

NI 43-101 Technical Report Preliminary Economic Assessment Altar Project San Juan, Argentina

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Appendices

Appendix A: Certificates of Qualified Persons

1 Summary

This document was prepared as a Canadian National Instrument 43-101 (NI 43-101) Technical Report on a Preliminary Economic Assessment (PEA) for Aldebaran Resources Inc. (Aldebaran or the Company) by Knight Piésold (KP), Independent Mining Consultants, Inc. (IMC), SRK Consulting (US) Inc., and SRK Consulting (Canada) Inc., (collectively SRK) on the Altar Project (the Project).

Aldebaran had an option to earn up to an 80% interest in the Altar Project pursuant to an option and joint venture agreement (the JV Agreement) entered in 2018 with Stillwater Canada LLC (Stillwater), an indirectly owned subsidiary of Sibanye-Stillwater Limited (Sibanye-Stillwater). On August 14, 2023 (see Aldebaran's press release dated August 14, 2023), Aldebaran announced it had officially acquired a 60% interest in the Altar Project from Sibanye-Stillwater. As of June 30, 2024, Aldebaran has crossed the threshold to acquire an 80% interest in the Altar Project from Sibanye-Stillwater (see Aldebaran's press release dated April 15, 2025). Stillwater Mining acquired the Altar Project when it acquired Peregrine Metals Ltd (Peregrine) and its Argentine subsidiary Minera Peregrine Argentina, S.A. in October of 2011.

This technical report documents the status of the project as of September 1, 2025.

This report is written in compliance with disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101, Companion Policy 43-101Cp, and Form 43-101F1. In addition, the Standards and Guidelines of the Canadian Institute of Mining, Metallurgy & Petroleum (CIM) have been followed in the development of this estimate of Preliminary Economic Assessment (PEA).

1.1 Property Description and Ownership

The Altar Project is a cluster of copper-gold-molybdenite porphyry centres located in San Juan Province, Argentina, approximately 10 kilometers (km) from the Argentine-Chile border and 180 km west of the city of San Juan. In addition to copper and gold, the deposit contains silver and minor molybdenum. The Quebrada de la Mina (QDM) area, located roughly 3.5 km west of the Altar porphyry cluster, hosts the QDM gold and silver deposit and the Radio copper-gold porphyry deposit. Both the QDM and Altar areas are supported by a common exploration camp.

The Altar Project is currently accessed via two routes in Argentina. The primary access route is shared with the El Pachón project (owned by Glencore) and leads southwestward from the town of Barreal before swinging northwards toward El Pachón, then continuing an additional 25 km to the Altar Camp. In total, there is approximately 170 km of gravel road from Barreal to Altar that is suitable for exploration support. There is no rail or air access to the Project. The closest airports are in the cities of San Juan and Mendoza. The site is remote and has no local infrastructure apart from the gravel road to the property. The second access is northward from Altar toward the Los Azules Project and along the Rio Calingasta to the town of Calingasta.

In the future, there is an opportunity to develop alternative property access from Illapel, Chile. This route would require the upgrading of 64 km of existing unpaved public road and the construction of 23.5 km of new roads.

The Altar Project consists of nine mining concessions and nine land easements, comprising rights of way or occupancy as shown on Table 4-1 and Figure 4-2. It also includes an option on the five adjacent

Rio Cenicero concessions (IPEEM). The Altar concessions collectively cover an area of about 8,443.7 hectares (Ha) and the Rio Cenicero concessions cover an additional 3,716.6 Ha.

1.2 Geology and Mineralization

The Altar porphyry cluster was formed in a transitional environment from the basal roots of a high-sulphidation epithermal lithocap to a deeper porphyry copper environment. Some of the porphyry centres have been described as telescoped because of the close spatial distance between the porphyry and the high-sulphidation systems; however the age of the porphyry copper mineralization is estimated to be Miocene, ranging from approximately 10 to 12 million years old, which suggests there has been superposition of different aged systems rather than telescoping of one single system.

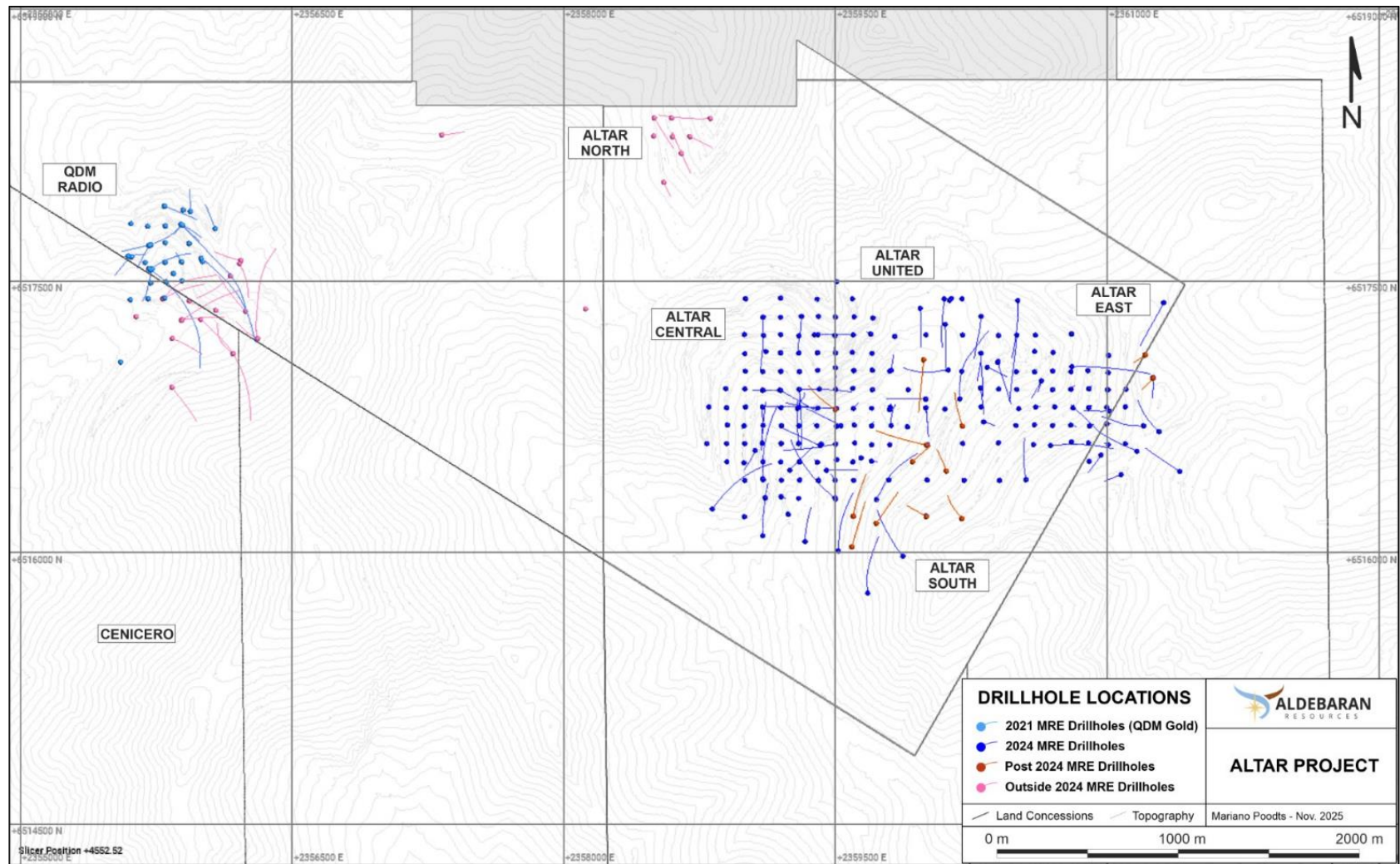
There are several adjacent mineral properties under exploitation, exploration or development in the area surrounding Altar. Los Pelambres Mine (Chile), El Pachón (Argentina), and Los Azules (Argentina) are within 60 km or less of Altar.

There are three main mineralized zones within the main Altar area of the project that are referred to as Altar Central, Altar United, and Altar East from west to east. Each zone is associated with a distinct porphyry intrusive centre that spatially coalesce to form one large zone of mineralization. In addition, there is another copper porphyry centre called Altar North, with limited drilling to date, that is about 2 km north of the Altar Central centre. Three and a half kilometers west of the Altar Central zone is a gold-silver deposit called QDM, that is included in the 2024 statement of mineral resources. Just east and immediately adjacent at depth from QDM is a copper-gold mineralized porphyry discovered in 2017 called the Radio Porphyry, which is currently not in the mineral resource.

1.3 Status of Exploration, Development and Operations

The mineral resources for the Altar Central, United, East, and North zones were updated during the last half of 2024 (see Aldebaran's press release dated November 24, 2024) and the 43-101 technical report filed on SEDAR on January 9, 2025 (see Aldebaran's press release dated January 9, 2025). QDM was not updated at the time of that publication, so the QDM resource did not change since the previous Technical Report published in March of 2021 (see Aldebaran's press release dated March 22, 2021).

Within the Altar Central, United, and East areas, there were a total of 219 diamond drill holes containing 67,574 assay values for copper, gold, and silver, and other elements that were used for the 2024 resource estimation. QDM and Radio Porphyry contained 42 drill holes and 9,065 assay intervals for copper, gold and silver, and other metals at the time of the last QDM mineral resource. Figure 1-1 illustrates the drill hole locations and topography in the Altar area that were utilized for the 2024 mineral resource update.



Source: Aldebaran Resources, 2025
Note: 15-m topographic contour interval

Figure 1-1: Altar District Drill Hole Location Map and Deposit Locations used for the 2024 Mineral Resource

1.4 Mineral Processing and Metallurgical Testing

The Altar copper-gold project has been the subject of extensive metallurgical test programs during the period from 2007 – 2014 to investigate flotation as a process option for recovering copper and gold values from the Altar Deposit. This work demonstrated that copper can be recovered from the Altar deposit using conventional copper flotation technology and a process flowsheet that includes copper rougher flotation, regrinding of the rougher concentrate and three stages of cleaner flotation. Conditions selective against pyrite are required to avoid pyrite flotation into the copper concentrate.

Additional testing was completed in 2024-2025 at Hazen in Golden, CO, examining the viability of Nuton® Technology for use at the Altar project. A total of 26 Stage I column tests were started with 9 columns still in operation at the time of this report. Copper extraction generally ranged from 70% to 94% depending on the mineralogy and selected Nuton Technology operating conditions.

Chalcopyrite is the primary copper mineral in the hypogene zone of the Altar deposit, with local areas of hypogene bornite and chalcocite. The supergene enrichment blanket consists of secondary copper sulphide minerals such as chalcocite and covellite which transitions downward into a mixed zone of these secondary sulphides overprinting hypogene chalcopyrite and pyrite. Enargite and tennantite, which are arsenic-bearing copper minerals, occur predominantly in the upper portions of the deposit and within very narrow, structurally controlled corridors throughout the deposit. However, recent modeling by Aldebaran's team has demonstrated that resource models prior to 2024 didn't model these corridors and hence arsenic was allowed to "blowout" into areas that it shouldn't have. The overall effect of Aldebaran's modeling was to reduce the global arsenic content of the 2024 mineral resource by >50%. Gangue minerals consist mainly of quartz, white mica, and feldspars with relatively low quantities of kaolinite and chlorite.

A primary grind size of 80% passing (P80) 190 µm was selected as the optimal primary grind size. Regrinding of the rougher concentrate to P80 20 - 30 µm prior to cleaner flotation is required to achieve adequate mineral liberation and produce high grade copper flotation concentrates.

Life of Mine (LoM) copper recovery is estimated at 85 - 88% into copper flotation concentrates containing 26 - 32% Cu. Gold recovery from both Altar Central and Altar East is estimated at 57% based on the locked cycle and pilot plant test results and silver recovery is estimated at about 50%.

1.5 Mineral Resource Estimate (MRE)

The MRE for the Altar and QDM deposits was developed from computer-based block models, using the drill results available at the end of the 2024 drill program for Altar and the end of 2020 for QDM. The effective date for the Altar Resource Estimate is 31 December 2024. It was prepared prior to the rest of the work completed for this Technical Report. As a result, economic inputs used to define the Mineral Resource and reported in Section 14 may differ from economics presented in other sections of this report.

At Altar, copper, gold, silver, and arsenic values in the block model have been incorporated into the calculation of economic value to establish the MRE. Molybdenum, iron, sulfur, zinc, and antimony have been estimated, but do not contribute economically to the mineral resource.

At QDM, gold and silver values in the block model have been incorporated into the calculation of economic value to establish the mineral resource estimate.

There are a number of mining and process scenarios that could be applied to the Altar area deposits, including both surface mining and underground mining. The basis for the 2024 statement of mineral resources is that Altar is an open pit mine feeding a sulphide flotation plant with shipment of the Altar concentrate to a smelter. Arsenic penalties were incorporated into the estimated smelter costs assuming that the concentrate will be sent to a smelter that can process high arsenic concentrates. This assumption was supported at the time by study work completed by CRU (CRU International Limited) in their High Arsenic Copper Concentrates Study dated January 31st, 2022, covering marketability and estimated costs of arsenic penalties in a copper concentrate. The component of the mineralization that meets the mineral resource requirements for “reasonable prospects of economic extraction” was based on the results of a pit optimization algorithm. The input parameters for the resource pit and the block grade estimation parameters are reported in Section 14.

For this resource statement, QDM mineralization is assumed to be sent to the Altar plant on a campaign basis. QDM flotation recoveries differ from those applied to Altar as reported in Section 14.

The mineral resources are developed using a pit optimization algorithm to establish the component of mineralization with reasonable prospects of economic extraction.

Table 1-1 summarizes the 2024 mineral resource at the base prices of US\$3.75/lb copper, US\$1,800/oz gold, and US\$23.00/oz silver for Altar. QDM mineral resources were based on metal prices of US\$1,500/oz gold and US\$20/oz silver. Sensitivity to changes in metal prices and production costs are summarized in Section 14. The sensitivity tests have allowed Jacob Richey and John Marek (QPs) to form the opinion that the Altar Mineral Resources as stated on Table 1-1 have reasonable prospects of economic extraction on a current economic basis.

The cut-off grades are presented in terms of Net Smelter Return (NSR) that incorporates the benefits of copper, gold, and silver in the concentrate. Arsenic penalties are calculated on a block-by-block basis and are reflected in the NSR calculation. Approximate equivalent copper cutoff grades (CoG) are presented in the mineral resource table. They are approximate because they cannot accurately reflect the arsenic penalties in the same way as the NSR calculation.

The parameters used to determine mineral resource CoG results in calculated values for the internal or marginal cutoff of US\$5.00 per tonne (t) NSR. Considering the remote location of Altar and the capital burden that would be required for a project of this scale, the resource CoG was increased to US\$13.99 NSR. The US\$13.99/t NSR cutoff is the same cutoff applied to the Altar mineral resource during 2021, so direct comparison is possible.

The qualified persons for the estimation of the mineral resource are John Marek and Jacob Richey of Independent Mining Consultants, Inc. Substantial metal price or production cost changes could materially change the estimated mineral resources in either a positive or a negative direction. Detailed testing of process alternatives and the selection of the mineral process could have a positive or negative material impact on the resources at Altar. Additional planning and evaluation could change the mine plan and materially change the mineral resource.

Table 1-1: Combined Altar and QDM Mineral Resources, December 31, 2024

Material Type	Resource Class	Cu Price (US\$/lb)	Cut-Off									Contained Metal		
			US\$NSR/T	EqCu (%)	Ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Cu (Mlb)	Au (Moz)	Ag (Moz)
Total Altar Deposit, US\$13.99 NSR Cutoff to Match 2021														
Supergene	Measured	3.75	13.99	0.237	121,884	34.44	0.549	0.080	1.07	21	289	1,475	0.31	4.19
	Indicated	3.75	13.99	0.237	80,007	23.33	0.362	0.060	0.93	19	123	639	0.15	2.39
	Measured + Indicated	3.75	13.99	0.237	201,891	30.04	0.475	0.072	1.01	20	223	2,114	0.47	6.59
	Inferred	3.75	13.99	0.237	24,850	29.17	0.459	0.073	1.01	19	213	251	0.06	0.81
Mixed	Measured	3.75	13.99	0.237	109,510	24.11	0.378	0.068	1.22	23	192	913	0.24	4.30
	Indicated	3.75	13.99	0.237	19,208	20.55	0.320	0.055	1.11	23	139	136	0.03	0.69
	Measured + Indicated	3.75	13.99	0.237	128,718	23.58	0.369	0.066	1.20	23	184	1,049	0.27	4.98
	Inferred	3.75	13.99	0.237	1,386	19.32	0.290	0.070	1.00	13	111	9	0.00	0.04
Hypogene	Measured	3.75	13.99	0.237	549,385	27.60	0.410	0.099	0.98	20	120	4,966	1.75	17.31
	Indicated	3.75	13.99	0.237	1,517,339	26.62	0.415	0.053	1.33	54	114	13,882	2.59	64.88
	Measured + Indicated	3.75	13.99	0.237	2,066,724	26.88	0.414	0.065	1.24	45	116	18,848	4.33	82.19
	Inferred	3.75	13.99	0.237	1,189,513	23.28	0.365	0.043	1.26	46	96	9,572	1.64	48.19
Total Supergene Mixed Hypogene	Measured	3.75	13.99	0.237	780,779	28.18	0.427	0.092	1.03	21	156	7,354	2.30	25.80
	Indicated	3.75	13.99	0.237	1,616,554	26.39	0.411	0.053	1.31	52	115	14,657	2.77	67.96
	Measured + Indicated	3.75	13.99	0.237	2,397,333	26.97	0.416	0.066	1.22	42	128	22,011	5.08	93.76
	Inferred	3.75	13.99	0.237	1,215,749	23.39	0.367	0.044	1.25	45	98	9,832	1.71	49.04
15,984,418 Ktonnes Total Material				Total M+I+I										

Material Type	Resource Class	Cu Price (US\$/oz)	Cut-Off									Contained Metal		
			US\$NSR/T	EqCu (ppm)	Ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Cu (Mlb)	Au (Moz)	Ag (Moz)
Quebrada de La Mina Gold and Silver Mineralization (QDM), From 2021														
Oxide Plus Sulphide	Measured	1,500	13.17	0.33 to 0.70	15,818	31.70	0.061	0.810	3.59	2	168	21	0.41	1.83
	Indicated	1,500	13.17	0.33 to 0.70	4,162	25.28	0.055	0.678	3.74	2	164	5	0.09	0.50
	Measured + Indicated	1,500	13.17	0.33 to 0.70	19,980	30.36	0.060	0.783	3.62	2	167	26	0.50	2.33
	Inferred	1,500	13.17	0.33 to 0.70	1,195	21.32	0.031	0.582	5.34	2	153	1	0.02	0.21

Material Type	Resource Class	Cu Price (US\$/lb)	Cut-Off (US\$NSR/T)								Contained Metal		
				Ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Cu (Mlb)	Au (Moz)	Ag (Moz)
Total Altar + QDM Mineral Resources													
Total Supergene Mixed Hypogene	Measured	3.75	13.17 to 13.99	796,597	28.25	0.420	0.106	1.08	20	157	7,375	2.71	27.62
	Indicated	3.75	13.17 to 13.99	1,620,716	26.38	0.410	0.055	1.31	52	115	14,662	2.86	68.46
	Measured + Indicated	3.75	13.17 to 13.99	2,417,313	27.00	0.413	0.072	1.24	41	129	22,037	5.58	96.08
	Inferred	3.75	13.17 to 13.99	1,216,944	\$23.39	0.367	0.044	1.26	45	98	9,833	1.73	49.24

Source: IMC, 2024

Cautionary notes to U.S. investors: This Technical Report uses terminology that is defined under Canadian law by National Instrument 43-101 including “measured, indicated, and inferred”, and “mineral resource”. U.S. investors are cautioned that NI 43-101 and U.S. Rule SK-1300 are not directly compatible. The estimation of measured resources, indicated resources, and inferred resources involves greater uncertainty as to their existence and economic feasibility than estimation of proven and probable reserves. There are no mineral reserves at Altar at this time.

1) Copper grades are in percent of dry weight. Gold, Silver, Moly and Arsenic grades are in units of parts per million = grams/tonne dry weight.

2) Contained metal units are millions of pounds of copper, millions of troy ounces for gold, and millions of troy ounces for silver.

3) The Altar mineral resource was updated during 2024.

4) The QDM resource has not been updated since 2021.

5) All mineral resources are contained in pit geometries based on the following metal prices.

6) Mineral Resources for Altar are based on metal prices of US \$3.75/lb copper, US\$1,800/oz gold, US\$23.00/oz silver.

7) Mineral Resources for QDM are based on metal prices of US \$1,500/oz gold, US\$20.00/oz silver.

8) There are no mineral reserves at Altar or QDM at this time.

9) Cutoff grades are based on calculations of net smelter return (NSR) assuming the processing by flotation to produce a copper concentrate and smelting of that concentrate.

10) The Altar NSR is defined as:

a. Copper Contribution:

i. Float Recoverable Copper Grade x 22.0462x(3.75-TCRC) less 1% smelter deduct.

ii. Flotation Recoverable Copper Grade = (Copper Grade – 0.01)*0.92

b. Gold Contribution: (Gold Grade in ppm x 0.55 /31.1035) x (1800-4.00) less 1 gm smelter deduct.

c. Silver Contribution: (Silver grade in ppm x 0.50/31.1035) x (23.00 -0.30) less 30 gm deduct.

d. Arsenic grades vary by block in the model and smelter terms including arsenic penalties vary by block. Average smelting refining and freight costs including arsenic penalties for the Altar Mineral Resource are approximately US\$0.71/lb copper.

11) The QDM NSR is defined as: 18.733 x Au ppm + 0.311 x Ag in Oxide and 39.808 x Au ppm + 0.311 x Ag in Sulphide

12) Equivalent copper cutoff grade calculations at Altar are approximate due to the complexities of arsenic penalty calculations by block.

13) NSR and all economic calculations applied to the mineral resources are summarized in Section 14.

14) Tables may not balance exactly due to rounding.

15) The Qualified Persons for the Mineral Resources are John Marek RM-SME, and Jacob Richey PE, of Independent Mining Consultants, Inc.

1.6 Resources Mined in the PEA

The estimates of resources mined are effective as of September 1, 2025, and are presented in Table 1-2. The PEA models an open pit mine with resources mined containing 2.18 million ounces (Moz) of Au, 48.3 Moz of Ag and 10,734 Mlb of Copper (4.87 million tonnes [kt]).

Measured, Indicated, and Inferred resources were used for conversion to resources mined within the PEA ultimate pit designs. The resources mined (in-pit) are based on cut-off grade of 0.18 TCU%.

The resources mined in the open pit are associated with 340.9 Mt of waste and a LoM stripping ratio of 1.53:1.

SRK confirmed the overall project economics are favorable at an Au price of US\$2,500/oz Au, an Ag price of US\$27/oz Ag and a Cu price of US\$4.35/lb Cu.

Table 1-2: Resources Mined in the PEA

Category	Zone	Tonnes (Mt)	Average Grade					In-Situ Metal				
			CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	As (g/t)	CuEq (M lb)	Cu (M lb)	Au (Moz)	Ag (Moz)	As (Mt)
Measured	OP-Altar	207.7	0.50	0.45	0.07	1.21	288	2,290	2,061	0.47	8.08	59,818
	UG-Altar	83.5	0.65	0.55	0.17	1.37	118	1,202	1,016	0.45	3.68	9,834
	UG-RCC (IPEEM)	29.3	0.65	0.52	0.22	1.50	110	420	335	0.21	1.41	3,237
	Total Measured-Altar	291.2	0.54	0.48	0.10	1.26	239	3,492	3,077	0.92	11.76	69,652
	Total Measured	320.5	0.55	0.48	0.11	1.28	227	3,911	3,412	1.13	13.17	72,889
Indicated	OP-Altar	14.0	0.36	0.33	0.04	0.85	140	111	102	0.02	0.38	1,960
	UG-Altar	397.6	0.58	0.54	0.05	1.77	128	5,101	4,774	0.64	22.68	50,739
	UG-RCC (IPEEM)	55.7	0.52	0.46	0.10	1.38	115	638	559	0.18	2.48	6,414
	Total Indicated-Altar	411.6	0.57	0.54	0.05	1.74	128	5,212	4,876	0.66	23.06	52,699
	Total Indicated	467.3	0.57	0.53	0.06	1.70	127	5,851	5,435	0.84	25.54	59,112
Inferred	OP-Altar	0.9	0.24	0.24	0.00	0.09	56	5	5	0.00	0.00	50
	UG-Altar	185.0	0.39	0.37	0.03	1.32	83	1,611	1,522	0.16	7.85	15,380
	UG-RCC (IPEEM)	17.1	0.97	0.91	0.06	3.23	204	365	345	0.04	1.78	3,484
	Total Inferred-Altar	185.9	0.39	0.37	0.03	1.31	83	1,615	1,527	0.16	7.85	15,430
	Total Inferred	203.0	0.44	0.42	0.03	1.48	93	1,980	1,872	0.19	9.63	18,914
Total	OP-Altar	222.6	0.49	0.44	0.07	1.18	278	2,383	2,167	0.49	8.47	61,829
	UG-Altar	666.2	0.54	0.50	0.06	1.60	114	7,914	7,312	1.25	34.21	75,952
	UG-RCC (IPEEM)	102.1	0.63	0.55	0.13	1.73	129	1,423	1,239	0.43	5.66	13,134
	Total-Altar	888.8	0.53	0.48	0.06	1.49	155	10,297	9,480	1.74	42.68	137,780
	Total	990.8	0.54	0.49	0.07	1.52	152	11,742	10,719	2.16	48.34	150,914

Source: SRK, 2025

Notes:

- Resources mined are not mineral reserves and do not have demonstrated economic viability.
- Abbreviations used in the table above include Mt = million metric tonnes, Kt = thousand metric tonnes, % = percent, g/t = grams per metric tonne, M lb = million pound, and Moz = million troy ounces.
- All figures are rounded to reflect the relative accuracy of the estimates. Totals may not sum or recalculate from related values in the table due to rounding of values in the table, reflecting fewer significant digits than were carried in the original calculations.
- At this stage of the Project, it is the Company's opinion that all the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold.
- All dollar amounts are presented in US dollars.
- Bulk density is estimated on a block basis using specific gravity data collected on diamond drill core.
- The in-situ economic copper cutoff grade (CoG) used was 0.18% Cu.
- Equivalent Copper (CuEq) percent is calculated with the formula $CuEq\% = ((Cu\text{ grade} * Cu\text{ recovery [87.76\% average]} * Cu\text{ price}) + (Au\text{ grade} * Au\text{ recovery [57\%]} * Au\text{ price}) + (Ag\text{ grade} * Ag\text{ recovery [50\%]} * Ag\text{ price})) / (Cu\text{ price} * Cu\text{ recovery})$. It assumes that the Altar Project will produce a conventional (flotation) copper concentrate product based on average metal recoveries at 87.76% Cu, 57% Au, and 50% Ag based on initial preliminary metallurgical test work.
- Reported contained individual metals in the table above represent in-situ metal, calculated on a 100% recovery basis, except for CuEq% (see Note 8).
- Mined resources in the PEA for the Project were calculated by Fernando P. Rodrigues, BSc, MBA MMSAQP #01405QP of SRK Consulting, Inc. in accordance with the Canadian Securities Administrators National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and generally accepted Canadian Institute of Mining, Metallurgical and Petroleum "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines ("CIM Guidelines"); and
- Resources mined effective date: September 1, 2025.

1.7 Mining Methods

In this study, the proposed mining method is divided into open pit mining for the surface part of the deposit and underground caving for the deeper parts. The open pit will use well-known truck and shovel operations with 12.5-m bench intervals. Haul trucks will be used for hauling mineralized material to the crushing plant and long-term stockpile facilities. Waste rock will be hauled to the closest waste rock storage facility (WRSF). Underground operations will handle material in bulk using block caving methods. Open pit mining will take place during the first 9 years of the project while UG development is taking place.

Open pit mining operations will use small-scale equipment to allow narrower phasing and access into the highest margin mineralization sooner. The small-scale equipment fleet will include 8 m³ hydraulic excavators and 100t capacity haul trucks.

The final pit is approximately 1,500 m long (N-S) and 1,600 m wide (E-W) with a pit depth of 850 m.

Other important facilities supporting the Project and the mining process are the crusher pad, mineral process plant, the tailings storage facility (TSF), and the north and south Waste Rock Storage Facilities (WRSF).

The open pit mining sequence consists of 6 phases. The Project has a mine life of 48 years, which includes 3 of construction and 2 years of pre-stripping for the open pit. The mine production plan contains 991 Mt of mineralized material with an average grade of 0.54% CuEq which will be processed at the mill. 223 Mt of mineralized material will be mined via the open pit, and 768 tonnes will be mined through underground mining methods.

Underground access to the mining areas will be through a portal and conveyor drift from the south of the proposed pit. All lateral developments are designed to 5.5 m wide and 5.5 m high to allow for equipment and ventilation. Three underground caves (Altar Central, Altar United, Altar East) are divided into two lifts, an upper and lower, with the upper lifts being mined first followed by the lower lifts and a sequenced manner. The Altar caves are below the pit and will be mined when the pit is finished, with the Altar East cave being mined first, followed by the Altar United cave and then the Altar Central cave.

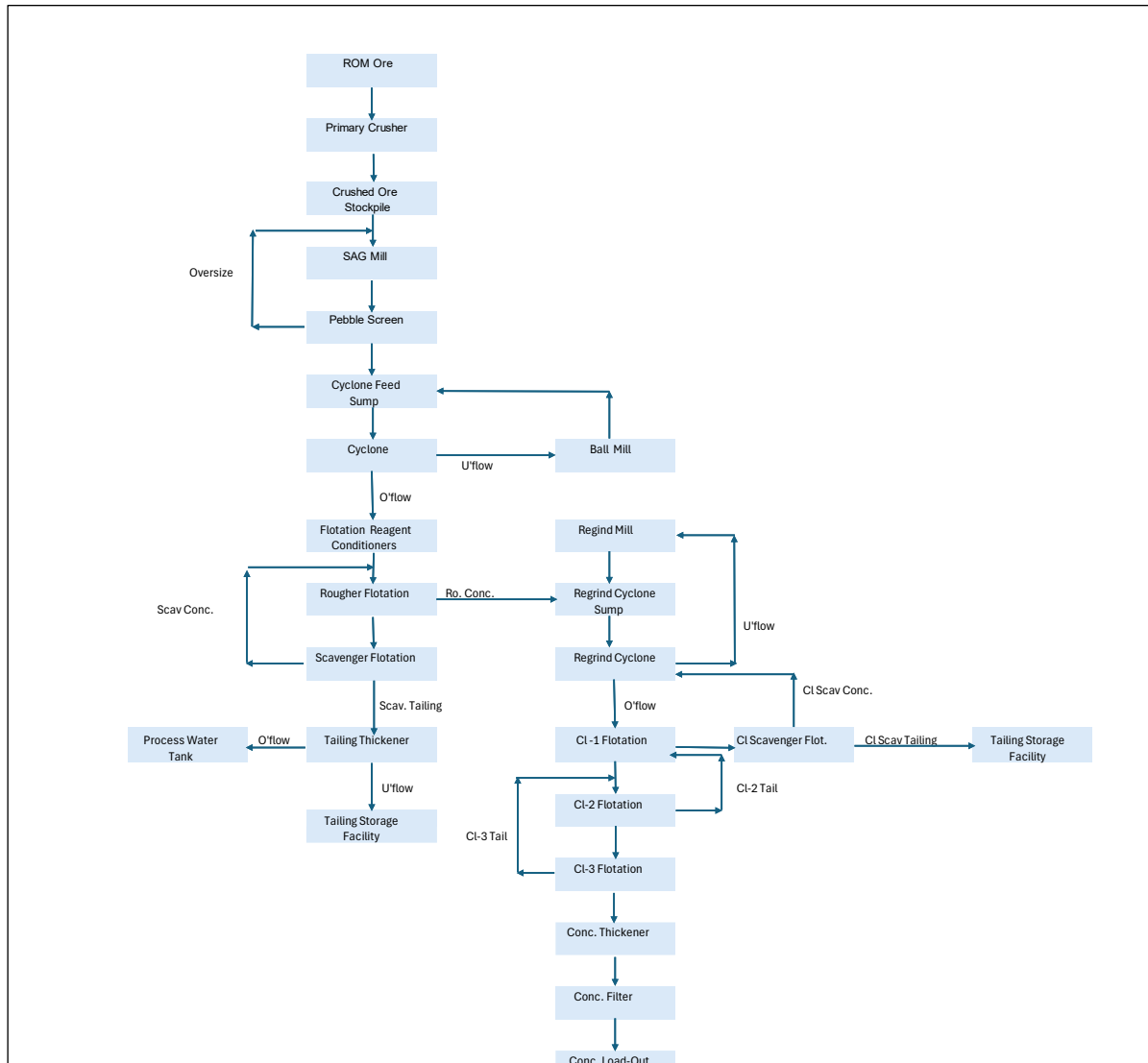
1.8 Recovery Methods

Extensive metallurgical test work has demonstrated that the contained copper and gold values can be effectively recovered in a flotation concentrator that would produce a single gold-bearing copper concentrate using industry-accepted technologies. The flowsheet includes primary crushing followed by grinding in a SAG (semi-autogenous grinding) mill/ball mill grinding circuit, rougher flotation, regrinding of the rougher concentrate and three stages of cleaner flotation. The concentrator would be constructed with a capacity to process 60,000 tonnes per day (tpd) and operated on a 365 day/year, 24 hour/day schedule. A simplified process flowsheet is shown in Figure 1-2.

Run of mine (ROM) material averaging about 0.49% Cu and 0.07 g/t Au will be trucked to the primary gyratory crusher and either direct dumped into the crusher feed bin or dumped on the stockpile in front of the crusher. Any material dumped on the stockpile would be rehandled and fed to the primary crusher with a front-end loader. ROM material will be crushed to about 6 inches and conveyed to the crushed material stockpile. Material will be reclaimed from the stockpile with variable speed belt

feeders that will feed the material onto the SAG mill feed conveyor. The 40 ft x 26 ft EGL SAG mill will discharge across a pebble screen, and the pebble screen oversize will be conveyed back to the SAG mill feed (the need for a pebble crusher will be assessed during the next phase of study). The screen undersize will be classified in a cluster of cyclones. The cyclone underflow will feed a 26 ft diameter x 40.7 ft ball mill operated in closed circuit with the cyclones. The cyclone overflow, classified at 80% passing (P80) 180 μ m, will advance to the copper rougher flotation circuit.

The cyclone overflow from the grinding circuit will flow to the rougher flotation conditioner where the slurry will be conditioned with the collector potassium amyl xanthate (PAX) at pH 10.5 adjusted with lime and then advanced to the rougher flotation circuit where a rougher flotation concentrate and a final rougher flotation tailing will be produced. The rougher flotation tailing will be pumped to the TSF, and the rougher flotation concentrate will be reground to about P80 18 – 20 μ m in a stirred media regrind mill (tower mill) operated in closed circuit with cyclones. The reground rougher concentrate will then be upgraded in three stages of cleaner flotation to produce a final flotation concentrate containing about 26 - 32% Cu and 3.5 g/t Au. Copper recoveries are expected to average about 87.8%, gold recoveries are expected to average about 57% and silver recoveries are expected to average about 50%. The grade of the flotation concentrate will vary depending on whether supergene or hypogene material are being fed to the concentrator. Supergene material will contain secondary copper sulphide minerals such as chalcocite and covellite that have a higher copper content, whereas hypogene material will consist primarily of chalcopyrite and locally enargite which have lower copper contents. Arsenic in the concentrate is expected to be variable ranging from about 0.5 – 2.2% As. The highest arsenic levels are expected when supergene material is being processed due to the presence of the arsenic-bearing copper mineral enargite (AsCu_3S_4) in the upper portions of the orebody.



Source: SRK, 2025

Figure 1-2: Simplified Copper Flotation Concentrator Flowsheet

1.9 Project Infrastructure

This section reports on the infrastructure design for the Altar Project. The infrastructure includes both open pit and underground activities within the same footprint.

The Project includes on-site infrastructure such as earthworks development, crushing and process plant facilities and ancillary buildings such as warehouses and workshops, on-site roads, water management systems, and site electrical power facilities. Off-site infrastructure includes a site access road, plant roads, groundwater supply, power supply (power transmission line), two WRSFs, the TSF, and surface water management structures.

The Project includes all the necessary infrastructure to support the mining and processing operations; all infrastructure buildings will be built as per applicable codes and regulations. Buildings include

workshops for mine and maintenance, administrative and operation offices, warehouses for mine and process plant, process plant control room and assay laboratory, and other minor facilities. The permanent accommodation camp will be a modular building with capacity for 2,500 employees. Sewage will be treated via a wastewater treatment plant sized to meet the demand. A pre-engineered building for security and medical facilities is also part of the Project infrastructure. Water management structures will include diversion channels, collection ditches, and ponds.

The following paragraphs detail the modifications proposed for the updated infrastructure design:

The primary crushing facility is now located closer to the pit and UG decline and is situated immediately south of the Initial 222 Mt Pit boundary with ramp access from both OP and UG areas. This new location reduces the hauling distance to the dump pocket by over a kilometer and allows for a shorter haul to dispose of initial stockpile at the two WRSFs which will be built up over Phase I of the Project. This WRSF is immediately adjacent to the primary crushing pad. Furthermore, the primary crushing facility has been replaced with an in-pit crushing, semi-mobile station, which comes fully equipped with a feed hopper, gyratory crusher, a discharge hopper, truck ramps, semi-mobile support structure for the gyratory crusher and direct drive, a bridge crane, rock breaker, and discharge conveyor. Mill feed discharged from the primary crusher will be conveyed through a 0.9 km conveyor.

Groundwater is the proposed freshwater option to supplement the process of makeup water. This resource will also be tapped for other freshwater uses at the plant and ancillary facilities such as firewater, utility water, gland water and tepid, and potable water for safety showers/ eyewashes. It is proposed that the groundwater well-field be located closer to the plant and adjacent to the anticipated northern end of the Pit boundary. The advantage of pumping groundwater at this location is that it will serve to help draw down the water table ahead of pit excavation to mitigate seepage into the pit and prevent water pollution. In Year 10, a grout curtain will be installed to further mitigate seepage. Groundwater pumping from this location to meet process water requirements for Phase I (311 l/s) is required for the first five years and will consist of twelve 90 m deep wells, three pump stations, each one having two 450 kW pumps. The revised pipeline to deliver freshwater to the plant from this location consists of a combination of 1 km of 600 mm diameter carbon steel pipe, 1.5 km of 400 mm diameter carbon steel pipe, and 4.5 km of 760 mm diameter of SDR 11 HDPE pipe to meet the pressure ratings encountered along the length of this pipeline. After such time, an additional set of deeper wells will be installed within the pit boundaries along the northern edge to further mitigate seepage. Each well will be fitted with a 187-kW submersible pump and will tie into a similar pumping system equipped as described for Phase I but with larger pumps.

Permanent electrical power will be provided through a new power transmission line that will be interconnected to a newly built-up power plant owned and operated by a third-party. Power at the plant will be generated via the combustion of natural gas and all the necessary electrical equipment for this interconnection will be an integral part of the new self-generation power plant. The supply of natural gas to the power plant and the provision of electricity to power the Altar processing plant will be contractual between Aldebaran and the third-party at an estimated rate of US\$0.077 per kWh. The capital cost to route the new power transmission line from the new power plant to the main substation at the Project site are included as part of the off- and on-site infrastructure, respectively. The new power transmission line will be designed to supply power for the OP and UG phases of the project and any upgrade requested for the self-generation plant will be the direct responsibility of the third-party.

Waste rock resultant from the open pit will be stored in two external waste rock storage facilities (WRSFs); a smaller facility to the east of the pit adjacent to the primary crushing facility and the original facility, which resides at the same location in the natural valley west of the pit, but which has been expanded into the natural shallower valleys to the south to better suit the new mine plan and schedule. Permanent storm water diversion channels along the perimeter WRSFs will be constructed to reduce the amount of water in contact with these materials.

The TSF design is developed in accordance with Global Industry Standard on Tailings Management (2020). This facility will be constructed in stages over the life of mine to optimize the economics of the facility.

1.10 Environmental Studies, Permitting and Social Impact

1.10.1 Environmental Studies

Environmental studies have been conducted continuously since 2008, focusing on critical environmental components that could have an impact on the project's physical and biological surroundings. These studies are conducted in compliance with national environmental legislation and aim to identify compliance requirements and potential impacts on the project's viability and operational aspects.

Key findings from the environmental studies and conducted to date include:

- **Water:** Streamflow measurements, surface water quality sampling, and groundwater investigations have been completed within the project area. Results obtained from geophysical testing and hydrogeological drilling have identified that an aquifer with sufficient capacity to provide some of the water required for mine operations may be present in the area 2 km upstream and 2 km downstream of the Altar camp (following the La Pantanosa River valley). Additional study is required to further define the available water resources.
- **Geochemistry:** A Phase I geochemical characterization program completed in 2011 found that most waste rock samples had neutralization potential ratio (NPR) of <2.0, indicating that most of the waste rock is potentially acid generating (PAG). Based on the expected sulphide deportment to the Cu–Au concentrate, the process tailings are anticipated to be non-acid-generating (NAG), though geochemical testing of the tailings is required. New testing to determine NAG is being carried out at the moment, with 87 static tests started with humidity cell kinetic tests to follow.
- **Geomorphology and Cryology:** the National Glacier Inventory previously identified 8 rock glaciers within the Project area. The most recent work indicates that none of the cryogenic landforms in the Altar project area present massive, evenly distributed ice masses, and that ice is present discontinuously. Analysis of the landforms based on morphology by Mountain Pass (2025) concluded that three of the landforms 3, 7, and 8 do not meet the geomorphological criteria listed by the government as sine qua non (indispensable) characteristics needed to classify a rock glacier. Studies are underway on the other landforms to quantify the water content, with the aim of being able to demonstrate negligible hydrologic value, i.e., insignificant contribution to the water balance. With these analyses completed, Aldebaran can request permit approval by submitting a formal request for elimination of landforms 3, 6, 7, and 8 from the provincial inventory based on absence of ice and/or geomorphological discrepancies. The same request can be submitted to the National

authorities, except that the request will only include landforms 6, 7 and 8 (landform 3 would be considered protected by the National law due to the presence of ice-rich permafrost).

- **Flora:** The vegetation study conducted to date has identified a total of 131 plant species in the sampled high Andean environmental units. Of the recorded species, 58 (44.27%) are considered endemic. Due to the existing lack of knowledge about the high Andean flora, the surveyed species are not categorized under Resolution No. 0599-SEAyDS-2015 (Categorization of Endemic Plants of the Province of San Juan). At the global level, according to the IUCN, only six species (*Azorella compacta*, *Colobanthus quitensis*, *Phleum alpinum*, *Poa annua*, *Stuckenia filiformis*, *Ranunculus cymbalaria*) have been categorized, all as least concern (LC). Based on this, potential impacts should be assessed, and specific environmental management strategies should be developed to mitigate any adverse effects on these species and their habitats.
- **Fauna:** All mammal species recorded for January and March 2025 are categorized as least concern (LC) at the international level. However, the populations of guanaco (*Lama guanicoe*) from the Puna of San Juan are categorized as endangered (EN) and are listed in Appendix II of CITES. Although it does not pose a risk to the project, specific environmental management measures must be implemented to protect the species *Lama guanicoe* and its habitat.
- **Limnology:** was conducted in the study area to evaluate the aquatic biota (fitoplancton, zooplancton, fitobentos y macroinvertebrates).
- **Protected areas:** No interactions were identified between the project and areas of interest for conservation or protected areas.
- **Archaeology:** Various pre-Hispanic and historical-cultural archaeological sites, which also predate the Inca domination of the region, as well as intangible cultural heritage in the form of shelters or installations used by Chilean goat herders or "*crianceros*" have been identified. Some areas did not reveal any evidence of past human settlement, including higher elevation areas such as the western area where the project's exploration tasks are carried out, and where the camp is located. Recommendations have been provided regarding the management of the sites potentially affected by the project. The need to seek approval and potentially mitigate archaeological sites with the potential to be affected by construction of the project will need to be considered so as to avoid potential schedule delays.
- **Paleontology:** The paleontological survey identified bioclastic accumulations of marine invertebrates in Jurassic-age carbonate rocks outcropping on the banks of the Yeso River, corresponding to the Los Patillos Formation. The sporadic and discontinuous characteristics of the outcrops on the banks of the Yeso River, primarily the poor to fair preservation state of the fossil materials, lead to the conclusion that these deposits have little significance as a paleontological site.

1.10.2 Project Permitting

The Environmental Law for Mining Business, Law No 24.585, incorporated into the Mining Code is the most important piece of legislation for mining. The environmental section was incorporated in 1995 by Law 24.585, which added the "Environmental Protection for Mining Activity" title.

Before starting any activity, from exploration to exploitation, a company must submit an Environmental Impact Report (EIR) or *Informe de Impacto Ambiental* (IIA) to the provincial authority. The IIA must

describe the project, identify potential environmental and social impacts, and propose mitigation, rehabilitation, and restoration measures.

Following the provincial review process, the provincial authority approves the IIA by issuing an Environmental Impact Declaration or *Declaración de Impacto Ambiental* (DIA). The DIA is the environmental permit for the project and sets the specific conditions under which the project must operate.

Companies are subsequently required to submit updated IIA reports at least every two years, detailing the results of their environmental monitoring and any changes to their operations or mitigation plans.

Law 24.585 amending the Mining Code requires that the initial IIA must include a detailed plan for mine closure and rehabilitation of the affected area, so that closure is planned from the project's inception.

1.10.3 Social and Community

San Juan Province in Argentina is a key mining region where copper and gold mining plays a major economic role, creating thousands of direct and indirect jobs and driving local industry growth. The area has a diversified socioeconomic base, strong geological advantages, and infrastructure supportive of mining investment, particularly as international demand for copper increases and the region transitions towards renewable energy.

The local economy traditionally relied on farming, tourism, and commerce, but major mining operations such as Veladero, Casposo (now closed), and Gualcamayo, as well as a number of large development projects like El Pachón, Los Azules, the Vicuna district (Josemaria, Filo del Sol, Lunahuasi), and several others, have expanded mining's influence in recent years. Communities like Barreal, Calingasta, and Tamberias in Calingasta municipality have around 11,000 residents, with recent gains in technical education and healthcare access through small hospitals and expanding university options.

Socioeconomic concerns include potential environmental contamination and pipeline failures, local opposition rooted in social and environmental worries, modest expectations for job creation, the importance of compensation and community investments, and the need for negotiated land acquisition and rights-of-way, especially in Illapel. Transparent communication and early community engagement are critical even though permitting does not require public hearings.

Mining project success also depends on regulatory clarity, infrastructure investment in water and energy, managing inflationary pressures, and fostering labor agreements. The upcoming Environmental Impact Assessment (EIA) will further detail social conditions, impacts, and mitigation measures, and provide a Community Relations Master Plan.

1.10.4 Mine Closure

Argentina lacks a unified national law specifically mandating mine closure or requiring a mine closure permit; instead, closure requirements are governed by a combination of national guidelines, federal and provincial laws, and regulatory decrees. San Juan Province does not have a specific law or decree regulating the closure stage of a mine, nor does it have a closure plan or financial mechanisms or instruments to guarantee closure tasks. However, mine closure legislation has been under development for several years and could be enacted in the future.

The Mining Code (Law 1.919, as amended by Law 24.585) embeds the requirement to develop a mine closure plan as part of an Environmental Impact Report (EIR) or *Informe de Impacto Ambiental* (IIA). The IIA must be submitted to the provincial authority (in this instance, the Province of San Juan) for approval prior to construction, with updated IIAs submitted every two years.

Resolution No. 161/2021 approved the *Guidelines for Mine Closure with Financial Guarantees in Argentina: Towards Responsible Mine Closure* (IGF, 2021). However, adherence to the guidelines is voluntary best practice. Article 2 of the resolution states, "The Provinces, the Autonomous City of Buenos Aires, and the provincial Municipalities are invited to adopt, within their respective jurisdictions, the Guidelines approved by Article 1 of this measure." It is noted that the Province of San Juan has not adhered to Resolution 161/2021.

Assuming industry practice for closure of the remaining surface facilities (e.g., waste rock disposal areas, building demolition, pipeline decommissioning and limited removal, general surface rehabilitation, etc.), a reasonable total for complete closure of the Altar Project would be on the order of US\$282 M (including mine and TSF facilities). This estimate is within keeping and benchmarking against the Los Azules Copper Project (a nearby and reasonable analog) of US\$180 M reported in their 2023 PEA.

The conceptual closure arrangement for the TSF includes for placement of a 0.5 m thick closure cap over the entire surface, and installation of closure water management channels over the surface of the TSF, and a closure spillway.

1.11 Capital and Operating Costs

The capital cost estimate prepared for the PEA includes an installation cost associated with the site infrastructure, open pit mine and concentrator plant, a growth capital associated with the installation of the block caving underground mining operation, and the sustaining capital associated with the production plan. The LoM summary of capital is presented in Table 1-3.

Table 1-3: Altar PEA Capital Cost Summary

Description	Unit	Value
Initial Open Pit Capex	M USD	350
Initial Processing Capex	M USD	579
Initial Infrastructure Capex	M USD	665
Total Initial Capex	M USD	1,593
Growth UG Capex	M USD	227
Total Initial + Growth Capex	M USD	1,821
Sustaining Capital	M USD	3,830
Total LoM Capital	M USD	5,651

Source: SRK, 2025

SRK estimated operating costs for the open pit mining operation, block caving mining operation, the concentrator processing operation, and G&A. A summary of the estimated operating costs is presented in Table 1-4.

Table 1-4: Altar PEA Operating Cost Summary

Description	Unit	Value
Open Pit Mining Cost	M USD	1,324
Cost / t mined	USD/t	2.35
Block Cave Mining Cost	M USD	6,510
Cost / t mined	USD/t	8.42
Processing Cost	M USD	6,866
Processing Cost/Ore	USD/t	6.93
Processing Cost/Lb Cu Payable	USD/lb Cu Payable	0.76
G&A Cost	M USD	1,365
G&A Cost/Ore	USD/t	1.38
Total Opex	M USD	16,065
Opex per lb Cu Eq.	USD/lb	1.69

Source: SRK, 2025

Note: All operating costs include capitalized operating costs prior to production.

1.12 Economic Analysis

The PEA is preliminary in nature, that it includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the PEA will be realized. Mineral Resources that are not Mineral Reserves and do not have demonstrated economic viability.

The economic model is based on mine plans that were prepared as outlined in previous sections. Inferred resources only account for approximately 20% of the tonnage contained within the mine plan. As the stage of study for the Altar project is a PEA, no reserves are estimated for use in this analysis. The economic evaluation was completed using resource material that includes material in the Inferred category.

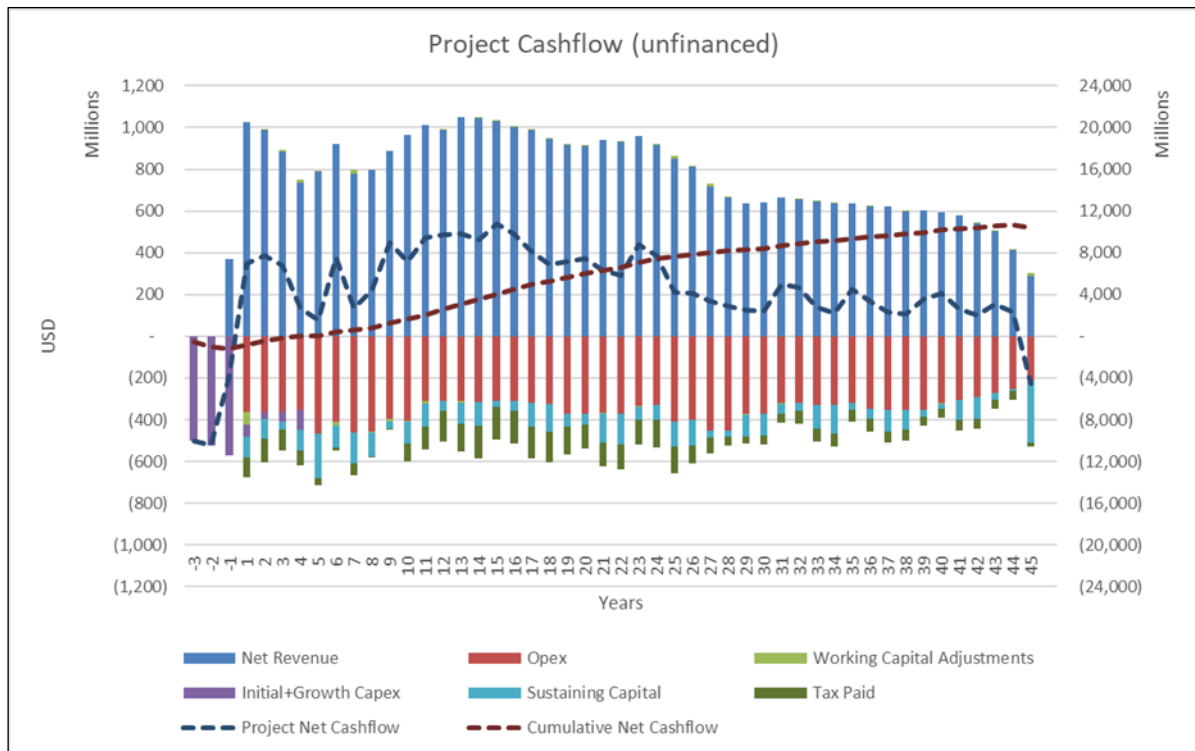
This economic analysis is supported by an annual after-tax cashflow in 2025 US dollars. The results of the analysis are presented in Table 1-5. The results indicate that, at an average concentrate price of US\$4.35/lb-Cu, the operation returns an after-tax NPV at 8% of US\$2,009 million.

Table 1-5: Altar PEA Economic Results

Description	Unit	Value
Net Revenue	M USD	35,725
Total Opex	M USD	(15,754)
Operating Margin	M USD	19,972
Operating Margin Ratio	%	55.9%
Initial+ Growth Capex	USD	(1,821)
Sustaining Capital	USD	(3,830)
Tax Paid	USD	(3,689)
Free Cashflow	USD	10,632
Before Tax		
Free Cash Flow	M USD	14,320
NPV @ 8%	M USD	2,852
NPV @ 10%	M USD	2,002
NPV @ 12%	M USD	1,409
IRR	%	24.5%
After Tax		
Free Cash Flow	M USD	10,632
NPV @ 8%	M USD	2,009
NPV @ 10%	M USD	1,358
NPV @ 12%	M USD	904
IRR	%	20.5%
Payback	Year	4.0

Source: SRK, 2025

A summary of the economic results and back-up chart information for charts within this section are presented on an annual basis in Figure 1-3 and Table 22-2.



Source: SRK, 2025

Figure 1-3: Altar PEA Annual Cashflow Summary

1.13 Conclusions and Recommendations

1.13.1 Property Description and Ownership

- The Altar Project is a cluster of copper-gold porphyry centres located in San Juan Province, Argentina, approximately 10 kilometers (km) from the Argentine-Chile border and 180 km west of the city of San Juan. In addition to copper and gold, the deposit contains silver and minor molybdenum. The Quebrada de la Mina (QDM) area, located roughly 3.5 km west of the Altar porphyry cluster, hosts the QDM gold and silver deposit and the Radio porphyry deposit. Both the QDM and Altar areas are supported by a common exploration camp.
- The Altar Project consists of nine mining concessions and nine land easements, comprising rights of way or occupancy as shown on Table 4-1 and Figure 4-2. It also includes an option on the five adjacent Rio Cenicero concessions. The Altar concessions collectively cover an area of about 8,443.7 hectares (Ha) and the Rio Cenicero concessions cover an additional 3,716.6 Ha.
- As of June 30, 2024, Aldebaran had crossed the threshold to acquire an 80% interest in the Altar Project from Sibanye-Stillwater where ownership going forward is a Joint Venture between Aldebaran (80%) and Sibanye-Stillwater (20%).

1.13.2 Geology and Mineralization

- The Altar Project is a cluster of classic copper-gold-molybdenite porphyry centres that includes from west to east: QDM, Radio, Altar North, Altar Central, Altar United, and Altar East.
- Each porphyry centre is comprised of multiple mineralized porphyry intrusions that progressively overprint one another over an approximately two to three million period based on extensive radiometric age dating that has been done.
- In the case of the main Altar deposit, its very large size (3 km long by 3 km wide by >2 km deep) can be attributed to the very close proximity of three mineralized centres, Altar Central, Altar United, and Altar East, which have coalesced to produce this large volume of mineralized rock.
- Four main mineral domains have been identified and modeled: Leached (Cap), Secondary (Supergene Enrichment), Mixed (Secondary + Primary), and Primary (Hypogene).
- A total of 11 major lithology types, 10 major structural blocks, 4 mineral zones, and numerous arsenic-bearing structural corridors were modeled in 3D to produce the Altar deposit geology model used for the 2024 Mineral Resource Estimate (MRE), which in turn was utilized in the PEA economic analysis.
- The mineralization consists of common copper sulphide minerals typical of porphyry copper deposits in the Andes of South America: chalcocite, covellite, digenite, enargite in the secondary zone, chalcopyrite, bornite, enargite, (pyrite), minor primary chalcocite in the hypogene zone, and a mixture of all of these in the mixed zone.

1.13.3 Status of Exploration, Development and Operations

- The Altar project has more than 200 km of historical diamond drilling completed between 2004 to June 2025 and focused on multiple mineralized porphyry centres spread along a 7 km strike length.
- The current PEA study only uses drill holes completed up to May 2024 on the main Altar deposit area (Altar Central-United-East).
- A total of approximately 25,000 m of drilling completed during the 2024-2025 field campaign was not considered in the 2024 Mineral Resource Estimate (MRE) or the current PEA study.
- Additional infill drilling and geotechnical drilling is planned for the 2025-2026 exploration campaign. At the time of this report, crews were already in the project site preparing the camp and cleaning roads of remnant snow in preparation to receive several drill rigs and their associated personnel.
- The infill drilling will focus on those areas of inferred resources in the current mine plan that need to be converted to the measured-indicated categories to be used in a PFS study,
- Geotechnical drilling will focus on collecting the critical data required for the PFS study, with a focus on the open pit and the upper lifts of the three block cave areas, which collectively account for approximately a 30 Year mine life.
- An updated MRE will be required for the PFS study and will incorporate all the new drill holes and data collected during both the 2024-2025 and 2025-2026 campaigns.
- Additional water wells and pump tests are planned for the 2025-2026 campaign to complement those completed in 2024-2025; all of which will be required for the PFS study.
- Continued environmental monitoring and water balance studies are also planned.

1.13.4 Mineral Processing and Metallurgical Testing

- Copper can be recovered from the Altar deposit using conventional copper flotation technology and a process flowsheet that includes copper rougher flotation, regrinding of the rougher concentrate and three stages of cleaner flotation. Conditions selective against pyrite are required to avoid pyrite flotation into the copper concentrate.
- A primary grind size of 80% passing (P80) 190 µm was selected as the optimal primary grind size. Regrinding of the rougher concentrate to P80 20 - 30 µm is required to achieve adequate mineral liberation and produce high grade copper flotation concentrates.
- LoM copper recovery is estimated at 85-88% into copper flotation concentrates containing 26-32% Cu.
- Gold recovery from both Altar Central and Altar East is estimated at 57% based on the locked cycle and pilot plant test results.
- Arsenic in the concentrate is expected to be variable ranging from about 0.5 – 2.2% As. The highest arsenic levels are expected when supergene material is being processed due to the presence of the arsenic-bearing copper mineral enargite (AsCu_3S_4).

1.13.5 Mineral Resource Estimate

There are several options available for treatment of the high arsenic value concentrates. Selection of the best method will require additional process testing and economic evaluation. Test work is underway to evaluate the use of Nuton® Technology, Rio Tinto's proprietary primary sulphide leaching technology, on the Altar copper mineralization.

The Altar Central, United and East zones have potential to expand with additional drilling. The deposits are not completely closed off by drilling and additional target areas have been identified within the Altar concessions. Approximately 20,000m of resource infill and expansion drilling completed during the 2024-2025 field campaign have not been considered or incorporated into this PEA study.

Targeted drilling for: (a) resource confirmation, (b) Nuton Technology and conventional metallurgical testing, and (c) more detailed geotechnical data collection should be planned.

1.13.6 Resources Mined in the PEA

Table 1-6: Resources Mined in the PEA

Category	Zone	Tonnes (Mt)	Average Grade					In-Situ Metal				
			CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	As (g/t)	CuEq (M lb)	Cu (M lb)	Au (Moz)	Ag (Moz)	As (Mt)
Measured	OP-Altar	207.7	0.50	0.45	0.07	1.21	288	2,290	2,061	0.47	8.08	59,818
	UG-Altar	83.5	0.65	0.55	0.17	1.37	118	1,202	1,016	0.45	3.68	9,834
	UG-RCC (IPEEM)	29.3	0.65	0.52	0.22	1.50	110	420	335	0.21	1.41	3,237
	Total Measured-Altar	291.2	0.54	0.48	0.10	1.26	239	3,492	3,077	0.92	11.76	69,652
	Total Measured	320.5	0.55	0.48	0.11	1.28	227	3,911	3,412	1.13	13.17	72,889
Indicated	OP-Altar	14.0	0.36	0.33	0.04	0.85	140	111	102	0.02	0.38	1,960
	UG-Altar	397.6	0.58	0.54	0.05	1.77	128	5,101	4,774	0.64	22.68	50,739
	UG-RCC (IPEEM)	55.7	0.52	0.46	0.10	1.38	115	638	559	0.18	2.48	6,414
	Total Indicated-Altar	411.6	0.57	0.54	0.05	1.74	128	5,212	4,876	0.66	23.06	52,699
	Total Indicated	467.3	0.57	0.53	0.06	1.70	127	5,851	5,435	0.84	25.54	59,112
Inferred	OP-Altar	0.9	0.24	0.24	0.00	0.09	56	5	5	0.00	0.00	50
	UG-Altar	185.0	0.39	0.37	0.03	1.32	83	1,611	1,522	0.16	7.85	15,380
	UG-RCC (IPEEM)	17.1	0.97	0.91	0.06	3.23	204	365	345	0.04	1.78	3,484
	Total Inferred-Altar	185.9	0.39	0.37	0.03	1.31	83	1,615	1,527	0.16	7.85	15,430
	Total Inferred	203.0	0.44	0.42	0.03	1.48	93	1,980	1,872	0.19	9.63	18,914
Total	OP-Altar	222.6	0.49	0.44	0.07	1.18	278	2,383	2,167	0.49	8.47	61,829
	UG-Altar	666.2	0.54	0.50	0.06	1.60	114	7,914	7,312	1.25	34.21	75,952
	UG-RCC (IPEEM)	102.1	0.63	0.55	0.13	1.73	129	1,423	1,239	0.43	5.66	13,134
	Total-Altar	888.8	0.53	0.48	0.06	1.49	155	10,297	9,480	1.74	42.68	137,780
	Total	990.8	0.54	0.49	0.07	1.52	152	11,742	10,719	2.16	48.34	150,914

Source: SRK, 2025

Notes:

1. Mined resources are not mineral reserves and do not have demonstrated economic viability.
2. Abbreviations used in the table above include Mt = million metric tonnes, Kt = thousand metric tonnes, % = percent, g/t = grams per metric tonne, M lb = million pound, and Moz = million troy ounces.
3. All figures are rounded to reflect the relative accuracy of the estimates. Totals may not sum or recalculate from related values in the table due to rounding of values in the table, reflecting fewer significant digits than were carried in the original calculations.
4. At this stage of the Project, it is the Company's opinion that all the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold.
5. All dollar amounts are presented in US dollars.
6. Bulk density is estimated on a block basis using specific gravity data collected on diamond drill core.
7. The in-situ economic copper cutoff grade (CoG) used was 0.18% Cu.
8. Equivalent Copper (CuEq) percent is calculated with the formula $CuEq\% = ((Cu\text{ grade} * Cu\text{ recovery [87.76\% average]} * Cu\text{ price}) + (Au\text{ grade} * Au\text{ recovery [57\%]} * Au\text{ price}) + (Ag\text{ grade} * Ag\text{ recovery [50\%]} * Ag\text{ price})) / (Cu\text{ price} * Cu\text{ recovery})$. It assumes that the Altar Project will produce a conventional (flotation) copper concentrate product based on average metal recoveries at 87.76% Cu, 57% Au, and 50% Ag based on initial preliminary metallurgical test work.
9. Reported contained individual metals in the table above represent in-situ metal, calculated on a 100% recovery basis, except for CuEq% (see Note 8).
10. Mined resources in the PEA for the Project were calculated by Fernando P. Rodrigues, BSc, MBA MMSAQP #01405QP of SRK Consulting, Inc. in accordance with the Canadian Securities Administrators National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and generally accepted Canadian Institute of Mining, Metallurgical and Petroleum "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines ("CIM Guidelines"); and
11. Resources mined effective date: September 1, 2025.

1.13.7 Mining Method

In this study, the proposed mining method is divided into open pit mining for the surface part of the deposit and underground caving for the deeper parts. The open pit will use well-known truck and shovel operations with 12.5 m bench intervals. Underground operations will handle material in bulk using block caving methods. Open pit mining will take place during the first 9 years of the project while UG development is taking place.

The open pit mining sequence consists of 6 phases. The Project has a mine life of 48 years, which includes 3 of construction and 2 years of pre-stripping for the open pit. The mine production plan contains 991 Mt of mineralized material with an average grade of 0.54% CuEq which will be processed at the mill. 223 Mt of mineralized material will be mined via the open pit and 768 t will be mined through underground mining methods.

Other important facilities supporting the Project and the mining process are the crusher pad, mineral process plant, the TSF, and the north and south WRSF.

Underground access to the mining areas will be through a portal and conveyor drift from the south of the proposed pit. Three underground caves (Altar Central, Altar United, Altar East) are divided into two lifts, and an upper and lower, with the upper lifts being mined first followed by the lower lifts in a sequenced manner. The Altar caves are below the pit and will be mined when the pit is finished. The Altar East caves will be mined first, followed by the Altar United cave and then the Altar Central caves.

1.13.8 Recovery Methods

Extensive metallurgical test work has demonstrated that the contained copper and gold values can be effectively recovered in a flotation concentrator that would produce a single gold-bearing copper concentrate using industry-accepted technologies. The flowsheet includes primary crushing followed by grinding in a SAG (semi-autogenous grinding) mill/ball mill grinding circuit, rougher flotation, regrinding of the rougher concentrate and three stages of cleaner flotation. The concentrator would be constructed with a capacity to process 60,000 tpd and operated on a 365 day/year, 24 hour/day schedule.

1.13.9 Project Infrastructure

The project infrastructure design includes a third-party port, access to the site, a waste dump, a TSF, an open pit area, an underground block caving area, and camp for employees. The road system on site including haul roads is identified. Tailings storage and tailings handling system have been accounted for. Water systems including makeup water, surface water control, potable water, and firewater are in the design documents. The Project has included the appropriate facilities for operations. The energy needs for the Project include an electric power generation system (third party). A cost estimate for installation of the infrastructure has been included at PEA level in this study.

The infrastructure surveys will need to be updated to the appropriate level for future study. Specific areas include the third-party port and road system to site. SRK recommends that Aldebaran develop the third-party port facilities options further in the PFS level design and develop a firm option. SRK further recommends additional optimization of the power supply system and refinement of the costs and appropriate trade-offs to confirm the size and number of power lines to provide the Project power requirements. These activities will take place in the next level of study.

1.13.10 Environmental Studies, Permitting and Social Impacts

Robust baseline datasets have been developed for most aspects of the environment, and this work should continue in parallel with engineering studies, for the preparation of an IIA. Highlights are summarized as follows:

- **Cryogenic landforms:** A key permitting risk is represented by the cryogenic landforms within the Project area and the Glacier protection laws, but there is a plan well underway that should effectively manage that issue.
- **Stakeholder engagement** - efforts should ramp up as the Project advances and ahead of submission of an IIA.
- **Mine hydrogeology:** Future study should include the following elements to further characterize groundwater in relation to the open pit and underground:
 - Hydrogeological instrumentation program - designed and implemented in coordination with geotechnical programs for the open pit and block cave design. The instrumentation would target key locations and structures to aid in:
 - Identifying pore pressures in the vicinity of pit walls and underground workings
 - Long term monitoring of pore pressure changes during mining.
 - Characterization of geological structures.
 - In situ testing of geological materials - conducted to inform the:
 - Design of dewatering/depressurization systems.
 - Hydraulic characterization of rock mass and geological structures
 - Groundwater sampling - Sampling of groundwater quality in discrete units, to allow prediction of the likely groundwater quality which will enter the open pit and underground workings.
 - Reanalyze the 2025 pumping test data to consider the anisotropy of the system.
- **Water supply:** A water supply strategy for the project will need to be multi-faceted, including multiple supply sources and various water conservation measures (measures to reduce usage and losses, recycling, etc.). A water supply study is envisaged to estimate the quantity of water that could be used for mine operations:
 - Additional investigation of the La Pantanosa Valley aquifer, including additional geophysics, drilling and well installation, in-situ sampling and pump tests.
 - Identification and investigation of alternative well field locations beyond the La Pantanosa Valley aquifer.
 - Consideration should be made of the potential to implement an aquifer storage and recovery system, for example by injecting surface water into the La Pantanosa Valley aquifer during high flow periods.
- **Geochemical characterization:** Waste rock characterization is underway and should continue, and tailings should be subject to geochemical characterization in the next phase of study.

1.13.11 Capital and Operating Costs

The capital costs estimate prepared for this study can be considered between a Class 5 and Class 4 (AACE) level of detail, which is considered more than required for a PEA level study. Contingencies vary from 15% to 25% and reflect the level of detail of the prepared estimates.

The operating cost estimates prepared for this study were mostly prepared under a first principles basis and are more than adequate for a PEA level study. Most of the estimates also include contingencies, which range from 5% to 25%.

More work could be done to identify the exact port where the concentrate will be transported to and the potential routes and modes of transportation.

1.13.12 Economic Analysis

The results of the economic analysis indicate that, at an average concentrate price of US\$4.35/lb-Cu, the operation returns an after-tax NPV at 8% of US\$2,009 million.

Estimated internal rate of return is 20.5%, all-in sustaining cash costs are estimated at US\$2.59/lb-Cu and project payback is expected by year 4 of operation.

There could be an upside related to the sale of the copper concentrate if more favorable smelter terms can be secured for the sale of gold and silver, as a big portion of the potential revenue of these metals are being offset by the assumed smelter terms.

2 Introduction

SRK Consulting (US) Inc., SRK Consulting (Canada) Inc., (collectively SRK), Knight Piésold (KP), Independent Mining Consultants, Inc. (IMC) were requested to prepare the Preliminary Economic Assessment (PEA) report by Aldebaran Resources Inc. (Aldebaran) for the Altar copper-gold porphyry project in San Juan Province, Argentina (Altar or the Altar Project).

Aldebaran had an option to earn up to an 80% interest in the Altar Project pursuant to an option and joint venture agreement (the JV Agreement) entered in 2018 with Stillwater Canada LLC (Stillwater), an indirectly owned subsidiary of Sibanye-Stillwater Limited (Sibanye-Stillwater). On August 14, 2023 (see Aldebaran's press release dated August 14, 2023), Aldebaran announced it had officially acquired a 60% interest in the Altar Project from Sibanye-Stillwater. As of June 30, 2024, Aldebaran had crossed the threshold to acquire an 80% interest in the Altar Project from Sibanye-Stillwater (see Aldebaran's press release dated April 15, 2025). Stillwater Mining acquired the Altar Project when it acquired Peregrine Metals Ltd (Peregrine) and its Argentine subsidiary Minera Peregrine Argentina, S.A. in October of 2011.

This technical report documents the status of the project as of September 1, 2025.

This report is written in compliance with disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101, Companion Policy 43-101Cp, and Form 53-101F1. In addition, the Standards and Guidelines of the Canadian Institute of Mines and Metallurgy (CIMM) have been followed in the development of this estimate of Mineral Resources.

Table 2-1 lists the Qualified Persons for this report.

Table 2-1: Qualified Persons

Qualified Person	Site Visit Date	Responsible for Sections
John Marek, P.Eng. President of Independent Mining Consultants, Inc., Registered Member of the SME	February 1 to 2, 2013	1.5 1.13.5 12 14
Jacob R. Richey, P.Eng. Senior Mining Engineer at IMC Inc.	April 17 to 19, 2024	1.5 1.13.5 12 14
Dr. Kevin B. Heather, BSc (hons), MSc, PhD, FAusIMM, FSEG, FGSL, Chief Geological Officer, Aldebaran Resources Inc.	February 4-to 6, 2025 and April 5-7 2025	1.1-1.3 1.13.1-1.13.3 4-11 23
Fernando Rodrigues, BS Mining, MBA, MAusIMM, MMSAQP	January 28 to 31, 2025	1.6-1.7 1.9 portion of 1.11 1.13.6 1.13.7 1.13.9 1.13.11 2,3 15 16.1 16.4 16.6 18.1-18.2 18.5-18.11 21.1.1 portion of 21.4 21.5 21.6.1 24.1-24.4 26 26.5 27
Eric Olin, MSc Metallurgy, MBA, SME-RM, MAusIMM	NA	1.4 1.8 portion of 1.11 1.13.4 1.13.8 1.13.11 13 17 24.5-24.6
Mark Willow, MSc, CEM, SME-RM	NA	1.10.3 1.10.4 1.13.10 20.2 20.4
Bruce Murphy, MSc Engineering (Mining), BSc Mining and Exploration Geology, BSc Geology and Advanced Earth Sciences, P. Eng., MMSAQP	NA	16.2-16.3

Qualified Person	Site Visit Date	Responsible for Sections
Matthew Sullivan, BS Economics, BS Metallurgy	NA	portion of 1.11 1.12 1.13.12 19 21.9 22
Anton Chan, BEng Mining, MS Earth Science, P.Eng., MMSAQP	NA	portion of 1.11 1.13.11 16.5 21.1.2 21.6.2
Craig Hall (Knight Piésold Ltd.), BSc Geological Engineering, P.Eng.	NA	portion of 1.11 1.13.11 18.3-18.5 portion of 21.4 26.1-26.5
Bruno Borntraeger (Knight Piésold Ltd.), BSc Geological Engineering, P.Eng,	NA	24.6.5
Richard Cook (Knight Piésold Ltd.), BSc Environmental Science, P.Geo. (Ltd.)	NA	1.10 1.10.1-1.10.2 1.13.10 20.1 20.3 26.6

Source: SRK, 2025

IMC's John Marek, and Jacob Richey are independent of Aldebaran Resources Inc., Sibanye-Stillwater Limited, and Minera Peregrine Argentina S.A. applying the tests in Section 1.5 of National Instrument 43-101 and are responsible for a number of sections of this technical report.

Dr. Kevin B. Heather of Aldebaran Resources Inc. visits the site frequently. His most recent visit was in February 4-6, 2025, and April 5-7, 2025, as noted above. Dr. Heather is not independent applying the tests in Section 1.5 of National Instrument 43-101.

John Marek visited the Altar Property February 1-2, 2013, to understand site conditions and geologic outcrop as well as review the on-site sample collection, preparation, and security procedures. John Marek also visited the sample preparation and assay facilities that are used for the project on February 4, 2013, to review sample preparation, core handling, and security for shipment to assay laboratories.

Jacob Richey completed a site visit during April of 2024 to understand site conditions and geologic outcrop as well as review the on-site sample collection, preparation, and security procedures. Jacob Richey also visited the Aldebaran office and warehouse in San Juan, where all of the core for the project is stored.

John Marek, Jacob Richey, and IMC have had full access to all drilling, sampling, and site exploration data that is available. That information has been reviewed by John Marek and Jacob Richey and has been found to be consistent with the exploration discussion presented in Section 9.

All SRK and Knight Piésold consultants are independent of Aldebaran Resources Inc., Sibanye-Stillwater Limited, and Minera Peregrine Argentina S.A. SRK's Fernando Rodriguez and Knight

Piésold's Wilson Muir visited the Altar Property on January 28th, 2025, to review site condition and have a deeper understanding on on-site challenges and opportunities.

The sources of information for this report are the drilling, assays, geological interpretation, and process metallurgical testing completed by Aldebaran and Stillwater/Peregrine. IMC, SRK and Knight Piésold have reviewed the supporting information provided by Aldebaran and performed check calculations where possible to confirm procedures and assumptions used by Aldebaran. Where checks and confirmations were not possible, QP's have assumed that all information supplied is complete and reliable within normally accepted limits of accuracy. During the normal course of the review, none of the consultants discovered any reason to doubt that assumption.

The metric system is used throughout this report, and all currency is in U.S. dollars. References to pounds of copper reflect the convention of marketing copper in Imperial Units. Gold and Silver metal are reflected in Troy ounces. Copper grades are in percent by dry weight. Gold, silver, molybdenum, and arsenic grades are in grams per metric tonne (gm/t = ppm). Ktonnes means 1000 metric tonnes.

3 Reliance on Other Experts

SRK, KP and IMC have relied on the contributions from members of the Aldebaran staff. IMC, KP and SRK have reviewed that work and finds that it has been performed to normal and acceptable industry and professional standards. SRK, KP and IMC are not aware of any reason why the information provided by Aldebaran cannot be relied on.

Chief Geological Officer Dr. Kevin B. Heather, Aldebaran's qualified person, authored Sections 1.1-1.3, 1.13.1-1.13.3, 4 - 11, and 23. Those sections have been reviewed by the qualified person John Marek.

Processing of Altar mineralized materials may include heap leaching of both secondary and primary copper sulphides using novel Rio Tinto's Nuton Technology. SRK relied on information provided by Nuton® to properly cost OPEX and CAPEX for comparison scenarios used for Section 24.

Section 4 regarding the Property Description and Location has been updated by Dr. Heather and Javier Robeto of Aldebaran during 2024. IMC has not reviewed the mineral tenure nor independently verified the legal status or ownership of the project area or underlying property agreements.

SRK relied on the work done by CRU to appropriately estimate and model the arsenic penalties associated with processing high arsenic concentrates.

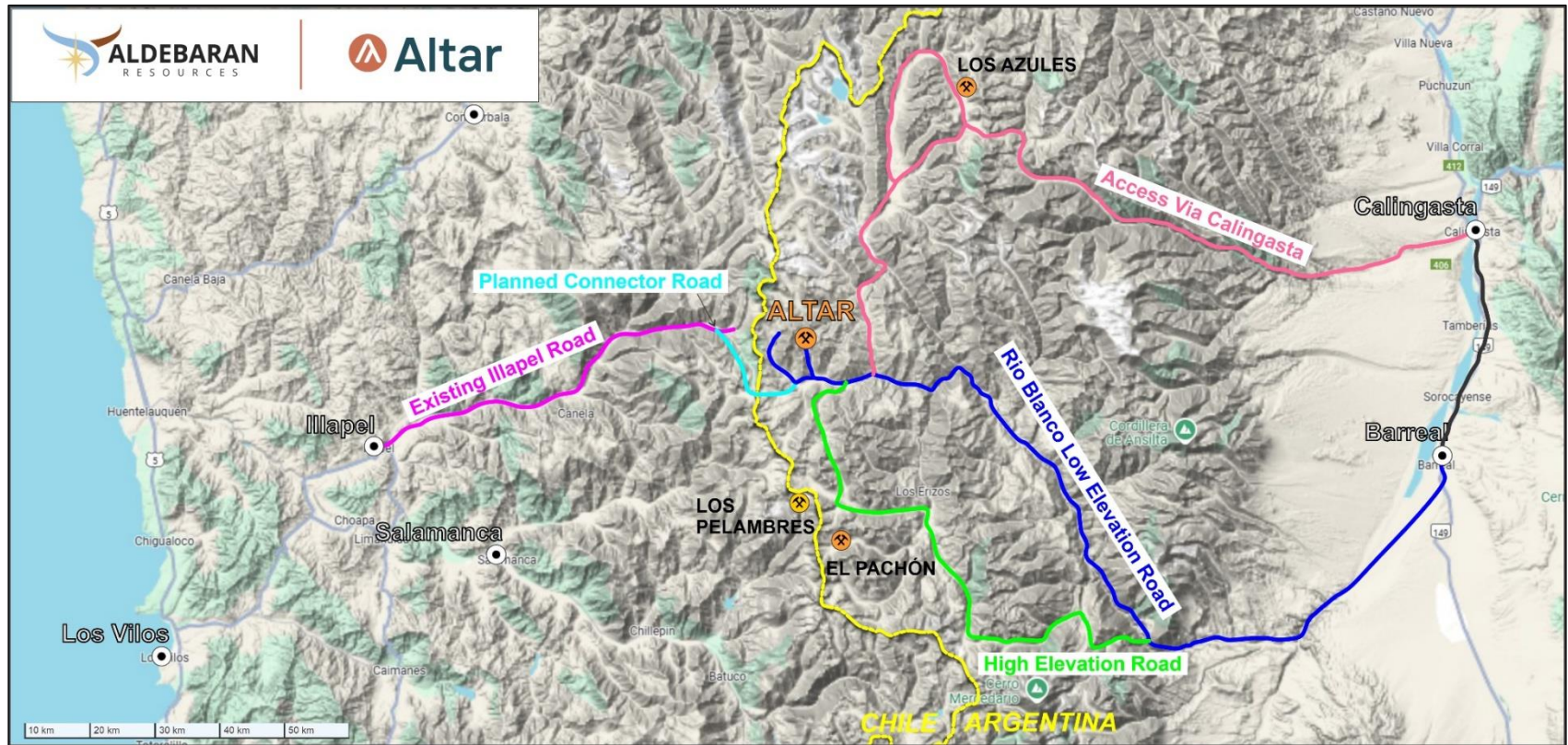
4 Property Description and Location

The Altar property description and location was updated by Javier Robeto, Moria Rothis, and Dr. Kevin B. Heather during 2024. Dr. Heather is the qualified person for this section.

Dr. Kevin B. Heather is not aware of any significant factors or risks that may affect access, title, or the right or ability to perform work on the property.

4.1 Property Location

The Altar Project is located in Argentina, within the Province of San Juan, about 10 km from the Argentina–Chile border, and approximately 180 km in direct line west of the city of San Juan (Figure 4-1). The Project is centred on approximate coordinates 6,817,190 m North and 2,359,830 m East with datum set to Campo Inchauspe and projection to Gauss Kruger, Zone 2. Elevations within the Project area range between 3,100 meters above sea level (masl) and 4,000 masl. The centre of the Altar deposit is at an elevation of about 3,400 masl.



Source: Aldebaran Resources, 2024 (modified from Peregrine Metals Ltd., 2012)

Figure 4-1: Project Location and Access Routes Map

4.2 Overview of Argentina

The Republic of Argentina is in the southeastern portion of South America. Argentina is bordered to the south and west by Chile, and to the north by Bolivia and Paraguay. The east side of Argentina is bordered by Brazil, Uruguay, and the Atlantic Ocean (Figure 4-1).

Argentina is the second largest country in South America after Brazil and the eighth largest in the world. The population of the country is about 45,851,378 with approximately 15,752,300 living in the capital city, Buenos Aires, and its suburbs.

4.2.1 Metal Mining in Argentina

Historically metal mining has not played a dominant role in Argentina's economy, but this situation has changed during the last fifteen years. While industrial minerals and building materials accounted in the past for nearly two thirds of the total mining production, more recently Argentina's metal mining sector has become a significant contributor to the country's economy, with a diverse range of minerals being extracted. The country's mineral wealth includes lithium, copper, gold, silver, and uranium, with lithium being the most prominent. Argentina's lithium reserves are part of the renowned "Lithium Triangle" alongside Bolivia and Chile, which collectively hold over 50% of the world's lithium resources. The country's lithium resources are predominantly found in brine deposits across the provinces of Catamarca, Jujuy, and Salta. In 2019, Argentina was the world's 4th largest producer of lithium, the world's 9th largest producer of silver, the 17th largest producer of gold and the 7th largest world producer of boron. Argentina is one of three producers of primary aluminum in Latin America. The country is Latin America's 3rd steel producer (after Brazil and Mexico), 5th lead producer (after Peru, Mexico, Brazil and Bolivia) and 6th zinc producer (after Peru, Bolivia, Mexico, Brazil and Honduras).

Argentina's copper mining industry is a growing and strategically important sector, with major projects like Josemaría, Taca Taca, and El Pachón positioning Argentina to become a significant global copper producer in the coming decades. The Mining Department of the Ministry of Planning and Public Investment oversees the mining industry in Argentina, and it is regulated at the provincial level, with San Juan, Catamarca, and Salta provinces being the most mining friendly.

The important operating mines in Argentina are Pirquitas (Province of Jujuy), Lindero (Province of Salta), Gualcamayo and Veladero (Province of San Juan) and Cerro Vanguardia, Mina Santa Cruz, Manantial Espejo, Cerro Negro, Cerro Moro (Province of Santa Cruz) are also in production. There are a number of well-defined porphyry copper resources in pre-feasibility or feasibility development including Taca Taca, Agua Rica, Jose Maria, Los Azules, Filo del Sol and Pachon.

4.2.2 Mining Industry and Legislation

The Argentine Mining Code, which dates to 1886, is the legislation which deals with mining in the country. Special regimes exist for hydrocarbons and nuclear minerals. In the case of most minerals, the Mining Code dictates that the owner of the surface is not the owner of the mineral rights; these are held by the Provincial State. The State is also bound by the Code to grant to whoever discovers a new mine the rights to obtain a "mining concession".

Owners must comply with three conditions: payment of an annual fee, investment of a minimum amount of capital, and the carrying out of a reasonable level of exploitation. Failure to do so could lead to forfeiture of the property back to the Provincial State.

The administrative organization for mining specific regulation at the Federal level is the Federal Ministry of Planning and Public Works and Investment, which has a Mining Department headed by the Secretary of Mines. At the Provincial level, there are mining departments, or mineral courts depending on the jurisdictions, that deal with the granting of exploration permits and mining concessions, and have jurisdiction on mining permitting, in general. The Argentine Mining Code is a federally drafted law implemented by all Provincial governments under the National Constitution of Argentina. Argentine Provinces retain sole jurisdiction on matters of procedural regulations but cannot change the Mining Code.

In 1980, an amendment recognized the need for modernizing the production and classification of minerals, size of individual mining areas (to encourage development of low-grade deposits) and elimination of miners' rights to encourage foreign companies to engage in mining operations through public tenders.

Between 1993 and 1995, Argentina implemented a new Mining Investment Law, a Mining Reorganization Law, a Mining Modernization Law, a Mining Federal Agreement, and Financing and Refund of IVA. Decree 456/97 implemented a unified text of the Mining Code with all amendments made by the aforementioned legislation. These amendments offered attractive incentives for exploration and mining to foreigners, and include both financial and tax guarantees, such as import duty exemptions, unrestricted repatriation of capital and profits and a 3 percent cap on Provincial royalties. This group of laws also creates the basis for federal-provincial harmonization of the procedural regulations.

In 2001, Law 25.429 "Update of the Mining Investment Law" was passed, and in March 2004 approval was reached for a key provision of the Law allowing refund of the IVA (or value added tax) for exploration related expenses incurred by companies registered under the Mining Investment Law. In 2024 a change was introduced to a 5 percent cap on Provincial royalties.

In 1995, Law No 24.585 Environmental Protection (Mining Code) was passed and provides regulation for operations and environmental reporting at the exploration and exploitation levels. During February of 2016, Argentine President Macri made several changes including the elimination of the export retention on concentrates and final products (dore), but they were reinstated in September 2018.

In summary, the major changes to the Mining Code in force today encompass:

- Exploration areas have been increased to a maximum of 200,000 ha per company and per Province.
- Exclusive aerial prospecting areas of 20,000 km² (that can be extended to 40,000 km² in Provinces whose territory is more than 200,000 km²), are also permitted.
- A guarantee of tax stability for 30 years has been granted.
- Expenditures made in prospecting, exploring and construction of mining installations are tax deductible, and value added taxes are recoverable.
- Imports of capital goods, equipment and certain raw materials are exempt from import duties.
- Provincial royalties will not exceed 5 percent of the ex-mine value of the extracted mineral.
- Environmental funds to correct damage are required and are deductible from income taxes; a national system of permanent mining environmental monitoring is set up. Implementation at the provincial level has been variable and in 2004-2005 San Juan Province began to increase staffing for monitoring purposes.

- Municipalities are encouraged to eliminate taxes on mining.
- Systemization and digital conversion of mining property registers have been implemented to varying degrees of success in each Province and the definition by geographic coordinates now establishes mining rights.

A number of changes were made during February of 2016 with the election of President Macri. The Department of Energy and Mining was formed which has a Secretary of Mines.

At that same time, the export tax on concentrates and final products (dore) were eliminated, plus increased freedom of capital inflows/outflows and simplified import of capital goods was put into place. In September 2018 export tax (retention) was implemented back.

A provincial Secretary of Mines has been in place in San Juan Province since early 2004. The Secretariats are also commissioned to foster mining investment, participate in cooperation between international and inter-jurisdictional departments, and to oversee environmental, labor and hygiene issues related to mining. They respond to and govern initiatives of the National Mining Commission (which supervises the country's mining policy) and oversee the National Geological Service Board (SEGEMAR, which functions as a national Geological Survey). In the Province of San Juan, the Mining Ministry was created at the end of 2010, and a mine minister is appointed to lead this Ministry.

In mid-2024, President Milei's government approved the "Bases Law," which includes the Incentive Regime for Large Investments (RIGI), designed to attract significant capital investments. This framework involves tax, customs, and exchange flexibility to encourage companies to invest more than US\$200 million in Argentina, offering 30 years of fiscal stability.

The RIGI enables Argentina to attract investments in strategic sectors such as oil and gas, mining, renewable energy, forestry industry, steel production, technology, infrastructure, and tourism.

Key benefits of RIGI include:

- Tax benefits:
 - Accelerated refund of VAT credits within no more than three months.
 - Reduction of the corporate income tax rate from 35% to 25%
 - Full deduction of taxes on bank debits and credits as a credit against income tax.
 - Payment of VAT through transferable Tax Credit Certificates.
- Foreign exchange benefits:
 - Gradual free availability of foreign currency from exports, starting with 20% in the first year, 40% in the second, and 100% from the third year onward.
 - Access to foreign currency for local or external financing without restrictions.
- Customs benefits:
 - Exemption from export duties for the first three years for projects under RIGI.
 - Exemption from import duties on capital goods, spare parts, components, and inputs.

This regime aims to provide predictability, legal certainty, and clear rules for project development, especially for export-oriented initiatives. Companies have until July 2026 to join the RIGI from the date the decree came into effect. The deadline may be extended by one additional year if deemed necessary by the government.

4.2.3 Mineral Property Title

Among other functions, the Mining Code constitutes the system to obtain exploration rights or concessions. Characteristics of an exploration concession, referred to as a cateo, include:

- Exclusivity - the holder of the cateo has rights to any mineral discoveries, including those made by a third party within the boundaries of the cateo.
- Extent - cateos are measured in 500 ha units, or fractions thereof. No single cateo may exceed 10,000 ha (20 units), and no person may hold more than 200,000 ha (20 cateos) in a single Province.
- Time - the holder of a cateo must assess the mineral potential within its exploration boundary within a time period based on the size of the cateo. The exploration term is 150 days for the first 500 ha (1 unit) or fraction thereof, and an additional 50 days for each additional unit (or fraction thereof) within the cateo. As an example, a cateo with the maximum size (20,000 ha) has a 1,100-day term. After three hundred days, 50 percent of the exploration area over 2,000 ha (4 units) within the cateo must be relinquished. At seven hundred days, 50 percent of the remaining area over 2,000 ha (4 units) must be dropped. Time extensions may be granted to allow for inclement weather, difficult access, etc.
- Work - the holder of a cateo must present to the mining authority a minimum exploration work program and schedule. The cateo may be revoked if the requirements of the work program and schedule are not met.

A one-time fee per 500 ha (one unit) must be paid upon application for a cateo.

The Mining Code also regulates exploitation rights (mining concessions). Priority for receiving a mining concession is given to the registered discoverer of the mine, i.e. the holder of the cateo. A mining concession unit area, or “pertenencia”, is 6 ha for some types of minerals (mainly, gold, silver, copper, and, generally, hard rock minerals), in common deposits, and 100 ha for the mentioned type of minerals if found in disseminated mineral bodies; each mining concession may consist of one or more units. The application to the mining authority must include official cartographic coordinates of the mine location and of the reconnaissance area, and a sample of the mineral discovered. The reconnaissance area, which may be as much as twice the surface area projection of the mine, is intended to allow for the geological extent of the ore body and for site layout and development. Excess area is released once the survey plans are approved by the mining authority.

Once the application for a mine has been submitted and the Environmental Impact Assessment has been approved, the applicant may commence works on the reconnaissance area of the application. Any person, or company, opposed to the application for title to the new mine, whether a holder of an overlapping cateo, a mining title holder with conflicting claims, a partner in the discovery that claims to have been neglected, among others, may submit his opposition, following publication of the application in the Boletín Oficial or official publication of the Provincial jurisdiction. The person, or company, opposed to the mining concession application must present evidence of his claim to the Provincial mining authority. The Provincial mining authority resolves the opposition, and such a resolution can be appealed to the Provincial mining law courts.

Within 30 days after the term to file certain statutory exploration works on the reconnaissance area of the mining concession application, the applicant must submit a legal survey of the units (“pertenencias”) requested for the new mine, within the maximum property limits allowed by the Mining Code. The request is published in the Boletín Oficial and may also be subject to opposition by third

parties, (on different grounds than the disputes mentioned above), to be resolved under similar rules as mentioned with regard to opposition to the application for mining concessions. Approval and registration of the legal survey request by the Provincial Mining Authority constitutes formal title to the mining property.

4.2.4 Royalties

On October 1, 2014, Rio Tinto sold its 1 percent NSR royalty on the Altar Concession to Vaaldiam Mining Inc. a wholly owned subsidiary of Orion Resource Partners LP. Osisko Gold Royalties subsequently acquired the Altar Concession one percent NSR royalty when it acquired Orion. Osisko Gold Royalties currently holds the one percent NSR royalty on the Altar Concession.

The original underlying concession owners Juan Carlos Robledo and Otto Wilko Simon (Robledo and Simon) also hold the Robledo Royalty, being an NSR royalty of 1 percent on all mineral products from the mining concessions known as Loba, Santa Rita, RCA II and RCA VII. The Corporation has the right to purchase the Robledo Royalty at any time for a payment of US\$ 1,000,000. As stipulated in the contract, as there was no mine in production by April 21, 2010, payments of US\$ 80,000 per annum until commercial production was achieved started to be applied and payments were made to Robledo and Simon. On the date of commencement of commercial production, the annual payments cease, and the Robledo Royalty becomes due. The annual payments are in addition to, and not an advance on, the Robledo Royalty.

According to the Mining Investment Law, mining royalties imposed by the provinces cannot be more than 5 percent of the mineral's mouth-of-mine value.

Mining royalties are paid to the provincial government in the territory of which the exploitation concession is registered and are paid in equal installments twice yearly. A mining operation that has not paid its royalty within two months of the due date will be served a notice by the mining authority.

In the Province of San Juan, the law stipulates that the Provincial Royalty is 3 percent of the mineral mouth-of-mine value, defined as the value obtained in the first instance of commercialization minus all direct costs necessary to bring the mineral to commercialization at the exception of the extraction costs.

Canon and Other Conditions to Keep Title in Good Standing

Apart from payments indicated above, a mining concession is subject to pay certain special types of charges that are called, in Spanish, "Canon". Canon is set by Mining Code according to the special class or category of the minerals found in a deposit. The discoverer of the mine is exempt from paying Canon for 3 years from the date on which application of title to the mine is registered.

In addition, the holder of the exploitation concession must also commit to investing in the property fixed assets of at least three hundred times the value of the annual Canon, over a period of five years. In the first two years, 20 percent of the total required investment value must be made each year. For the final three years, the remaining 60 percent of the total required investment may be distributed in another manner. The exploitation concession can be terminated if the minimum required investment schedule is not met.

Finally, the mining company has to keep a sustainable mining program in the mining concession. If a mining concession remains abandoned for more than 4 years, the mining authority will give notice to the title holder to direct it to file a plan to reactivate mining works over a five-year term. Failure of the

title holder to file the plan or, if filed to comply with its terms and conditions will cause the mining concession to terminate and title goes back to the provincial authorities.

A new mining operation is entitled to national, provincial, and municipal tax exemptions for five years. The exemptions commence with the registration of application of the mining concession.

4.2.5 Surface and Private Property Rights

Access over surface property rights, mainly in the forms of rights of way and occupancy rights (“Land Easements”), in Argentina, is obtained through the provincial mining authorities which will require title holders to give a guarantee to cover damages, if any, that may be inflicted on the surface landowner. Usually, surface owners and mining companies negotiate the terms of an adequate settlement on payments due to the surface owners for Land Easements, which are filed with the Mining Department in the Province concerned for approval. In the absence of such a settlement, the provincial mining authorities resolve under the principle that mining activities are of public interest.

Private property rights are secure rights in Argentina, and the likelihood of expropriation is considered low. The Argentine legal and constitutional system grants mining properties all the guarantees conferred on property rights, which are absolute, exclusive and perpetual. Mining property may be freely transferred and acquired by foreign companies.

4.2.6 Environmental Regulations

The Environmental Protection Act (EPA) of Argentina, enacted in 1996, establishes the guidelines for preparing environmental impact assessment studies for mining projects. The guidelines for preparing environmental impact studies or reports for mining activities (prospecting, exploration, and exploitation) were established through National Law No. 24585, enacted in 1995 and incorporated into the National Mining Code (National Decree No. 456/97). National Law No. 24585 on Environmental Protection for Mining Activities includes, in Annex IV, guideline levels for water, soil, and air quality. The Province of San Juan adhered to this law through Provincial Decree No. 1426/96 (currently Provincial Decree No. 0007/2024).

A party wishing to commence or modify any mining-related activity as defined by the EPA, including prospecting, exploration, exploitation, development, preparation, extraction, and storage of mineral substances, as well as property abandonment or mine closure activity, must prepare and submit to the Provincial Mining and Environmental Authorities an Informe de Impacto Ambiental or Environmental Impact Assessment (EIA) prior to commencing the work. Each EIA must describe the nature of the proposed work, its potential risk to the environment, and the measures that will be taken to mitigate that risk. The provincial authorities have a sixty-day period to review and either approve or reject the EIA; however, the EIA is not considered to be automatically approved if the provincial authorities have not responded within that period. Normally, provincial authorities have questions, comments or require additional information or studies granting a thirty-day period to the applicant in which to answer the questions or file additional information or documents.

If accepted by the provincial authorities, the EIA is used as the basis to issue a Declaración de Impacto Ambiental or Declaration of Environmental Impact (DEI) to which the applicant must agree to uphold during the mining-related activity in question. The DEI must be updated at least once every two years. Sanctions and penalties for non-compliance to the DEI are outlined in the EPA, and may include

warnings, fines, suspension of Environmental permits, restoration of the environment, temporary or permanent closure of activities, and removal of authorization to conduct mining-related activities.

In 2010, the Federal Government approved a law to establish the minimum standards for the protection of glaciers and peri-glacial environment. A regulation was successively approved in 2011. Law 26.639 establishes minimum budgets for the protection of glaciers and the periglacial environment to preserve them as strategic reserves of water resources for human consumption; for agriculture and as water suppliers for the recharge of watersheds; for the protection of biodiversity; as a source of scientific information and as a tourist attraction. According to this Law, glaciers constitute public assets.

San Juan Province Environmental Regulations

Under Argentine Mining Law, the State Mining Ministry (SMM) of the San Juan Province manages the environmental approval system for new mining projects. The applicable evaluation process of the EIA is handled by the Secretary of Environmental Management and Mining Control.

The new Decree of the Provincial Law 1679 SMM, dated October 2006, states that for small and medium mining projects in San Juan Province, the EIA must be presented together with a feasibility study. This allows the SMM to determine the size of the deposit to select the members of the Evaluation Commission, as well as defining the corresponding terms of reference. The environmental impact assessment procedure for the prospecting, exploration, and exploitation stages is regulated by Provincial Decree No. 0007/2024, published in the Official Gazette of the Province of San Juan in December 2024. Provincial Decree No. 0007/2024 repealed Provincial Decree No. 1679-SEM-06, which was also not applicable to large mining projects.

After obtaining an EIA, the applicant must apply and obtain various permits and authorizations from the Province of San Juan to proceed with Project development. The permits and authorizations demonstrate compliance with current legislation for the construction and operation of mining operations.

The Province of San Juan passed in 2011; a law aiming at the protection of the Glaciers and approved the regulations of such law in 2011 and 2012. The Government of the Province of San Juan presented a claim to the Supreme Court of Argentina stating that the Glacier Protection was of Provincial jurisdiction. The national law includes the entire periglacial environment including permafrost where the provincial law excludes permafrost. The Supreme Court of Justice of Argentina issued a ruling rejecting the submission by the Province of San Juan. The current name of Provincial Law No. 8144 is Provincial Law No. 1076-L.

4.3 Property Description - Argentina

4.3.1 General

The Altar Concession consists of nine mining concessions and nine land easements comprising rights of way or occupancy as shown on Table 4-1 and Figure 4-2. It also includes an option on the five Rio Cenicero mining concessions (IPEEM), four of which are immediately adjacent to the Altar property and one of which is located to the southwest of the Altar property. The Altar mining concessions and exploration permits collectively cover an area of approximately 8,443.7 hectares (ha) and the Rio Cenicero mining concessions cover an additional 3,716.6 ha.

Exploration permit 1124-444-M-08 (the Leon Norte Permit) was acquired from MIM Argentina Exploraciones S.A. (now Glencore, Pachón Project). A mine concession was staked by Peregrine Argentina in the Leon Norte Permit area on September 5th, 2016, and a request was sent to the mining authorities to include this concession within the Altar Concession Package.

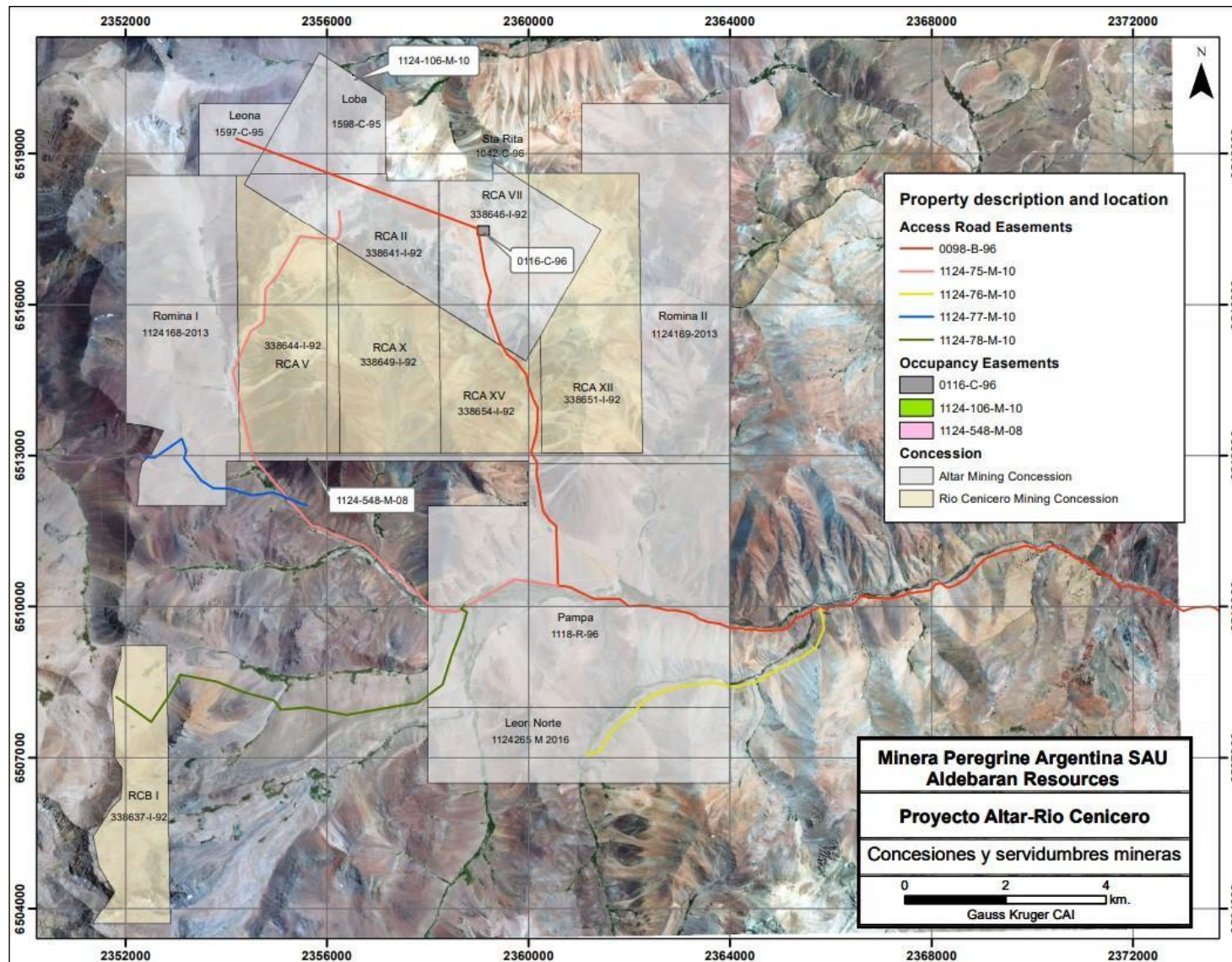
The Altar deposit is situated mainly on the RCA VII tenement as illustrated in Figure 4-2. The exploration camp is located seven kilometers south of the Altar deposit in the Pampa mining concession.

Table 4-1: Tenure Details

Concession Number	Concession Name	Concession Type	Area (ha)
Mining Tenure			
Altar			
1597-C-95	Leona	Mine	200.00
1598-C-95	Loba	Mine	300.00
1042-F28-C-96	Santa Rita	Mine	3.90
1118-F28-R-96	Pampa	Mine	2,740.00
338.641-I-92	RCA II	Mine	549.00
338.646-I-92	RCA VII	Mine	809.30
1124-168-M-13	Romina I	Mine	1,373.30
1124-169-M-13	Romina II	Mine	1,568.17
1124-265-2016	Leon Norte	Mine	900.00
Subtotal Area Altar			8,443.7
Rio Cenicero Concession			
338.644-I-92	RCA V	Mine	965.70
338-649-I-92	RCA X	Mine	709.10
338-651-I-92	RCA XII	Mine	942.10
338-654-I-92	RCA XV	Mine	464.60
338-637-I-92	RCB I	Mine	599.96
Sub-total Area Rio Cenicero			3,681.46
Rights of Way			
0116-F-28-C-96	Rio Tinto	Occupancy Easement	30 Ha
98-B-96	No name	Access Road Easement	22.6 km
1124-75-M-2010	No name	Access Road Easement	13.6 km
1124-76-M-2010	No name	Access Road Easement	6.1 km
124-77-M-2010	Cenicero	Access Road Easement	4.0. km
124-78-M-2010	Casa Piedra	Access Road Easement	9.2. km
1124.106-M-2010	La Pampa	Occupancy Easement	1,991 Ha
1124.107-M-2010	Ore Body	Occupancy Easement	2,741 Ha
1124-161-M-2010 ¹	Pampa	Access Road Easement	6.8.km

Source:

¹Overlaps with Access Road easement 98-B-96.



Source: Aldebaran Resources, 2021

Figure 4-2: Project Location Map

Rio Cenicero Option

The five mining concessions cover a total of approximately 3,716 ha. These concessions are collectively referred to as the “Rio Cenicero concessions”.

The option agreement was signed on 14 August 2008 between Minera Peregrine Argentina S.A. (Minera Peregrine) and the Exploration and Mining Institute of the Province of San Juan (IPEEM). The conditions are presented below:

Stage 1 - Exploration (August 2008 through 14 August 2013)

Initially a 5-year exploration period is granted to Minera Peregrine, and the following conditions are included in the contract:

- The total exploration expenditure for the 5-year period have to total US\$ 1.7 M. The time frame for expenditures is as follows:
 - Minimum US\$100,000 on or before first anniversary date of signing of option agreement.
 - Minimum additional US\$100,000 on or before second anniversary date of signing of option agreement.
 - Minimum additional US\$500,000 on or before third anniversary date of signing of option agreement.
 - Minimum additional US\$1,000,000 on or before fifth anniversary date of signing of option agreement.

The contract stipulates that Minera Peregrine must pay to IPEEM US\$2,500 option payment each month to maintain the Option payment and pay the mining rights corresponding to the Rio Cenicero concessions. Minera Peregrine is also responsible for obtaining all permits related to the execution of the different activities carried out on the Rio Cenicero concessions. The contract also contains clauses related to provisions to extend the exploration period, force majeure and transferability of the contract, subject to IPEEM approval. At the end of Year 4, Peregrine Metals reported expenses registered in Argentina on the Rio Cenicero Concessions of US\$3,127,005, excluding Value Added Tax.

Additional exploration period extensions were requested by Peregrine and approved by IPEEM resolution. The previous exploration extension was for the period from April 2020 to April 2022 and includes minimum spending/investment of US\$750,000 for year 1 and US\$850,000 for year 2, with a commitment to a minimum of 2,000 m of drilling. The current exploration extension was granted from April 2022 and up to the completion of the PEA during the 2Q of 2025 and includes minimum spending/investment of US\$1,075,000 for 2023-2024 season and US\$2,000,000 for 2024-2025 season, with a commitment to a minimum of 3,000 m of drilling.

Stage 2 - Exploitation

At the end of the Exploration Period, Minera Peregrine can exercise the Exploitation option by signing an exploitation agreement under the following conditions:

- Fulfillment of the conditions stipulated in the Exploration Contract.
- Presentation of a detailed Technical/Economical Feasibility Study at the latest 60 days after completion of the exploration period.
- Option payments to IPEEM of US\$7,500 each month up until commencement of commercial production.

- If the exploration period is extended, as allowed in the agreement, the above conditions will be renegotiated.
- Upon commencement of commercial production payment of a fee calculated as 1 percent of all product sales invoiced by Peregrine and coming from Rio Cenicero mining concessions, (option payments cease).

4.3.2 Tenure History

CRA and Rio Tinto

From 1988 to 2003 the original underlying “Altar” mineral exploration concession (cateo) was the subject of litigation between its owner Robledo, and IPEEM. On 21 April 2003, the conflict was resolved by resolution in favor of the Robledo and the property passed to CRA Exploration Argentina SA (CRA), who held rights under an option agreement signed with the owners in 1995. The Altar cateo has subsequently expired.

Rio Tinto is the successor company to CRA. In 1995, Rio Tinto staked the “Leona” and “Loba” concessions and, in 1996, the “Santa Rita” concession.

Rio Tinto also staked the “Pampa” concession in 1996 to cover a potential exotic copper target and to protect the broad valley area for possible future plant and tailings disposal sites.

On August 1, 2003, CRA assigned its rights in an option agreement with the Altar exploration permit (cateo) owner Juan Carlos Robledo (Robledo) to Rio Tinto.

Rio Tinto and Peregrine Metals

Under the terms of an option agreement signed April 20, 2005, between Peregrine Diamonds and Rio Tinto, Peregrine Diamonds had the right to acquire a 100 percent interest in the Altar Property from Rio Tinto subject to, among other things, taking over the Robledo Royalty. The agreement was amended on October 18, 2006, to transfer Peregrine Diamond’s rights to Peregrine Metals Ltd.

To exercise the option, Peregrine Diamonds agreed to assume all of Rio Tinto’s obligations to Robledo, and to undertake a series of option payments on a prescribed schedule.

Peregrine Metals and Peregrine Diamonds

In January 2006 Peregrine Diamonds transferred its metals assets, including its interest in the Altar Property option, to a new private company, Peregrine Metals Ltd. after an Option Agreement signed in September 2005 between the two companies.

The Altar Option Agreement has been subsequently assigned to the Peregrine Metals Ltd. subsidiary company Minera Peregrine Argentina SA under Argentine law.

Robledo - Rio Tinto Agreement

The obligations to the original owner, Robledo comprised the following:

- A payment of US\$ 70,000 on or before 21 July 2005.
- A payment of US\$ 800,000 on or before 21 April 2007.
- The Robledo Royalty, a net smelter return of 1 percent on all mineral products from the Altar Property, is payable to Robledo. If the mine is not in production by April 21, 2010, then payments of US\$ 80,000 per annum in lieu of the Robledo Royalty must be made until

commercial production is achieved. On the date of commencement of commercial production, the annual payments cease, and the Robledo Royalty becomes fully due. The annual payments are in addition to, and not an advance on, the Robledo Royalty.

Under the terms of the agreement between Rio Tinto and Robledo, Rio Tinto had the right to purchase the Robledo Royalty at any time, for a payment of US\$ 1 million. On exercise of the option between Peregrine Diamonds and Rio Tinto, Peregrine Diamonds acquired the Robledo Royalty.

On May 23, 2006, Robledo transferred 50 percent of his rights to the Robledo Royalty (inclusive of the US\$ 80,000 annual payments commencing in April 2010) to Mr. Otto Wilko Simon.

Peregrine has confirmed that the original owner obligation payments of US\$ 70,000 due 21 July 2005, and US\$ 800,000 due 21 April 2007, were made by Rio Tinto on behalf of Peregrine Diamonds. In addition, Peregrine Argentina started to pay the annual payments of US\$ 55,890 (partial year starting on April 22, 2010) and paid the US\$ 80,000/year for the years 2011 to year 2020.

Rio Tinto Agreement

The obligations to Rio Tinto under the Altar Option Agreement prior to the amendment on October 18, 2006, were:

- Payment of US\$50,000 on completion of a due diligence period.
- Payment of US\$50,000 on or before three months following 20 April 2005.
- Payment of US\$50,000 on or before the first anniversary of the 20 April 2005 date.
- Expenditures of not less than US\$ 350,000 on or before the first anniversary of the 20 April 2005 date.
- Payment of US\$825,000 on or before the second anniversary of the 20 April 2005 date.
- Issue of a number of common shares of Peregrine Diamonds on or before the second anniversary of the 20 April 2005 date. The number of shares is fixed by a formula relating to division of US\$825,000 by the market price per common share of Peregrine Diamonds, discounted by 10 percent.
- A net smelter return, the Rio Tinto Royalty, of 1 percent on all mineral products from the Altar Property.

Peregrine completed US\$50,000 due diligence, US\$50,000 20 April 2005, and US\$50,000 20 April 2006 payments as per the schedule above. Peregrine also completed the US\$350,000 expenditure requirement for the first anniversary period.

Unlike the Robledo Royalty, there is no agreement to purchase the 1 percent Rio Tinto Royalty.

Amendments to Rio Tinto Agreement

On October 18, 2006, Peregrine amended the agreement with Rio Tinto as follows:

- To exercise the option, Peregrine was required to complete a cash payment to Rio Tinto of US\$1,650,000 due on or before 20 July 2008.
- Notification of assignment of Peregrine Diamonds' interest in the option to Peregrine Metals Ltd.

The US\$1.65 million payment due 20 July 2008 replaced two clauses in the original agreement, the requirement to pay US\$825,000 on or before the second anniversary of the 20 April 2005 signing date

and requirement to issue common shares in Peregrine Diamonds on or before the second anniversary of the 20 April 2005 signing date.

Peregrine confirmed that the original owner obligation payment of US\$800,000 due 21 April 2007 was made by Rio Tinto on behalf of Peregrine Metals.

On 9 July 2008 Peregrine Metals completed the final US\$1,650,000 payment that was due to Rio Tinto by 20 July 2008, thereby exercising the option to acquire a 100 percent interest in the Altar Property.

On 25 November 2008 Peregrine Metals amended 20 April 2005 agreement with Rio Tinto assigning Peregrine Metals' interests, rights, and obligations with respect to the Altar Property to its Argentinean subsidiary Minera Peregrine Argentina S.A. This amendment also established that Rio Tinto Mining and Exploration Ltd. Mendoza Branch (Rio Tinto Exploration Argentina) was the Argentinean Branch of Rio Tinto and was bound by the terms and conditions of the 20 April 2005 agreement between Peregrine Diamonds and Rio Tinto.

On 6 March 2009, Minera Peregrine Argentina S.A. signed a title transfer agreement with Rio Tinto Exploration Argentina, in accordance with Argentinean law, that transferred the rights and obligations with respect to the Altar Property from Rio Tinto Exploration Argentina to Minera Peregrine Argentina S.A. This agreement also established that the price of the transfer was US\$2,670,000 and that this amount was received by Rio Tinto Exploration Argentina previous to the execution of the title transfer agreement.

Stillwater Mining Company acquires Peregrine Metals Ltd.

On October 4, 2011, Stillwater Mining Company acquired the Canadian public company, Peregrine Metals LTD that included subsidiaries Peregrine Argentina SA and Peregrine Chile SCM. Stillwater paid Peregrine Metals Ltd. US\$166.4 million (net of cash acquired) in cash and issued 12.03 million SWC shares for the acquisition on 4 October 2011 closing price (approximate total cost of US\$262.9 million).

From 2011 through 2013 Stillwater completed drilling 80 core holes and four-hole extensions for 38,379 m of drilling and generated a NI 43-101 compliant resource update dated January 31, 2014. Drilling at Altar significantly increased the copper and gold resource at Altar East and provided the initial gold resource for the shallow portion of Quebrada de La Mina to the west. This report was made public on the US-based Stillwater Mine website but was never filed on either SEDAR or EDGAR since being a USA-based company it was prohibited from reporting resources under SEC Industry Guide 7.

Following completion of the 2014 technical report, Stillwater performed a more regional grass-roots exploration approach instead of offsetting known mineralization. No drilling occurred in years 2014 and 2015 where prospecting, geophysics and geochemical surveys were performed that outlined several drill-ready targets not associated with the existing resource base.

From 2016 through 2017 Stillwater completed 15 core holes and one hole extension for 10,562 m of drilling, which resulted in discovery of a new copper-gold porphyry East of QDM named Radio Porphyry.

Sibanye Gold Acquires Stillwater Mining Company

On December 9, 2017, Sibanye announced a proposed acquisition of Stillwater Mining Co. as an all-cash transaction valued at US\$18 per share of SWC stock (US\$2.2 billion transaction). Following various shareholder and regulatory approvals, the deal was finalized on May 4, 2017. In addition, on

August 30, 2017, Sibanye Gold changed its name to Sibanye-Stillwater. However, the structure of the Altar Project subsidiaries (Minera Peregrine Argentina SA and Minera Peregrine Chile SCM) remained unchanged following this transaction.

Aldebaran Resources

In June 2018 Regulus Resources announced the spin-out of Aldebaran Resources, with an option to acquire a majority interest in the Altar copper-gold Project, Argentina by entering an arrangement agreement with Stillwater Canada LLC, an indirect subsidiary of Sibanye-Stillwater.

October 2018, an option and joint-venture agreement was finalized between Regulus and Sibanye-Stillwater. In addition to the Altar project, Aldebaran acquired the Rio Grande copper-gold project located in Salta Province, Argentina from Regulus along with several other earlier stage projects in Argentina. Aldebaran was also granted the right to earn up to an 80% interest in the Altar copper-gold project in San Juan Province, Argentina from Sibanye-Stillwater.

On 2 November 2018, Aldebaran Resources (ticker ALDE) began trading shares on the TSX Venture Exchange.

On August 14, 2023 (see Aldebaran's press release dated August 14, 2023), Aldebaran announced it had officially acquired a 60% interest in the Altar Project from Sibanye-Stillwater. As of June 30, 2024, Aldebaran has crossed the threshold to acquire an 80% interest in the Altar Project from Sibanye-Stillwater (see Aldebaran's press release dated April 15, 2025). Stillwater Mining acquired the Altar Project when it acquired Peregrine Metals Ltd (Peregrine) and its Argentine subsidiary Minera Peregrine Argentina, S.A. in October of 2011.

4.3.3 Surface Rights

Figure 4-3 presents the Occupancy and Road Easements.

Camp Easement 0116-F-28-C-96

CRA (now Rio Tinto) applied on 2 February 1996 (# 0116-F-28-C-96) for an area of about 30 ha that could be used as an exploration camp and equipment storage area. On 8 October 2004, Rio Tinto requested the publication of a notice of the easement claim against the corresponding landowner (M.L. Correa G. de Errázuriz), holding surface rights on the area.

The Camp Easement has been granted on an interim basis by the Mining Department of the Province of San Juan and permanent constitution of the Camp Easement will call for payment of indemnification to the landowners to cover damages to areas covered with surface rights.

Access Road Easement 98-B-96

A 123 km access road easement was applied for by CRA (now Rio Tinto) on February 9, 1996 (98-B-96). Statutory notices were made, and the permit is currently pending grant.

Pachón SA Minera (Pachón) objected to the application, and a later objection was filed by IPEEM.

The Pachón objection was a formal objection, but as a copy of an agreement between Pachón and Rio Tinto to share easement rights was filed, it is not considered a material objection. The IPEEM objection has to be resolved; however, there is a report from the Legal Department within the Mining Directorate that is favorable to Rio Tinto.

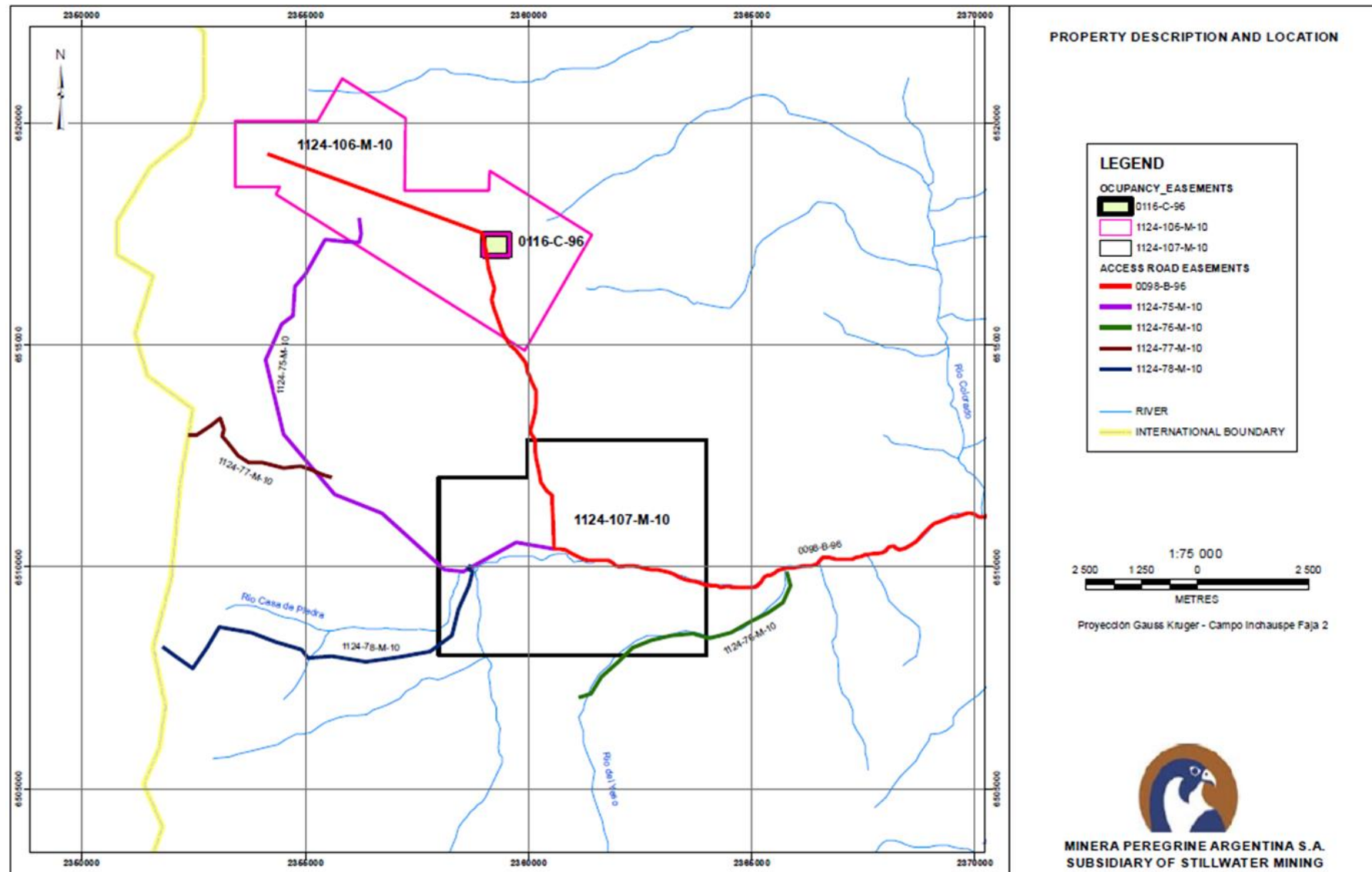
Certain landowners have been identified as being affected by the right of way application. The San Juan mining authority informed that only the last 22.6 km of the original request would be considered because the first part of the easement was already awarded to Pachon SA Minera. The easement corresponds to the access road from the intersection of the rivers Pantanosa and Colorado to the Altar Mining Rights.

The Access Road Easement has been granted on an interim basis by the Mining Department of the Province of San Juan and permanent granting of the Access Road Easement will call for payment of indemnification to the landowners to cover damages to areas covered with surface rights.

New Easements

In 2010 Peregrine applied for an additional six rights of way, two of which are occupancy Easement and five of which are access road Easements. The easements 1124-75-M-10 and 1124-76-M-10 have been granted on an interim basis by the Mining Department of the Province of San Juan and permanent granting of the Road Easements will call for payments of indemnification to the landowners to cover damages to areas covered by the road easements.

The additional four rights of way are under review by the Provincial Mining Department of San Juan. It is expected that these will be approved by the authorities in due course and time.



Source: Peregrine Metals Ltd., 2016

Figure 4-3: Access Road Easement 98-B-96

4.4 Property Description – Chile

Minera Peregrine Chile SpA. (Peregrine Chile), formerly Minera Peregrine Chile SCM, subsidiary of Peregrine Metals Ltd, acquired at the end of 2011 a Rights of Way Easement (ROW) for the access road from the National Road D-801 to the Border of Chile and Argentina.

The Easement was granted by the Society of Parceleros de la Hacienda Illapel (Parceleros Illapel), allowing Peregrine Argentina and Peregrine Chile the use of all roads located on the land owned by the Parceleros Illapel and for the specific ROW for approximately 50 km which covers the actual exploration road, and the proposed access road presented in the Conceptual Study prepared by BGC Engineering.

The negotiations with the representatives of the Parceleros Illapel were conducted on the base that the ROW would be used during the exploration period. Peregrine Chile in exchange for the ROW agreed to an initial payment, annual payments, construction of some infrastructure and re-opening of the old exploration road.

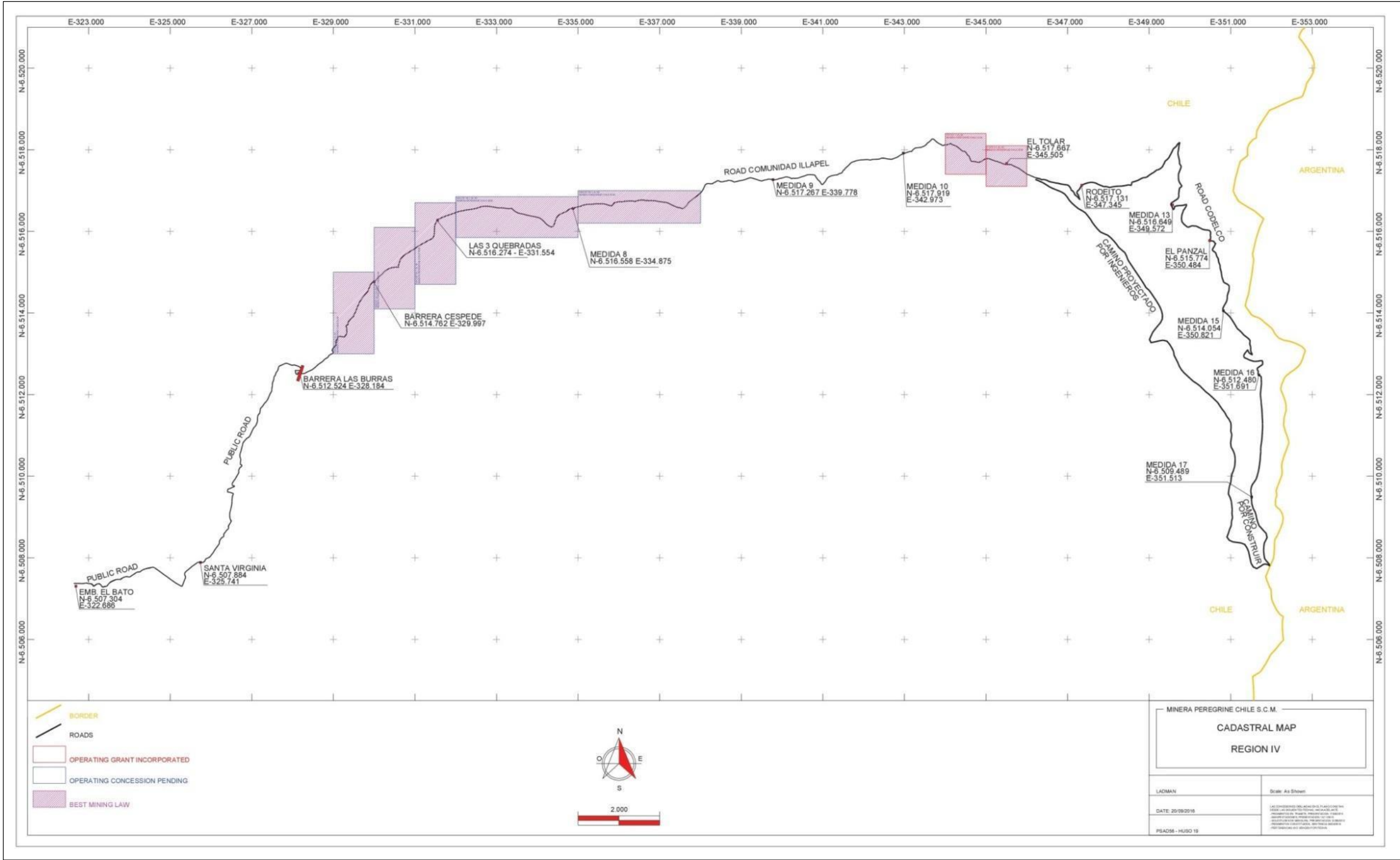
At the end of 2012 some correspondence from the Farming Community indicated their desire to renegotiate the ROW agreement.

The Peregrine Chile lawyers confirmed that the agreement signed previously was valid however it was recommended to maintain the good relationship with the Parceleros Illapel and to see how Peregrine Chile could accommodate their request, as Parceleros Illapel could request the termination of the ROW for legal or commercial reasons (e.g. the non-use of the ROW).

During year 2016, Peregrine Chile lawyers negotiated with Parceleros Illapel resulting in a new right-of-way authorization agreement during November 2016 (ROW authorization). The Agreement will remain valid by paying an annual fee of approximately US\$3,100/year at the start of each year.

Peregrine Chile has also covered the area of the ROW available with 2 staked mining concessions and 5 mining concessions in process of being approved, as shown in Figure 4-4. All 7 concessions do have priority rights. The following is a list of the seven Pertenencias:

- NACHO 1A, 1 AL 40
- NACHO 2A, 1 AL 40
- NACHO 3A, 1 AL 40
- NACHO 4A, 1 AL 60
- NACHO 5A, 1 AL 48
- TOTO 1, 1 AL 20
- TOTO 2, 1 AL 20



Source: Peregrine Metals Ltd., 2016

Figure 4-4: Access Road Alignment Chile

4.5 Permits – Argentina

Rio Tinto provided an initial exploration-stage Environmental Impact Assessment (EIA) report on 23 April 2003 and an updated exploration-stage EIA in 2005. The 2005 assessment was completed by Vector Argentina S.A. The report covers all claims and concessions that were held by Rio Tinto in the Altar area, and incorporate the easement claims in process at that time.

Rio Tinto continued to administer the environmental permitting aspects for the project until 2007-year end. As the Altar Option Agreement has been fully exercised as of July 2008, Minera Peregrine Argentina took the responsibility for any future updates.

Vector Argentina S.A. completed the first phase of the baseline environmental study on the Altar Project that was begun during the field season of 2008 (Vector, 2008). This report was submitted to the environmental authorities of the Province of San Juan in November 2009.

Further studies of flora, fauna, limnology, archaeology, and water quality were carried out on the Rio Cenicero concessions in 2009.

The baseline environmental study has continued through 2010 to 2024 on both the Altar and Rio Cenicero properties. Comprehensive ongoing environmental work includes water quality, air quality, fauna, flora, geomorphology, glaciology, geological hazard, seismicity, hydrology, hydrogeology, limnology, ichthyology, scenic landscape, traffic, noise and vibration, acid rock drainage, archaeology, and community relations studies. An extensive team of individual environmental consultants have been contracted to carry out this work and provide reports and interpretation of the results.

The Altar Project currently has an approved exploration-stage EIA in place (Approved 26 August 2008). An EIA update has to be presented every 2 years. The first EIA update was filed in March 2010 and was approved in December 2011. The second Altar EIA update was presented to the Authorities in October 2012 and was approved in April 2014. The third Altar EIA update was presented in August 2014 and approved May 2017. The fourth Altar EIA update was submitted August 2016, the fifth update was submitted August 2018, the sixth EIA update was filed October 2020 and those three were approved August 2021. The seventh EIA update was approved April 2024, while the eight EIA update was submitted September 2024 and is under revision.

An exploration EIA for Rio Cenicero was filed in October 2011 and was approved in February 2012. The first Rio Cenicero EIA update was presented in October 2013 and was approved by corresponding Authorities in November 2015. The second Rio Cenicero EIA update was presented in October 2015. The third update of the Rio Cenicero EIA was presented in October 2017. Both second and third updates were approved in November 2019. The fourth EIA update was submitted in October 2019 and was approved October 2021. The fifth update was submitted October 2021 while the sixth EIA update was filed October 2023. These last two are pending approval.

The water permits for the exploration work (drilling and camp) will be requested on an annual basis before each field season and are associated to a payment of 460 Argentine Pesos/m³ of water. The last payment and request were made in October 2024 for a drilling campaign of 10,000 m. The same permits were also obtained for the previous campaigns. The last permit was established in 2024 for a 10,000 m campaign, and an extension for additional 10,000 m has been submitted.

Minera Peregrine also obtained all specific permits required for the execution of the drilling campaigns and other related work. The last permit was established in 2024 for a 10,000 m campaign, and an extension for additional 10,000 m was submitted.

To provide the primary access to the Altar project, Peregrine enters on an annual basis into an agreement with Glencore to share the use and maintenance of the access road leading from the town of Barreal to the El Pachón project.

Peregrine can also use, subject to authorization granted by Los Azules Project Management, the secondary and emergency access road from the town of Calingasta to the project via Los Azules and others exploration projects in the area.

A Bailey Bridge was installed at La Junta by the Argentine Army January of 2017 to provide access to Altar via the Glencore right of way. An agreement is made at the end of each year with the Army to maintain the bridge. Glencore originally controlled the bridge, but had it removed in 2015. Access via Los Azules is not preferred due to it being a more primitive route and propensity of the access being snowed in during early April each year

4.6 Mining Integration and Complementary Treaty

The Altar Project is located within the Application Zone of The Mining Integration and Complementary Treaty between Argentina and Chile (The Treaty) the Treaty has been the result of a long historical process of collaboration between the two countries.

In 1991, Argentina and Chile signed an Economical Complementary Agreement (ACE –16) within the Latin American Integration Association structure (ALADI). They also adopted an additional protocol (Protocolo # 3) on the cooperation and integration of mining activities.

In 1997, both countries subscribed an additional protocol (Protocolo # 19) under ACE – 16 to facilitate the execution of the El Pachon Project and in 1998 an additional protocol (Protocolo # 20) was signed to regulate Protocol # 19.

Both countries signed the Treaty in 1997, and a Complementary Protocol was signed in 1999 leading to the publication of the Treaty and the Complementary Protocol in the official gazettes of Argentina and Chile in 2001, the Treaty and Complementary Protocol had been previously approved by the National Congresses of Chile and Argentina.

4.6.1 Treaty Aspects

The Treaty and the Complementary Protocol cover the following aspects, which have been summarized below:

- Scope and battery limits of the Treaty.
- Definitions of the terms used in the Treaty.
- Corridor along the borderline covered by the Treaty.
- Definition of the principle that investors will be subject at least, in the respective countries, to the conditions prevailing in the country where the activity takes place.
- Need to establish Additional Specific Protocol for specific projects.
- Border Facilitation
- Tax and Customs issues

- Definition of the application of the Promotion Programs that might be offered in Argentina and Chile.
- Social Security for the employees involved in trans-border projects and operations.
- Labor aspects.
- Investment and operating costs required for the application of the Treaty.
- Environmental aspects.
- Health of workers involved in trans-border projects and operations.
- Shared water resources.
- Respect of the Territory Limits and Borders Monuments.
- Provisions for termination or suspension of mining activities.
- General exceptions stipulate that the Article 50 of the 1980 Montevideo Treaty and the General Agreement on Import Duties and Commerce of 1994 will always prevail.
- Management and evaluation of the Treaty.
- Solution of divergence between the Parties.
- Solution of divergence between an investor and the other country.
- Incorporation of existing Protocols.
- Effective date and indefinite duration.
- After thirty years of application of the Treaty, both countries will have the faculty of requesting, by diplomatic procedures, the termination of the Treaty. Termination will only apply three years after such notification.
- The Complementary Protocol to the Treaty clarifies the following aspects of the Treaty:
 - Mining rights acquisition in the other country.
 - Definition of the solution to solve divergence between one investor and the other country.
 - Possibility of using resources that are not shared from one country to the other one.
 - Clarification of the trans-border rights of way.
 - Application of the Treaty at the national, provincial, and regional organizations.

The Treaty brings the general rules and specific Protocols which were established by the authorities of the two countries, with regard to each mining project that is eligible, in order to establish the special rules and regulations that will be applicable to such eligible projects.

Pascua-Lama has obtained a specific Protocol to govern the project, and it appears that the Pachón Project will consider using the Treaty to support the activities taking place in the two countries.

5 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

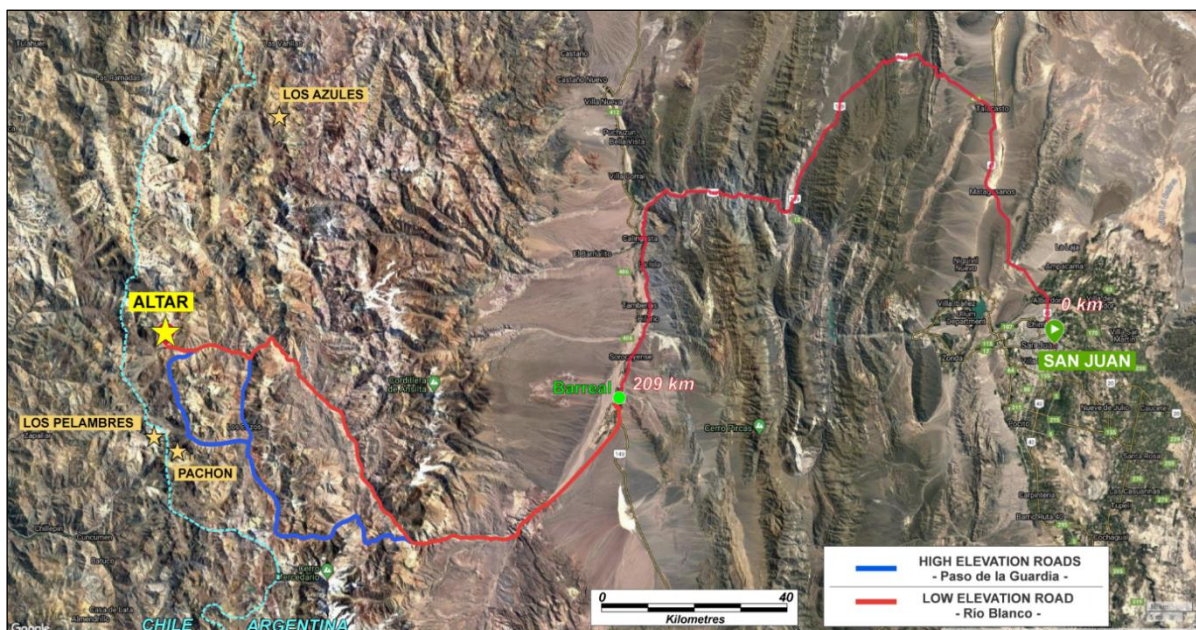
This Section was reviewed and updated in 2025 but is based on various iterations presented in past Technical Reports in 2011, 2014, 2018, 2021, and 2024.

5.1 Accessibility

The Altar Project can be accessed via two routes in Argentina. Approximately 209 km from San Juan City, a well-maintained paved highway gives access to the town of Barreal (Figure 5-1). The primary, low-elevation access route is shared with the El Pachón project and leads southwestward from the town of Barreal before swinging northwards toward El Pachón and continuing an additional 25 km to the Altar Camp (Figure 5-1). It is a gravel road approximately 170 km in length that is suitable for exploration support.

Secondary access is provided by 180 km of exploration gravel road leading westward from the town of Calingasta along the Rio Calingasta. The route crosses the Cordillera de La Totora at the headwaters of the Rio Calingasta, turns southward along the upper tributaries of the Rio Blanco and then westward again along the Rio Pantanosa to the Property.

Both routes take approximately 7 hours from San Juan by 4x4 pick-ups and involve crossing several rivers and/or high mountain passes. Figure 4-1 in the previous section illustrates the current routes to the Altar property. Access to the site from Illapel, Chile would require the upgrading of 64 km of existing unpaved public road and the construction of 23.5 km of new road.



Source: Aldebaran Resources, 2024

Figure 5-1: Altar Project Access Roads

5.2 Climate

The climate is continental semi-arid, characteristic of elevations above 2,500 masl in the Central Andes. Temperatures are low during the entire year ranging from -3°C to 15°C in summer and from -25°C to 7°C in winter. Precipitation ranges from six hundred millimeters per year (mm/year) to 1,000 mm/year with frequent storms bringing rain and snowfall, along with strong winds, mainly in the winter (May through August). In contrast, the summers are generally dry. Net evaporation rates are high and exceed annual rainfall by a significant margin.

The Pacific Ocean has a strong effect on the climate of the region. Low pressure centres forming in the eastern Andes cause the movement of air masses from the Pacific eastward through the mountain passes. Storm fronts coming from the west may bring snowfall as early as mid-March. Snowstorms in the region can last for several days.

The exploration field season is normally restricted to the six-month period from November through April. Because of lighter winter snowfalls in more recent years, it has been possible to mobilize in October and work in the field well into May. The plan is for year-round mining operations.

In 2008, Peregrine installed a remote solar-powered weather station at the camp site. Prior to that time, there was no site-specific weather data collected. The National Meteorological Service has in the past recorded data in the Rio de Los Patos valley, and some weather data has been recorded at the El Pachón exploration camp in the Rio Pachón valley, 25 km due southwest of the Project.

In May 2011, Peregrine commissioned two new Campbell solar-powered weather stations, one at the Altar Camp and one along the high ridge to the north of the Altar deposit. The data from these weather stations have been collected since they have been put in service.

5.3 Local Resources

The nearest centres of population to the Project are Barreal and Calingasta, both located on the Provincial highway connecting Uspallata and San Juan. These towns offer basic supplies and simple accommodation. Barreal is 170 km and Calingasta is 180 km by road to the Project.

The closest major population centre to the Project is the city of San Juan (population 560,819) in San Juan Province, some 180 km to the east. The city is a major centre providing full hospital services and educational facilities to university level. The Universidad Nacional de San Juan has a century old mining engineering and geology facility, as well as diverse science and humanities programs and a medical school.

5.4 Infrastructure

5.4.1 Regional Infrastructure

The closest international airports in Argentina are in the cities of San Juan and Mendoza, located 180 km due east, and 220 km southeast of the Project respectively. In Chile, the closest international airport is in Santiago, about 250 km to the southwest.

There is no rail or air access to the Project. The closest ports are on the Chilean coast, at Los Vilos (120 km due west) and Coquimbo (170 km to the northwest). Los Vilos is the deep-water port currently used by the Los Pelambres mine located 25 km south of the Altar Project, which pumps concentrate via a slurry pipeline from the mine to the coast and pumps water up to the mine from a desalination

plant in Los Vilos. On the Argentinean coast, the closest port is at Bahia Blanca, about 700 km south–southeast of the project.

The Project falls within the Treaty area designated by the Chilean and Argentinean governments (Section 4.6) for facilitation of cross-border mining activities. Peregrine has investigated, but not pursued, the potential for a border crossing if a road to Chile is required. Altar is an advanced exploration project and is not at the stage where final access requirements have been established.

There is no existing power infrastructure at the site.

5.4.2 Local Infrastructure

The site is very remote and has no local infrastructure apart from the gravel roads constructed into the Project, which provide access to drill sites and ridge tops. There are no settlements closer than Barreal and Calingasta.

There is sufficient area within the Altar Project boundaries for future construction of a plant, related infrastructure, tailings disposal and waste disposal.

5.5 Physiography

The Altar and Rio Cenicero areas are located in the western fringe of Argentina occupied by the Cordillera de Los Andes. The Cordillera in this area is characterized by the presence of two major mountain ranges respectively named from East to West as Cordillera Frontal and Main Cordillera. The exploration area is included within the Main Cordillera where the border with Chile is also located.

The relief in the project area is characterized by long mountain ranges generally oriented North to South, which are cut by narrow valleys that generally drain the water from West to East. In this area, dominated by glacial and periglacial landforms the glaciers movement have shaped the important flat areas at the bottom of the valleys.

The University of San Juan compiled the seismic information available in Argentina and Chile. The report estimates that the area of the project is exposed to important seismic events of magnitude between 7.0 to 7.5 Mw.

The subsidence of the Nazca plate originating in the Pacific Ocean is considered the main potential source of seismic activities, although some active cortical regional structures at the West and East of the Main Cordillera can also induce seismic events of an estimated maximum magnitude of 7.0 Mw.

5.5.1 Flora and Fauna

The project area is characterized by a High-Andean ecosystem dominated by subshrubs of the genus *Adesmia* and the presence of poposas, llaretas and plants generally associated with steppes and wetlands. The area is also characterized by the long-time tradition for the Chilean herdsmen and their livestock to cross the border and graze their animals in Argentine territory during the summertime. The border crossing is informal and almost impossible for the Authorities to control.

The various field campaigns, carried out since 2008, have identified significant plant diversity among the different vegetation patches located in the steppe areas. Fieldwork has confirmed the effects of overgrazing on the vegetation in isolated patches and in the wetlands of the lower part of the project area, which, combined with 15 years of poor water cycles, has intensified the degradation of the wetland sectors.

In the project areas, the azonal communities contribute value in terms of biodiversity. Local biodiversity is also negatively affected by the presence of goats and dogs, which compete for the same resources as local fauna.

6 History

The Altar deposit was discovered in the mid-1990s by CRA. CRA completed access road construction, surface sampling (rock chip, talus fines and stream sediment), and geological mapping in the period 1995 to 1996. Geophysical data from a helicopter borne aeromagnetic and radiometric survey over the property was acquired and interpreted.

CRA (Conzinc Riotinto of Australia Ltd) and Rio Tinto merged in 1995. Specifically, the Australian and British Rio Tinto companies were unified under a single management in 1995, and CRA became Rio Tinto Limited in 1997.

In 1999, Rio Tinto completed geological mapping of the greater Altar area including QDM, and did alteration studies, a ground magnetic survey, and completed seven shallow diamond drill holes totaling 2,841 m.

Peregrine Diamonds optioned the property in 2005 and carried out a 23.4 line-km induced polarization (IP) survey followed by eight diamond drill hole (DDH) totaling 3,302 m during the 2005-2006 summer field season.

In January 2006 Peregrine Diamonds transferred its metals assets, including its interest in the Altar Property option, to a new private company, Peregrine Metals Ltd. after an Option Agreement signed in September 2005 between the two companies. The Altar Option Agreement has been subsequently assigned to the Peregrine Metals Ltd. subsidiary company Minera Peregrine Argentina SA under Argentine law.

In the first quarter of 2007, Peregrine carried out a second drilling campaign comprising 25 drill holes (10,408 m). Peregrine carried out a third drilling campaign in the first quarter of 2008 comprising 24 core holes and deepening of one pre-existing hole (12,741 m). Peregrine continued drilling during 2010, adding about 25,000 m of core.

In October 2011, Stillwater Mining Company (SMC) completed the acquisition of all outstanding shares of Peregrine for \$US 487 million. Since the acquisition, Peregrine has been maintained as a subsidiary as have Peregrine's operating companies Minera Peregrine Argentina S.A. and Minera Peregrine Chile S.C.M. SMC was actively engaged in the Altar project activities from 2012 through 2017.

In May 2017, Sibanye Gold of South Africa acquired all shares of SMC, the owner of the Altar Project. However, the structure of the Altar Project subsidiaries (Peregrine Argentina S.A. and Peregrine Chile SCM) remained unchanged. In August 2017, Sibanye changed its name from Sibanye Gold to Sibanye-Stillwater. The company names and structure for Peregrine remained unchanged.

In June 2018, Regulus Resources announced the spin-out of Aldebaran Resources, with an option to acquire a majority Interest in the Altar Copper-Gold Project, Argentina by entering an arrangement agreement with Stillwater Canada LLC, an indirect subsidiary of Sibanye-Stillwater.

In October 2018, an option and joint-venture agreement was finalized between Regulus and Sibanye-Stillwater. In addition to the Altar project, Aldebaran acquired the Rio Grande copper-gold project located in Salta Province, Argentina from Regulus along with several other earlier stage projects in Argentina. Aldebaran had the right to earn up to an 80% interest in the Altar copper-gold project in San Juan Province, Argentina from Sibanye-Stillwater.

On November 2, 2018, shares of Aldebaran Resources (ticker ALDE) began trading on the TSX Venture Exchange. On August 14, 2023 (see Aldebaran's press release dated August 14, 2023), Aldebaran announced it had officially acquired a 60% interest in the Altar Project from Sibanye-Stillwater. As of June 30, 2024, Aldebaran had crossed the threshold to acquire an 80% interest in the Altar Project from Sibanye-Stillwater (see Aldebaran's press release dated April 15, 2025) and moving forward it will be joint venture 80% Aldebaran Resources and 20% Sibanye-Stillwater. A discussion of Aldebaran's exploration progress is summarized in Section 9.

7 Geological Setting and Mineralization

7.1 Regional Geology

The Andean Cordillera extends for about 5,000 km along the western coast of South America, attaining a maximum width of about 700 km in the Central Andes of Bolivia. Tectonism in the Cordillera varies both along strike and across the range; along-strike variations reflect changing plate geometry along the Pacific margin, whereas across-strike variations generally assigned to four sub-domains reflect the generally eastward migration of Andean arc magmatism and deformation through time. In general terms, there are three units within each sub-domain, from west to east: a fore-arc zone, a magmatic arc, and a back-arc region.

In the southern flat-slab sub-domain of the Central Andes (from 28°S to 33°30'S), the fore-arc zone is a steady rise to the crest of the Andes, which is formed by an inactive magmatic arc and thrust belt (Frontal Cordillera and Cordillera Principal). The Triassic magmatic (rift) arc has a general northwest–southeast trend. The foreland consists of an active, thin-skinned fold-thrust belt (Pre-cordillera) and zone of basement uplifts (Sierras Pampeanas, with altitudes ranging from 2,000 to 6,000 m). The Altar Project is located in the Cordillera Principal.

Basement rocks in the Altar region have been assigned to the Choiyoi Group, of Permo-Triassic age; the Choiyoi Group covers about 500,000 km² in Argentina. It comprises an upper and lower volcanic sequence, intruded by shallow-level plutons, stocks, and dyke-like bodies. The lower volcanic sequence comprises calc-alkaline andesite-dacites that represent the products of a subduction-related magmatic arc, which is overlain by an upper sequence of peraluminous rhyolites, related to a period of post-orogenic extensional collapse. Composition of the volcanics trends from mafic to acidic through time. Both sequences are propylitically altered and contain fracture-controlled epidote, chlorite, albite, and calcite veining. The volcanic sequence was intruded by peraluminous A-type and S-type granites that are considered coeval with the rhyolitic volcanics and likewise typically exhibit low-grade propylitic alteration.

Generally, Jurassic marine sediments that consist of red-bed sandstones and claystones infill the Triassic rift, and unconformably overlie the Choiyoi Group; however Jurassic sediments are not known in the immediate surroundings of the Altar Project. Within the project area, rhyolitic ignimbrites and andesitic volcanics of the Pachón Formation overlie the Choiyoi basement sequence (Mpodozis & Perello, 2009).

The wider area of what comprises the Altar and Río Cenicero concessions is flanked by two significant regional north-south striking faults, referred to as the Pelambres Fault to the west, and the Río Teatinos Fault to the east of the concession area. The Pelambres fault limits the rocks of the Pachón formation against the Paleogene Pelambres formation to the west. The Río Teatinos fault juxtaposes the Pachón formation against Paleozoic to lower Mesozoic metasedimentary and intrusive basement rocks to the east.

7.2 Property Geology

The Altar copper-gold project is a cluster of several intermediate composition subvolcanic porphyries occurring within an area of approximately 5 km by 8 km and emplaced during Middle to Late Miocene times (8.9 mega annum [Ma] to 11.91 Ma. U/Pb in zircons. Maydagan et al. 2011, 2014, 2017, 2019

and 2020). Six main mineralized zones have been defined for exploration purposes: Altar Central, Altar United, Altar East, Altar North, QDM, and Radio.

Basement rocks in the area correspond to the Pachón Formation, which consists of a thick sequence of intercalated bimodal composition subvolcanic and volcanic-sedimentary units, deposited, and emplaced during the Early Miocene (Mpodozis & Perello, 2009). This sequence is characterized by a stratigraphically lower member consisting of mainly fine-grained andesite flows and pyroclastic units intercalated in the upper portion of the sequence with layers of rhyolitic rocks progressively increasing in thickness and frequency. The top of this sequence is overlain by several hundred meters of rhyolitic ignimbrite flows that cover the eastern half of the project area.

The Early Miocene Pachón complex was formed in an extensional N-S elongated basin, possibly initiated as a half-graben, with the main basin boundary fault along its eastern edge (Breed, 2020 int. rep.). Within the basin, a family of ~NNW-SSE to ~N-S oriented normal faults were formed during the extensional phase, this is confirmed by the disappearance of stratigraphic units across these faults.

Remarkable changes of stress regimes and magmatic activity occurred at a continental scale during the Middle Miocene, coincident with the variation in the angle of subduction of the oceanic plate and the subduction of the “Juan Fernandez Ridge”. Local stress fields shifted during this period into a compressional regime, leading to an inversion of the basin, and to a reactivation during this process of some of the main faults as high-angle thrusts. The presence of these discontinuities likely had an influence on the emplacement of magmas and hydrothermal fluids in the area (Richards, 2003; Maydagan et al., 2011; Breed 2020 int. rep.).

The following geological descriptions included Aldebaran lithological codes, used for geological logging, for each of the main lithological units (e.g., DIP5, RHY, DIPAE, etc.).

7.2.1 Early Miocene Pachón Formation

The Pachón Formation comprises a volcanic-volcaniclastic sequence of Early Miocene age, (20 to 22 Ma) made up of intercalated aphanitic basaltic andesite and porphyritic andesite-dacite lava flows, andesitic-dacitic lapilli tuff and pyroclastic breccia grading upwards into an upper member of compacted and thick rhyolitic tuffs. The unconformity that separates the Pachón Formation from the underlying Choiyoi basement sequence is not exposed on the Altar Project and has not been intersected in drilling.

This formation was previously believed to be Cretaceous in age. Recent regional mapping and age dating studies have established an Early Miocene age for the Pachón Formation volcanic rocks and time-stratigraphic equivalents in Chile, which form the country rocks to the subvolcanic porphyries responsible for the porphyry copper mineralization at Altar, El Pachón and Los Pelambres.

Pachón Formation Andesite Unit (AND)

These rocks occur in a layered stratified sequence of andesitic, basaltic-andesitic, and andesitic-dacitic composition units, including lava flows, pyroclastic and sedimentary units, intercalated with rhyolitic rocks on the upper portion of the Pachón Formation complex.

Basaltic-andesitic rocks are very dark in color with fine grained phenocrysts of plagioclase, ferromagnesian silicates, and magnetite in an aphanitic groundmass. The porphyritic andesite-dacite flows have phenocrysts of plagioclase, ferromagnesian silicates, and opaque minerals in a pilotaxitic groundmass of fine-grained plagioclase and disseminated opaque minerals. The pyroclastic units are

green lapilli tuffs and clast - to- matrix supported polymictic breccias. The clasts are angular and comprised of aphanitic to porphyritic andesite and fragments of crystals set in a devitrified matrix.

Pachón Formation Rhyolite Unit (RHY)

The rhyolitic units of the Pachón Formation are dominated by compact tuffs most of which can be grouped into two lithofacies: massive and eutaxitic tuffs. Massive tuff crops out abundantly at Altar Central. It has tabular fragments of plagioclase and rounded fragments of quartz in a silicified microgranular matrix. Pyroclastic features such as glass shards, fiamme and pumice fragments are obliterated by hydrothermal alteration in the vicinity of the deposit.

Eutaxitic tuff crops out in the ridges that surround the deposit, and it comprises an ignimbrite with crystals and crystal fragments, fiamme and glass shards, and lithic fragments in a partially devitrified matrix. Crystals are generally euhedral and consist of plagioclase, quartz, biotite, and opaque minerals. Lithic fragments are rounded and andesitic in composition with plagioclase phenocrysts in a pilotaxitic groundmass.

Within the Altar Central and East areas, outcrops of the rhyolitic unit are widespread, and rhyolites constitute the most abundant country rocks to the intrusive porphyries related to the alteration and mineralization. Outcrops of andesitic units occur on the ridges, fringing the western side of the mineralizing system. The contacts between andesitic and rhyolitic units of the Pachón Formation are concordant and mostly transitional.

On the ridges to the north of Altar Central and East there are small outcrops of rheomorphic and parallel-laminated tuffs. These are highly welded tuffs characterized by flow foliations and containing crystals and crystal fragments of plagioclase, ferromagnesian silicates, and quartz, and fiamme in a partially devitrified groundmass.

Samples of the Pachón Formation rhyolitic tuff from Altar have returned U-Pb zircon dates of 20.8 ± 0.3 Ma (Maydagan et al., 2011), 21.2 ± 0.3 Ma (Mpodozis & Perello, 2009) and 21.9 ± 0.2 Ma (Gatzoubaros et al., 2013).

Early Miocene rocks in the QDM-Radio zone are represented mostly by the volcano-sedimentary andesitic-dacitic units of the lower portion of the Pachón Formation and to-date there is no evidence of these rhyolitic units in the QDM-Radio zone.

Dacite Tuffs (DACvf)

These rocks are apparently the youngest lithologies within the volcanic basement rock package, with a possible angular unconformity with the underlying andesitic and rhyolitic Pachón Formation units.

The Dacite tuffs (DACvt) are represented by lithic-crystal tuff (DACf) overlain by massive to laminar tuffs, with accretionary lapilli texture locally. These sequences are observed in the SW ridge and NE sector of the Altar East area, and to the south of Altar valley, where they are overlying rhyolitic and andesite flows. The crystal tuff (DAXtC) is a predominantly fine- to medium-grained, characterized by irregular, corroded, or fragmented crystals. In certain instances, it exhibits preserved stratification and crystal alignment. It is commonly interbedded with the DACf.

Quartz-Rich Rhyolite Dome (SiID)

This is a single unit occurring in a very distinctive white colored prominent hill located northeast of the QDM-Radio target. It is characterized by flow banded, spherulitic and auto-breccia textures,

suggesting the emplacement as a shallow subvolcanic intrusion cutting the Early-Miocene andesitic rocks. A strong structural NE control during its emplacement is evidenced by flow banding orientations and borders consistently oriented in that direction.

Time of emplacement is not clear, but based in field observations, it is suggested to have occurred contemporaneous with the Dacite tuffs (DACv)

7.2.2 Middle-Late Miocene Subvolcanic Porphyry Suite

A suite of subvolcanic porphyritic stocks, dykes, and associated magmatic and hydrothermal breccias intruded the Pachón Formation volcanic complex during the Middle-Late Miocene (12 to 10 Ma). These subvolcanic stocks are intimately related to the occurrence of porphyry Cu-Au mineralization.

There are clear hiatus and distinct textural differences between the bimodal volcanic rocks and the late Miocene porphyry intrusions, which are volumetrically small and have no preserved extrusive equivalents in the region. This hiatus is regionally correlated with a change from extensional basin deposition to basin inversion, with increased compression leading to storage of magma in the mid-crust and emplacement of intrusive, phenocryst-rich porphyries in the upper crust (Richards, 2003; Maydagan et al., 2011).

Modal composition within each of the subvolcanic porphyries ranges from dacite to andesite, comprising phenocrysts of plagioclase, amphibole, biotite, and quartz, along with accessory rutile, ilmenite, magnetite, and apatite, in a phaneritic, microcrystalline groundmass.

Altar Central - Altar East Quartz-Diorite Porphyries (DIP5, DIPAE, DIOPAC, DIP6, DIOPAE 2 and IBAE)

Porphyry stocks cropping out at Altar Central (DIP5) and Altar East (DIPAE) show well developed quartz vein stockworks along with intense sericite alteration and associated strong mineralization. These have been given the field name “Early Quartz Diorite Porphyries”. Although the areas where these porphyries crop out are widely separated, they are petrographically indistinguishable and therefore it's postulated that they are derived from a larger intrusive body at depth.

A sample of hydrothermal sericite from a mineralized porphyry from the Central Zone gave an Ar-Ar date of 10.38 Ma (Almandoz et al., 2005), which is close to a K-Ar date of 9.8 Ma obtained from hydrothermal biotite at Los Pelambres. More recently obtained ages for the Early Quartz Diorite Porphyry from the Central and East Zones include two U-Pb dates of 9.9 Ma (Mpodozis & Perello, 2009) and 10.35 Ma (Maydagan et al., 2011) from Early Quartz Diorite Porphyry from Altar Central and a U-Pb date of 11.68 Ma from the Early Quartz Diorite Porphyry stock from Altar East (Maydagan et al. 2014). A Re-Os date of 10.18 Ma was obtained from molybdenite from Altar Central (Perello, 2009).

A second phase of Quartz Diorite Porphyries exposed in the northern part of the Central Zone (DIOPAC) and in Altar East (DIP6) has been given the field name “Inter-mineral Quartz Diorite Porphyries”. These rocks contain less abundant quartz vein stockworks, are moderately mineralized, and less intensely altered in comparison to the slightly older Early Quartz Diorite Porphyry. Early and inter-mineral porphyry phases are often difficult to distinguish, and cross-cutting relationships are in many cases inferred in outcrop or drill core.

During the 2020 mapping program, some porphyry and intrusive breccia units cutting the Inter-mineral Quartz Diorite “DIP6” Porphyry, were described at the eastern flanks of Altar East cirque (DIOPAE 2

and IBAE). These units were not found in the core and may represent a late stage of intrusive emplacement occurring in this area.

Altar North Porphyries (NP4, NP5, NP6/LDP)

The Altar North zone was defined during the 2011 field season, when float of a new porphyry stock was discovered about 1.2 km north of the Altar Central area. The distinctive subvolcanic intrusion has been given the field name Altar North Porphyry and first drill-tested during the 2012 drilling campaign.

At least three, very distinctive events of porphyry intrusions were defined during 2019-2020 core relogging campaign (units NP4, NP5, NP6/LDP). Most of these porphyritic units are texturally similar, characterized by an equigranular, crowded texture with overall smaller plagioclase and amphibole crystals than the ones found in the Quartz Diorite Porphyry stocks in Altar East and Central. Distinction between the various porphyry phases at Altar North was established by crosscutting relations observed in the core.

Three main stages of porphyry emplacement were defined in Altar North. An early-stage porphyry (NP4) that commonly displays the best grade copper-gold mineralization is associated with strongly developed quartz stockwork veining and intense K feldspar and biotite alteration. These rocks are cut by an inter-mineral stage porphyry (NP5), which crosscuts early quartz veins and mineralization, but is overprinted by a younger and locally less developed quartz stockwork and mineralization. A late stage of intrusions is represented by texturally distinctive, light gray color, quartz-diorite porphyries (NP6/LDP) characterized by a seriated population of plagioclase phenocrysts from 0.6 centimeter (cm) to 1 mm in size floating in a phaneritic, crowded groundmass, with amphiboles, biotite and magnetite as accessory minerals. These late, poorly mineralized, and in most cases barren units are widespread throughout the core and at surface, cannibalizing early stage mineralized rocks in the area. Interestingly, deep in hole ALD 195, this late porphyry unit (NP6) is cut by a much younger tourmaline breccia body with associated moderate copper-gold mineralization.

QDM Dacite Porphyry (DAC)

The QDM Dacite Porphyry (DAC) represents one of the oldest units from the Middle-Late Miocene Subvolcanic Porphyry Suite and is characterized by a matrix-supported porphyritic texture with plagioclase, biotite-brooks, minor amphiboles, and abundant, coarse grained quartz phenocrysts. The texture and chemistry of the Dacite Porphyry intrusion clearly differs from all the other intrusions described in the Altar project area and therefore is a very distinctive unit to recognize.

This dacitic porphyry is locally mineralized, hosting, near-surface, high-grade, epithermal-style gold mineralization referred to as QDM Gold. This gold mineralization is most likely related to a deeper, underlying porphyry system, which was confirmed in 2019 with drill hole QDM-19-041, drilled below the QDM Gold area and that intersected porphyry-style copper-gold mineralization.

Radio Porphyries (RAD1, RAD2, RADcd)

Multiple diorite porphyries occur in the Radio area and consist of discrete dyke bodies and display remarkably similar textures and composition, characterized by feldspar-rich medium-coarse grained crowded textures with plagioclase, biotite, and amphibole phenocrysts (>30%), very rare quartz phenocrysts in a phaneritic micro-crystalline to very fine-grained groundmass.

The emplacement of these porphyry dykes occurred in several pulses. An early event is represented by quartz-diorite porphyries (RAD1), which display strong potassic alteration and, in some portions of

the core, also display some spectacularly mineralized “A” type veins and “USTs” (Unidirectional Solidification Textures) indicative of quartz-sulphide-rich fluids directly exsolving from the magma. These textures and veins are associated with the deposition of high-grade copper-gold mineralization.

These early porphyries were later crosscut by a second pulse of dykes (RAD2), which also display locally potassic alteration, but less developed copper-gold mineralization in general. Late intrusions in the area (RADcd) display little to null alteration and are barren in most places. These porphyries are remarkably similar to the “late” units defined in Altar North (NP6/LDP) and could be temporally and genetically related with those, but more work is required.

Breccias (RMB, HBt, HBbm, HBhs)

Late events of brecciation occur in most of the zones in the project. These include locally overlapped pulses of rock-milled matrix breccias (RMB), quartz-tourmaline breccia veins (HBt), and anhydrite-quartz-sulphides matrix breccia bodies. These last associated with base metals and high-sulphidation epithermal fluids (HBbm, HBhs).

Epithermal Veins (EVhs, EVbm)

Different types of epithermal veins have been identified and classified based on their mineralogical characteristics. These include veins associated with the high-sulphidation epithermal system (EVhs) with pyrite ± enargite ± tennantite ± quartz ± anhydrite, and veins related to the base metal intermediate sulphidation style of epithermal gold-silver mineralization (EVbm) with carbonates ± sphalerite ± galena ± stibnite ± pyrite ± quartz ± anhydrite.

7.2.3 Colluvium and Alluvium (OVB)

The Altar area was subjected to regional alpine glaciations which resulted in several moraines and significant glacial sediments that cover most low-lying areas. There is little outcrop within the altered and mineralized area due to scree and talus cover on steep slopes and glacial sediments in the valley bottoms (Figure 7-1).

7.2.4 Lithology Codes

A total of 57 lithological units were defined within the boundaries of the model during field mapping and core logging. These units were later grouped into 33 families, of which only 18 of these were modeled in 3D to form the basis for the resource block model. Table 7-1 summarizes the 57 lithologies and the codes used to describe them.

Table 7-1: Lithology Units and Codes

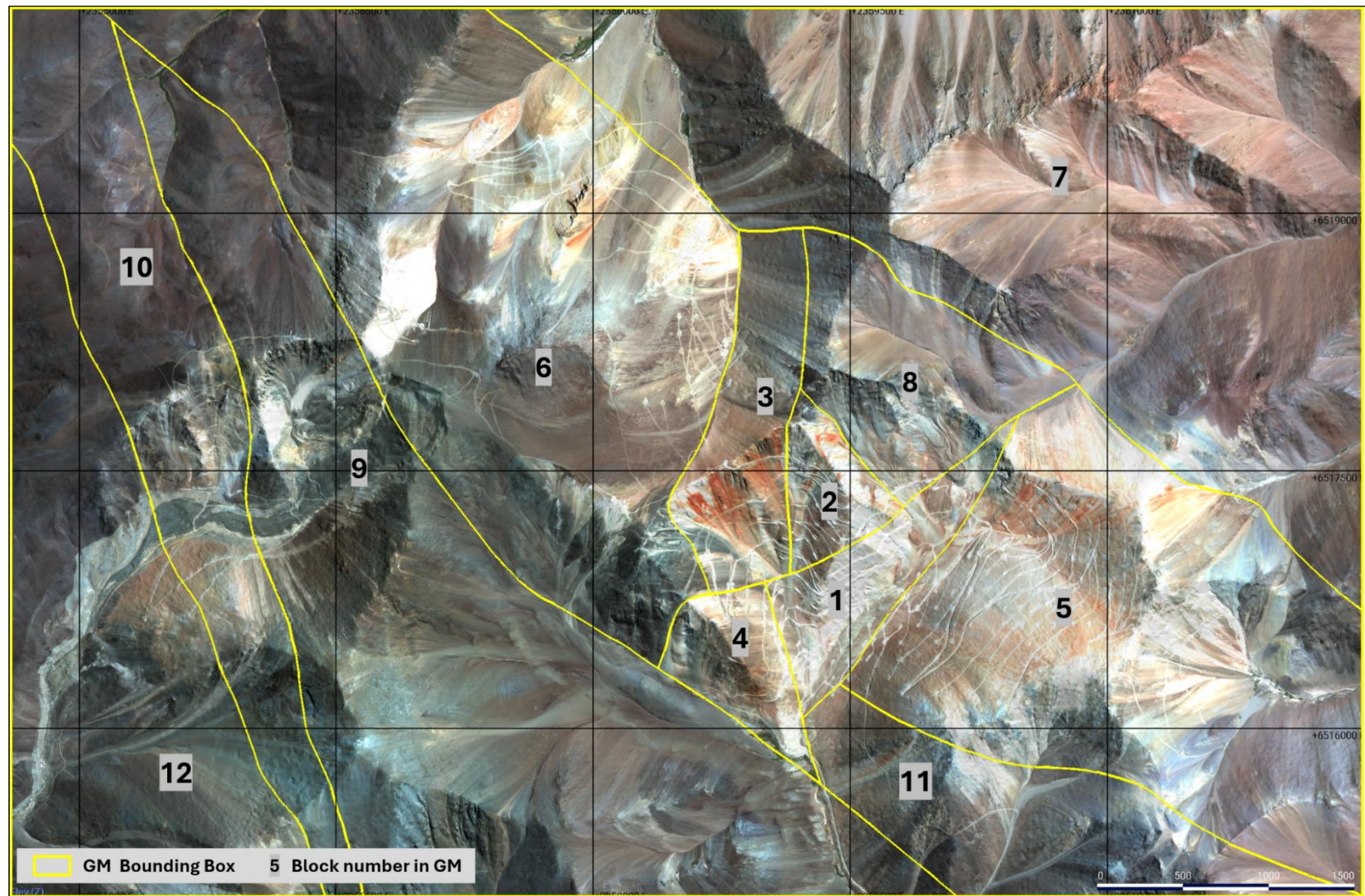
Unit	Stage	Litho Family	Litho Code	Litho Description
	Colluvium and Alluvium	OVb	OVb	Overburden
Middle-Late Miocene Subvolcanic Porphyry Suite	Faults	FLt	FLt	Fault
	Epithermal Veins	EV	EV	Epithermal Vein
			EVbm	Epithermal Vein Base Metals
			EVhs	Epithermal Vein High-sulphidation
	Breccias	HB	HB	Hydrothermal Breccia
			HBbm	Hydrothermal Breccia. Base Metals.
			HBhs	Hydrothermal Breccia High-sulphidation
			HBt	Hydrothermal Tourmaline Breccia
		RMB	RMB	Rock milled breccia. Polymictic rock-flower matrix supported breccia (unclear timing united under the same lithology)
			RMBds	Rock milled breccia: “d” Is the coarser portion and “s” the central fine-grained (sand-size) part of a well-defined breccia body emplaced on the northern part of QDM
			RMBf	Rock Milled Breccia
			RMBjc	Rock milled breccia with juvenile crystals, including quartz, feldspars and biotite (possible diatreme (ALD202 in upper 160 m)
			RMBt	Rock Milled Breccia with tourmaline.
		IB	IB	Intrusive Breccia. Defined at surface by Mappers
		IBAE	IBAE	Intrusive Breccia Altar East. Defined at surface by Mappers
		MHB	MHB	Magmatic Hydrothermal Breccia. Defined at surface by Mappers
	Massive Quartz Veins	QV	QPV	Quartz Pyrite vein
			QV	Quartz vein
	Aplite Dykes and Rhyolites	RHY2	RHY2	Rhyolite apparently intruding diorite porphyry DIP5
		APL	APL	Aplite Intrusion
			APLbx	Aplite Intrusion with fragments
			RADfa	Fine grained aplite pink to grey. Radio zone
	Late Diorite Porphyries	LDP	LDP	Late Dacite Porphyry (AN). Defined at surface by Mappers
		NP6	NP6	Light-gray medium-grained porphyritic diorite. Bimodal crowded plagioclase phenocryst (~50%) population with minor biotite and amphibole phenocrysts (5%) in a phaneritic groundmass
			NP6bx	Light-gray medium-grained porphyritic diorite intrusion breccia with diorite fragments and incorporates wall rock fragments
		DIOPAE2	DIOPAE2	Diorite Porphyry Altar East 2. Defined at surface by Mappers
		QFP	QFP	Quartz-felspar porphyry crowded; >70% feldspar, 10-20% quartz
		RADcd	RADcd	Light-grey porphyritic crowded diorite, medium to coarse glomeroporphyritic. Phenocrysts (30%) bimodal plagioclase mainly, biotite and amphiboles
	Inter-mineral Quartz Diorite Porphyries	NP5	NP5	Medium-grained porphyritic diorite, displaying a bimodal crowded population of plagioclase phenocrysts (~60%) with minor biotite and amphibole phenocrysts (5%) in a phaneritic groundmass
			NP5bx	Medium-grained porphyritic diorite intrusion breccia, crowded diorite porphyry NP5 fragments mainly and subordinately incorporates wall rock fragments
		DIOPAC	DIOPAC	Inter-mineral Diorite porphyry AC
		DIP6	DIP6	Sub- to non-crowded diorite porphyry; cuts DIP5
			DIP6bx	same as DIP6, with fragments of porphyry.
		RAD2	RADbf	Fine agglutinated biotite-feldspar porphyritic diorite, significant presence of fine biotite (no amphiboles observed).
			RADdg	Dark grey medium to coarse grained porphyritic crowded diorite. Plagioclase, biotite and amphibole phenocrysts (30%) in a medium- to fine-grained groundmass.
			RADpd	Pink porphyritic dacite; phenocrysts <10%, bimodal plagioclase. Fine-grained plagioclase and quartz groundmass
			RADqd	Medium to coarse porphyritic- crowded quartz-diorite. Phenocrysts of plagioclase, biotite, amphibole, and quartz (>30%) surrounded by a granular groundmass
			RAD2	Medium-coarse grained semi- to crowded diorite porphyry. Plagioclase, biotite and amphibole phenocrysts (> 30%); micro- crystalline to very fine-grained groundmass
	Early Quartz Diorite Porphyries	NP4	NP4	Medium grained porphyritic diorite, displaying a crowded population of plagioclase phenocrysts (~60%) with minor biotite and amphibole phenocrysts (5%) in a phaneritic groundmass
			NP4bx	Medium-grained porphyritic diorite intrusion breccia, crowded diorite porphyry NP4 fragments mainly and subordinately incorporates wall rock fragments
		DIP5	DIP5	Crowded texture Diorite to Quartz-Diorite Porphyry – AC
			DIP5bx	Same as DIP5, whit fragments of porphyry.
		DIPAE	DIPAE	Diorite to Quartz-Diorite Porphyry
		RAD1	RAD1	Medium to coarse glomeroporphyritic crowded diorite. More than 30% of bimodal phenocrysts (plagioclase, biotite, and amphibole); granular groundmass.
Early Miocene Pachón Formation	Dacite Tuffs	SiID	SiID	Silicic Dome (LE). Defined at surface by Mappers
		DACv	DACf & DACxt	Lithic and crystal tuffs.
	Rhyolitic Suites	RHY	RHY	Rhyolite: embayed quartz eye & feldspar phenocrysts in a fine-grained grey (light to dark) groundmass
			RHYb	Fragmental rhyolite breccia with quartz-vein and porphyry fragments in a fine-grained rhyolitic matrix. Apparently result of partial melting of rhyolite close to the diorite intrusive contact.
			RHYbx	Rhyolite breccia; mainly rhyolite fragments within a rhyolite matrix (ALD031, 324-328 m)
			RHYf	Rhyolite with Fiamme texture: embayed quartz eye & feldspar phenocrysts in a fine-grained grey (light to dark) groundmass
	Andesitic Suites	AND	ANDf	Andesite units with fragmental texture
			ANDm	Massive andesites (aphanitic, fine-grained to porphyritic)
			ANDt	Andesite with trachytic texture (ocoita)
			PAI	Coarse grained Andesitic Porphyry Intrusion.
			VES	Volcaniclastic-Epiclastic Sequence (red & green)

7.3 Property Geology - Structures

Structural setting around the project responds to the inheritance of multiple and variable continental-scale tectonic processes, occurring since Mesozoic times. As mentioned before, Early Miocene basement rocks were formed in an extensional N-S elongated basin, possibly initiated locally as a half-graben, with the main basin boundary fault along its eastern edge. During this extensional phase, a set of ~NNW-SSE to ~N-S oriented normal faults were formed. This is confirmed by the disappearance of stratigraphic units across these faults.

Stress fields changed into a compressional regime during Middle Miocene, leading to an inversion of the basin, followed by folding of the layered sequences and to a reactivation during this process of some of the main faults as high-angle thrusts. The presence of these discontinuities likely had an influence on the emplacement of magmas and hydrothermal fluids in the area.

Field work and surveying conducted by Aldebaran and by specialized contractors during 2018-2020 included drilling, surface geochemistry, hyperspectral image analysis, geological mapping, core logging, geophysics, and detailed regional structural analysis. The acquisition of these multiple sets of information helped to significantly improve the understanding on the structural setting and dynamics controlling the occurrence of mineralization. Major faults displaying great offset and a strong structural control over the mineralized systems was evidenced when analyzing this data, which was used to define and build the structural block domains in the latest 3D geologic model prepared for the project area during 2024. Figure 7-1 illustrates the structural blocks that have been interpreted.



Source: Aldebaran Resources, 2024

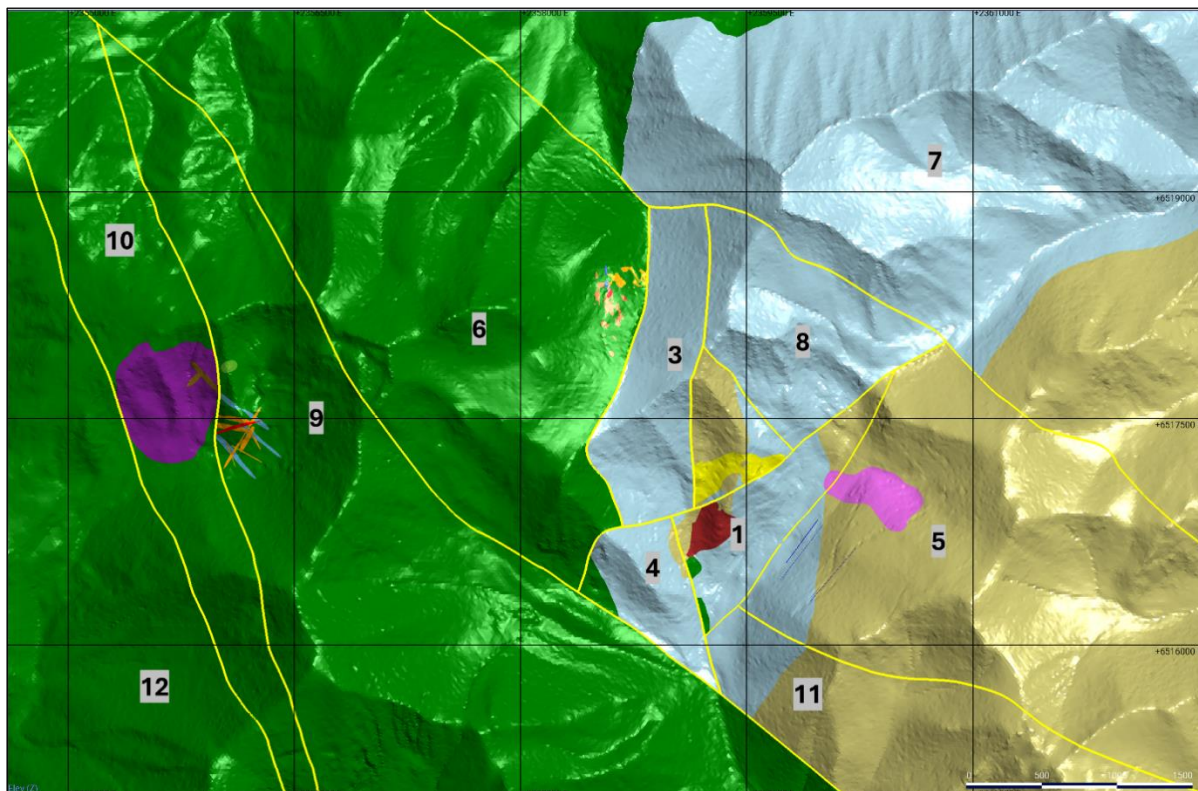
Figure 7-1: Altar Structural Domains, 500-m Grid

7.4 Property Geology - “3D” Structural & Lithological Geology Model

A structural-lithological 3D model was built during 2024, utilizing the geological information acquired from the latest core relogging campaign, surface geological mapping, and structural analysis from satellite imagery.

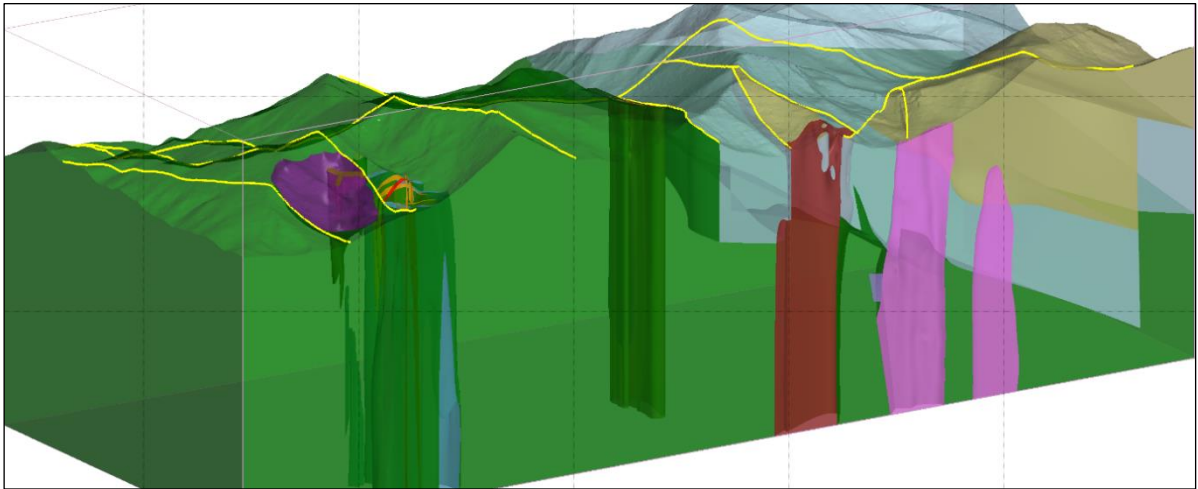
This model covers an area of 8 km by 5.2 km and encompasses all the known mineralized zones found within the project area. There are of 12 independent, structural fault blocks (Figure 7-2), bounded by major faults that were either identified during the surface mapping and core logging, or were interpreted from satellite imagery. Some of the faults separate fault blocks that exhibit significant changes in lithology, or alteration, or mineralization, or geochemistry, suggesting syn- to post-mineralization movements.

Figure 7-2 illustrates the structural interpretation superimposed over the lithology interpretation. Figure 7-3 illustrates the same information as an oblique view looking northeast.



Source: Aldebaran Resources, 2024

Figure 7-2: Structural Domains and Lithology Plan Map, 500-m Grid



Source: Aldebaran Resources, 2024

Figure 7-3: Oblique View to the Northeast of a Section through the Geologic Model

7.5 Property Geology - Alteration, Mineralization, Veins and Silica Ledges

7.5.1 General

The Altar project consists of a cluster of mineralized porphyry centres, located within a large area of hydrothermal alteration, which extends over a seven-kilometer strike-length. From west to east those porphyry centres are: QDM, Radio, Altar North, Altar Central, Altar United, and Altar East. QDM can be separated into an upper epithermal gold-silver deposit known as “QDM Gold” and a recently discovered, lower porphyry copper-gold-molybdenite deposit known as the “Radio Porphyry”.

7.5.2 Alteration, Mineralization and Veins

Main Cu-Au-Mo mineralized centres in the project are associated with porphyry style alteration mineral assemblages. These are, in some of the areas, locally overprinted due to telescoping by epithermal style assemblages. Subsequent weathering processes also produced supergene alteration assemblages which affected prior hypogene and primary minerals.

Porphyry style alteration in the Altar project systems display a marked zonation of mineral assemblages. Starting with an inner core of predominantly high temperature potassic alteration (PBK) within the quartz diorite intrusions, characterized by the occurrence of secondary biotite - k feldspar - quartz $\pm$ magnetite $\pm$ chalcopyrite $\pm$ bornite related to the occurrence of “A” and “AB” type veins, crosscut by “B” type and quartz-molybdenite veins.

Rhyolite and Andesite basement rocks also underwent potassic alteration where these units occur in proximity to the porphyry intrusions, but in all cases the vein density was substantially less than that found in the nearby intrusions.

The core of potassic alteration is partially overprinted by high-temperature transitional - assemblages, characterized by green and pale-gray sericite ± chalcopyrite ± bornite ± pyrite ± quartz pervasive alteration occurring in the halos of hair-wide structures, associated in occasions with possible “EDM” type and green sericite veins (GSC).

High temperature alteration assemblages are partially overlapped and grade outwards into pyrite - white sericite ± quartz “phyllic” assemblages associated with the occurrence of “D” type veins, and finally into distal chlorite ± quartz ± hematite ± pyrite ± epidote “Propylitic” alteration at the fringes of the system. Illite - smectite “Intermediate Argillic” alteration occurs in the upper-distal portions of the system in Altar porphyries. The shallower portions of the Altar Central and Altar East centres are locally overprinted by high-sulphidation alteration associated with pyrite ± enargite ± chalcopyrite ± quartz ± clay ± anhydrite veins.

Several generations of quartz veins related to potassic alteration are seen in drill core. These veins constitute typically between 10 and 30 volume percent of the rock mass but can locally reach >50 volume percent in the early diorite porphyries. Quartz veining and K-feldspar replacement within inter-mineral quartz diorite porphyries grade from weak to moderate, with quartz veins generally constituting less than 20 percent of the resulting rock mass. The well-developed copper mineralization shows a strong relationship to the distribution and intensity of green sericite and potassic alteration types.

Acidic high-sulphidation conditions prevalent in an advanced argillic lithocap were superimposed on an underlying potassic alteration zone because of telescoping. Hypogene sulphides generally exhibit a consistent vertical zonation pattern: pyrite–enargite at the higher levels; pyrite–chalcocite–bornite assemblages at intermediate levels; and pyrite–chalcopyrite–bornite and pyrite–molybdenite assemblages at deeper levels. Recent petrographic work has also identified tennantite-tetrahedrite from intermediate level samples. Supergene covellite and digenite occur as an overprint on hypogene sulphides within sericite alteration, descending from the base of oxidation beneath the leached capping at high levels to intermediate depths.

The copper mineralization associated with the potassic alteration, mainly porphyry style chalcopyrite–bornite mineralization, was reconstituted as hypogene assemblages of pyrite, chalcocite and bornite within the green sericite alteration zone. Magnetite originally present in the potassic alteration zone was pyritized during the high sulphidation overprint. Sulphide minerals found within sericite alteration include hypogene pyrite, chalcopyrite, chalcocite, bornite, and molybdenite along with supergene covellite and digenite. Latest stage pyrite-enargite veins related to a high sulphidation epithermal system cut through the Stage 1 and 2 mineralization but contribute a minor proportion of the copper mineralization.

Pyrite is ubiquitous with contents ranging from 2 to 15 percent but generally falling between 3 percent and 6 percent. It occurs as disseminations in wall rock, as quartz–pyrite veins, in late pyrite–enargite veins and occasionally as massive pyrite veins up to 2 cm thick.

During the 2019-2020 relogging campaign, Aldebaran geologists identified several assemblages of alteration minerals, occurring in a reasonable well-defined paragenetic sequence defined here:

Hypogene Assemblages

PBK “Potassic Biotite - K feldspar”

As mentioned before, potassic alteration is one of the earliest alteration events associated to metasomatic processes during the emplacement and cooling of quartz - diorite porphyries. Characterized in this case by the occurrence of distinctive, brown color shredded biotite with variable amounts of k feldspar - quartz $\pm$ magnetite $\pm$ chalcopyrite $\pm$ bornite $\pm$ pyrite.

GSC “Green Sericite - Chlorite”

The presence of green sericite has been observed closely associated with the main stage of copper mineralization characterized by chalcopyrite hairlines/veinlets and dissemination. The green sericite is observed as an alteration reaction front/rim between white sericite and earlier biotite/ K-feldspar alteration. It is also observed locally replacing earlier biotite and observed to a lesser degree associated/together with the chalcopyrite hairlines and disseminated chalcopyrite minerals. Chalcopyrite hairlines clearly cut early coarse quartz veinlets. Bornite, although minor, is seen associated with this stage of alteration. Molybdenite can also be associated with chalcopyrite and green sericite. Pyrite is also present in this stage. In the higher-grade copper zones, chalcopyrite hairlines/veinlets are almost exclusively (>90%) formed by that mineral; in areas with lesser copper grades, they are a mixture of chalcopyrite and pyrite and distally can be predominantly pyrite.

ANL “Lavender Anhydrite”

Lavender anhydrite occurs mainly as veinlets and filling open spaces. Multiple stages of lavender anhydrite veins were described. Some early-stage veins are associated with the potassic assemblages and can contain variable amounts of biotite and sulphides, displayed in occasionally selvages of biotite. These are crosscut locally by younger events, carrying lesser amounts of sulphides, and usually displaying clay-sericite halos.

WSP “White Sericite Pyrite”

White Sericite Pyrite is usually associated with pyrite $\pm$ quartz veins with well-developed white sericite - pyrite halos, which on occasions completely obliterates original textures of the rock. These are the classic “D” type veins, and in most cases are associated with late, mineralization destructive events, crosscutting and overprinting all of the alterations described above.

TQS “Tourmaline Quartz Sericite”

Tourmaline-quartz-white sericite alteration occurs in veins, breccia-veins, and as destructive, pervasive fronts overprinting earlier alteration assemblages. Timing of the TQS events is variable for each system, occurring as late-stage pulses in Altar East and Altar North, where it relates with the occurrence of copper and gold mineralization. In some portions of Altar Central, TQS alteration appears to be crosscut by WSP assemblages, indicating the existence of earlier events of TQS.

QPC “Quartz Pyrite Clay”

A quartz - pyrite ($\pm$ clay-sericite) event (QPC), is characterized by coarse crystalline quartz + yellow-crystalline pyrite in thin veinlets with a strong silicification halo. This late-stage event diminishes/destroys mineralization. QPC is close in time/related to the SHS event, although enargite/pyrite veinlets are seen cutting QPC.

SHS “High-Sulphidation Epithermal”

This mineralization type occurs in the upper portions of the deposit, overprinting and crosscutting all of the events described above. It is characterized by the occurrence of pyrite - enargite $\pm$ chalcopyrite veins with associated, widely developed clay - sericite halos, occurring mostly as discrete veins and breccia-veins, but also disseminated.

SBM “Base Metals Epithermal”

Base metal epithermal (or intermediate sulphidation style) is white mica - clay occurring as halos to late epithermal-type veins with variable contents of anhydrite, quartz, pyrite, carbonates, sphalerite, chalcopyrite (galena, tennantite) with local gold and silver values.

PR “Propylitic”

Propylitic is characterized by the presence of epidote - chlorite $\pm$ calcite $\pm$ quartz $\pm$ hematite. Usually occurring outside main mineralized zones, but in some places, it is observed overprinting potassic assemblages, likely indicating an overlap of contiguous systems

GYA “Gypsum”

Gypsum occurs mostly filling fractures and in veins, with variable contents of pyrite crosscutting all of the defined hypogene events. It is quite common as a secondary product after weathering of anhydrite.

Supergene Assemblages

SCL/SFX/SCF

The term is used for the occurrence of variable amounts of iron oxides (hematite, goethite, jarosite) and undifferentiated clay minerals occurring close to surface in the leached zones and intimately related to weathering processes. Cu-wad and manganese oxides can be present.

SCu

The term is used for the occurrence of copper oxides and secondary enrichment copper zones characterized by the occurrence of secondary chalcocite, digenite and minor covellite overprinting hypogene pyrite, chalcopyrite and bornite. Clays can be significant; iron oxides minor to absent. Cu-wad absent.

7.5.3 Silica Ledges

Structurally controlled silica ledges occur on the eastern and southeastern portions of the Altar East zone. In 2008, approximately fifty principal ledges were mapped to define a broadly radial pattern centred on the eastern stockwork zone. Mapping by Peregrine in 2009 defined over 200 ledges, confined mostly to the ridge top, at elevations above 3,600 m, with no evidence they continue far down the talus-covered slopes.

Most ledges are formed in steeply dipping structures, ranging in width from 10 cm to 2 m that display a central quartz–alunite alteration, flanked outwards by quartz–kaolinite assemblages. Pyrophyllite is observed locally as a transitional zone. Some ledges contain pods of vuggy residual quartz along their centres, in which enargite and, less commonly, barite and native sulphur occur. Many of the ledges are characterized by vuggy silica, multi-stage episodic hydrothermal breccias (crackle breccias and rotational breccias, and breccias with well-rounded clasts that indicate forceful expulsion of high-

pressure fluids), colloform and crustiform banded quartz, deposition of native sulphur, alunite, barite, enargite and tennantite, limonite and boxworks after sulphides.

These are indicators of the high-level acid sulphate environment that typically overlies high-sulphidation epithermal gold deposits.

7.5.4 QDM Gold

The QDM Gold deposit is primarily a gold-silver deposit with minor associated copper. The Pachón Andesite volcanics were intruded by a circular dacite porphyry stock approximately 700 m in diameter and host a large alteration footprint centred on the porphyry stock. Surface rock exposures at QDM are characterized by pervasive quartz-sericite-tourmaline alteration with disseminations and veinlet stockworks of jarosite after pyrite and less-abundant fine quartz veinlets.

Visible oxide copper mineralization occurs in the alteration zone at QDM and includes malachite, chalcantite, neotocite, and azurite impregnating fractures. Sphalerite mineralization of up to a few percent in volume was observed in several surface exposures in the northern and eastern part of the alteration footprint.

Well-defined hydrothermal breccias occur at the eastern contact between the dacite intrusion and the andesitic host rocks. Three campaigns of geochemical rock chip sampling have consistently returned gold grades ≥ 0.5 grams per tonne (g/t) along with low copper grades reflecting the fact that the rocks at surface are leached of more mobile copper while leaving behind the immobile gold. The 2011 and 2012 exploration drilling at QDM confirmed significant Au mineralization in the leached capping and the underlying sulphide zone, where Au mineralization is associated with abundant pyrite dissemination.

7.6 Mineralization Thickness

Mineralization at the Altar project consists of two styles, epithermal gold-silver $\pm$ copper and porphyry copper-gold. The terminology “thickness” is not applicable for these deposit types, but rather the term “geometry” is a much better way to describe the shape of the mineralization.

7.6.1 Porphyry Copper-Gold

All the mineralized porphyry centres at Altar have a strong vertical aspect relative to their length and width in plan view, forming vertically oriented, cylinder-like bodies. The dimensions of these hypogene (primary sulphide) mineralized bodies varies, but in general they are several hundreds of meters in length and several hundreds of meters in width and can extend vertically for greater than 1.8 km.

Superimposed on this original hypogene geometry is a moderately developed supergene (secondary sulphide) weathering profile that can extend several hundred meters from the present-day topographic surface. The supergene weathering profile consists of an upper “Leached Cap” zone, where all of the primary hypogene copper minerals have been completely leached out by sulphuric acid-rich supergene fluids, leaving behind iron oxides and any gold that may have been present. Thickness of this “Leached Cap” is variable and can range from zero to several hundred meters vertically from the present-day topographic surface.

Below the “Leach Cap” is a zone of secondary copper sulphide minerals (dominantly chalcocite - covellite $\pm$ digenite) that forms an irregular, blanket-like zone of variable thickness ranging from a few

meters to several hundred meters. This zone is commonly referred to as the “secondary enrichment blanket” in many porphyry deposits in the world. Below the secondary enrichment blanket, and transitional to, is the primary hypogene copper-gold zone described above.

7.6.2 Epithermal Gold-Silver ± Copper

Mineralization thickness at the QDM Gold deposit is approximately 220 m for mineralization with grade above 0.20 g/t.

7.7 “3D” Modeling of Arsenic-bearing Structural Zones

Historically, there has been a perception that arsenic is a potential issue at Altar. Prior to Aldebaran acquiring Altar, there had been no attempt to geologically constrain and model the arsenic distribution. This, in addition to using a geostatistical model with limited geological constraints, resulted in arsenic being artificially spread out in the 2018 resource model. A significant amount of the arsenic at the Altar project occurs within the leach-cap and supergene zones, primarily above Altar Central. This realization could have material impacts on the project as the leach-cap rocks will not be processed as they have no mineralization, and the supergene zone could potentially be processed by either traditional SX-EW heap leach technology, or the Nuton® Technology, neither of which would extract the arsenic. Geological evidence indicates that the arsenic in the primary (hypogene) mineralization is hosted by sub-vertical, centimeter-scale quartz-enargite-pyrite veinlets that occur within narrow, meter, to in rare instances, tens of meter-scale structural corridors/zones that have now been meticulously modeled in three-dimensions, which will better constrain the arsenic in the new resource model and reduce the overall arsenic content of the reportable primary (hypogene) copper mineralization. In the supergene zone, arsenic has been interpreted as a large pervasive area superimposed over the supergene copper zone.

To model these arsenic-bearing structural zones the following steps were completed:

- 1) All the arsenic values from individual assay intervals were composited using 300 parts per million (ppm) cutoff and 15 m minimum composite length, which happens to be the block size used in the current resource model. Subsequently, 15 m minimum length composites for assays below the 300-ppm cutoff were generated.
- 2) Using our knowledge from the recent 1:50,000 and 1:10,000 scale structural studies and recent surface geological mapping, the predominant sets of structural orientations from these studies have been used as reasonable proxies, since none of the current DDH is oriented.
- 3) Using these reasonable structural orientations as a guide, all the ≥300 ppm arsenic (As) composites were linked up manually by Aldebaran’s modeling geologist (in coordination with the other members of the Aldebaran geological team) in the 3D space using 3D software.
- 4) The resulting model was checked against photos of the drill core boxes for visual validation.
- 5) The modeled solids were then exported from the 3D software as DXF wireframes and incorporated into IMC’s block model to be used as hard constraints on arsenic distribution.

This process of modeling the higher arsenic structures has resulted in a much more geologically realistic model of the 3D distribution of arsenic within the Altar project.

8 Deposit Type

The Altar porphyry cluster was deposited formed in a transitional environment that transitions from the basal roots of a high-sulphidation epithermal lithocap to a sub-volcanic deeper porphyry copper environment at depth. Some of the porphyry centres can have been described as telescoped because of the close spatial distance between the porphyry and the high-sulphidation systems; however the age of the porphyry copper mineralization is estimated to be Miocene, ranging from approximately 10 to 12 million years old (Maydagan et al. 2011), which suggests there has been superposition of different aged systems rather than telescoping of one single system. There are currently no reliable published dates for the epithermal mineralization that overlies the copper-gold porphyry systems and therefore any direct timing link between the two types of mineralization remains conjectural.

There are three main mineralized zones within the main Altar area of the project that are referred to as Altar Central, Alter United, and the Altar East from west to east zones. Each zone is associated with a distinct porphyry intrusive center that spatially coalesce to form one large zone of mineralization. In addition, there is another copper porphyry centre called Altar North, with limited drilling to date, that is about 2 km north of Altar Central. Three and a half kilometers west of the Altar Central zone is a gold-silver deposit called the QDM, that is included in the 2024 statement of mineral resources. Just east and immediately adjacent at depth from QDM is a copper-gold mineralized porphyry discovered in 2017 called Radio Porphyry, which is currently not in the mineral resource.

There are currently no reliable published dates for the epithermal mineralization that overlies the copper-gold porphyry systems and therefore any direct temporal genetic link between the two types of mineralization remains conjectural.

There are several adjacent mineral properties under exploitation, exploration or development in the area surrounding Altar. Los Pelambres Mine (Chile), El Pachón (Argentina), and Los Azules (Argentina) are within 25 km, 25 km, and 45 km respectively from Altar.

8.1 High- and Intermediate-Sulphidation Epithermal Deposits

These deposits typically form in shallow, subaerial volcanic complexes or composite island arc volcanoes above degassing magma chambers. The deposits are also genetically related to high-level intrusions. Multiple stages of mineralization are common, presumably related to periodic tectonism with associated intrusive activity and magmatic hydrothermal fluid generation. High - and intermediate-sulphidation deposits can also be developed in second order structures adjacent to crustal-scale fault zones, both normal and strike slip, as well as local structures associated with sub-volcanic intrusions. The deposits tend to overlie and flank porphyry copper-gold deposits and underlie acid leached siliceous, clay and alunite-bearing lithocaps.

Host rocks are typically volcanic pyroclastic and lavas, most commonly subaerial andesite to dacite and rhyodacite, and their sub-volcanic intrusive equivalents. The deposits range in age from Tertiary to Quaternary; less commonly, Mesozoic and rarely Palaeozoic volcanic belts may be hosts. The rare preservation of older deposits reflects rapid rates of erosion before burial of subaerial volcanoes in tectonically active arcs.

Mineralization is developed in multiple, cross cutting veins and massive sulphide replacement pods and lenses, stockworks and breccias. Deposits may have irregular shapes, as deposit geometry is determined by host rock permeability and the orientation of deposition controlling structures. Principal

minerals comprise pyrite, enargite/luzonite, chalcocite, covellite, bornite, gold, and electrum; lesser minerals can include chalcopyrite, sphalerite, tetrahedrite/tennantite, galena, marcasite, silver sulphosalts, and tellurides.

Typically, alteration consists of quartz, kaolinite/dickite, alunite, barite, hematite; sericite/illite, amorphous clays and silica, pyrophyllite, andalusite, diaspore, corundum, tourmaline, dumortierite, topaz, zunyite, jarosite, Al-P sulfates (such as hinsdalite, woodhouseite, crandalite) and native sulfur. Advanced Argillic alteration is characteristic and can be laterally extensive and visually prominent. Quartz occurs as fine-grained replacements and, more characteristically, as vuggy residual silica in acid-leached rocks.

8.2 Porphyry Copper Deposits

Porphyry copper deposits tend to form in orogenic belts at convergent plate boundaries and are commonly linked to subduction related magmatism and subvolcanic intrusions. They may also form in association with emplacement of high-level stocks during extensional tectonism related to strike slip faulting and back-arc spreading following continent margin accretion. Virtually any type of country rock can be mineralized, but commonly the high-level stocks and related dykes intrude their coeval and cogenetic volcanic piles. Porphyry deposits in the Andes are generally Tertiary in age; globally, deposits can range in age from Archaean to Quaternary.

Intrusions range from coarse grained phaneritic to porphyritic stocks, batholiths and dike swarms, but are rarely pegmatitic. Compositions range from calc-alkaline quartz diorite to granodiorite and quartz monzonite. Commonly, there are multiple emplacements of successive intrusive phases and a wide variety of breccias. Deposits generally comprise large zones of hydrothermally altered rock that contain quartz veins and stockworks, sulphide-bearing veinlets, fractures, and lesser disseminations in areas up to 10 km² in size. Deposits can be wholly or in part coincidence with hydrothermal or intrusion breccias and dike swarms. Deposit boundaries are determined by economic factors that outline ore zones within larger areas of low grade, concentrically zoned mineralization.

Pyrite is the predominant sulphide mineral; in some deposits the iron oxide minerals magnetite, and rarely hematite, are abundant. Economically important minerals are chalcopyrite; molybdenite, lesser bornite and rare (primary) chalcocite. Subordinate minerals are tetrahedrite/tennantite, enargite and minor gold, electrum and arsenopyrite. In many deposits, late veins commonly contain galena and sphalerite in a gangue of quartz, calcite, and barite.

Early formed alteration can be overprinted by younger assemblages. Central and early formed potassic zones (K-feldspar and biotite) commonly coincide with ore. This alteration can be flanked in volcanic host rocks by biotite rich rocks that grade outward into propylitic rocks. The biotite is a fine-grained secondary mineral that is commonly referred to as an early-developed biotite or a biotite hornfels. These older alteration assemblages in cupriferous zones can be partially to completely overprinted by later biotite and K-feldspar and green sericite ± chlorite-clay alteration, which in turn is overprinted by phyllic (quartz–sericite–pyrite) alteration and less commonly argillic, and rarely, in the uppermost parts of some ore deposits, advanced argillic alteration (kaolinite–pyrophyllite).

Alternatively, a porphyry system may exhibit hypogene enrichment. The process of hypogene enrichment may relate to the introduction of late hydrothermal copper enriched fluids along structurally prepared pathways, or the leaching and redeposition of hypogene copper, or a combination of the two.

The enriched copper mineralogy comprises, for example, covellite and chalcocite. Such enrichment processes result in elevated hypogene grades.

Supergene enrichment of porphyry deposits may occur during tectonic uplift and coeval erosion processes and episodes of favorable semi-arid climate, when meteoric water percolates through the topmost parts of the deposit, thereby oxidizing primary sulphides. This process leads to the formation of sulfuric acid. Acidic meteoric waters leach metals and carry them downward to react with primary sulphides at the redox boundary, e.g., the paleo water table. This reaction produces secondary sulphide mineralization such as chalcocite, covellite and digenite. For supergene enrichment to take place a balance between uplift, climate, rock composition and structure is required.

The Altar deposit exhibits moderate supergene enrichment as observed in drill core and recorded in the drill logs, as well as measured by the sequential copper assays in the database.

9 Exploration

This section provides a high-level summary of all the exploration work completed at Altar from 2005 through early 2021. This summary utilizes portions of the write-up from the 2014 and 2018 NI 43-101 reports by Independent Mining Consultants, Inc. (dated January 31, 2014, and September 28, 2018, respectively). Additional new information has been added for the years 1995 to 2004 and for 2019 to 2021. The main area of exploration is approximately 8 km east-west and approximately 6 km north-south. This section has been updated by Aldebaran geologists Mariano Poodts and Dr. Kevin B. Heather (Aldebaran QP, FAUSIMM) and reviewed by John Marek of IMC. Refer to Section 10 for a summary of drilling that has been completed.

9.1 1995 - 2004

From 1995–1996, CRA completed construction of 18 km of new access roads, reconnaissance stream sediment sampling (36 samples), rock chip sampling (485 samples), talus fines sampling (491 samples), geological mapping and acquisition of heli-borne magnetic geophysical data. From 1999–2003, Rio Tinto completed limited geological mapping (1:10,000 scale), alteration studies using Aster imagery, a ground magnetic survey (line spacing of 100 m and sensor height of 2 m), diamond drilling (total of 2,845.13 m in seven widely-spaced holes), reverse circulation drilling (four widely-spaced holes), and petrographic examination of selected diamond core samples.

9.2 2005 - 2008

Peregrine optioned the Altar property from Rio Tinto in 2005 and completed a 23.4 line-km IP survey followed by eight core holes totaling 3,302 m during the 2005-2006 summer field seasons. In the first quarter of 2007, Peregrine carried out a second diamond drilling campaign comprising 25 core holes totaling 10,408 m.

Peregrine completed a third drilling campaign in the first quarter of 2008 comprised of 24 additional core holes and the deepening of one pre-existing hole for a total of 12,741 m.

9.3 2009 Field Season

During January and February 2009, a follow up geologic and geochemical program was completed to refine understanding of the copper and gold mineralization and alteration zoning at Altar East. The previously identified silica ledges of the high sulphidation epithermal system at Altar East were mapped and sampled in detail. A total of 441 grab-style rock chip samples were collected in the area.

Further reconnaissance-scale geologic mapping and geochemical sampling was conducted at the QDM prospect where an additional 27 rock chip samples were collected from outcrops in the area. Results of the 2009 reconnaissance work established QDM as a potentially significant porphyry-style gold target which warranted continued evaluation.

Also, during 2009, a stream sediment survey was conducted which included the collection of 15 stream sediment samples and 15 panned concentrate samples from principal streams and drainage courses in the area.

9.4 2010 Field Season

Between January and May 2010, Peregrine completed an additional 76 core holes and deepened 2 prior core holes for a total of 26,348.55 m. The 2010 drilling also included 8 twinned holes to provide metallurgical samples. The company also conducted additional surface geochemical sampling and completed a total of 22.9 line-km of IP geophysical surveys over the Altar project and the QDM target areas.

The company constructed 24 km of additional access and exploration roads on the Altar and Rio Cenicero properties to facilitate planned drilling, trenching, geochemical sampling, and geophysical surveys. A new road was constructed to establish vehicle and drill rig access to the QDM target area. A 6.4 km road providing an alternative access route was also constructed to connect the Altar Camp with the network of existing well maintained roads serving Xstrata's neighboring El Pachón project.

Peregrine's 2010 exploration activities included a total of 4,360 m of excavator trenching in the epithermal Au-Ag target at Altar East. Continuous 2-meter rock chip samples were collected from these trenches totaling 2,679 samples. At the QDM target area, the company collected a 169 additional grab-style rock chip samples.

9.5 2011 Field Season

The December 2010 to April 2011 field campaign consisted of drilling 6 large diameter PQ-size Metallurgical drill holes in the central part of the Altar deposit (2,056 m), three exploration drill holes at Altar East and 4 initial exploration drill holes in the QDM area. A preliminary groundwater survey was also conducted at four select sites each with an array including a test well and monitoring hole for determining local ground water characteristics, aquifer depths, basic water chemistry and recharge characteristics. A total of 3,962 m of core drilling and 1,133 m of rotary drilling were completed.

During January, three step-out exploration drill holes provided further insights regarding the Altar East epithermal Au-Ag target and porphyry mineralization. A total of 900 m was drilled in the 3 angle holes. Significant porphyry-style Cu-Au mineralization was intercepted in drill hole ALD 148.

A down-hole geophysical survey applying "Mise a la Masse" technology was conducted in April 2011 to estimate the potential extent of sulphide mineralization encountered at depth in ALD 148 (from a patterned 3.6 line-km surface array). An additional 3 pole-dipole IP geophysical survey lines were completed over the Altar East target totaling 1.7 line-km.

Four initial reconnaissance diamond drill holes were collared in the QDM Porphyry Au-Cu target. A total of 1,005.5 m was drilled in 2 angle and 2 vertical holes. Significant drill intervals of Au mineralization were intercepted in 3 of the 4 drill holes. The QDM drilling confirmed the discovery of anomalous Au mineralization in the oxidized leached cap and also associated with deeper disseminated pyrite mineralization in the non-oxidized hypogene portions of a Dacite Porphyry stock. In March and April of 2011, two additional pole-dipole IP lines were completed across the northern part of the QDM target area to better define the northern extent of the IP anomaly identified by a prior 2010 geophysical survey.

An 11.9 line-km Controlled Source Audio-frequency Magneto-Telluric (CSAMT) survey was conducted in the Altar Central and Altar East areas in combination with resistivity measurements on existing drill core intervals from the deeper holes at Altar Central.

Further rock chip sampling was conducted in the QDM target area collecting a total of 460 rock chip samples. Forty-three trench and road cut samples were collected on two-meter intervals at the Altar North prospect, and 438 trench samples were collected from new road cuts and drill platforms at Altar East. A total of 272 talus fines samples were collected in the QDM and Altar North areas.

In November 2011, SMC completed the acquisition of all outstanding shares of Peregrine, and Peregrine was maintained as a subsidiary, as were Peregrine's operating companies Minera Peregrine Argentina S.A. and Minera Peregrine Chile S.C.M.

9.6 2012 Field Season

Exploration work continued both at QDM and the Altar Central deposits. Twenty-four exploration holes totaling 6,080.6 m were drilled at QDM. The company collected 111 grab samples for rock chips. A 15 m deep water monitoring well was installed adjacent to drill hole QDM 19.

Seven exploration holes were drilled in the Altar North Porphyry target located north of the Altar main zone. Additional exploration roads and platforms were excavated allowing for the collection of 36 rock chip grab samples at Altar North. In total, there were 36 holes drilled at Altar North, Central, and East during 2012 as summarized in Section 10.

Eleven rock chip grab samples were collected along the eastern extensions of Altar East, and a water monitoring well was drilled in the central-northern part of the project to a depth of 21 m.

9.7 2013 Field Season

Exploration work continued at Altar East and Altar North between December 2012 and April 2013. Two DDH were drilled at the Altar North Porphyry target, and 18 holes were drilled at Altar East (including 4 drill hole extensions).

Between December 2012 and February 2013, the company collected 263 rock chip samples in road cuts and platform outcrops for better delineation of the geochemistry anomalies at Altar North and Altar East. A total of 60 rock chip samples were collected during first prospection work on the two peripheral concessions 414.1458-R-05 and 414.1487-R-05. A tested color anomaly in the south-western sector of concession 414.1487-R-05 revealed anomalous gold and highly anomalous arsenic grades.

9.8 2014 Field Season

Exploration work continued at Altar East, Altar North, La Esquina and QDM between January and March 2014. No diamond drilling was carried out during the 2014 field season. Between January and March 2014, 38 rock chip samples were collected, and a 13-line talus fines sampling program was carried out collecting a total of 136 talus fines at the above-mentioned targets.

9.9 2015 Field Season

Exploration work continued at Altar East, Altar North, La Esquina, QDM and new a new target called Chinchimoye between January and April 2015. No DDH was carried out during the 2015 field season. Chinchimoye is 1.5 km north of QDM.

Between January and March 2015, a total of 110 rock chip samples were collected. Native Cu nuggets of >40% Cu and grab samples of >1% Ag were collected at the Chinchimoye prospect. A 3-line talus

finer sampling program was carried out at the Chinchimoye prospect located 1.5 km north of the QDM project. A total of 51 talus fines samples were collected.

In addition to the prospecting, mapping and sampling work, a Titan 24 magneto-telluric (MT) survey was carried out by Quantec Geosciences. A total of 3 lines each with a minimum length of 4.8 km were surveyed, 2 crossing lines at Altar East and 1 W-E running line from QDM to Altar North. This sophisticated survey provided a deep IP response down to >1,000 m depth. The magneto-telluric (MT) component of the survey provided resistivity to depths greater than 2,000 m. Several high-quality low resistivity – high chargeability targets were identified.

9.10 2016 Field Season

Exploration work continued at Altar East, Altar North, La Esquina, QDM and the Chinchimoye target between January and April 2016. Between January and March 2016, a total of 52 rock chip samples were collected.

A DDH program was carried out with a total of 4,931 m drilled in 8 drill holes and drill hole extensions. Two drill holes were collared at Altar East, 1 drill hole was extended at Altar North, 1 drill hole was collared at La Esquina, 2 drill holes at Chinchimoye, and 2 drill holes were collared at QDM. Drilling work started on January 30th and was terminated on April 16th due to adverse weather conditions. New drill roads and drill platforms were constructed at Altar East, La Esquina, Chinchimoye and QDM.

A new discovery was made and the first economic copper mineralization at QDM was found by drilling QDM-029. The discovery hole intercepted a new copper-gold porphyry stock named Radio Porphyry consisting of multiple porphyry pulses. QDM-029 intercepted 311 m of mineralization averaging 0.36% Cu and 0.16 gm/t Au including higher grade intervals of: 32 m of 0.50 % Cu and 0.13 gm/t Au, and 46 m of 0.50% Cu and 0.31 gm/t Au. The Radio Porphyry target area coincides with multiple surface geochemistry anomalies and a former Rio Tinto airborne magnetic anomaly. The Radio Porphyry was considered as a high priority target to be further drill-tested.

9.11 2017 Field Season

Exploration work, that included a ground magnetic survey, drilling program, and collection of 12 rock chip samples, continued at the QDM - Radio Porphyry discovery between January and April 2017.

The QDM - Radio Porphyry discovery hole QDM-029 displayed an abundance of magnetite alteration, which has not been associated with the previously known mineralization. Therefore, a small 11-line ground magnetic survey was completed by Quantec Geosciences prior to commencement of drilling. It is noted the previous magnetic survey performed by Rio Tinto did not contain sufficient resolution for detailed drill target definition. The magnetic reduced-to-pole and vertical derivative maps from the Quantec were utilized in targeting the DDH since the new discovery is predominately covered by Quaternary landslide material.

A total of seven DDH were completed at QDM Radio Porphyry, all with HQ diameter core, between January to April 2017. Total meters drilled was 5,630.5 m. The drilling focused on the QDM Radio Porphyry discovery made in 2016 to further define and understand this new and important discovery. In general, the drilling defined an approximate area of 300 m by 600 m of quartz stockwork with associated sericite/potassic alteration within multiple pulses of porphyry intrusive that is currently open at depth and in all directions.

It was noted that drill spacing for QDM - Radio Porphyry was not sufficient to complete a resource estimate, with additional drilling being required. No additional drilling occurred in the area of the shallow QDM gold mineralization.

9.12 2018 Field Season

Sibanye-Stillwater continued exploration work continued between January and April 2018 at the Altar Central, Altar East and QDM-Radio zones. Work included an extension of the existing ground magnetic survey, a drilling program, and collection of talus fines and rock chip samples for geochemistry.

A 60 line-km ground magnetic survey was conducted over the QDM-Radio area in order to better define magnetite-bearing potassic alteration, which was known to be associated with some of the better grade mineralization.

A total of four DDH totaling 4,923.30 m, were completed between January and April 2018. Two holes were drilled in Altar East, one was an extension of ALD 190, and the second was new hole ALD 209. These drill holes proved the extension at depth and to the east of the mineralized zone defined by prior holes in the area.

A third drill hole, ALD 210, was collared south of Altar Central, it intercepted two major zones with relevant mineralization:

A single hole of 1,540 m depth was drilled in QDM-Radio during 2018. This was QDM 039 which intersected 808.0 m at 0.384 % Cu, 0.190 g/t Au from 184 m to 992 m. This proved the continuity to the north of the mineralized zone found in previous hole QDM 037.

An ambitious talus fines sampling program was proposed and started during 2018. This program consisted of a 100 m by 100 m spaced grid of sampling points, covering the entire extension of Altar-Rio Cenicero land tenures. A total of 193 samples were taken during the first year of this ambitious program. A total of 61 rock chip samples were collected during 2018.

In October 2018, Aldebaran Resources Inc. (TSX-V: ALDE) was officially spun-out of Regulus Resources Inc. (TSX-V: REG) and the Altar earn-in agreement with Sibanye-Stillwater finalized. From this date forward, Aldebaran was designated operator of the project and assumed control on all technical aspects of the exploration at Altar.

9.13 2019 Field Season

Aldebaran Resources continued the field component of the exploration work between January and April 2019 at the Altar Central, Altar East and QDM-Radio zones. Work included a drilling program, and continuation of the talus fines sampling program, which started in 2018. In addition, a small number of rock chip samples were collected for geochemistry.

Four DDH were completed during the 2019 drilling program, adding a total of 5,562 m. Two holes collared in QDM-Radio zone, one in Altar East and one in Altar Central.

The talus fines sampling program continued over the northern portion of the property and a total of 325 samples were collected. In addition, 50 rock chip samples for geochemistry were collected during 2019 season.

During the 2019 winter and spring seasons, the company started an extensive and detailed geological logging campaign of approximately 115,000 m of historical drill hole cores from the project. This work

was started at its former Mendoza City warehouse facilities and eventually completed at its new San Juan City warehouse and office facilities.

9.14 2020 Field Season

Aldebaran decided not to drill during the 2020 field season, in order to carry out other baseline field mapping and sampling programs. That work was undertaken between January and April 2020 and consisted of talus fine sampling, 1:10,000 geological and structural mapping, ground magnetic geophysical surveying, and satellite-borne hyperspectral and structural analysis. The detailed re-logging campaign started in 2019 and continued during 2020.

In April 2020, the COVID-19 pandemic became a serious concern in Argentina and Aldebaran elected to cut its 2020 field campaign earlier than originally anticipated, although most of the critical field programs were 80 - 90% complete. By the end of 2020, a variety of programs and surveys were completed, which have provided valuable information and insights into the controls of the copper-gold mineralization at the Altar project. These are listed below:

- Detailed Geological Core Logging Program: ~115,000 m of historical core completed.
- Surface Geological Mapping: 70% of Altar land package was covered at 1:10,000 scale.
- Surface Talus Fine Geochemical Sampling Program. 1,500 were collected in 2020.
- Ground Magnetic Geophysical Survey: 383.4 linear km for ~4,425 ha surveyed.
- Hyperspectral Survey & Structural Analysis:
 - Aster: regional 1:50,000 area 60 x 60 km (3,600 km²)
 - Worldview3: detailed 1:10,000 Area 16 x 24 km (384 km²)
- Creation of a Structural & Lithological Geology Model
 - Fault block model for the Altar cluster of porphyries
 - Definition of syn- & post-mineral faults
 - Definition and modeling of the supergene copper zones
 - Definition of Hypogene Copper Grade Shells that Respect the Fault Blocks
 - Definition of Gold Grade Shells that Respect the Fault Blocks
 - Modelling of Arsenic using >300 ppm grade shells to better constrain arsenic in the resource block model

This work provided Aldebaran incredible new understanding of the project, and the development of a new geological-structural model, which will be used as the base for an updated resource estimate focused on highlighting higher-grade mineralization, as well as the delineation of areas for possible extensions of the known higher-grade mineralization and new, previously untested, exploration targets.

9.15 2020-2021 Field Season

The 2020-2021 drill campaign at the Altar project commenced at the beginning of February 2021 and was completed in May 2021. A total of five DDH totaling 4,934.50 m were completed on various targets in the Altar Central, Altar East and Radio areas. Drilling focused on testing several of the higher priority targets from the group of new targets generated as part of the recently completed extensive data collection and data modeling exercise. The Company believes there may be significant untapped potential to find higher grade mineralization at the Altar project. Known mineralization at three additional porphyry centres, Radio porphyry, QDM porphyry, and Altar North, were not included in the

Altar mineral resource estimate due to insufficient drilling, but with additional drilling these zones offer significant opportunities to contribute to future resource estimates. The objectives of the 2020-2021 drill campaign were to: (a) test extensions to zones of higher-grade mineralization; and (b) test areas within specific structural blocks identified during the relogging and geological modeling process as having a high potential to extend the footprint of the known mineralization.

Talus Fine Geochemistry: The first-ever systematic talus fine geochemical sampling program has now been completed over 100% of the main Altar project area, with talus fine samples being collected on a 100 x 100 m grid pattern. Approximately 4,335 samples have been collected and analyzed for multi-element geochemistry with low-detection limits. The purpose of this type of sampling is to identify areas not only with anomalous Cu, Au, and Ag geochemistry, but also areas with anomalous geochemistry in the trace elements typically associated with porphyry copper-gold systems. Processing and analysis of this data has been completed and used as one integrant for the generation of drill hole targets.

Geophysics – 3D IP and Magneto-Telluric (MT) Survey: Phases I and II of a 3D IP and MT survey was completed during the 2020-2021 field season. The survey covered an area approximately 5 x 3 km over the QDM/Radio and Altar Central mineralized areas and their immediate surrounds. Due to weather conditions at the end of the 2020-2021 field season, the survey had to be terminated before entire 26.5 km² area (7.8 x 3.4 km) could be completed (Phases III, IV, V, and VI). The objective of the survey is to provide additional characterization of the known mineralization and identify possible extensions and/or new areas for drill testing. Most mineralized porphyry systems have clear responses to both IP and MT, with IP helping to map out sulphide distributions and MT helping to identify areas of favorable alteration such as potassic alteration and silicification, both typically associated with copper mineralization in these types of systems.

9.16 2021-2022 Field Season

A total of 14,538.70 m of diamond drilling was completed in 18 holes. In addition to the drill programs described above, the Company also completed other exploration activities during the 2021-2022 field season, as outlined below:

Talus Fines Geochemistry Due to the success of last season's talus fines geochemistry program in identifying prospective areas for mineralization, it was decided to extend this sampling program to cover the entire Altar property position. An additional 2068 samples were collected during the 2021-2022 field season on both a 100 x 100 m grid to fill-in gaps in the previous campaign's sampling and then on a wider-spaced 200 x 200 m grid pattern to cover the remaining further-afield portions of the property package.

Geophysics – 3D IP and Magneto-Telluric (MT) Survey: Phases III through VI of a 3D IP and MT survey that were not completed last field campaign were completed during the first half of the 2021-2022 field campaign. Highlights include a large >1 by 1-km resistivity-low (conductivity-high) target located between Altar Central and Altar East within a larger 3 by 3-km resistivity anomaly that includes the better grade mineralization from historical drilling at Altar Central and East. Broad zones of higher-grade mineralization in historic drill holes associated with the anomaly demonstrate that the target may host attractive copper-gold mineralization. Hole ALD-22-221, which was started prior to receiving the final 3DIP-MT data, tested the northern edge of this geophysical target. At Altar South, a similar low-resistivity anomaly is coincident, with a multi-element talus fines geochemistry anomaly which sits

within the current resource pit shell. The results of the 3D IP/Resistivity and MT geophysical surveys (see Company news release, dated June 13, 2022) completed across the entire Altar project revealed a compelling coincidence between areas of high conductivity (i.e., low-resistivity) from both the IP and MT data, with areas of known copper-gold mineralization defined by previous drilling (Figure 1-1). At the time, only a small portion of this large, 3 km x 3 km x 2 km anomaly, which is situated between, to the south of, and below, the main Altar Central and East deposits, had been drill tested.

Drill holes ALD-22-220 and ALD-22-221 (discussed below) then confirmed management's long-held belief that the Altar system is much bigger than previously thought (see Company news release dated August 19, 2022). On September 7, 2022, the Company reported the remaining drill holes from the 2021/2022 drill program. Holes QDM-22-47B, QDM-22-48B, QDM-22-49 and QDM-22-50B were designed to test for extensions of porphyry mineralization and provide sufficient drill hole density to support a maiden 43-101 mineral resource calculation at the Radio Porphyry target. Drill holes QDM-22-45U, QDM-22-45L and QDM-22-45D were designed to test the areas around the high-grade gold intercept from the QDM Gold deposit intercepted in QDM-21-45 (see news release dated February 24, 2022).

The holes drilled at the Radio Porphyry successfully extended the mineralized footprint and indicated the system remains open in various directions. The holes following up on the previously reported high-grade gold intercept hit mineralization but were unable to reproduce the previous long runs of higher-grade. However, QDM-22-050B drilled through the western portion of the QDM Gold deposit and intercepted another high-grade gold intercept, providing more evidence that the QDM Gold deposit remains open in several directions and has the potential to host multiple high-grade mineralized structures.

Environmental. The Company will also continue to complete environmental monitoring and baseline studies at the Altar project that will primarily focus on characterization of surface water resources and any potential glacial related features. The Company completed a small reverse circulation drill program and installation of 5 water monitoring wells (~1,130 m) as part of a water balance study being completed by qualified independent experts that will provide a basis for future feasibility studies.

Metallurgy. An extensive amount of metallurgical test work has been completed for the Altar results of this data, taking into consideration the new geological/structural model and the numerous other new data sets to determine (a) whether the samples/results are representative of the deposits as they are currently known, (b) what the results are telling us, and (c) if there is a need for any additional, more focused metallurgical test work going forward.

9.17 2022-2024 Field Seasons

A total of 34,680.5 m in 36 drill holes were completed during the combined 2022-2023 and 2023-2024 field campaigns.

On March 1, 2023, the Company reported results from Altar drill holes ALD-22-222 and ALD-22-223. Hole ALD-22-222 was drilled in an area with no previous drilling and was designed to test a favorable geophysical signature coincident with a strong, multi-element talus fines geochemical anomaly at surface. Drill hole ALD-22-222 was terminated at 1,226 m depth. Drill hole ALD-22-222 is noteworthy as it encountered mineralization in an area within the 2021 conceptual open pit shell that is currently classified as “undefined waste” because there was no previous drilling. This hole demonstrates that additional, in-pit shallower drilling is justified to potentially convert more of the undefined waste into

mineralization which could reduce the strip ratio of the conceptual resource pit. Hole ALD-22-223 represents a 500 m step out from previously drilled hole ALD-22-221 and was designed to test a geophysical anomaly in an area of favorable geological and geochemical information gleaned from nearby shallow drilling. Hole ALD-22-223 was terminated at 1,287.5 m depth. Drill hole ALDE-22-223 should be viewed as a new brownfield discovery hole, considering that it was drilled into a previously undrilled area between Altar Central and Altar East, a significant distance from either of those known areas of mineralization. This is further verification that the geophysical anomaly is a reasonable proxy for mineralization and confirms our long-held belief that there is mineralization connecting Altar Central and Altar East together into a mega deposit.

On May 11, 2023, the Company reported results from Altar drill holes ALD-23-224 and ALD-23-226. Hole ALD-23-224 was drilled in an area with limited previous drilling and was designed to test a coincident MT and DCIP resistivity geophysical anomaly while at the same time testing a 500 m gap between previously released drill holes ALD-22-221 (see Company news release dated August 19, 2022) and ALD-22-223 (see Company news release dated March 1, 2023). Hole ALD-23-224 was terminated at 1,210.5 m and intercepted long runs of mineralization that extends the mineralized footprint well beyond the 2021 resource estimate model. Hole ALD-23-226 was drilled at the south-eastern edge of the resistivity anomaly and was designed to test the south-eastern extension of mineralization. The hole was collared approximately 700 m to the south of ALD-22-223 and was topographically quite high up the southern mountainside in relation to hole 22-223. Hole ALD-23-226 was terminated at 1,146.8 m and intercepted pyritic mineralization throughout the hole but did not return significant assays. Once the hole entered into more favorable host rocks at 1,076 m depth, mineralization improved, as did the assays indicating proximity to the main mineralized porphyry.

On May 31, 2023, the Company reported results from Altar drill hole ALD-23-225B. Hole ALD-23-225B was drilled to test the continuity between mineralization encountered in previously released holes ALD-22-223 (1,167.5 m of 0.48% CuEq – see Company news release dated March 1, 2023) and ALD-23-224 (769.5 m of 0.55% CuEq – see Company news release dated May 11, 2023), and to provide another pierce point into the promising geophysical anomaly that sits below and lateral to the current resources at Altar. Hole ALD-23-225B was terminated at 1,347.2 m depth and intercepted a long run of mineralization, representing one of the best holes drilled on the property to date.

On June 7, 2023, the Company reported results from Altar drill holes ALD-23-227 and ALDE-23-228. Hole ALD-23-227 was a 200 m step out hole to the north from previously released ALD-22-223 (1,167.5 m of 0.48% CuEq – see March 1, 2023, press release). ALD-23-228 was a 200 m step out to the north from previously released ALD-23-225B (951.2 m of 0.6% CuEq – see May 31, 2023, press release). Both holes have provided valuable additional pierce points into the promising geophysical anomaly beneath and lateral to current resources at the Altar project. In addition, both ALD-23-227 and ALD-23-228 tested the northern extension of the newly identified Altar United trend. ALD-23-227 entered favorable host rocks at approximately 1,000 m depth and then returned attractive grade mineralization until the end of the hole. ALD-23-228 hit the favorable host rock formation at approximately 750 m depth and thereafter returned some of the highest-grade copper mineralization encountered on the project to date, demonstrating that the high-grade mineralization found previously in hole ALD-23-225B has continuity.

On October 3, 2023, the Company reported results from Altar drill holes ALD-23-124EXT, ALD-23-228EXT, ALD-23-229, ALD-23-230, ALD-23-231, ALD-23-232, and ALD-23-189EXT. All holes hit mineralization and expanded the mineralized footprint of the Altar project by several hundred meters in multiple directions. The 2023/2024 drilling campaign was completed in May 2024, after drilling 20,024.40 m in twenty holes.

Aldebaran has completed over 63,000 m of drilling since the last resource estimate was produced on the project in 2021. An updated MRE published in November 2024 (see Aldebaran's Press Release dated November 25, 2024), based on drilling up to May 2024, will provide the basis for this PEA. Additional studies to support project feasibility and development were also undertaken during this season's drill program, including baseline environmental monitoring, water and glacial studies and monitoring, geotechnical studies, metallurgical studies, and hyperspectral Corescan characterization of drill core. As the project becomes more advanced, there will also be a notable increase in community relations activities, including the establishment of a project information office in the community of Barreal.

9.18 2024-2025 Field Season

On January 15, 2024, the Company announced (see Aldebaran's press release dated January 15, 2024) that it had entered into a collaboration agreement with Nuton LLC, a Rio Tinto venture, to evaluate the use of its Nuton® Technology, proprietary primary sulphide leaching technologies, on the Altar copper-gold project. Under the terms of the agreement, Aldebaran delivered samples from some historical drill holes representing various styles of mineralization from the Altar project to Nuton (i.e., Phase 1 samples). Nuton then completed detailed mineralogical analyses of each sample before placing the material into columns. Samples were placed in columns with a height of 1 m, each under different controlled Nuton Technology operating conditions. It is expected that the full results will be available in Q1, 2026, approximately one year after all the Phase 1 Nuton Technology 1 m columns were loaded. The parties will share the cost of the test program with Aldebaran covering the cost of preparation and shipping of the samples to Nuton, and Nuton paying for the costs of metallurgical test work.

In November 2024 (see Aldebaran's press release dated November 7, 2024), Nuton's affiliate and Aldebaran entered an Option to Joint Venture Agreement, pursuant to which Nuton has the option to acquire 20% of Altar, and Aldebaran granted exclusivity to Nuton in the area of novel, patented or trade secret leaching technologies for the term of that agreement. On December 23, 2024, the Company announced that Nuton Holdings Ltd. confirmed to move forward with the second payment pursuant to the Option to Joint Venture Agreement to fund the preparation of the Altar PEA Report with a Nuton case. Nuton and Aldebaran (or Nuton and Peregrine Metals) do not yet have a commercial agreement for the licensing of the Nuton Technology for deployment at Altar.

A total of 25,068.4 meters of diamond drilling were completed during the 2024-2025 season with two main objectives:

- 1- From November to late December 2024, a total of 5,977.5 m of large-diameter PQ-sized core were drilled in 10 holes for Phase 2 Nuton Technology metallurgical test work.
- 2- In addition, 28 drill holes were completed from January to May 2025 for a total of 19,090.9 meters with the purpose of upgrading the confidence level of the 2024 inferred resource blocks to the

Measured and Indicated categories), as well as for acquisition of geotechnical data and for potential waste conversion.

On June 17, 2025, the Company reported results from 11 drill holes ALD-25-030EXT, ALD-25-038EXT, ALD-25-080EXT, ALD-25-081EXT, ALD-25-118EXT, ALD-25-135EXT, ALD-25-230EXT, ALD-25-246, ALD-25-247, ALD-25-248 and ALD-25-249 (see Aldebaran's press release dated June 17, 2025).

On August 07, 2025, the Company reported results from the remaining 17 drill holes ALD-25-030B, ALD-25-057EXT, ALD-25-081D, ALD-25-132EXT, ALD-25-171EXT, ALD-25-180EXT, ALD-25-183EXT, ALD-25-200EXT, ALD-25-250, ALD-25-251B, ALD-25-252, ALD-25-253, ALD-25-254, ALD-25-255, ALD-25-256, ALD-25-257 and ALD-25-258 (see Aldebaran's press release dated August 7, 2025).

Additional studies were undertaken during the drill program to support continued project derisking and development, including continued yearly baseline environmental monitoring, water and glacial studies/monitoring, geotechnical studies, and hyperspectral Corescan characterization of drill core.

10 Drilling

This section summarizes the drilling completed to date at the Altar project.

10.1 Introduction

Many phases of diamond drilling have been completed on the Altar project as of the date of this Technical Report. Table 10-1 summarizes the total drilling by company, and Table 10-2 summarizes all drilling by deposit area and by company.

Table 10-1: Altar Project Drilling by Company and Deposit Area

Company	Deposit Area	Number of Drill Holes	Drilled (m)
CRA (now Rio Tinto)	Altar	7	2,838.80
Peregrine Metals	Altar	142	57,968.00
Stillwater	Altar	58	33,356.11
Sibanye-Stillwater/Regulus	Altar	3	3,033.59
Aldebaran Resources*	Altar	62	63,769.40
Stillwater	Others	4	611.50
Peregrine Metals	QDM-Radio	4	1,005.50
Stillwater	QDM-Radio	34	13,147.00
Sibanye-Stillwater/Regulus	QDM-Radio	1	1,540.00
Aldebaran Resources	QDM-Radio	18	14,916.70
Total		333	192,186.60

*2025 Nuton Technology metallurgical twin holes excluded

Table 10-2: Altar Project Drilling by Year, Company and Deposit Area.

Year	Company	Number of Drill Holes	Drilled (m)
Altar Central, United, East, and North			
2004	CRA (Rio Tinto)	7	2,838.80
2006	Peregrine Metals	8	3,302.20
2007	Peregrine Metals	25	11,176.55
2008	Peregrine Metals	24	13,454.30
2010	Peregrine Metals	80	28,512.95
2011	Peregrine Metals	5	1,522.00
2012	Stillwater	40	20,732.80
2013	Stillwater	15	10,129.31
2016	Stillwater	3	2,494.00
2018	Sibanye-Stillwater/Regulus	3	3,033.59
2019	Aldebaran	6	3,576.00
2021	Aldebaran	3	3,748.00
2022	Aldebaran	2	2,674.00
2023	Aldebaran	16	14,656.10
2024	Aldebaran	20	20,024.40
2025**	Aldebaran	28	19,090.90
	Total	285	160,965.9
QDM/Radio			
2011	Peregrine Metals	4	1,005.50
2012	Stillwater	24	6,083.50
2016	Stillwater	3	1,433.00
2017	Stillwater	7	5,630.50
2018	Sibanye-Stillwater/Regulus	1	1,540.00
2019	Aldebaran	2	2,012.00
2021	Aldebaran	1	1,047.00
2022	Aldebaran	15	11,857.70
	Total	57	30,609.20
Other Targets			
2012	Stillwater	2	36.00
2016	Stillwater	2	575.50
	Total	4	611.50

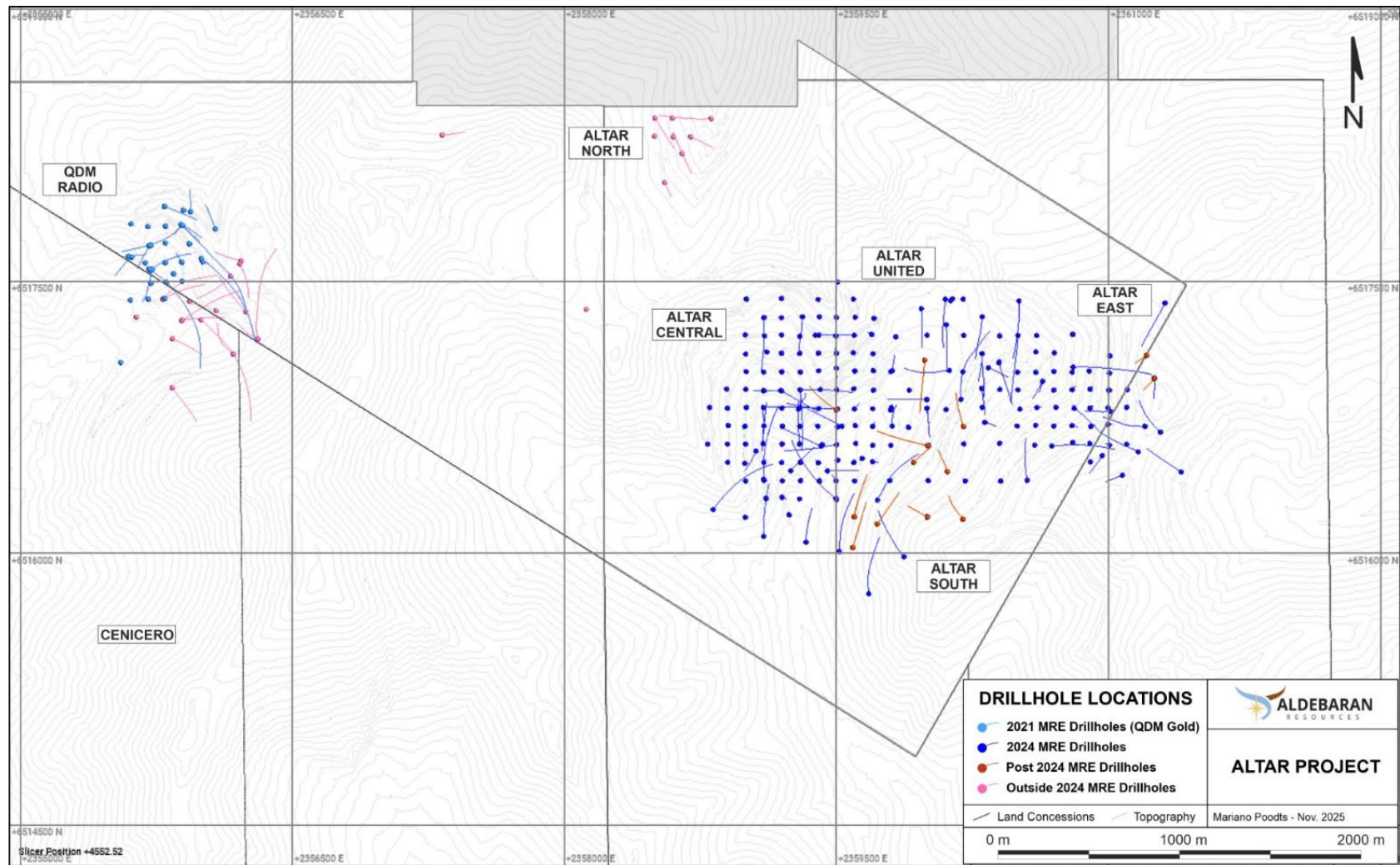
Source: Aldebaran Resources, 2025

*Note: The drill total for 2024 only includes drilling from the 2023-2024 drill campaign, which was used for the current mineral resource estimate. It does not include drilling completed in 2024 as part of the 2024-2025 drill campaign. **Note: The drill total for 2025 includes all Exploration drilling from the 2024-2025 drill campaign. These holes were not utilized for the resource in this report. Nuton's metallurgical twin holes were also excluded in the total.

The total drilling on Table 10-1 and Table 10-2 will not match the number of holes and intervals in the mineral resource database because the table counts include holes that are outside of the model areas, and include holes that are extended in later seasons as additions to the number of holes drilled.

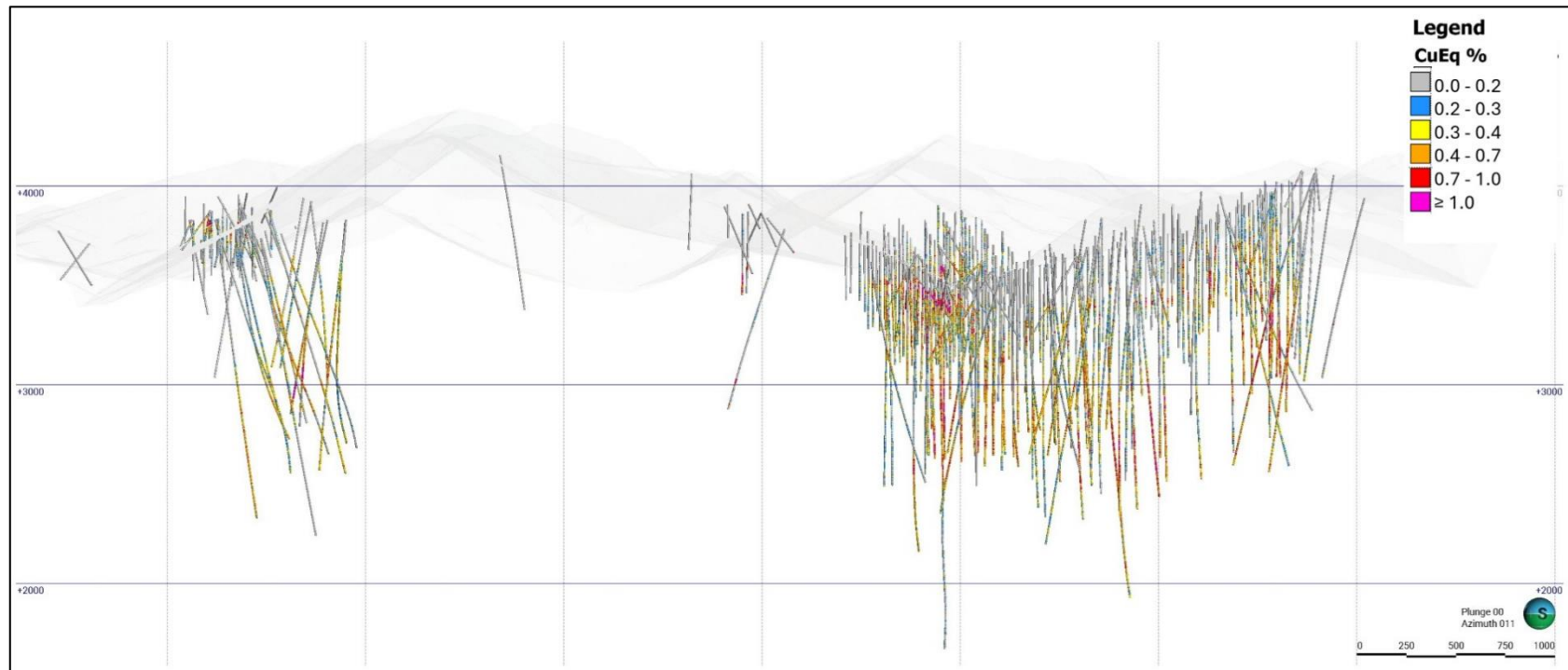
Figure 10-1 and Figure 10-5 illustrates the locations of the drill holes used to establish the mineral resource, and various sections through deposit.

The following paragraphs summarize the drill progress completed since the 2011 drill program.



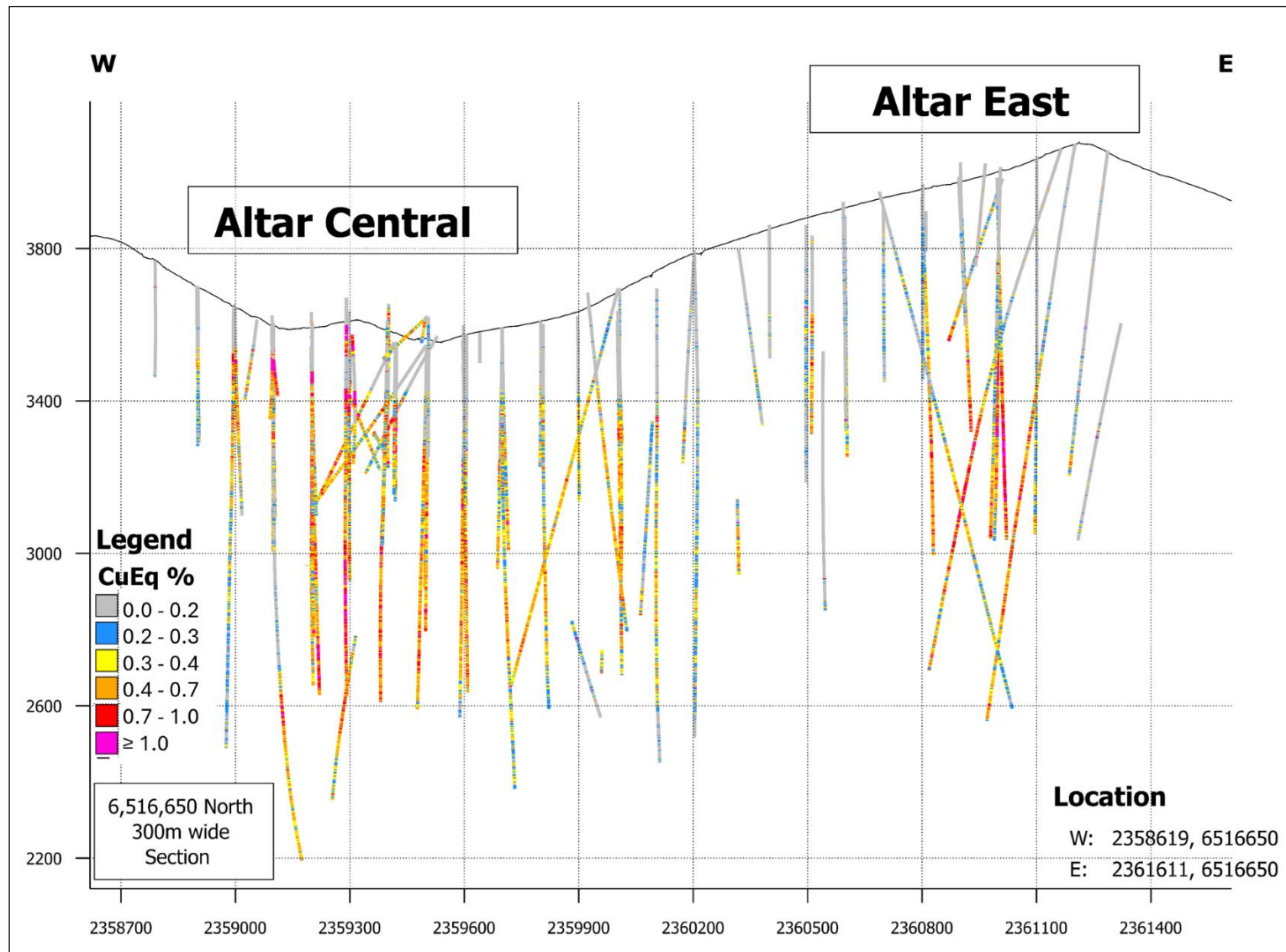
Source: Aldebaran Resources, 2025

Figure 10-1: Drill Hole Locations in the Mineral Resource Database



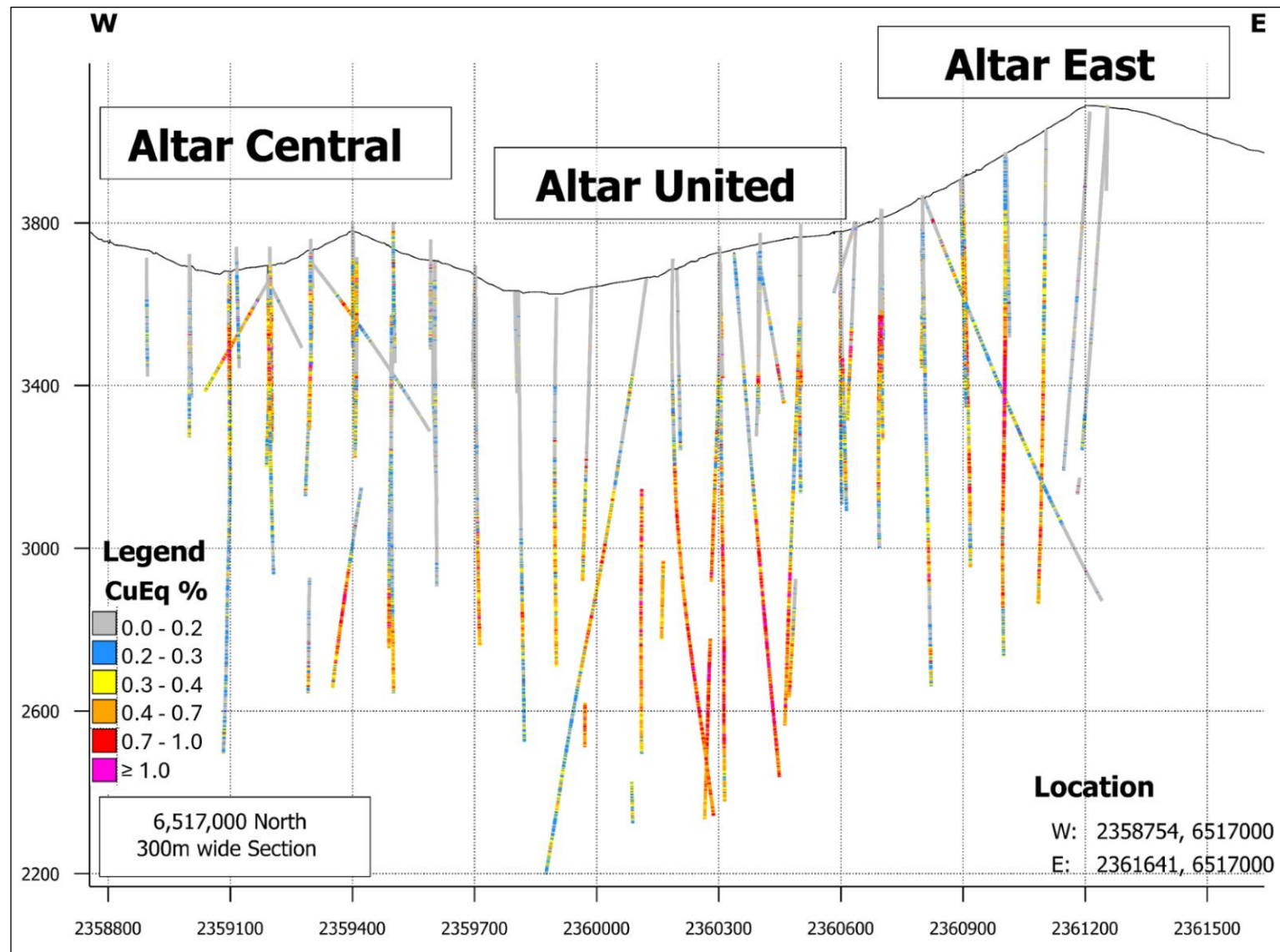
Source: Aldebaran Resources, 2025

Figure 10-2: Long Section through Mineral Resource Drill Holes



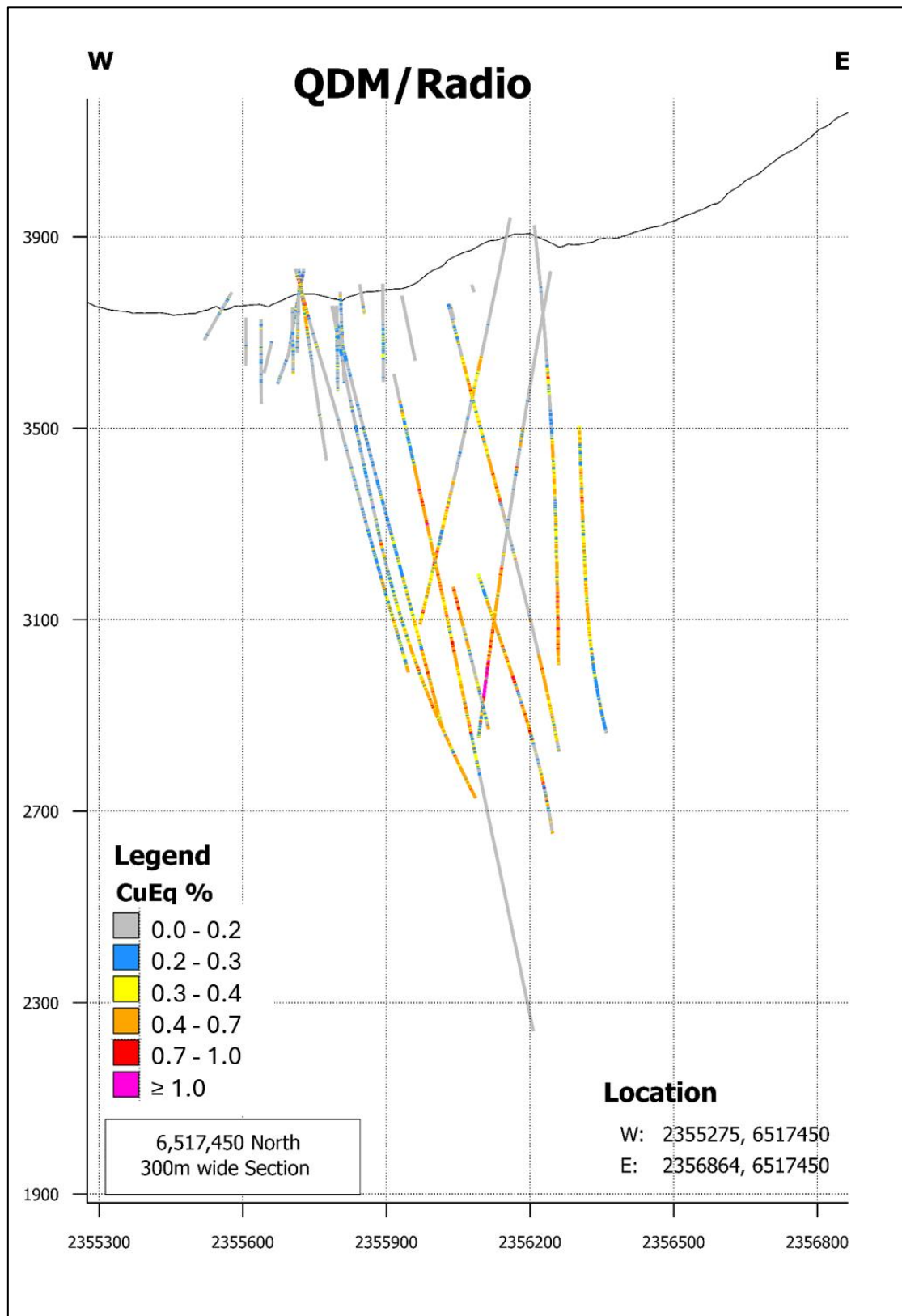
Source: Aldebaran Resources, 2025

Figure 10-3: Section through Altar Central and Altar East



Source: Aldebaran Resources, 2025

Figure 10-4: Section through Altar Central, Altar United and Altar East



Source: Aldebaran Resources, 2025

Figure 10-5: Section through QDM and Radio

10.2 2011 Drill Program

Mendoza-based Boart Longyear Argentina S.A. was contracted to provide drilling services during the 2010-2011 field program. They provided one wheel skid mounted.

LF-90 diamond drill rig and one wheel skid mounted LF-230 diamond drill rig, both with hydrostatic drives. The drilling commenced on November 30, 2010, with drill hole.

ALD-141 and finished with drill hole QDM-04 on January 24, 2011. A total of 3,961.50 m was drilled. Eight vertical holes were collared with depths up to 434 m. Five angle holes were drilled with dips ranging from -50° to -70° and depths up to 450 m. Six holes were metallurgical twins of pre-existing core holes completed in prior years. These were collared and completed with PQ diameter. All of the remaining holes were collared and completed with HQ equipment.

Between February and May 2011 Boart Longyear Argentina S.A. was contracted to drill within the Pampa concession, a total of 4 water monitoring wells and 4 corresponding observation drill holes totaling 1,133 m. A Drilltech D40KX truck mounted rotary drill rig was used for drilling the monitoring holes and installing the corresponding equipment and PVC filter piping.

10.3 2012 Drill Program

Mendoza-based Boart Longyear Argentina S.A. was contracted to provide drilling services during the 2011-2012 field program. They provided four wheel-skid mounted Boyles BBS37A or BBS56A class wireline-equipped core rigs modified to reliably perform at high elevations and capable of drilling with HQ and NQ rods to depths in excess of the Company's planned targeted drill depths.

All drill holes are initially collared with HQ diameter rods (96.1 mm dia. hole and 63.5 mm dia. core) and depending on hole conditions, are extended as deep as prudent, typically around 550 m, before reducing to NQ size core (75.7 mm dia. hole and 45.1 mm dia. core).

The drilling commenced on December 12, 2011, with drill hole QDM-05 and finished with drill hole ALD-189 on April 13, 2012. A total of 27,277.70 m were drilled in 64 drill holes and 6 drill hole extensions in the four exploration areas: 1) Altar Central Deep, 2) Altar East, 3) Altar North and 4) Quebrada de la Mina.

10.4 2013 Drilling Program

Mendoza-based Boart Longyear Argentina S.A. was contracted to provide drilling services during both the 2011-2012 and 2012-2013 field programs. They provided two wheel-skid mounted Boyles BBS37A or BBS56A class wireline-equipped core rigs modified to reliably perform at high elevations and capable of drilling with HQ and NQ rods to depths in excess of the Company's planned targeted drill depths.

All drill holes are initially collared with HQ diameter rods (96.1 mm dia. hole and 63.5 mm dia. core) and depending on hole conditions, are extended as deep as prudent, before reducing to NQ size core (75.7 mm dia. hole and 45.1 mm dia. core).

The drilling commenced on January 5, 2013, with drill hole ALD-190 and finished with drill hole ALD-205 on March 31, 2013. A total of 11,101.40 m were drilled in 16 drill holes and 4 drill hole extensions. 16 vertical holes and drill hole extensions were drilled with depths up to 1,166.5 m. Four angle holes were collared with dips ranging from -70° to -86° and depths up to 949.5 m.

10.5 2016 and 2017 Drilling Program

The 2016 program tested nine isolated targets generated from the 2014-2015 field exploration programs and resulted in discovery of the QDM Radio Porphyry in hole QDM-029 with additional mineralization discovered in Altar North in hole ALD-195 (extension). The 2017 program focused entirely on further definition of the discovery at QDM Radio Porphyry.

10.6 2018 Drilling Program

The 2018 program tested Altar East, Altar Central and QDM Radio Porphyry targets. Altar East drilling addressed gaps and mineralization depth extension with holes ALD 209 and re-entered and extended previous hole ALD 190. Altar Central extension south and at depth was performed with hole ALD 210, but the hole was lost at 1,263 m due to a geologic fault. At QDM Radio Porphyry, QDM 039 was drilled into a large drilling gap south of QDM 034.

10.7 2019 Drilling Program

The 2019 program further tested Altar East, Altar Central and below the QDM gold deposit. Hole ALD 211 tested south of hole ALD 176 in Altar East and below previous holes ALD 181 and ALD 183 that were previously not drilled deep enough. ALD 212 was drilled at Altar Central and is the deepest hole on the property at 2,004 m depth. ALD 212 was mineralized with good copper grades down to around 1,200 m. From 1,067 m on molybdenum grades increase, displaying 937 m of 244 ppm Mo to the end-of-hole and indicates the possible presence of another undiscovered system. Holes QDM 040 and QDM 041 were drilled directly below the QDM gold deposit and west of the Radio Porphyry. QDM 040 drilling was terminated early and never reached target depth due to unsafe highwall conditions at the pad. QDM 041 was successfully drilled to 1,526 m and discovered a new porphyry underneath the QDM gold deposit and approximately 250 m west of Radio Porphyry.

Also, during 2019, Aldebaran began a comprehensive drill hole re-logging campaign and initiated a talus fine sampling program on 100 m grid spacing that will take multiple field seasons to cover most of the Altar Project property.

10.8 2021 – 2024 Drilling

Aldebaran added a substantial amount of diamond drilling during the summer campaigns from 2021 through 2024. Most of the holes were collared using larger diameter, PQ-sized core, and typically drilled to between 300-400 m, before downsizing to HQ diameter and eventually to NQ-sized core in the >1,200 m deep holes in both Altar and QDM. Several holes were targeted between the Altar Central and Altar East deposits to understand their potential connection at depth and that drilling resulted in the discovery of the new Altar United zone that unifies the two previously known Altar Central and East deposits.

During the period 2021 to 2024, there were 41 holes totaling 41,102.5 m of drilling in the main Altar area and 16 holes totaling 12,904.7 m in the QDM/Radio area.

10.9 2024 – 2025 Drilling

During this period, as part of the Aldebaran drilling campaign, certain drill holes were designated for use in Phase 1 and Phase 2 of the Nuton® Technology test work. All of the Phase 1 test samples were

sourced from historical large-diameter PQ-size drill cores stored in Aldebaran's San Juan core warehouse facility. For Phase 2 Nuton Technology test work, a total of ten large-diameter PQ-sized core holes were drilled in key locations as twin holes to historical HQ-sized drill holes. The total meters drilled for the Phase 2 Nuton program was 5,977.5 m.

Foraco and Boart Longyear drilling companies were hired to complete the 2024-2025 drilling campaign, with each company using two LF-230 rigs, and an additional LF-90 rig, that was used by Boart Longyear for the acquisition of geotechnical data with a Televiwer instrument for a total of five rigs total in the project.

28 additional drill holes were completed for exploration and resource infill purposes. Adding a total of 19,090.90 m of drilling consisting of 15 new drillholes and 13 extensions of historical drill holes. None of these holes were included in the 2024 mineral resource that forms the basis of this current PEA study, but do offer potential upside to any future resource update and economic study.

10.10 Collar and Down Hole Surveys

Collar locations for Peregrine's drilling were surveyed by a professional topographer, using a Trimble R6 GPS system with real time and static differential correction providing accuracy to within +/- 5 mm.

Prior to 2016, the following methods were used for down hole survey. Downhole surveys to establish deviations in azimuth and dip angles are carried out by a third-party company using a Reflex EZ-TRAC multi-shot magnetic borehole surveying system. The instrument is highly accurate in all directions including vertical holes and has magnetic and gravimetric sensors that allow for surveys free of cumulative azimuth and dip errors. The survey data are stored electronically and transferred directly to a computer without the need to record or transfer written data. Downhole measurements are routinely taken at 6 m intervals.

All of the 2016 through 2024 drill holes were surveyed by a third-party company using a North-Seeking Gyroscope.

10.11 Drill Hole Monuments

After determining that a drill hole will not be re-entered and extended to a greater depth, any remaining steel casing is extracted and replaced with a length of standard PVC pipe to preserve physical evidence of the drill hole's general dip and azimuth. A concrete slab is prepared at each completed drill hole collar to preserve its location and identification. The concrete is inscribed with the drill hole ID, azimuth, dip, total depth and the drill hole's completion date.

For drill holes being considered as potential candidates for subsequent re-entry, the HWT metal casing is left in the hole to both mark its location and temporarily preserve the physical collar conditions of the drill hole. A cement slab is prepared at the drill hole collar to preserve its location and identification. The slab is engraved with the drill hole ID, azimuth, dip, total depth and the drill hole's completion date.

11 Sample Preparation, Analysis, and Security

Sample preparation, analyses, and security for samples collected between 2006 and 2017, is summarized in earlier Technical Reports 2011, 2018, and 2021. From 2018 to 2024, Aldebaran Resources was responsible for sample preparation, analyses and security procedures. Dr. Kevin B. Heather is the Qualified Person for this section. After review, John Marek also holds the opinion that sample preparation, analyses and security are adequate and appropriate for estimation of mineral resources. The methods that were applied to those programs are summarized here.

11.1 Drill Core Preparation

At the drill rig on site, drill cores are placed inside special core boxes. Two types of core boxes are used: 1 m wooden boxes and 0.6 m-plastic boxes. Each drill run is marked at the end with a wooden block labeling the drill depth in permanent waterproof marker. Core boxes number and corresponding Drill hole ID's are written on each box front and lid in permanent waterproof marker. Drill site core boxes are checked routinely for numbering errors and to see if there are inconsistencies in the meterage's reported on the wooden blocks. Any errors are resolved by the drill crew's supervisor and the geologist assigned to the core rig. Once the boxes are reviewed and approved, they are sealed with tight lids and placed in a safe location at the drill site. Geologists and/or their assistants routinely transport the core from the drill site to the Altar exploration camp with 4-wheel drive utility pickup trucks. The camp is located about 7 km south of the Altar Main area and approximately 12 km southeast from Quebrada de La Mina.

At camp, the trucks unload at the outdoor core staging area. The boxes are placed on tables and their lids are removed for preliminary geological, geotechnical, and drill core logging, checking, and labeling. The first step is to put the initial and end depths of each box, measured by the field technician or the geologist, using a permanent waterproof marker. on the lower-left and upper-right corners of the box, as well as on the front of each core box.

A quick geological log (QUICKLOG) of lithology, alteration, mineralization, and an estimate of copper grade is done on full, uncut core by field geologists and sent daily to the management and technical teams by electronic means. More traditional detailed geological logging is conducted on the uncut core at the logging warehouse located at the Altar camp site. This logging is later reviewed and amended where needed when the split drill core is at the sample preparation facility in San Juan during the winter months.

Geotechnical logging is completed on the uncut core at the camp including core recovery, RQD, fracture count, fracture fill characteristics, intact rock strength, etc. The data is recorded on portable computers and tablets. During initial logging, drill core intervals are rotated to appropriate uniform core axis configuration and a "cut line" is drawn by the geologist on the core segments to minimize any sample bias that might be introduced by misrepresentation of host rock layering, vein or fracture orientation, mineralization clusters, etc. when the core is sawed. The geologists are also responsible for laying out, measuring, and marking the assay sample intervals, which are done a geological basis. If no lithological changes are observed in the core, samples intervals are routinely taken at 2 m intervals. When lithological changes occur, or any significant variations in alteration intensity are observed, the geologist is responsible to set the assay sample intervals, based on geological criteria. Sample intervals should be at least 1 m long and not longer than 3 m. The geologist is also responsible for determining the positions for insertion of the QA/QC (discussed below) control samples, such as

the reference standards, blanks and core duplicates that will be inserted into the sample batch in the core processing facility at the Altar camp.

11.2 Full Core Photos by Aldebaran Personnel

After being properly labelled, and prior to sawing the core, boxes containing the whole core are systematically photographed in a dedicated room at the core processing facility at the Altar camp. This room is partially open to ensure the occurrence of natural light and was purpose-built in 2019 for this work. Each photograph includes 2-3 wooden core boxes (depending on core size, i.e., PQ vs HQ vs NQ), or 2 plastic boxes laid out in sequential order in a stationary photographic stage, specially constructed for this purpose, and labeled with standardized letter sign, indicating Drill hole ID, from - to depths and boxes numbers for each photographed interval. Up to 2014 a digital single-lens reflex camera with a 10.1-megapixel imaging sensor was used. Currently, and since 2017 a camera with a 24.2-megapixel imaging sensor is used. All photos are immediately checked, to ensure their quality and checked for potential errors. Once the photos are approved, core boxes are ready for the splitting and sampling process. The photographs are stored on a daily basis on a company computer and external hard drives and are further backed up digitally on the company's server in San Juan.

11.3 Core Splitting and Sampling by Aldebaran Personnel

Until 2019, core was split and sampled at the Company's (Peregrine Metals/ Stillwater) former core warehouse facilities in Mendoza, Argentina. Since the 2020 campaign, drill core is split and bagged at the core cutting facilities located at the Altar project camp that were built for this purpose.

The staff at the core splitting facility are well-trained and experienced. Cores are split with industry standard circular rotary rock saws using diamond saw blades. Drill core samples are taken at the intervals previously defined and supervised by core facility geologists and assistants. All the core is sampled and only the overburden cores remain uncut and unsampled in the boxes. Cores previously marked with cutting lines by exploration camp geologists are split down the line.

One half of the drill core is designated for assay sampling and the other half is placed back into the core boxes for storage and future reference and analysis. The insides of each core box are stapled with waterproof labels of Geochem sample numbers indicating the start and end of each sampling interval.

Special high-strength, clean, clear plastic bags are marked on the outside in permanent marker with a unique sample number and with a waterproof printed label displaying the same sample number for the corresponding sample interval. The core sample halves are placed in corresponding sample bags and top-tied with 2 sets of plastic security straps. The first security strap is placed as low as possible above the core samples. After the first strap is set, another waterproof label of the sample number is placed in the neck of the bag. The second security strap is specially made with the sample number imprinted on the strap and is tied so the neck of the bag is also pierced.

The double sealed sample bags are then stacked sequentially in larger, new rice bags. The rice bags are then strap sealed and clearly labeled with Peregrine's company name, rice bag number, list of contained sample bags, and the sample batch number. Awaiting shipment, rice bags are palletized with plastic "shrink-wrap" into 1 m x 1 m x 1 m blocks, which are properly labelled, indicating again batch numbers, Drill hole ID and rice bag numbers.

11.4 Cut-Core Photos by Aldebaran Personnel

After the sampling process is completed, the boxes of cut-core are photographed again using the exact same process described in Section 11.2. Each photograph includes 2-3 wooden core boxes (depending on core size, i.e., PQ vs HQ vs NQ), or 2 plastic cut-boxes laid out in sequential order in a stationary photographic stage specially constructed for this purpose, and labeled with standardized letter sign, indicating Drill hole ID, from - to depths and boxes numbers for each photographed interval. Currently, and since 2017, a Nikon D5300 with a 24.2-megapixel imaging sensor is used. All photos are immediately checked, to ensure their quality and the occurrence of errors. Once photos are approved, cut-core boxes are ready for preparation and dispatch to San Juan main facility.

11.5 Core Samples Transport to Analytical Laboratory in Mendoza

Up through 2014, samples were transported from the Company's former facilities in Mendoza, to the nearby ACME analytical laboratory. During 2016 - 2019 samples were transported via pick-up truck to the same preparation lab, but now under the name of ALS Analytical Laboratories (ALS).

Since 2020, samples are shipped directly from the field facilities to the ALS preparation lab in Mendoza, in an exclusively contracted truck, with a capacity to transport up to 8 pallets. Each shipment consists of either 500 samples of PQ sized core, or up to 900 samples when HQ - NQ size core. The truck is fitted with a specially constructed sealed steel box into which the palletized rise bags are placed and carefully packed to avoid movement during travel. The tight-fitting doors are securely closed and locked with padlocks following inspection and final inventory by a geologist. Numbered and tamper-proof zip-tie locks are also attached to the doors alongside each padlock and the corresponding zip-tie lock numbers are included in the core shipment transmittal form signed by the Project Manager that accompanies each core shipment. Keys for the padlocks sealing the door to the core transportation truck are only held by the Project Manager at the exploration site and these are sent in a secure, closed envelop that is only to be opened at the final lab destination, or by any government authority request along the route. The trip from Altar to Mendoza is approximately 430 km

A Sample Dispatch Transmittal Form is prepared and signed by the core facility supervisor for every shipment. When received, ALS prep laboratory representative signs the form when all samples have been inventoried and all seals and bags in the process of unpacking were checked for intact seals and good condition.

For security purposes, the top sample labeled strap must be removed first in order to remove the second, lower strap and due to the way the first strap pierces the neck the sample bag will remain intact if the straps were removed. The sample preparation lab is to report to Peregrine if any core sample bags do not come in good condition with both security straps intact. A separate assay sample ticket booklet is kept with records of sample numbers and corresponding core intervals the sample was taken from, as well as in an electronic database.

11.6 Cut-Core Boxes Transport to San Juan Main Storage Facility

After photography is complete, cut-core boxes are stacked on pallets, each containing 40 boxes, and secured with strapping and plastic "shrink-wrap" prior to being loaded for transport to Peregrine's storage facility in San Juan.

Since 2018, a truck is contracted for every individual shipment. The truck is fitted with a specially constructed sealed steel box into which the palletized core boxes are placed and carefully packed to avoid shifting. The tight-fitting doors are securely closed and locked with padlocks following inspection and final inventory by a geologist. The trip from Altar to San Juan is approximately 420 km

Upon arrival of a core shipment at the Aldebaran facilities in San Juan, the supervisor first examines the physical condition of the received dispatch. Any damaged or missing boxes or numbering discrepancies are immediately communicated to and reconciled with the Project Manager at Altar. Otherwise, the core boxes are unloaded and properly stored in racks.

11.7 Sample Preparation

This section describes the 2016-2024 methods applied by ALS which was independent of the Company. The pre-2014 procedures are similar and were previously documented.

ALS Minerals Division operates a sample preparation laboratory in Mendoza and operates as Mendoza ALS Patagonia S.A., which is accredited under ISO 9001. The ALS laboratory in Lima, Peru is the primary lab for assay analysis for the Altar Project since 2016. Lima ALS laboratory is accredited under ISO 9001:2008 and ISO 17025. Until 2015, Acme Analytical Laboratories in Santiago, Chile was used for the assay analysis. The Acme Labs became Bureau Veritas in 2015 and are arm's length contractors. Their certifications prior to 2015 are not known by the author.

Check samples for the secondary analytical laboratory are also prepared at the Mendoza prep lab. Historically, the Altar project has used two different laboratories for their secondary assay check samples. From 2007-2011, Alex Stewart (Assayers) Argentina S.A. accredited under ISO 9001, 14001, and 17025 served as the secondary laboratory. From 2010-2013, ALS Chemex, La Serena, Chile, accredited under ISO 17025:2005 and ISO 9001:2008. For the 2016 and 2017 field season Alex Stewart (Assayers) Argentina S.A. was used again as secondary laboratory. From 2018-2021 field season check samples were sent to MSA LABS Argentina in San Juan. In 2022, samples were once again analyzed by Alex Stewart (Assayers) Argentina S.A. During the 2023–2024 field seasons, check samples were submitted to QLABS Argentina in San Juan.

11.7.1 ALS Preparation Laboratory, Mendoza, SA

Split core samples are logged into the LIMS ALS tracking system, and a bar code label is attached to each sample bag on arrival from the Peregrine core storage and splitting facility. Security checks for intact seals and bags are completed, and the waterproof label that was inserted in the neck of each sample bag is removed and placed underneath a drying sheet. The core sample remaining in the bag is emptied onto the drying sheet, and drying is done for 7-8 hours at 110°C.

After weighing and drying the sample preparation procedures are carried out under ALS code PREP-31 as follows:

- 1) Crushing the samples to 70% passing a Tylor 9 mesh (2 mm) screen.
- 2) The crusher is cleaned with compressed air between each sample and with an inert rock at the beginning and at the end of each batch. Cleaning may occur more often as considered necessary.
- 3) A quality control sieve check at 9-mesh (2 mm) is tested as indicated by the LIMS. The sieve is cleaned with compressed air before samples are checked for mesh size.

- 4) The first stage crush product is homogenized and then placed into a Jones style riffle splitter to obtain a 1,000-gm sample.
- 5) The 1,000-gm sample is placed in a plastic bag, and the coarse reject is stored in plastic bags for return to the Peregrine core storage facility.
- 6) The 1,000-gm sample is pulverized to a nominal 85% passing 200 mesh (75 microns) using an LM-2 pulveriser.
- 7) The pulveriser is cleaned at the beginning of every sample with compressed air and with inert rock at the beginning and at the end of each batch. Cleaning with inert rock may occur more often as considered necessary.
- 8) The quality control sieve checks at 200-mesh are indicated by LIMS. The sieve is cleaned with air before samples are checked for mesh size.
- 9) Preparation duplicates (field duplicates) of randomly predetermined samples by Peregrine geologists are also inserted in the sample stream. The preparation duplicates enter the sample stream like any other sample with an assigned sample number.
- 10) Roughly 100 to 150 g of the 1,000-gm pulp sample is placed in a sample packet for shipment to Lima for analysis.

11.8 Analytical Procedures

From the ALS prep lab in Mendoza, Argentina, core pulp samples are sent to the ALS Analytical Lab in Lima, Peru in batches of 35 ~100 gm packet samples including samples for QA/QC. In previous years, the dispatch to ACME was in 34 sample groupings.

Sample batches of 35 samples contain:

- 30 pulps for assay
- Plus inserted QA/QC samples
 - 2 certified standards
 - 2 field duplicates from split core and
 - 1 blank

Sample batches are regularly submitted to the primary laboratory in Lima, Peru by air freight and regularly schedule air lines. ALS maintains the chain of custody evidence when sample pulps are logged into the Lima facility.

11.8.1 Pre-2019 Samples

Peregrine's analytical instructions for Altar drill core samples routinely include the following Geochemical or Assay analyses:

- 1) 41-element ICP-ES using an Aqua Regia digestion
- 2) Au by Fire Assay using a 30 g sample with an AAS finish
- 3) For all ICP analyses for Cu that exceed 5,000 ppm, the sample is repeat-assayed for Cu by AAS using an Aqua Regia digestion (wet assay).
- 4) For all Fire Assay analyses for Au that exceed 10 ppm, the sample is repeat-assayed for Au using a gravimetric finish.
- 5) For all ICP analyses for Ag that exceed 100 ppm, the sample is repeat assayed for Ag using a gravimetric finish.

11.8.2 2019 - 2024 Samples

Since 2019, Peregrine's (i.e., Aldebaran) analytical instructions for Altar drill core samples routinely include the following Geochemical or Assay analyses:

- 1) 48-element ME-ICP61 using Four Acid digestion.
- 2) Au by Fire Assay using a 30 g sample with an AAS finish.
- 3) For all ICP analyses for Cu that exceed 10,000 ppm, the sample is repeat-assayed for Cu by ICP-AES using four acid digestion.
- 4) For all Fire Assay analyses for Au that exceed 10 ppm, the sample is repeat assayed for Au using a gravimetric finish.
- 5) For all ICP analyses for Ag that exceed 100 ppm, the sample is repeat assayed for Ag using a gravimetric finish.

The results for all ICP analyses are reported on the Assay Certificates in units of either ppb or ppm as appropriate or percent to a 3 decimal place accuracy. Results for all Au and Cu assays are reported to one decimal place of uncertainty. Precision Au values are reported in g/t to 3 decimal place accuracy and precision Cu values are reported in percent to a 3 decimal place accuracy.

11.8.3 ALS Analytical Quality Control - Reference Materials, Blanks, and Duplicates

The LIMS inserts quality control samples (reference materials, blanks and duplicates) on each analytical run, based on the rack sizes associated with the method. The rack size is the number of samples including QC samples included in a batch. The blank is inserted at the beginning, standards are inserted at random intervals, and duplicates are analyzed at the end of the batch. Quality control samples are inserted based on the following rack sizes specific to the method:

Table 11-1: Quality Control Samples

Rack Size	Methods	Quality Control Sample Allocation
20	Specialty methods including specific gravity, bulk density, and acid insolubility	2 standards, 1 duplicate, 1 blank
28	Specialty fire assay, assay-grade, umpire and concentrate methods	1 standard, 1 duplicate, 1 blank
39	XRF methods	2 standards, 1 duplicate, 1 blank
40	Regular AAS, ICP-AES and ICP-MS methods	2 standards, 1 duplicate, 1 blank
84	Regular fire assay methods	2 standards, 3 duplicates, 1 blank

Source: Aldebaran Resources, 2024

Laboratory staff analyze quality control samples at least at the frequency specified above. If necessary, they may include additional quality control samples above the minimum specifications. All data gathered for quality control samples – blanks, duplicates, and reference materials – are automatically captured, sorted and retained in the QC Database.

Results of these QC measures are reported on a separate QC page with each Work Order.

The blanks are accepted within 2 times the detection limit of the corresponding analytical method. The pulp duplicates are accepted within a 10 percent variation. The geological standards are International Certified Reference Materials which have established means. They are accepted within error limits of 2 standard deviations of the mean.

After completion of the 2010 drill program, core intervals with anomalous molybdenum content from current and past drill programs were re-analyzed using ACME's Group 8TD method involving 4-acid

digestion which resulted in significantly higher grades over the ICP method. Approximately 4,600 intervals have been analyzed as of December 2012.

Acme also carried out sequential Cu analyses on 7,213 unique samples from the upper portion of the mineralized zone at the request of Peregrine. Results yielded grades for cyanide-soluble (CuCN), acid soluble (CuAS) and residual (CuR) copper.

11.9 QA/QC Samples

Section 12 presents a statistical analysis of the QA/QC data completed by IMC. Peregrine staff review of QA/QC results during the drill program have resulted in re-submission of occasional sample batches which are summarized below.

11.9.1 Standards

A total of 14 standards have been prepared and inserted in the sample stream over the course of Altar's drilling programs from 2005 to 2021. New standards have been blended as a result of the depletion of previously prepared standard samples consumed in QA/QC. The standards are specially blended to correspond with the typical host rock lithology, sulphide mineralogy, and metal grades of core samples sent for assay analysis. Based on core logging observations, geologists at the exploration site select 2 standards that best suit each batch of core samples for QA/QC.

The standards are certified by Round Robin Assays where six to seven assay laboratories are selected to establish the grade means for copper, gold, silver, arsenic, and molybdenum. The procedures for certification are well documented, and the statistical analysis of the certification process is completed by a third party.

11.9.2 Standards Failures

Aldebaran staff monitors the standards results on a routine basis. Through 2019, there were a total number of 25 standard failures in copper and 25 standard failures in gold requiring re-assay.

During the period 2020-2024, there were a total of 1,863 control standards inserted into the assay batches sent to the ALS laboratory. For the same period, a total of 53 copper standards (~2.8 %) and 46 gold standards (~2.5%) failed Aldebaran's QA/QC protocol for a variety of reasons. Of the 53 copper standard failures:

- 29 samples (~1.5%) were true failures, and the lab was advised to re-assay the samples in the vicinity of the failed standard (i.e., above, and below) at their cost,
- 19 samples (~1%) were failures within intervals of very low grade or no mineralization and hence it was determined no re-assaying was required,
- 5 samples (~0.3%) were the result of standard number mislabelling and were easily identified and corrected.

Of the 46 gold standard failures:

- 37 samples (~2%) were failures within intervals of very low grade or no mineralization and hence it was determined no re-assaying was required,
- 5 samples (~0.3%) were true failures, and the lab was advised to re-assay the samples in the vicinity of the failed standard (i.e., above, and below) at their cost,

- 4 samples (~0.2%) were the result of standard number mislabelling and were easily identified and corrected.

11.9.3 Blanks

Blank material was acquired by Peregrine in 2007 from a decorative stone quarry near Mendoza. The material was found in large quantity of homogeneous granite in the form of slabs. Alex Stewart (Assayers) Argentina S.A. in Mendoza assayed 21 samples of the material for the homogenous absence of significant detectable quantities of copper, gold, molybdenum, silver, and arsenic. Granite blank material is sent to the core splitting facility to be washed and broken into convenient sized pieces for the submittal of a coarse blank with each blank.

11.9.4 Blank Failures

Aldebaran staff monitors the results of the inserted control blank samples on a routine basis. Through 2019, blank failure due to copper occurred 7 times and gold blank failure occurred 2 times requiring re-assay. During the period 2020-2024, there were a total of 1,879 blank control samples inserted into the assay batches sent to the ALS laboratory. For the same period, a total of 25 blank samples (~1.3%) failed Aldebaran's QA/QC protocol for a variety of reasons; 22 copper blanks (~1.2%) and 3 gold blanks (~0.2%). Of the 22 copper blank failures:

- 20 samples (~1%) were true failures due to minor laboratory contamination and in a few cases due to rare/minor copper content in the coarse granite material used as a blank,
- 2 samples (~0.1%) were the result of a mix-up in the sample order and were easily identified and corrected.

Of the 3 gold blank failures:

- 2 samples (~0.1%) were true failures and the lab was advised to improve their cleaning procedures for the crushing and grinding equipment in the preparation lab,
- 1 sample (~0.05%) was the result of a mix-up in the sample order and was easily identified and corrected.

12 Data Verification

The Qualified Person for the data verification is John Marek and Jacob Richey, of Independent Mining Consultants Inc. Data verification has been completed in several iterations from 2013 through 2024. The first work by IMC was originally completed in late 2013 and reported in the Technical Report dated 31 January 2014. During 2016, Peregrine/Stillwater drilled an additional 8 holes: 2 in Altar East, 3 near QDM, and 3 outside exploration holes. Seven more drill holes were completed during 2017 containing 2,773 assay intervals. During 2018 and 2019, Aldebaran added another 7 holes totaling 4872 assay intervals. The QA/QC status was also reported in the 2018 Technical Report dated 28 September 2018. Since 2019, Aldebaran has completed additional drilling in both Altar and QDM. The QA/QC for the most recent data addition from 2020 through 2024 will be summarized in the last section of this section.

Section 12.1 summarizes the QA/QC for the data available from 2013 through 2019. Section 12.2 addresses the data added since 2020 through 2024.

12.1 Pre 2020 Data QA/QC

The majority of pre-2020 Altar database is based on diamond drilling information that has been collected by Peregrine or Peregrine/Stillwater since 2006. Prior to 2006, there were 7 holes drilled by Rio Tinto that are contained in the database. This sub-section summarizes the statistical verification of the Altar database that has been completed by IMC based on the QA/QC data and procedures that are applied by Aldebaran and Peregrine prior to 2020.

The verification procedures applied by IMC and summarized in the section are:

- 1) A check of 5% of the 2013 electronic database against certificates of assay.
- 2) Statistical analysis of inserted standard samples.
- 3) Statistical analysis of inserted blank samples.
- 4) Statistical analysis of Field Duplicates (Split core duplicates).
- 5) Statistical analysis of third-party check assays.

Each of the above topics will be addressed in the following subsections.

In some cases, the analysis for all drilling prior to 2013 will be presented followed by incremental analysis of the additional drilling added in subsequent years. Where convenient, the overall evaluation of all drilling through the 2019 season will be presented.

As outlined in Section 11, the primary laboratory for Peregrine assays up to 2014 was Acme Analytical Laboratories. During 2016 through 2019 the primary lab is ALS.

Submissions to the Acme or ALS lab consist of batches of 34 or 35 samples that contain the following QA/QC insertions:

- 1) 29 (Acme) core samples, 30 (ALS) core samples
- 2) 2 Certified Pulp Standards
- 3) 1 Coarse Blank
- 4) 2 Field Duplicates

12.1.1 Assay Database Checks

A selection of the assay database that was provided by Stillwater in August 2013 was manually checked against the assay certificates by IMC to verify the data entry process. More than 5% of the information in the electronic database was compared to certificates of assay from the laboratory. In summary, there were no errors identified that would indicate data entry errors.

Down-hole surveys were inspected by record and visually on sections for improbable trends and errors in down-hole deviations. Drill holes generally developed the typical slight clockwise cork-screw geometry.

Spot checks of assay information completed in the holes from 2013 through 2019 did not indicate any issues with data entry.

12.1.2 Standards

Standards were inserted into the sample stream by Aldebaran and Stillwater/Peregrine personnel before submission to the labs. Batches of 34 samples contain 29 routine core samples and 5 reference samples. The 5 reference samples include 2 pulp standards. The lab certainly recognizes that the pulps are reference material, however, the lab does not know which standards are submitted.

During 2007, Peregrine prepared considerable volumes of 5 different standards by blending drill core sample rejects from prior campaigns at Altar. Those were named STD 3 through STD 7. Standards 1 and 2 were used in earlier programs. During 2011 and 2012, Peregrine added STD 8 through STD 11 which were also blended from drill core coarse rejects. Grade ranges of the standards range from 0.20 to 0.75% copper. Standards 10 and 11 were blended from material at QDM with grades of approximately 1 gm/t and 0.25 gm/t for inclusion into the QDM sample stream. Standards STD 13 and STD 14 were added for the 2013 program with grades typical of the Altar deposits.

All of the certified standards up through 2019 have been prepared by CDN Resource Laboratories, LTD. in Vancouver, Canada and assayed at 6 internationally certified labs in a round robin process. Smee and Associates evaluated the assay results from the 6 labs and reported the certified mean values and standard deviations to Peregrine.

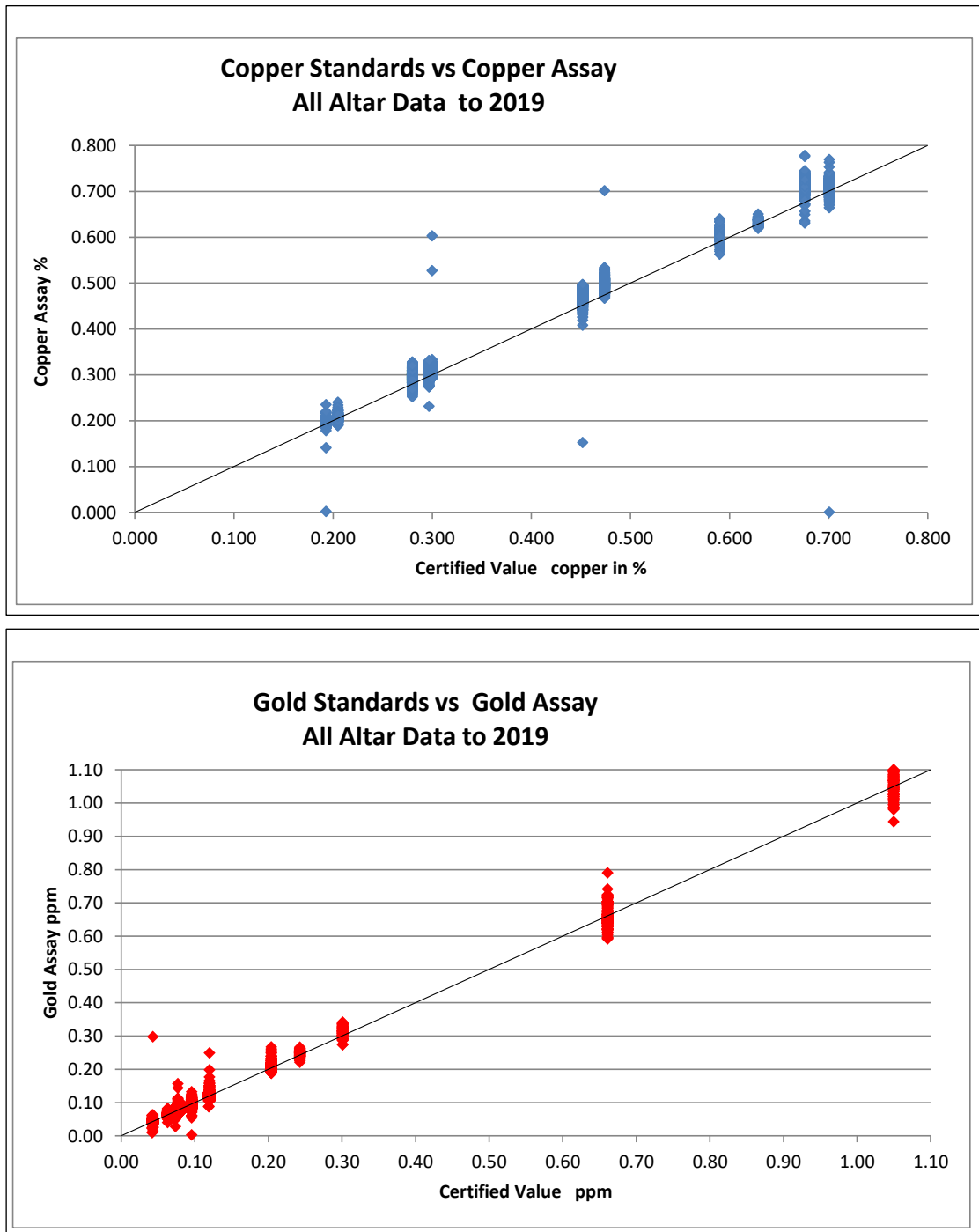
Figure 12-1 and Figure 12-2 display graphs of standard performance versus the certified means for all data up through 2019. Graphs shown are only for the metals of interest with certified means: copper, gold, silver, and arsenic.

The assays of copper standards generally average close to the certified value of the standards. There are roughly 6 to 9 samples that are likely swaps of standards or blanks in that they line up with another standard value. This can be caused by inserting the wrong standard into the stream, or recording the wrong standard number into the database. In either case, the error rate of sample swapping is around 0.2% which is not significant.

Gold results are similar to copper with little observed overall bias, but a similar percentage of sample or data entry swaps. IMC has not confirmed that these could be the same swap samples as in copper.

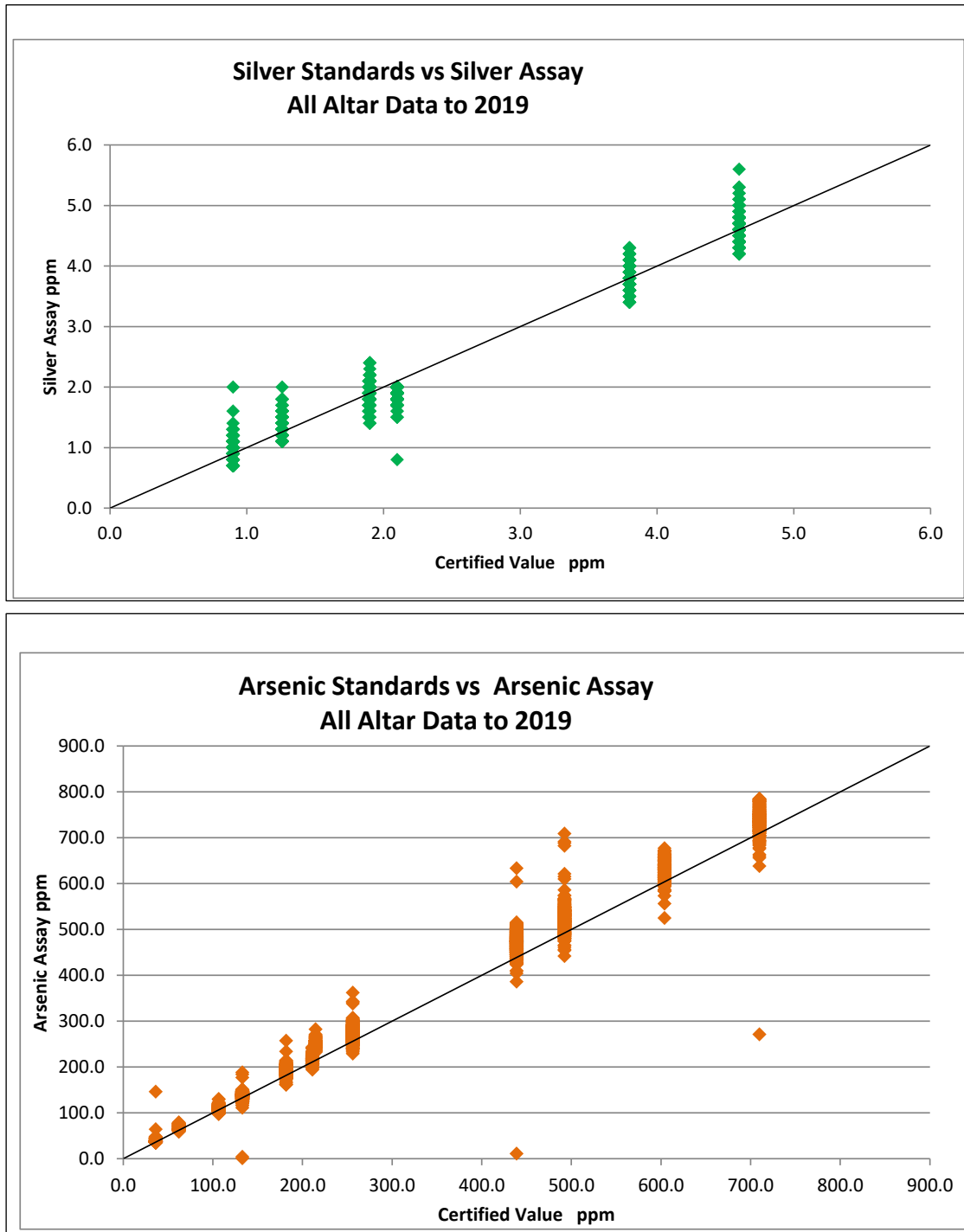
Silver standards results indicate that the labs report slightly high in the grade range around 1 ppm but consistently report lower results for Standard 8 than its expected value of 2.1 ppm. In this case, one might question the certified value of silver for Standard 8. Sample swaps are similar to the other metals.

Arsenic results appear to report slightly higher than the certified value for arsenic between 200 and 500 ppm. If there is a high bias in this range, it is subtle and would not over value the deposit. The same issues of swaps occur in arsenic as with the other metals.



Source: IMC, 2024

Figure 12-1: Results for Inserted Standards Copper and Gold Data through 2019 QDM Drilling Included



Source: IMC, 2024

Figure 12-2: Results for Inserted Standards Silver and Arsenic Data Through 2019 QDM Included

12.1.3 Blanks

Peregrine prepared blanks from a large quantity of homogeneous granite slabs from a decorative stone quarry in Cordova province. A total of 21 samples of this material were submitted to Alex Stewart Assayers in Mendoza to confirm the material is indeed blank.

In addition, a set of commercial pulp blanks were also purchased from Alex Stewart. These commercial blanks are submitted with the outside check assays.

In total, there are 1,836 blanks in the 2020 database that span the drill hole program. This averages to an insertion rate of 1 out of every 31 samples, which is consistent with the company protocol to insert a coarse blank for every 29 assayed samples.

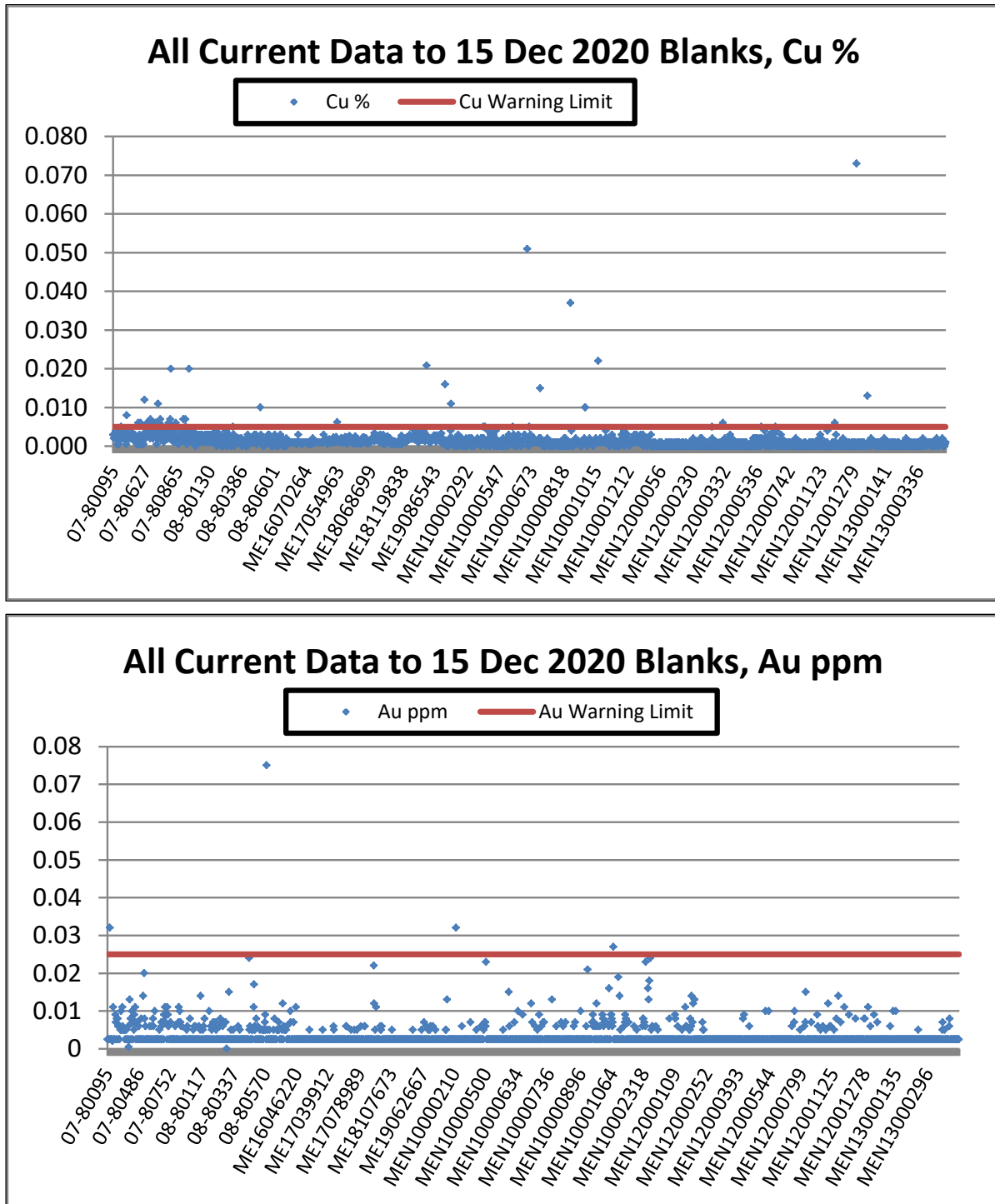
Out of 1,836 submitted blanks through 2019, there are:

- 1, Copper Values above 0.10% Copper that ran 0.373% copper
- 0, Gold Values over 0.10 gm/ton.
- 5, Silver Values above 0.50 gm/t, the maximum of which was 0.80 gm/t.
- 2, Arsenic Values above 100 ppm (0.01%).

Figure 12-3 and Figure 12-4 present a summary of the blank results sorted by time as represented by the submission number. The y-axis shows the grade whose unit of measure is in the title, and the x-axis chronologically displays the work orders. The warning limit on the graph was established by Aldebaran / Peregrine to trigger their internal review of the QA/QC result.

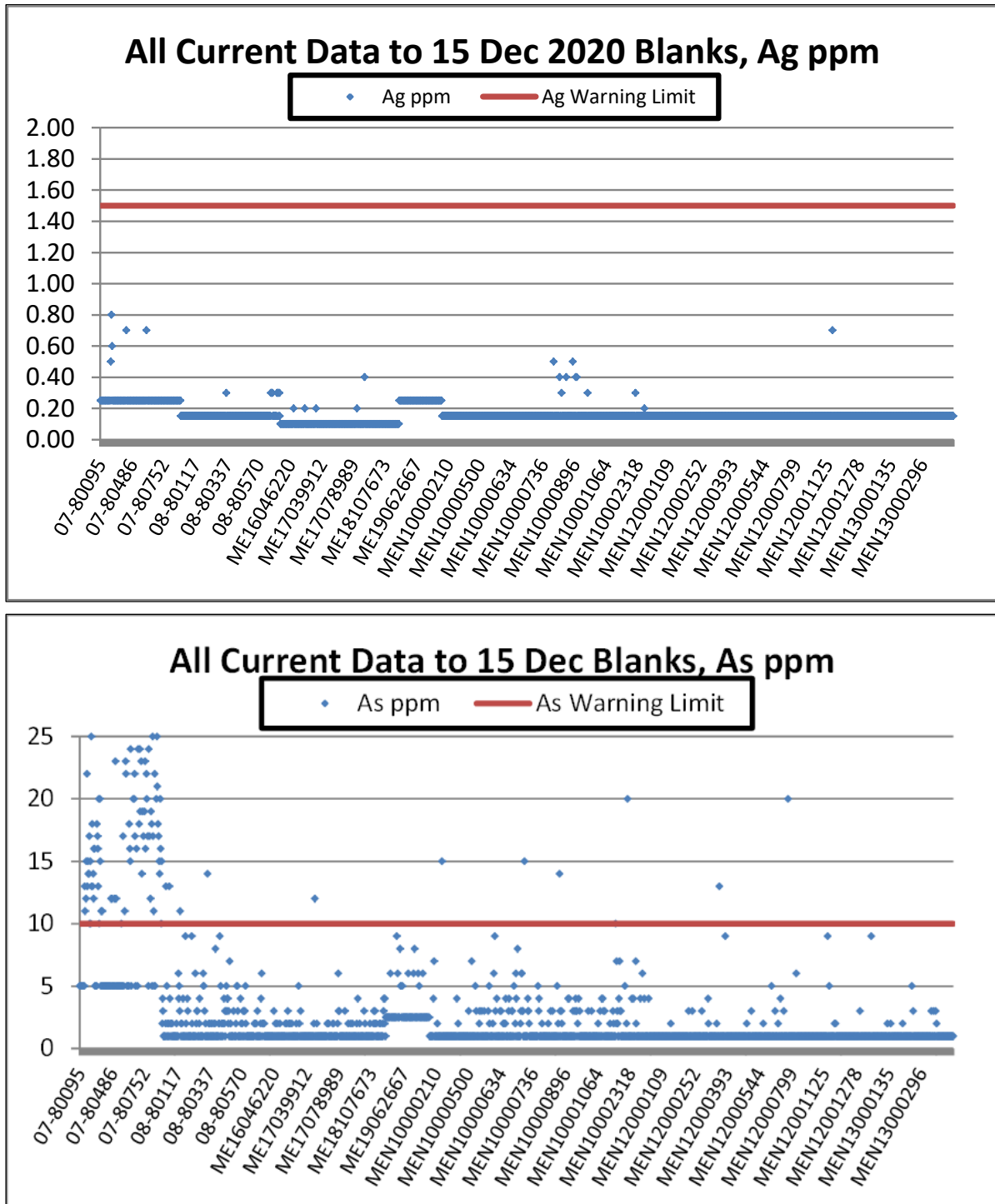
The graphs indicate that prior to 2008, the assay lab often reported arsenic blank samples higher than the Peregrine trigger value. Of 173 blanks that were run prior to 2008, there were 106 with values above 10 ppm that averaged 32 ppm (0.0032%).

The total 1,836 blanks include 373 that were submitted after 2013. None of the post 2013 blanks contributed to the outlier counts listed above and did not exceed the trigger values.



Source: IMC, 2024

Figure 12-3: Blank Results Copper and Gold



Source: IMC, 2024

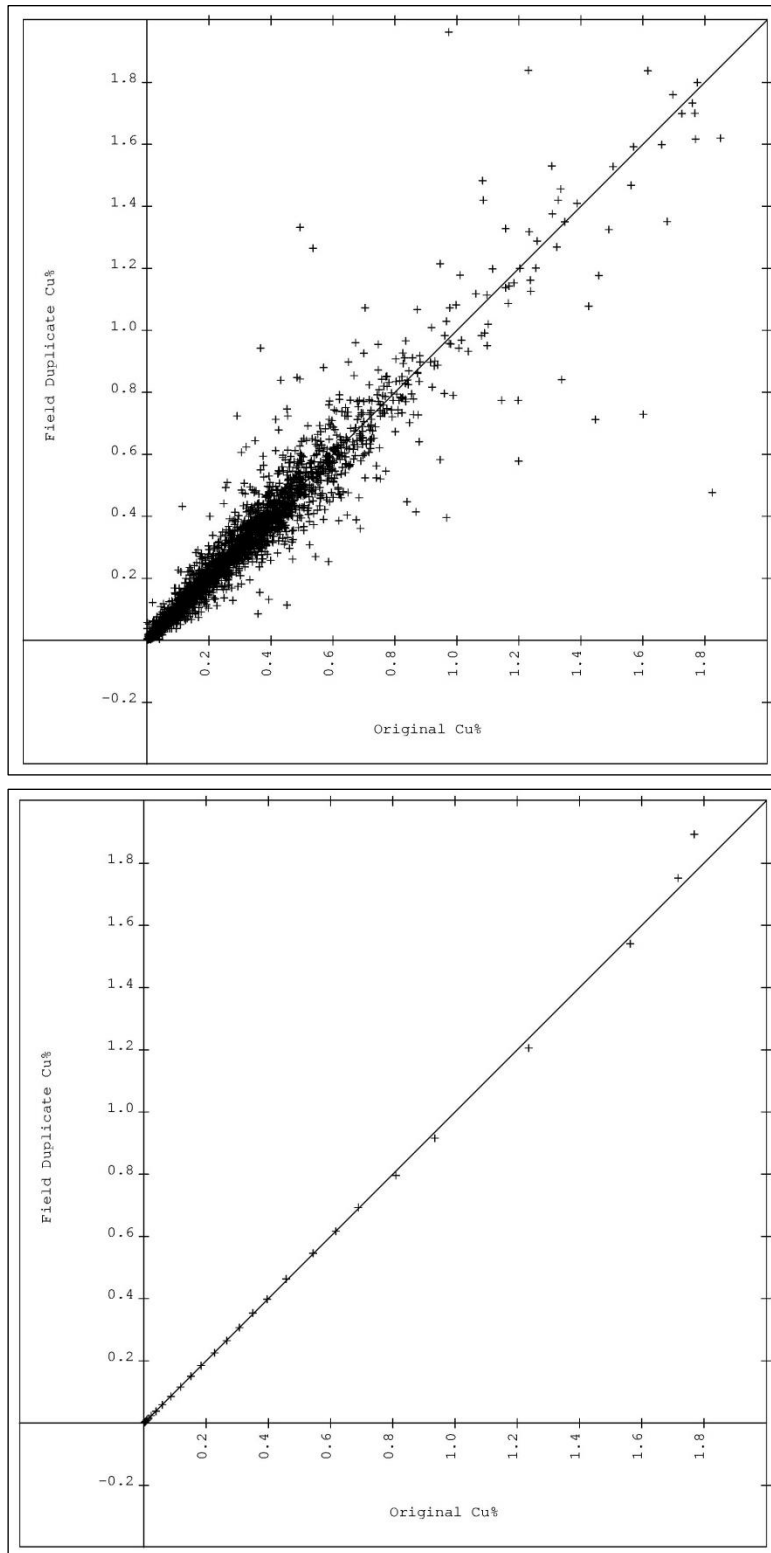
Figure 12-4: Blank Results Silver and Arsenic

12.1.4 Field Duplicates

Field duplicates are a $\frac{1}{4}$ split of the remaining half core that are prepared by Aldebaran at Peregrine's core splitting and storage facility. The repeatability and consistency of the sample preparation and Acme or ALS assay procedures are tested with this $\frac{1}{4}$ core split process. In the sample stream, the first of the set of two duplicates are always designated as the original sample for drill hole database input.

There were 3,766 field duplicates in the pre-2019 data set which is consistent with the 2 out of 29 selection process used in the laboratory submission protocol.

The results through 2019 are shown by scatter and QQ plots in Figure 12-5 through Figure 12-8 for copper, gold, silver, and arsenic. Displayed on the x-axis is the original ACME or ALS assay and on the y-axis is the field-duplicate Acme or ALS assay. The scatter plot range has been limited to show most of the data. QQ plots represent 95% cells from 5% to 95% and include a few tail value cells up to 99%.

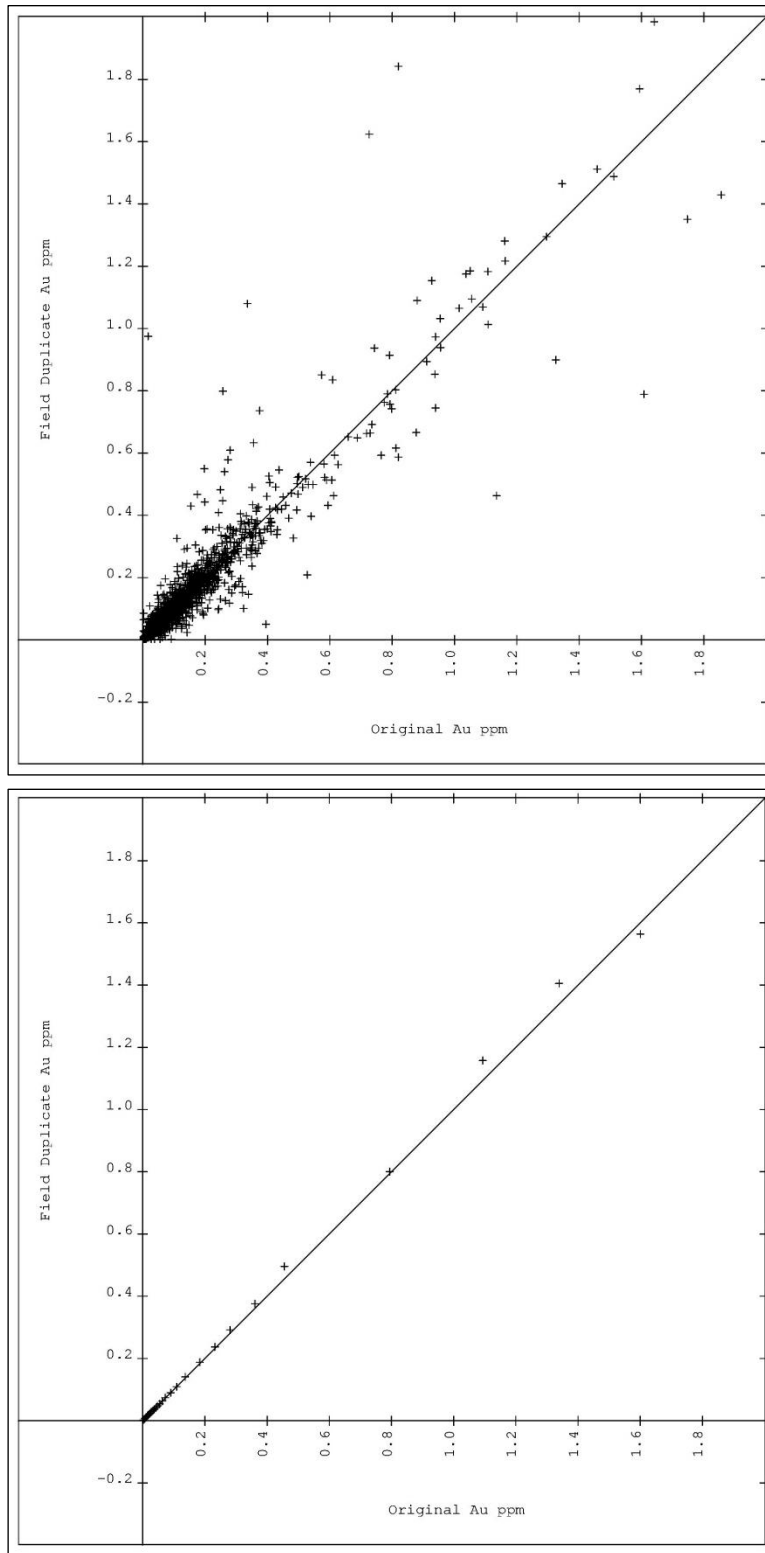


Source: IMC, 2024

Notes: The top graph is an XY plot, and the bottom graph is a QQ plot.

3766 Samples, Original Mean = 0.230% Cu, Duplicate Mean = 0.230% Cu

Figure 12-5: Split Core Field Duplicates for Copper, Pre 2020

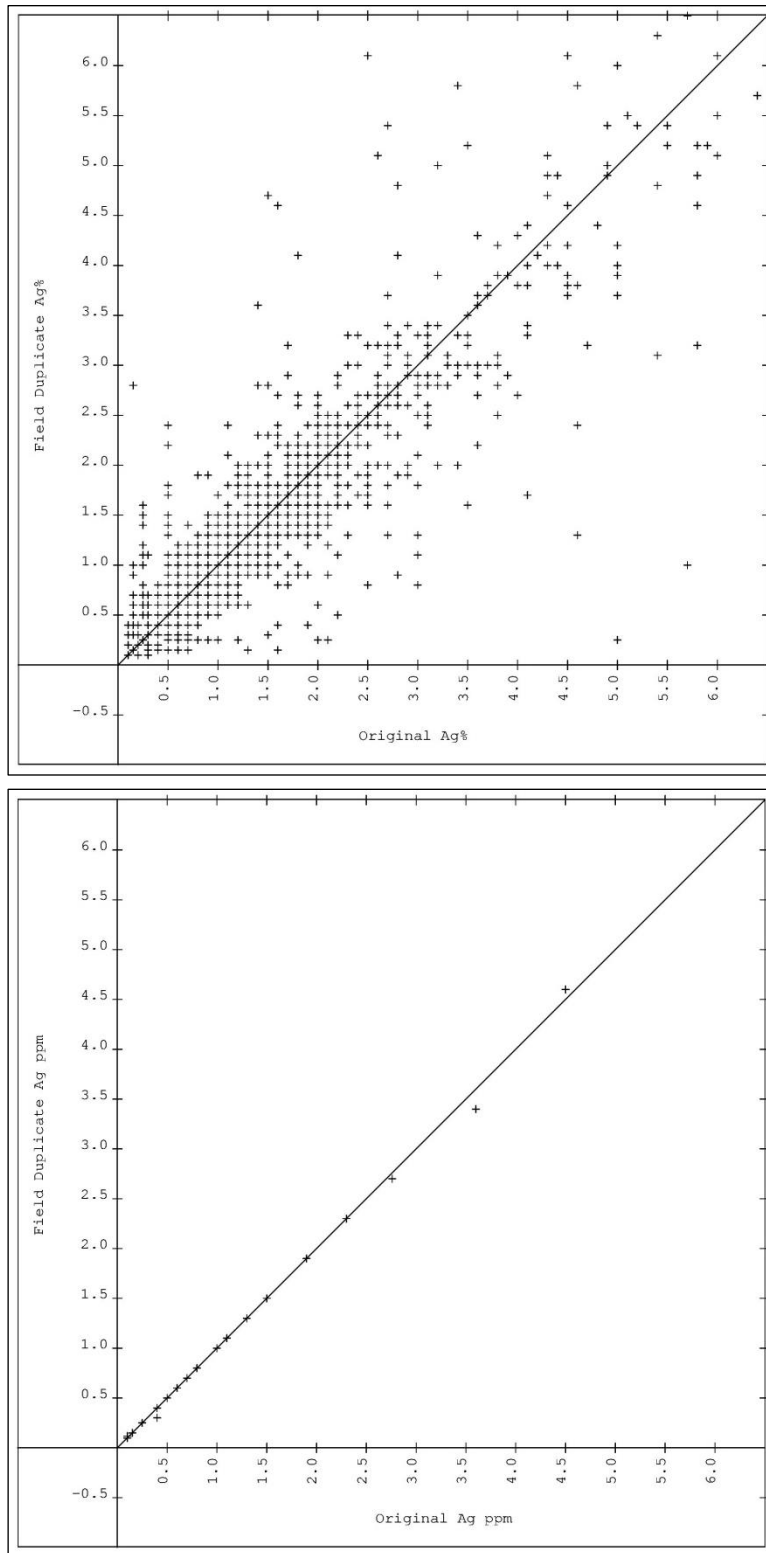


Source: IMC, 2024

Notes: The top graph is an XY plot, and the bottom graph is a QQ plot.

3768 Samples, Original Mean = 0.085 gm/t, Duplicate Mean = 0.088 gm/t

Figure 12-6: Split Core Field Duplicates for Gold, Pre 2020

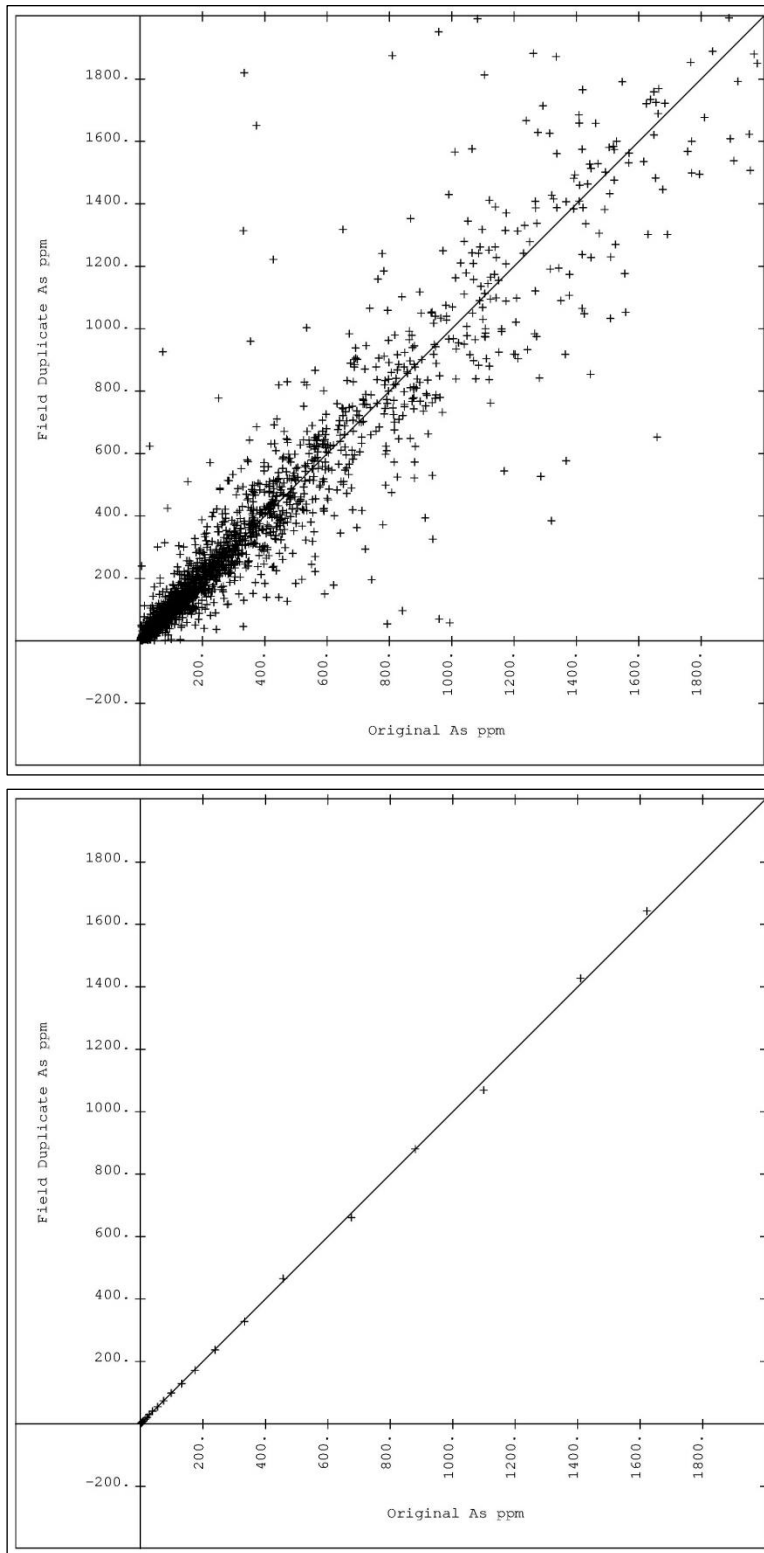


Source: IMC, 2024

Notes: The top graph is an XY plot, and the bottom graph is a QQ plot.

3768 Samples, Original Mean = 1.031 gm/t, Duplicate Mean = 1.036 gm/t

Figure 12-7: 2013 Split Core Field Duplicates for Silver, Pre 2020



Source: IMC, 2024

Notes: The top graph is an XY plot, and the bottom graph is a QQ plot.

3678 Samples, Original Mean = 236.3 ppm, Duplicate Mean = 238.3 ppm

Figure 12-8: Split Core Field Duplicates for Arsenic, Pre 2020

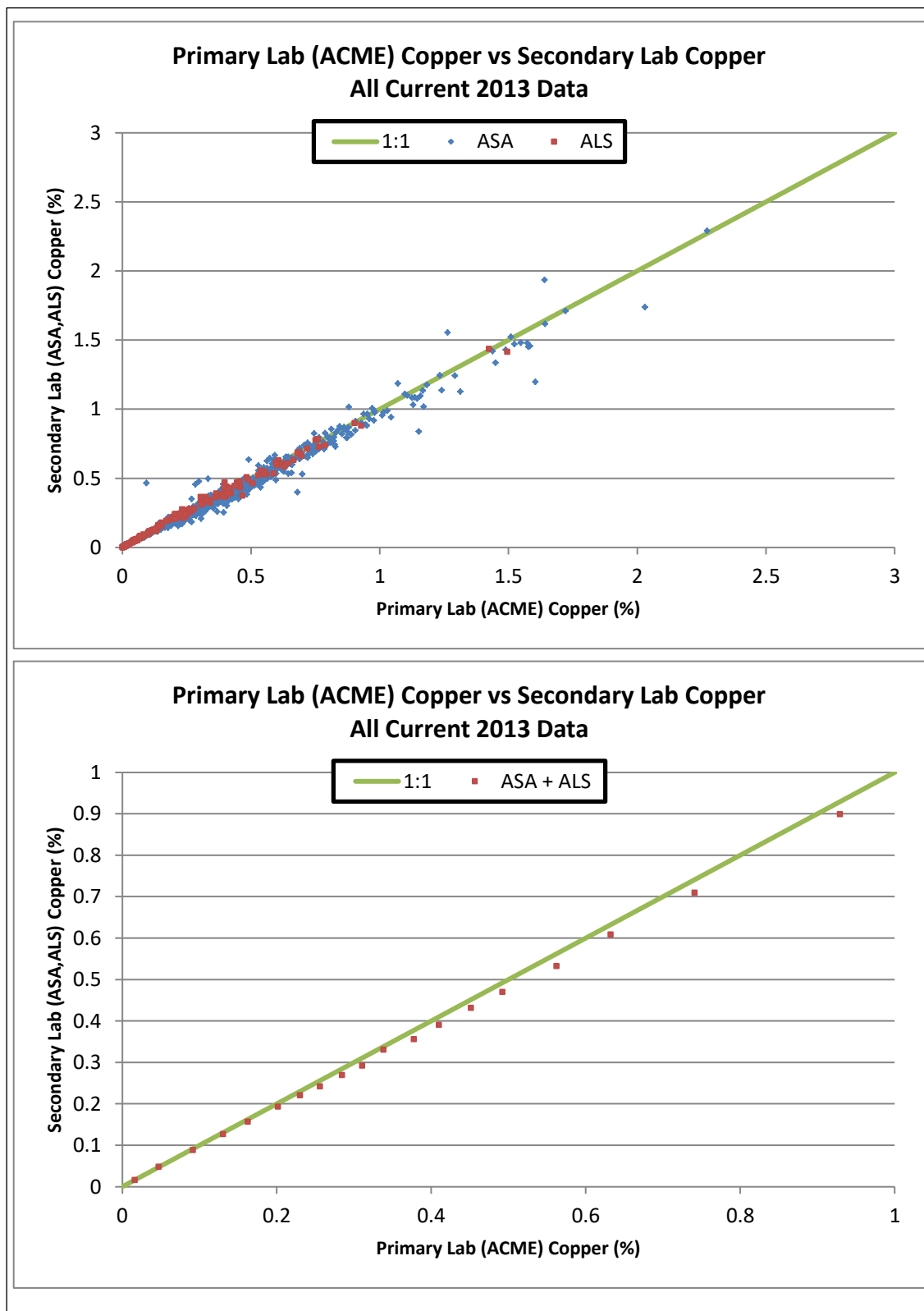
12.1.5 Second Laboratory Check Assays

Roughly 5% of the pulps are sent for a second assay at a separate laboratory. Check assays have been sent to Alex Stewart in Mendoza, Argentina (ASA) in some years, and during 2014 to ALS Chemex in La Serena, Chile. Alex Stewart was used for the first few years of the Peregrine drill program. ALS served as the check lab when ACME was the primary lab. Alex Stewart was the check lab with ALS as the primary lab from 2016 to 2020.

Figure 12-9 through Figure 12-12 summarize the available check results for copper, gold, silver, and arsenic, respectively up through the 2013 season. The XY scatter plots show the two check labs by color code on the plot. QQ plots are developed from a combination of both check lab results. The performance of 2013 assays that were done by ACME hold up respectably. Copper, gold, arsenic, and silver ACME assays correspond with the secondary check labs with little indication of bias.

The structure of the data check assay data base information provided in 2020 was more convenient to present the incremental check assay results for each of the years with drilling after 2013. As a result Figure 12-13 through Figure 12-15 summarize the check assay information for years 2016 through 2018 for copper and gold.

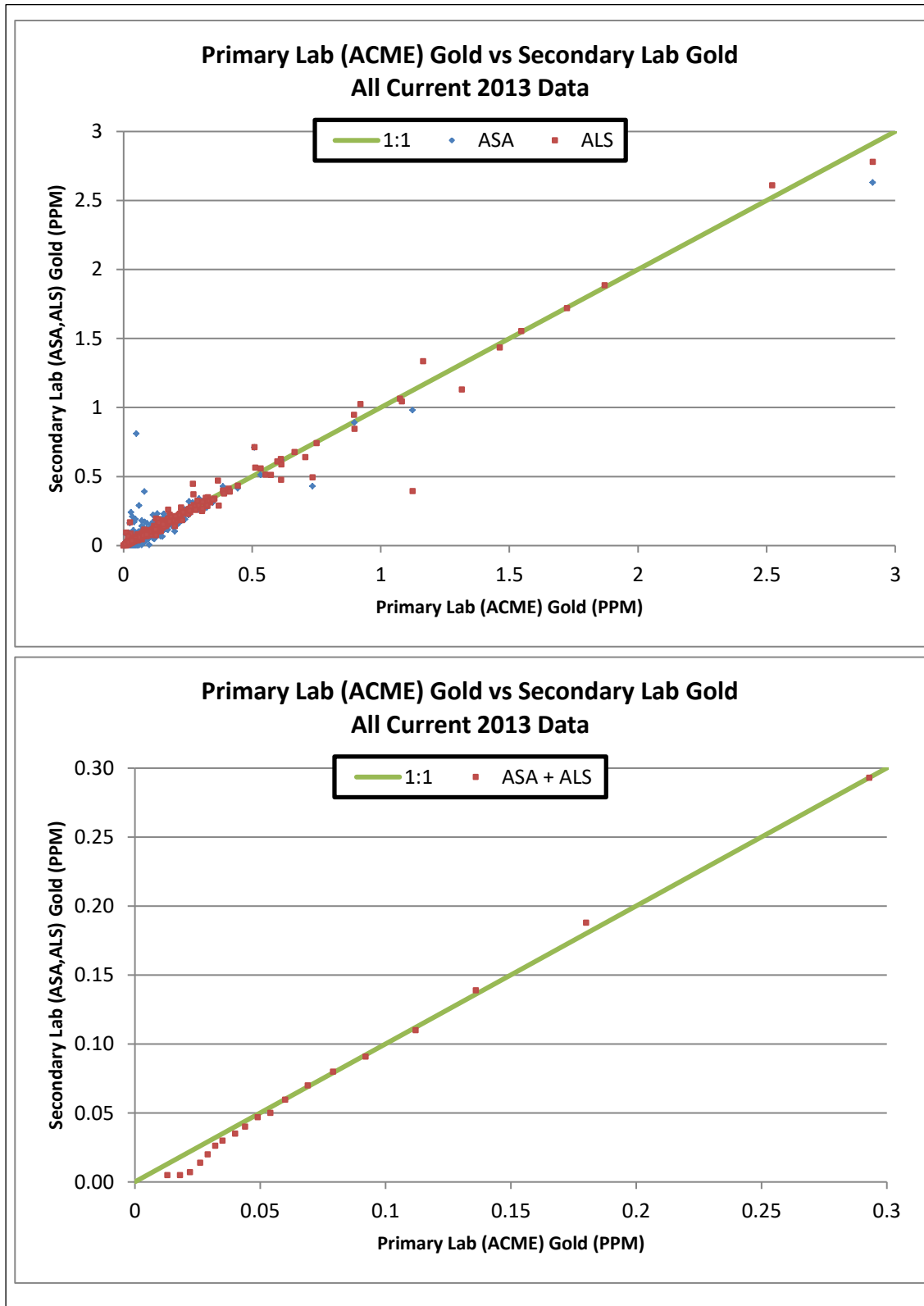
Year 2017 on Figure 12-14 is unique in that ASA reports low copper compared to ALS copper and ASA reports gold high compared to ALS Gold. The issue was rectified in 2018. Statistical checks on the 2017 data indicate that the samples could reflect the same data set, but the issue is worth further investigation. The 2017 data is also located outside of the resource pit geometries so if the bias is identifiable, it would not have an impact on the statement of mineral resources.



Source: IMC, 2024

Note: 940 Samples, Original Mean = 0.373% Copper, Duplicate Mean = 0.359% Copper

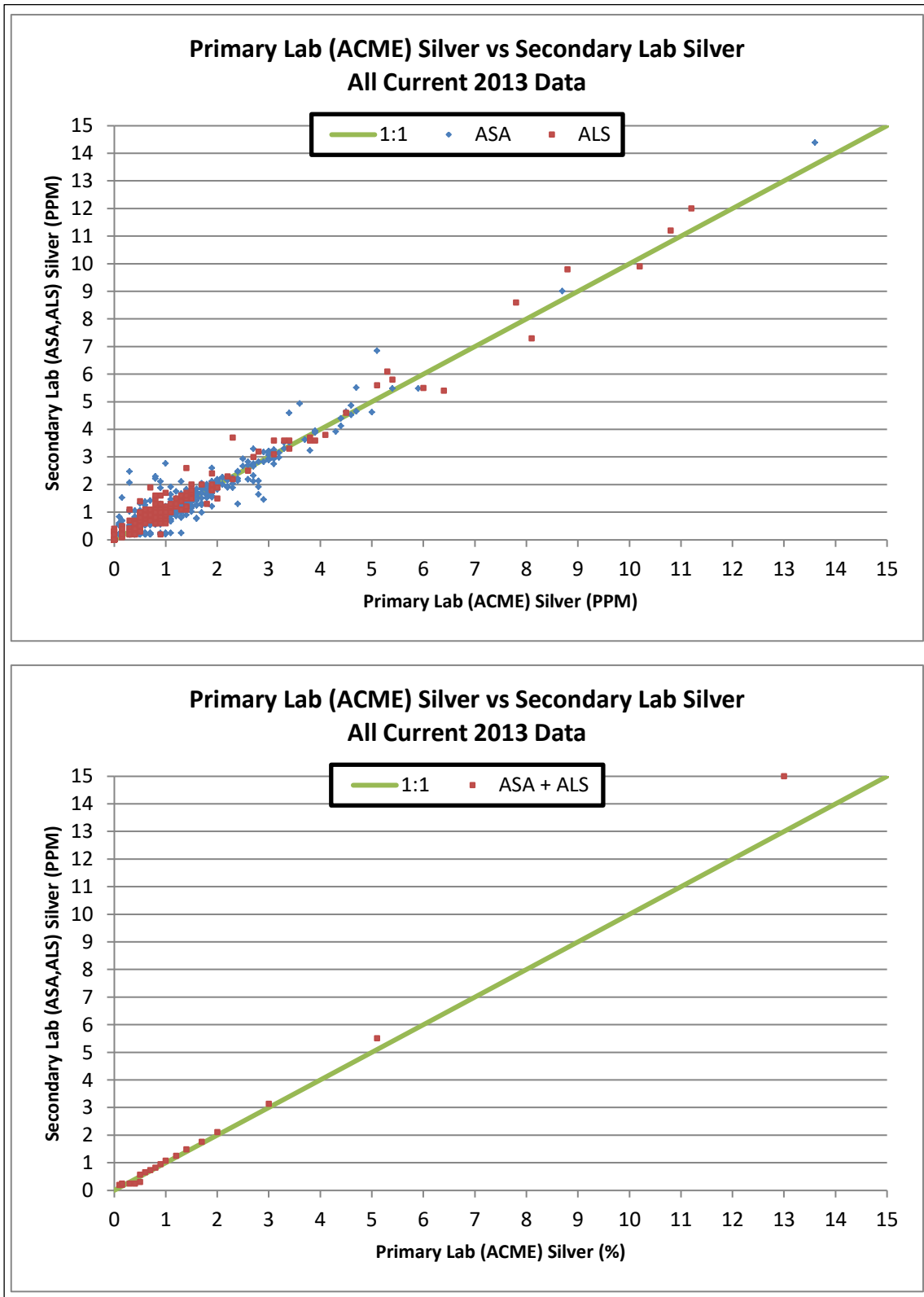
Figure 12-9: Pre 2016, Pulp Check Assays for Copper



Source: IMC, 2024

Note: 1322 Samples, Original Mean = 0.120 gm/t, Duplicate Mean = 0.114 gm/t

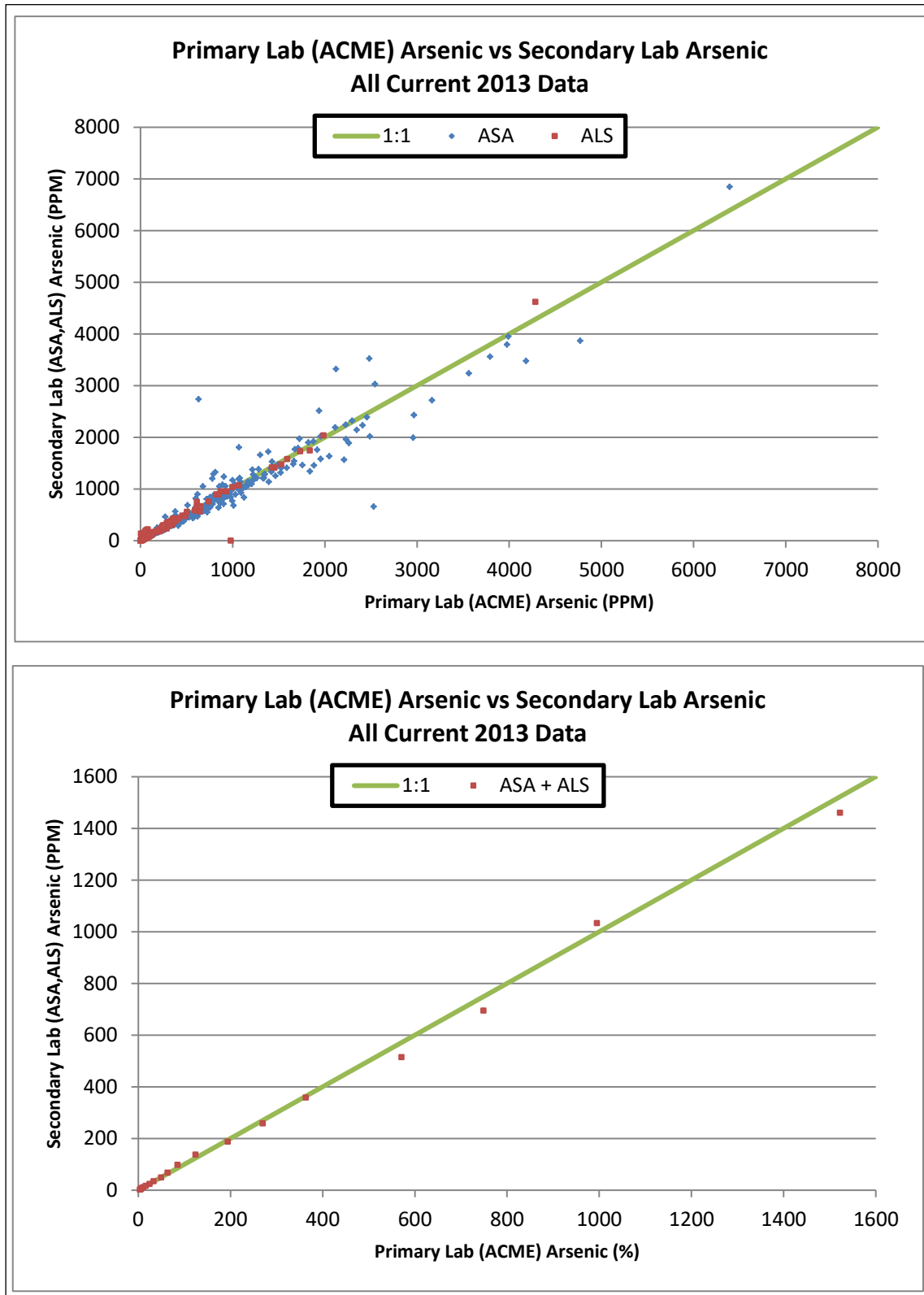
Figure 12-10: Pre 2016, Pulp Check Assays for Gold



Source: IMC, 2024

Note: 940 Samples, Original Mean = 1.329 gm/t, Duplicate Mean = 1.381 gm/t

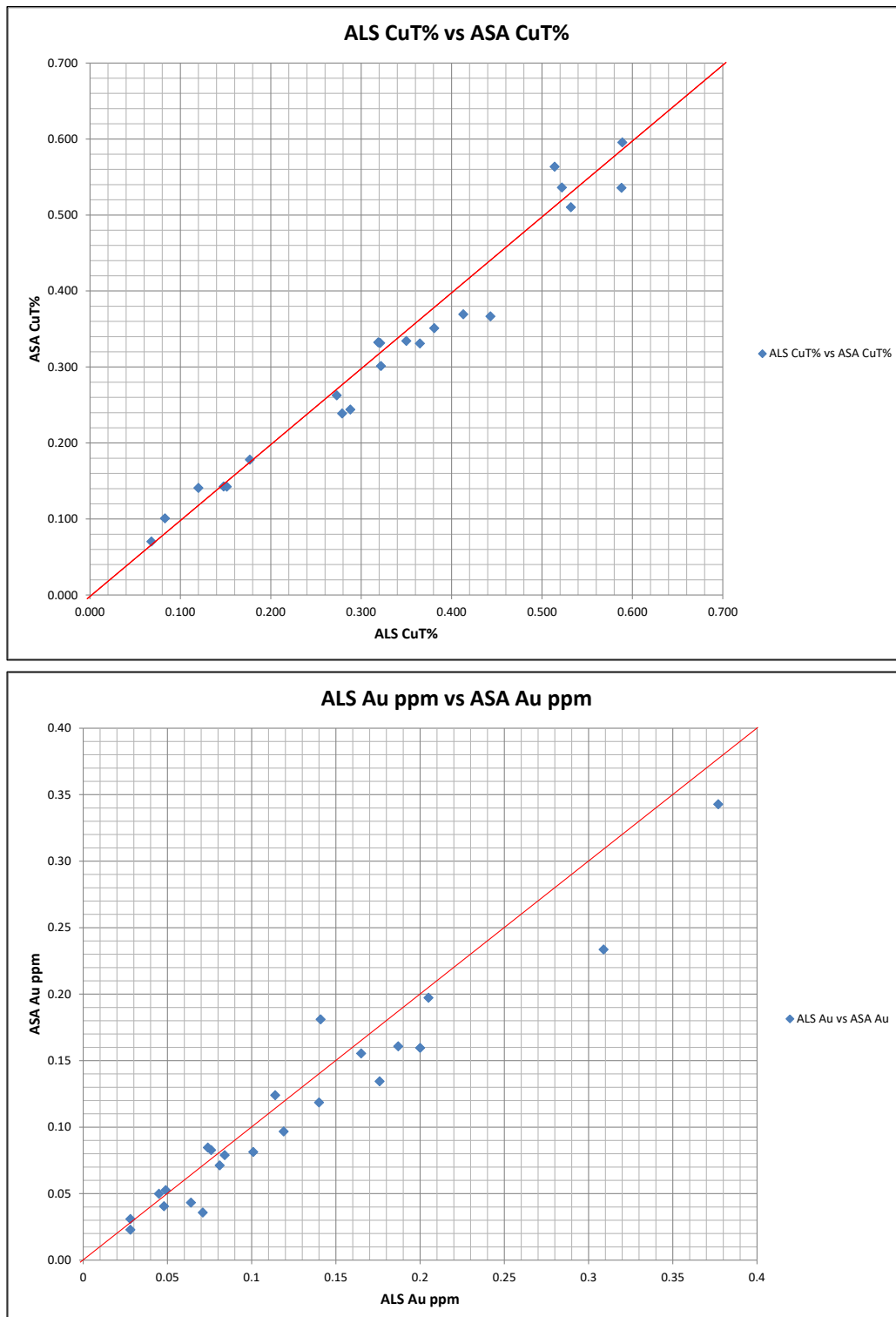
Figure 12-11: Pre 2016, Pulp Check Assays for Silver



Source: IMC, 2024

Note: 940 Samples, Original Mean = 337 ppm, Duplicate Mean = 331 ppm

Figure 12-12: Pre 2016 Pulp Check Assays for Arsenic

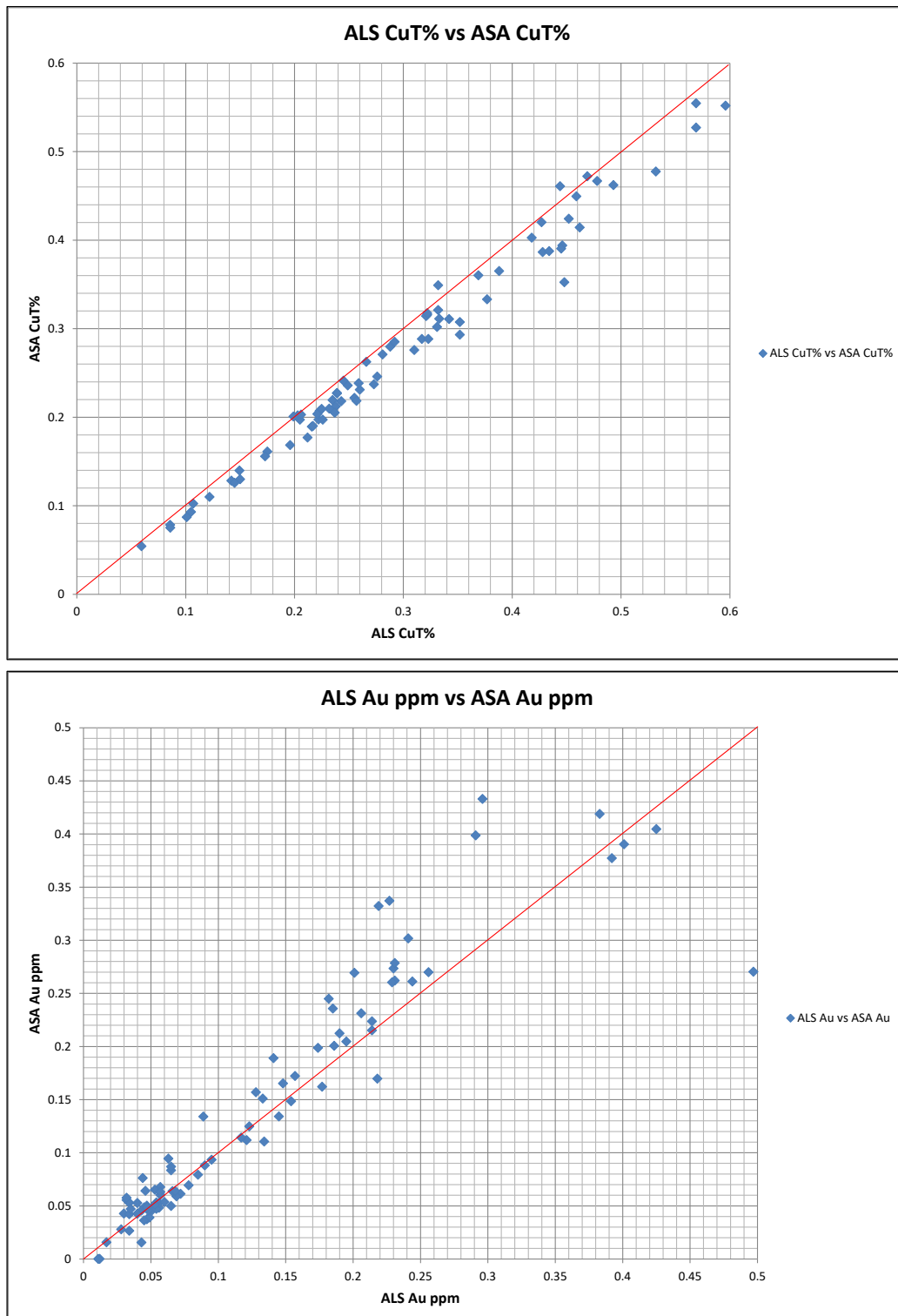


Source: IMC, 2024

Notes: Top graph: Copper Checks 2016: Mean = 0.43% (ALS Original), 0.41% (ASA Check); Stdev = 0.345 (ALS Original), 0.334 (ASA Check)

Bottom graph: Gold Checks 2016: Mean = 0.151 ppm (ALS Original), 0.133 ppm (ASA Check); Stdev = 0.122 (ALS Original), 0.104 (ASA Check)

Figure 12-13: Copper and Gold Pulp Check Assays 2016

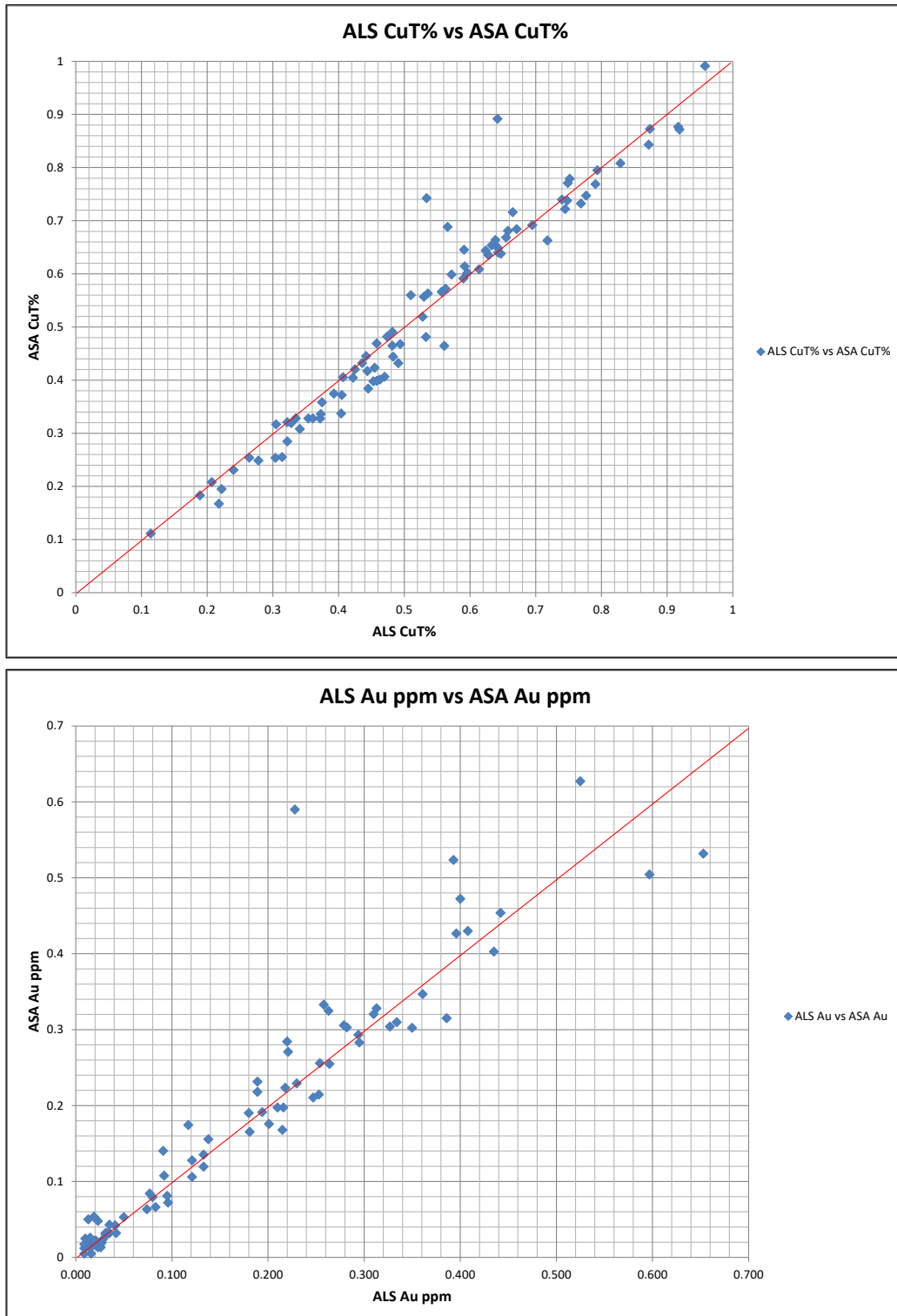


Source: IMC, 2024

Notes: Top graph: Copper Checks 2017: 98 samples, mean = 0.42% (ALS Original), 0.39% (ASA Check), Stdev = 0.331 (ALS Original), 0.324 (ASA Check)

Bottom graph: Gold Checks 2017: 98 samples, mean = 0.204 ppm (ALS Original), 0.222 ppm (ASA Check), Stdev = 0.292 (ALS Original), 0.303 (ASA Check)

Figure 12-14: Copper and Gold Pulp Check Assays 2017



Source: IMC, 2024

Notes: Top graph: Copper Checks 2018: 90 samples, mean = 0.53% (ALS Original), 0.53% (ASA Check), Stdev = 0.190 (ALS Original), 0.217 (ASA Check)

Bottom graph: Gold Checks 2018: 90 samples, mean = 0.161 ppm (ALS Original), 0.168 ppm (ASA Check), Stdev = 0.153 (ALS Original), 0.160 (ASA Check)

Figure 12-15: Copper and Gold Pulp Check Assays 2018

12.2 QA/QC 2020 – 2024

The QA/QC procedures since 2020 are like those discussed in Section 12.1. The procedures are more consistent since all have been under the control of Aldebaran. This sub-section will address the following procedures for the 2020 through 2024 drilling.

- 1) Standards
- 2) Blanks
- 3) Field Duplicates
- 4) Outside Lab Check Assays

Each will be discussed in the following paragraphs.

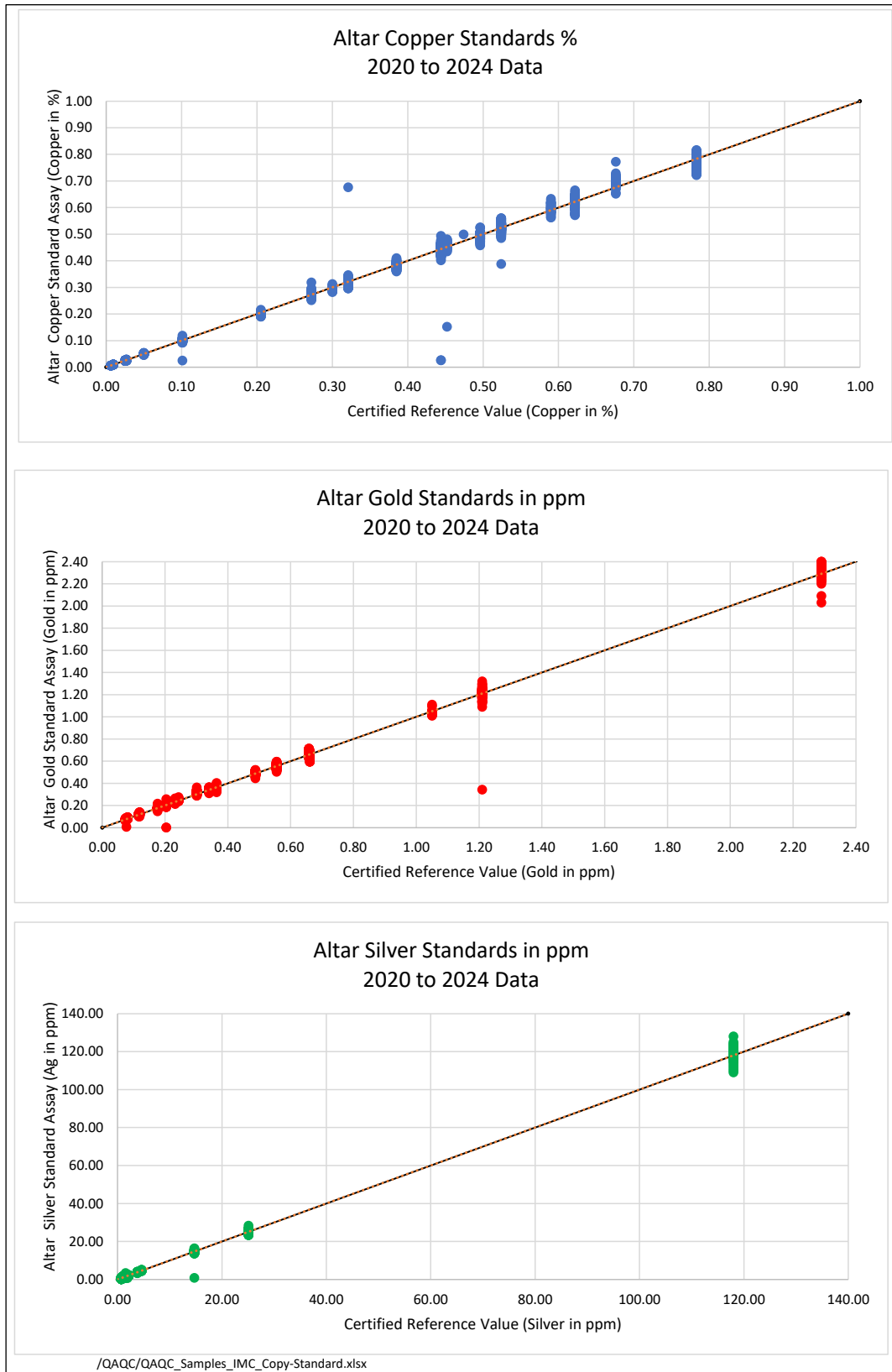
12.2.1 Standards 2020 – 2024

Aldebaran regularly inserts blind standards into the sample stream that is sent to the assay lab. The lab knows they are standards since they are pulps, but the labs do not know which standards were sent. Aldebaran reviews the standards values versus the certified value as they receive the assay results to confirm the reported assay is within two standard errors of the certified value.

IMC utilizes the standards data to determine if there is indication of bias in the assay process and to understand the reliability of the assay value.

Figure 12-16 summarizes the results of the Aldebaran standards for copper, gold, and silver that represent the new data added since 2020. In summary, there does not appear to be a bias between the standards, and the reported assay results from the laboratory. There are, however, five or six sample swaps that have occurred within the 1,749 analyzed standards on Figure 12-16. Some of the swaps were likely inserted blank samples rather than the recorded standard.

The data profile provided to IMC contained a number of intervals where the certified standard value was reported in ppb rather than ppm. The error was obvious when scanning the assay results versus the certified values. Those values were corrected to ppm prior to completion of the analysis on Figure 12-16.



Source: IMC, 2024

Figure 12-16: Standards Results 2020 – 2024

12.2.2 Blanks Insertions, 2020 – 2024

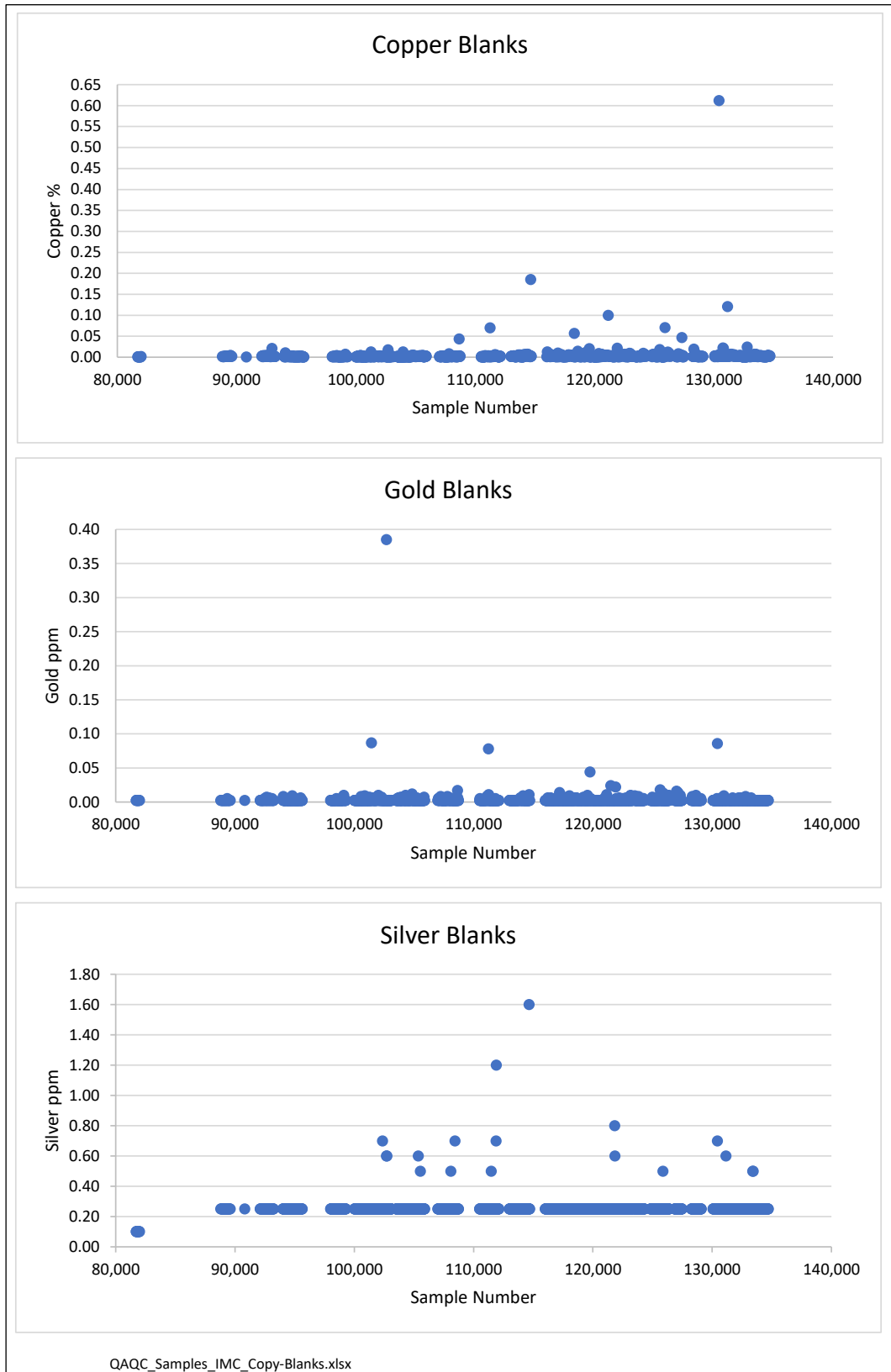
Aldebaran regularly inserts blank samples into the assay batches that are sent to the labs. Aldebaran has been using coarse material which is broken counter top material from a home improvement store that has been assayed to confirm that it is indeed near zero grade.

Figure 12-17 summarizes the blank insertions since 2020. The X axis represents the sample number which may not represent the time frame of the blank assay. The Y axis shows the reported results.

The high copper value on Figure 12-17 of 0.612% copper is very likely one of the standards that has a certified value of 0.661 or 0.658% copper, indicating that a standard was inserted instead of a blank, or the results were swapped inadvertently in the database. There are 0.4% of the copper blanks that report at 0.05% copper or above.

For gold, the high value of 0.385 ppm is likely one of the gold standards that was swapped rather than the appropriate blank. There is only about 0.06% of the gold blanks that report above 0.10 gm/t.

Silver is somewhat more scattered due to the lower reliability of the silver assay methods compared to copper or gold. The two values of 1.20 and 1.60 ppm silver match closely to standards grades further illustrating the swapping issue. The detection limit for silver is 0.25 gm/t. There is 0.7% of the silver blanks that report at or above 0.50 gm/t which is twice the detection limit.



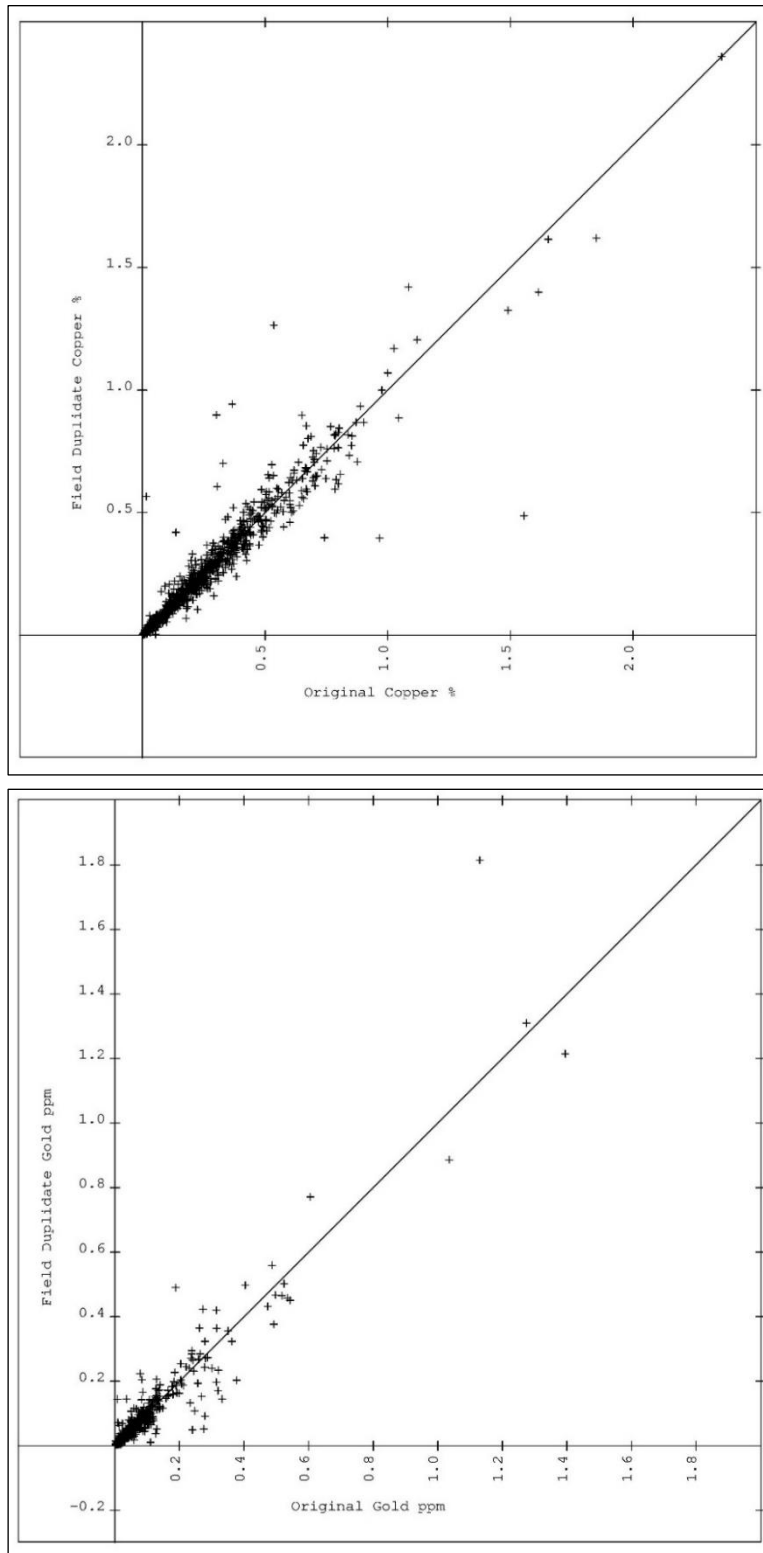
Source: IMC, 2024

Figure 12-17: Blank Insertions, 2020 – 2024

12.2.3 Field Duplicates

Aldebaran regularly submits $\frac{1}{4}$ core samples along with the original sample to the laboratory as a check on both sample preparation and assay precision combined. Figure 12-18 and Figure 12-19 summarizes the results of the field duplicate submissions for 2020 through 2024. The results do not indicate any bias between the samples and the repeatability (reliability) is good.

A statistical T-test on the means was completed for copper, gold, and silver, and all three indicate that the field duplicate mean and the original mean came from the same population with a 95% confident limit or better.

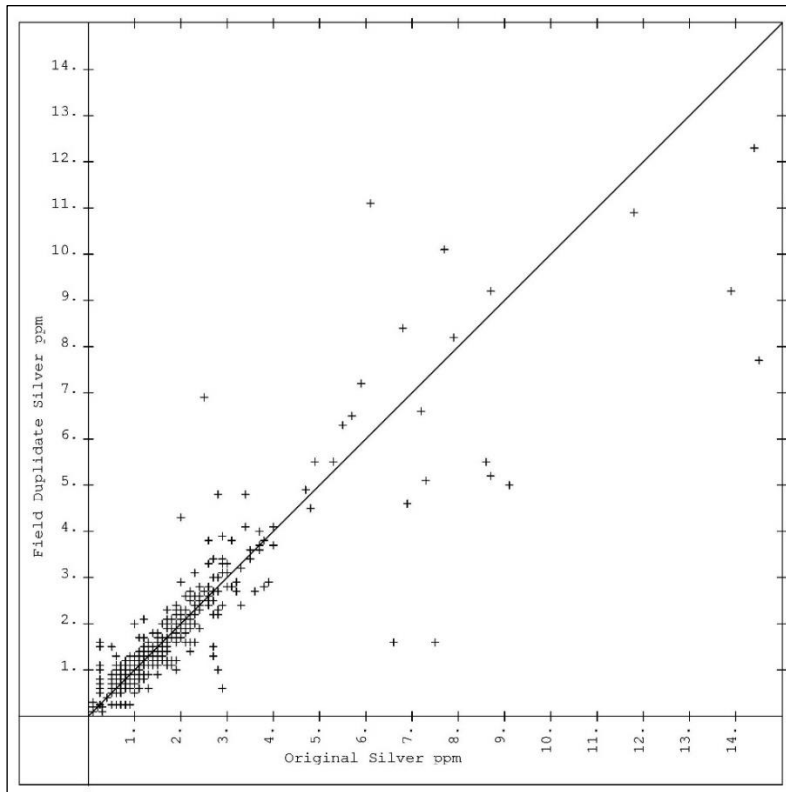


Source: IMC, 2024

Notes: Top graph: Copper Field Duplicates: original sample mean = 0.238%, duplicate sample mean = 0.239%

Bottom graph: Gold Field Duplicates: original sample mean = 0.662 ppm, duplicate sample mean = 0.638 ppm

Figure 12-18: Copper and Gold Field Duplicates, 2020-2024



Source: IMC, 2024

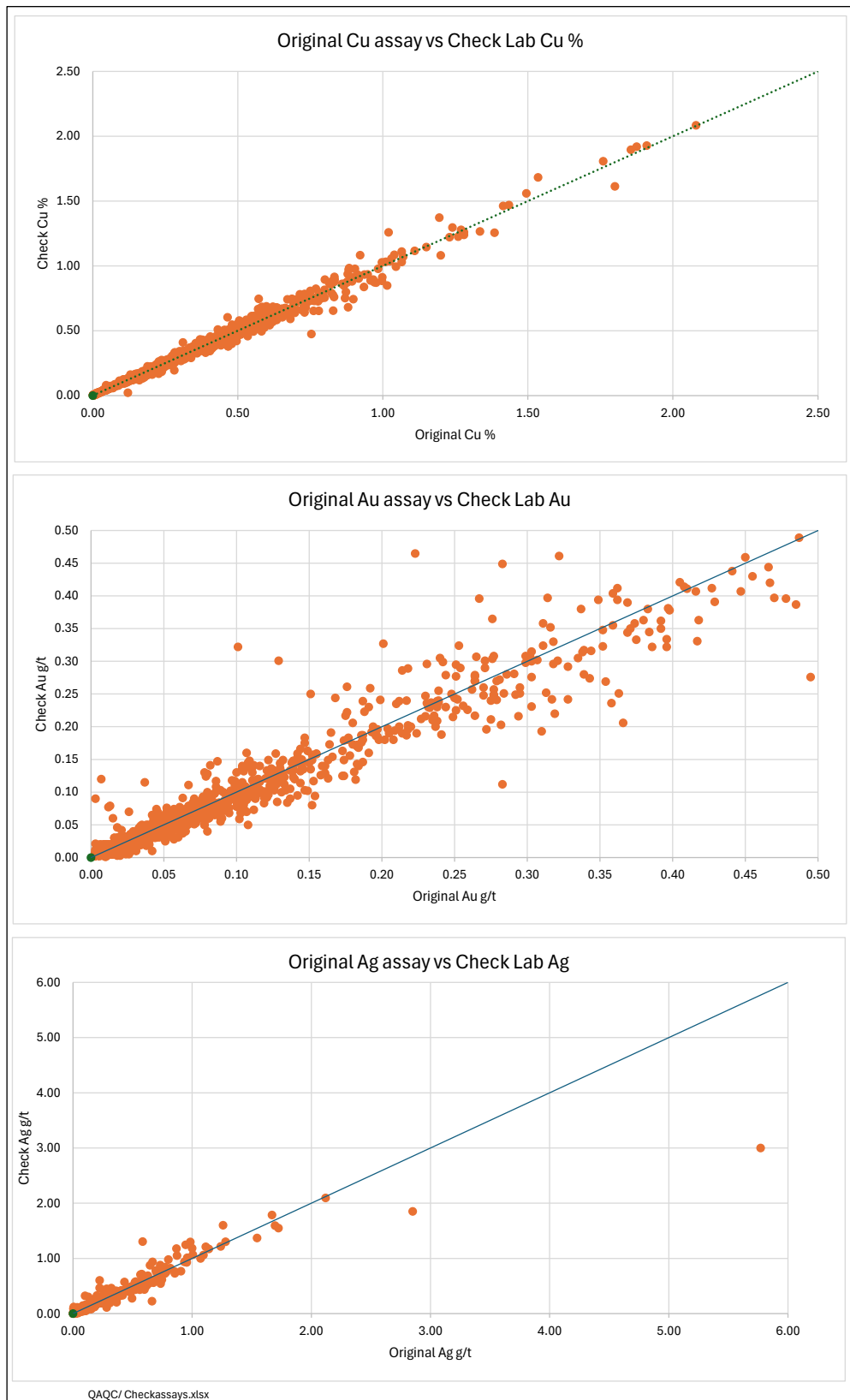
Note: Silver Field Duplicates: original sample mean = 1.05 ppm, duplicate sample mean = 1.03 ppm

Figure 12-19: Silver Field Duplicates, 2020-2024

12.2.4 Second Laboratory Check Assays

Aldebaran has a protocol to select prepared pulps and send them to a third-party laboratory for check assay on a regular basis. The procedure addresses the accuracy of the assay and provides a verification of the primary laboratory procedure. Figure 12-20 summarizes the results of the check assay process.

A hypothesis test of the means has been applied to copper, gold, and silver check results versus the original assays. The tests indicate that the original means and the check assay means came from the same population with 95% confidence.



Source: IMC, 2024

Figure 12-20: Check Assay Results, 2020-2024

12.3 Acceptance by Qualified Person

The qualified persons for the data verification and resource estimate are John Marek, RM-SME, and Jacob Richey P.E. of Independent Mining Consultants, Inc. As a result of the data verification work, John Marek and Jacob Richey hold the opinion that the Altar database can be reliably used for the determination of mineral resources.

13 Mineral Processing and Metallurgical Testing

The Altar copper project has been the subject of extensive metallurgical test programs during the period from 2007 – 2014 to investigate flotation as a process option for recovering copper and gold values from the Altar Deposit. Samples for metallurgical testing were obtained from Peregrine exploration drill core and specific metallurgical drill programs from 2007 through 2013. Eight metallurgical HQ diameter holes were drilled during the 2009-2010 program for comminution and column leach testing, and five additional PQ diameter metallurgical holes were drilled during the 2010-2011 season. This section provides a summary of the relevant copper flotation metallurgical programs which are fully documented in the following reports:

- G & T Metallurgical Services, “Metallurgical Assessment of the Altar Deposit – KM2875”, Peregrine Metals Limited, June 10, 2011
- G & T Metallurgical Services, “Metallurgical Assessment of the Altar Deposit – KM2987”, Peregrine Metals Limited, July 19, 2011
- G & T Metallurgical Services, “Metallurgical Assessment of the Altar and QDM Deposits – KM3443”, Stillwater Mining Company, November 26, 2012.
- ALS Metallurgy – Kamloops, “Pilot Plant Test Work – Altar Project – KM4073”, Stillwater Mining Company, February 11, 2014.

13.1 G&T Metallurgical Services – KM2875, 2011

The test program, which included analytical mineralogical characterization, comminution testing, and flotation testing on eight test composites, which were formulated from whole drill core representing quartz porphyry and rhyolite lithologies. Table 13-1 shows the drill holes and intervals used for each test composite.

Table 13-1: Test Composite Drill Hole and Sample Interval Location

Composite	Hole ID	Intersection (m)		Easting	Northing	Elevation	Lithology	Cu (%)	Au (g/t)	As (%)
		From	To							
POR-1	ALD43	327	342	2359290	6516703	3301	Quartz Diorite Porphyry	0.21	0.05	0.001
POR-2	ALD43	370	385	2359289	6516703	3261	Quartz Diorite Porphyry	0.48	0.08	0.01
POR-3	ALD36	64	79	2359199	6516800	3564	Quartz Diorite Porphyry	0.72	0.09	0.002
POR-4	ALD43	250	260	2359292	6516702	3381	Quartz Diorite Porphyry	0.93	0.06	0.01
RHY-1	ALD57	45	60	2359398	6516700	3556	Pachon Rhyolite	0.18	0.05	0.07
RHY-2	ALD33	182	197	2359421	6516597	3368	Pachon Rhyolite	0.48	0.04	0.02
RHY-3	ALD33	237	252	2359421	6516597	3308	Pachon Rhyolite	0.61	0.03	0.02
RHY-4	ALD47	152	167	2359098	6516896	3491	Pachon Rhyolite	0.95	0.08	0.02

Source: GT KM2875, 2011

13.1.1 Test Composite Head Analyses

Head analyses for each of the test composites are shown in Table 13-2. Copper grades ranged from 0.24 – 1.03% Cu, gold grades ranged from 0.01 – 0.09 g/t Au and arsenic ranged from 37 – 1,116 g/t (ppm). CuOX ranged from 0.004 – 0.050%, indicating that the presence oxide copper mineralization is low, and CuCN ranged from 0.02 – 0.61% indicating the presence of secondary sulphide mineralization in most of the test composites.

Table 13-2: Test Composite Head Analyses

Composite	Assay - percent or g/tonne							
	Cu	Fe	Au	As	S	C	CuOX	CuCN
POR 1	0.38	6.40	0.05	455	8.73	0.02	0.004	0.06
POR 2	0.34	3.77	0.04	133	6.63	0.02	0.003	0.02
POR 3	0.38	2.87	0.08	66	3.31	0.01	0.019	0.14
POR 4	1.02	3.74	0.09	37	5.01	0.02	0.050	0.74
RHY 1	0.24	1.51	0.04	1,116	1.99	0.01	0.006	0.19
RHY 2	0.36	2.05	0.03	413	2.57	0.01	0.018	0.24
RHY 3	0.36	2.54	0.01	482	3.39	0.02	0.018	0.22
RHY 4	1.03	1.19	0.09	201	1.92	0.02	0.056	0.61

Source: GT KM2875, 2011

13.1.2 Mineralogical Analyses

Mineralogical analyses were conducted on each of the test composites and the results of summarized in Table 13-3. Key observations include:

- Pyrite is the dominant sulphide mineral.
- Chalcopyrite is the primary copper mineral in the porphyry test composites along with lesser amounts of secondary sulphide copper mineralization.
- Copper mineralization in the rhyolite test composites occurs primarily as secondary sulphide copper minerals such as bornite, chalcocite and covellite along with lesser amounts of chalcopyrite.
- Enargite and tennantite, which are arsenic bearing copper minerals, were identified in most of the test composites, indicating that arsenic in the final copper flotation concentrates may be a concern.
- Gangue minerals consist mainly of quartz, muscovite and feldspars with relatively low quantities of kaolinite and chlorite.

Table 13-3: Summary of Mineralogical Evaluation of the Test Composites

Minerals	Mineral Content - percent							
	POR 1	POR 2	POR 3	POR 4	RHY 1	RHY 2	RHY 3	RHY 4
Chalcopyrite	0.89	0.76	0.82	0.46	0.01	0.13	0.16	0.65
Bornite	0.00	0.00	0.04	0.08	0.00	0.05	0.05	0.14
Chalcocite	0.00	0.00	0.02	0.73	0.02	0.15	0.09	0.28
Covellite	0.07	0.02	0.40	0.23	0.16	0.23	0.38	0.57
Enargite / Tennantite	0.33	0.05	0.00	0.00	0.33	0.17	0.14	0.02
Pyrite	13.3	9.6	3.9	7.6	1.9	4.2	5.1	1.6
Iron Oxides	0.2	0.2	1.7	0.1	1.7	0.1	0.0	0.1
Quartz	42.5	38.8	45.7	53.7	72.5	65.2	63.0	53.3
Muscovite	28.3	26.9	17.6	23.0	14.3	20.7	18.0	14.7
Feldspars	12.1	20.3	26.8	11.2	8.0	8.5	12.7	28.3
Ti Mineral Group	0.6	0.7	0.9	0.7	0.2	0.2	0.1	0.1
Kaolinite	1.1	0.9	0.5	1.9	0.1	0.1	0.2	0.2
Chlorite	0.0	1.0	0.4	0.2	0.0	0.0	0.0	0.0
Others	0.6	0.8	1.3	0.2	0.7	0.1	0.1	0.1

Source: GT KM2875, 2011

13.1.3 Comminution Test Work

Comminution tests, including Bond ball mill work index (BWi), Bond rod mill work index and SAG mill comminution (SMC) were conducted on each of the test composites. The results of these tests are summarized in Table 13-4. BWi tests on the porphyry composites ranged from 12.7 - 16.2 kWh/t and averaged 14.4 kWh/t. BWi tests on the rhyolite composites ranged from 11.6 - 15.7 kWh/t and averaged 12.9 kWh/t, indicating that rhyolite samples are somewhat softer with respect to ball mill grinding than the porphyry samples. The SMC Axb value for the porphyry samples ranged from 43.5 – 67.1 and averaged 48.2, while the Axb value for the rhyolite samples ranged from 28.2 – 40.1 and averaged 34.7. It should be noted that the lower the Axb value the harder the material is with respect to SAG mill grinding. As such, the rhyolite samples were found to be more resistant to SAG mill grinding than the porphyry samples. The abrasion index (Ai) averaged 0.116 for the porphyry samples and 0.098 for the rhyolite samples, indicating low to moderate abrasivity.

Table 13-4: Summary of Comminution Tests on Porphyry and Rhyolite Test Composites

Sample	Bond Indices			SMC Test Results						
	Abrasion Ai	BWi (kWh/t)	RWi (kWh/t)	DWi (kWh/m ³)	Mia (kWh/t)	A	b	Axb	SG	ta
Porphyry 1	0.116	14.1	12.0	6.65	18.1	72.5	0.60	43.5	2.89	0.39
Porphyry 2	0.143	14.5	13.9	8.01	22.1	71.6	0.48	34.4	2.74	0.32
Porphyry 3	0.113	16.2	13.2	5.33	17.1	60.8	0.79	48.0	2.55	0.49
Porphyry 4	0.091	12.7	10.3	3.91	13	62.1	1.08	67.1	2.63	0.66
Average	0.116	14.4	12.4	5.98	17.6	66.8	0.74	48.2	2.70	0.47
Rhyolite 1	0.77	15.7	14.9	6.84	20.9	70.4	0.53	37.3	2.55	0.38
Rhyolite 2	0.082	11.6	13.1	7.68	22.7	73.9	0.45	33.3	2.58	0.34
Rhyolite 3	0.122	11.8	15.6	9.27	25.8	85.5	0.33	28.2	2.64	0.28
Rhyolite 4	0.112	12.5	12.6	6.27	19.6	77.1	0.52	40.1	2.54	0.41
Average	0.098	12.9	14.1	7.52	22.3	76.7	0.46	34.7	2.58	0.35

Source: GT KM2875, 2011

13.1.4 Rougher Flotation and Cleaner Flotation (Open Circuit)

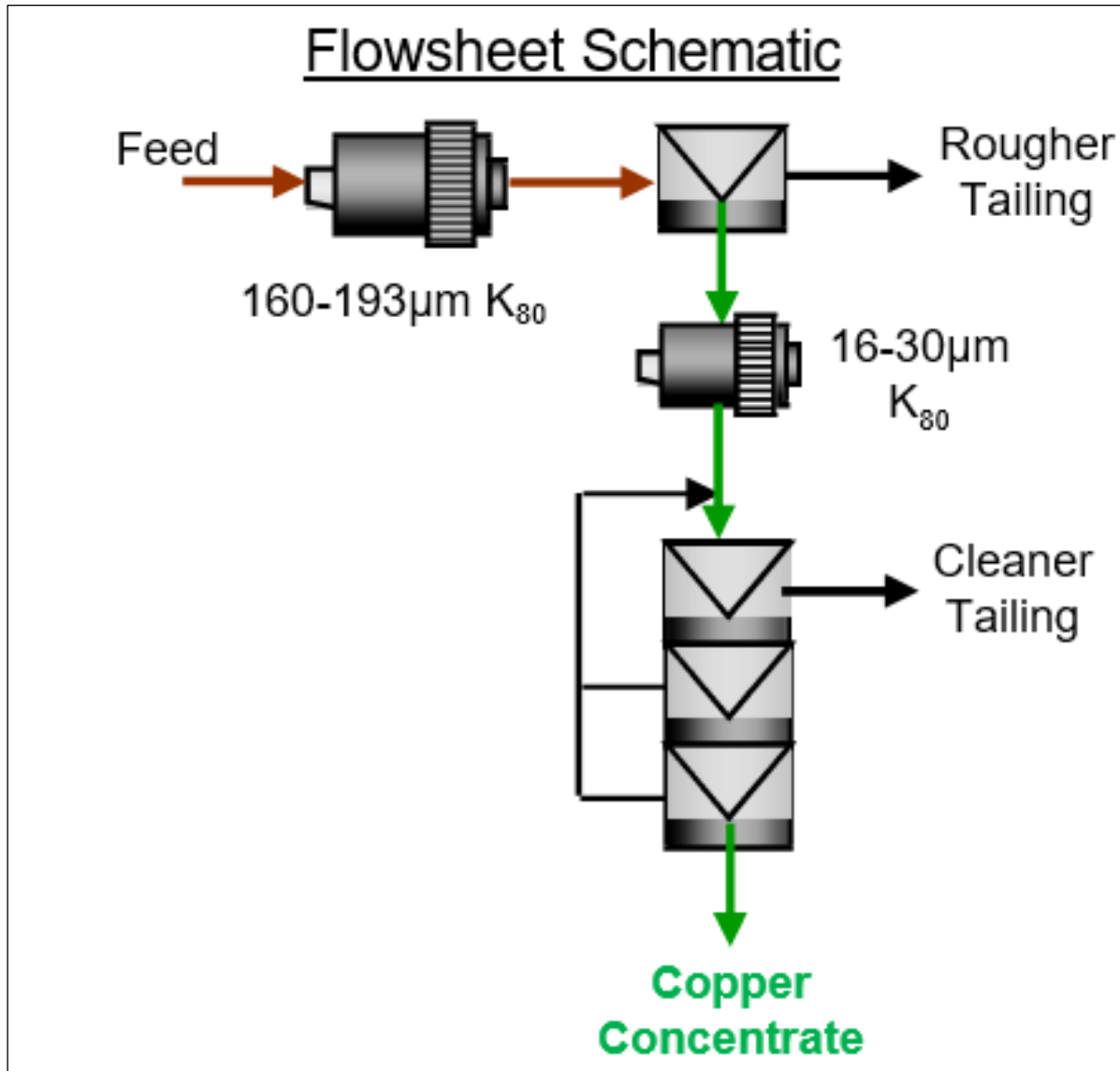
Open circuit rougher and cleaner flotation tests were conducted on the Porphyry 2 and Rhyolite 2 test composites to establish optimal rougher and cleaner flotation test conditions, which were then used for locked-cycle flotation tests on each test composite. Key process parameter established during open circuit rougher and cleaner flotation tests included:

- Primary grind size: P80 190 µm
- Rougher concentrate regrind size: P80 17 – 23 µm
- Rougher flotation pH: 10.0 adjusted with lime
- Cleaner flotation pH: 10.0 adjusted with lime
- Collector: PAX at 12 g/t
- MIBC: 40 – 60 g/t
- Cleaner flotation stages: 3

Generally, copper recovery ranged from 86.2 – 89.6% into final copper flotation concentrates that contained 26.6 – 32.3% Cu and gold recovery into the copper cleaner flotation concentrate ranged from 38.7 – 50.0%.

13.1.5 Locked Cycle Flotation

Locked cycle flotation tests were conducted on each of the test composites using the preferred test conditions established during open circuit rougher and cleaner flotation test work and the locked cycle test flowsheet shown in Figure 13-1 in which the second and third cleaner flotation tailings were cycled back to the first stage of cleaner flotation. The results of the locked cycle tests conducted on each of the test composites are summarized in Table 13-5. Copper recovery from the porphyry test composites ranged from 88.5 – 94.4% and averaged 91.6 % into final copper concentrates that ranged from 26.4 – 31.7% Cu and averaged 29.3% Cu. Gold recovery ranged from 52.5 – 79.4% and averaged 64%. Copper recovery from the rhyolite test composites ranged from 88.9 – 92.7% and averaged 90.7% into final copper concentrates that ranged from 27.6 – 36.7% Cu and averaged 32.0% Cu. Gold recovery ranged from 43.9 – 71.0% and averaged 52.4%. Arsenic in the porphyry composites ranged from 0.1 – 3.2% As and averaged 1.1% As. Arsenic in the rhyolite composites ranged from 0.6 – 9.7% As and averaged 4.2% As.



Source: GT KM2875, 2011

Figure 13-1: Locked-Cycle Test Flowsheet

Table 13-5: Summary of Locked Cycle Tests on the Porphyry and Rhyolite Test Composites

Sample	Feed Grade			wt%	Concentrate			Recovery (%)		
	Cu (%)	Au (g/t)	As (ppm)		Cu (%)	Au (g/t)	As (%)	Cu	Au	As
Porphyry 1	0.38	.005	455	1.1	30.7	2.4	3.2	89.5	52.5	77.4
Porphyry 2	0.34	0.04	133	1.1	28.5	8.7	0.9	93.9	79.4	74.4
Porphyry 3	0.38	0.08	66	1.1	31.7	4.2	0.3	88.5	56.3	50.0
Porphyry 4	1.02	0.09	37	3.7	26.4	1.7	0.1	94.4	69.3	80.0
Average	0.5	0.07	173	1.8	29.3	4.3	1.1	91.6	64.4	70.4
Rhyolite 1	0.24	0.04	1,116	0.6	36.7	4.6	9.7	92.7	71.0	52.3
Rhyolite 2	0.36	0.03	413	1.0	30.9	1.3	2.8	90.0	34.9	67.8
Rhyolite 3	0.36	0.01	482	1.0	27.6	1.4	3.6	88.9	59.6	74.7
Rhyolite 4	1.03	0.09	201	2.9	32.7	1.3	0.6	91.1	43.9	86.6
Average	0.5	0.04	553	1.4	32.0	2.1	4.2	90.7	52.4	70.3

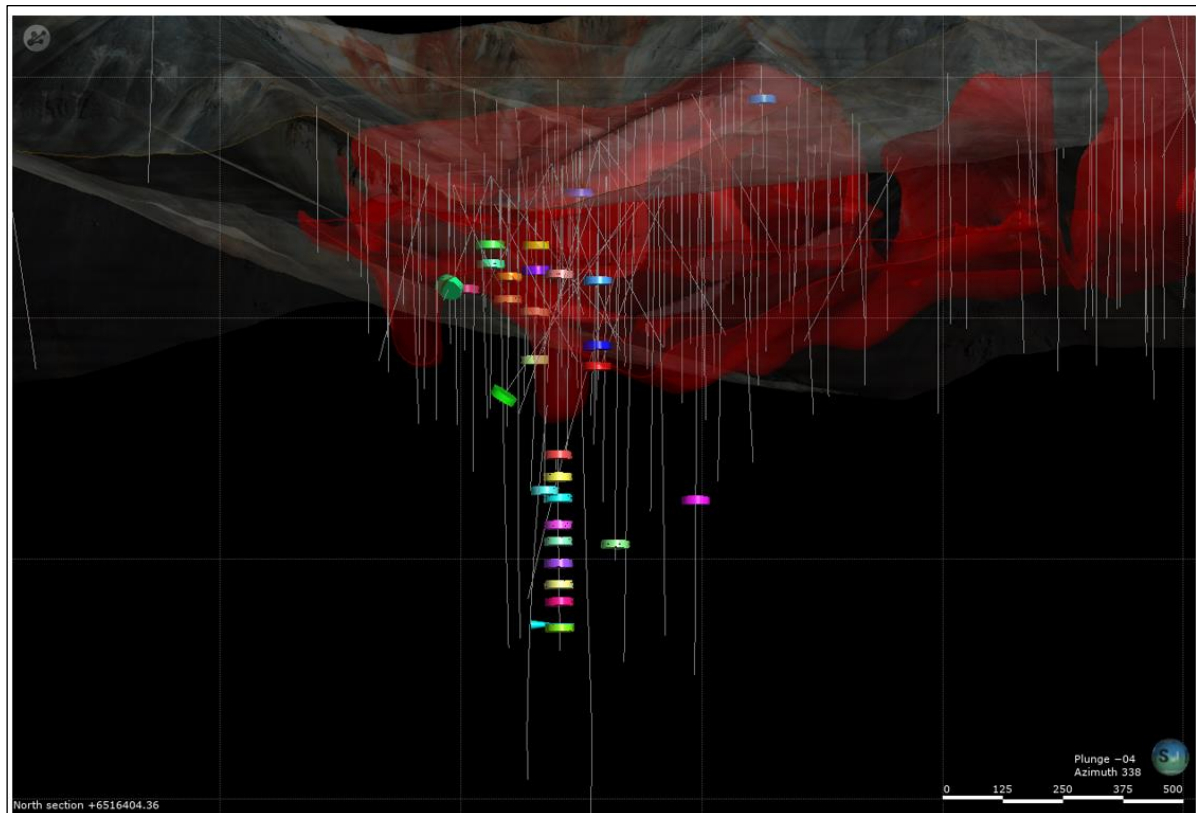
Source: GT KM2875, 2011

Key observations include:

- Copper can be recovered from the Altar deposit using conventional copper flotation technology and a process flowsheet that includes copper rougher flotation, regrinding of the rougher concentrate and three stages of cleaner flotation. Conditions selective against pyrite are required to avoid pyrite flotation into the copper concentrate.
- At a primary grind size between P80 136 µm and 160 µm copper sulphide mineral liberation was moderate for the eight samples tested, ranging from 37 to 64 percent. These liberation levels are similar to operating mines in G&T Metallurgical Services Ltd.'s database.
- Copper deportment was variable across the eight composites tested. The following copper sulphide minerals were present, in order of abundance; chalcopyrite, covellite, chalcocite, enargite/tennantite and bornite. Enargite and tennantite are copper arsenic sulphide minerals and will result in relatively high arsenic levels in the copper concentrate when present.
- A range of primary grind sizes were tested and a primary grind size of P80 190 µm was selected for further testing. A pH of 10.0 in both the rougher and cleaner circuits was required to depress pyrite. Between 0.3 and 2 kg/t of CaO was required to obtain this pH in the primary grind from Kamloops tap water. However, lime consumption will likely be lower when recycling of process water is taken into consideration.
- Regrinding of the rougher concentrate to P80 16 – 30 µm was required to achieve adequate mineral liberation and production of high-grade copper concentrates.
- The reagent scheme used in this program was very simple, utilizing the copper collector, Potassium Amyl Xanthate (PAX) and Methyl Isobutyl Carbonyl (MIBC) as the frother. To improve closed circuit stability via easier rejection of pyrite, the use of a more selective collector such as 3418A may be appropriate. Elevating the pH to 11 in the cleaner circuit may also assist circuit stability in this regard.
- Copper performance was good, with copper recoveries ranging from 88 to 95% into concentrates grading between 26 and 37% Cu.
- High grade copper concentrates, containing payable gold contents, can be readily produced.
- Copper concentrates contained high levels of arsenic levels due to the presence of the copper minerals, enargite and tennantite in the ore. As such, arsenic will draw significant penalties at the smelter.

13.2 G & T Metallurgical Services - KM2987, 2011

G & T Metallurgical Services conducted a metallurgical test program on 30 variability test samples from the Altar deposit in 2011. The program included Bond ball mill work index (BWI) determinations and rougher and cleaner flotation test work using standardized test conditions. The test samples were developed from core and assay reject samples. Figure 13-2 and Figure 13-3 shows the drill holes and intervals used for each test sample along with expected grades.



Source: Aldebaran Resources, 2025

Figure 13-2: Drill Holes and Intervals Used to Prepare the Altar Variability Samples

Sample	HoleID	Original HoleID	From (m)	To (m)	Interval (m)	Cu (%)	CuCN (%)	Au (ppb)	Mo (%)	As (%)	Lithology	Zone	Sample Type
1	ALD-141	ALD-33	162	177	15	0.921	0.672	0.06	0.004	0.0075	Tpr	Mixed	PQ Core
2	ALD-141	ALD-33	298	313	15	0.532	0.031	0.07	0.002	0.0138	Tdp	Transitional	PQ Core
3	ALD-141	ALD-33	340	355	15	0.365	0.019	0.05	0.001	0.0041	Tdp	Transitional	PQ Core
4	ALD-143	ALD-43	218	233	15	1.016	0.788	0.07	0.0004	0.0020	Tdp	Mixed	PQ Core
5	ALD-43	-	594	610	16	0.684	-	0.05	0.0002	0.0009	Tdp	Deep cp	Rejects
6	ALD-43	-	640	656	16	0.727	-	0.04	0.001	0.0001	Tdp	Deep cp	Rejects
7	ALD-43	-	684	700	16	0.921	-	0.06	0.001	0.0001	Tdp	Deep cp	Rejects
8	ALD-43	-	740	756	16	1.255	-	0.04	0.002	0.0001	Tdp	Deep cp	Rejects
9	ALD-43	-	774	790	16	0.761	-	0.03	0.006	0.0002	Tdp	Deep cp	Rejects
10	ALD-43	-	820	836	16	0.845	-	0.03	0.004	0.0064	Tdp	Deep cp	Rejects
11	ALD-43	-	864	880	16	0.856	-	0.02	0.003	0.0161	Tdp	Deep cp	Rejects
12	ALD-43	-	900	916	16	0.699	-	0.03	0.004	0.0035	Tdp	Deep cp	Rejects
13	ALD-43	-	954	970	16	0.409	-	0.01	0.001	0.0126	Tdp	Deep cp	Rejects
14	ALD-147	ALD-47	218	233	15	0.399	0.052	0.03	0.002	0.0014	Tpr	Transitional	PQ Core
15	ALD-147	ALD-47	265	280	15	0.405	0.030	0.04	0.001	0.0005	Tpr	Transitional	PQ Core
16	ALD-144	ALD-36	146	161	15	1.496	1.123	0.38	0.002	0.0048	Tdp	Mixed	PQ Core
17	ALD-144	ALD-36	198	213	15	0.735	0.240	0.14	0.002	0.0083	Tdp	Mixed	PQ Core
18	ALD-144	ALD-36	284	299	15	0.636	0.033	0.15	0.001	0.0047	Tdp	Transitional	PQ Core
19	ALD-144	ALD-36	384	399	15	0.612	-	0.13	0.001	0.0072	Tdp	Transitional	PQ Core
20	ALD-112	ALD-50	136	151	15	0.773	0.516	0.06	0.001	0.0017	Tpr	Mixed	HQ Core
21	ALD-112	ALD-50	176	191	15	0.804	0.359	0.08	0.001	0.0067	Tpr	Mixed	HQ Core
22	ALD-105	ALD-44	64	79	15	0.335	0.149	0.06	0.001	0.0115	Tpr	Mixed	HQ Core
23	ALD-113	ALD-48	80	95	15	1.401	1.098	0.12	0.001	0.0376	Tdp	Mixed	HQ Core
24	ALD-68	-	630	646	16	0.513	0.015	0.02	0.006	0.0033	Tpa	Transitional	Rejects
25	ALD-69	-	716	732	16	0.590	-	0.05	0.003	0.0105	Tpa	Transitional	Rejects
26	ALD-51	-	626	642	16	0.430	-	0.03	0.001	0.0269	Tpa	Deep cp	Rejects
27	ALD-73	-	320	336	16	0.441	-	0.07	0.001	0.0229	Tpa	Transitional	Rejects
28	ALD-75	-	478	494	16	0.431	-	0.08	0.0003	0.0060	Tpa	Transitional	Rejects
29	ALD-65	-	262	278	16	0.258	0.012	0.10	0.002	0.0011	Tpr	Transitional	Rejects
30	ALD-139	-	148	164	16	0.203	0.043	0.07	0.001	0.0148	Tpr	Transitional	Rejects

Source: GT-KM2987, 2011

Figure 13-3: Drill Holes and Core Intervals Used for Each Variability Sample

13.2.1 Head Analyses

Head analyses for each of the test samples are shown in Table 13-6. Also shown is a qualitative measurement of the copper oxide mineral occurrence (CuOX) and the occurrence of secondary copper sulphide mineralization (CuCN). Copper grades ranged from 0.19% to 1.36% Cu and gold grades ranged from <0.01 g/t to 0.28 g/t Au. Arsenic in the samples ranged from 9 ppm to 446 ppm As.

Table 13-6: Variability Sample Head Analyses

Sample	Assay - percent or g/tonne								Percent of Total Cu	
	Cu	Fe	S	Au	As	CuOX	CuCN	C	CuOX	CuCN
Sample 1	0.62	2.30	2.90	0.02	217	0.023	0.40	0.01	4	66
Sample 2	0.49	3.83	6.46	0.04	93	0.002	0.01	<0.01	<1	2
Sample 3	0.54	3.63	6.76	0.16	13	0.002	0.00	0.01	<1	1
Sample 4	1.02	5.57	6.32	0.28	446	0.049	0.77	0.01	5	76
Sample 5	0.66	3.38	5.00	0.08	25	0.023	0.01	0.02	3	2
Sample 6	0.67	4.63	6.52	0.06	14	0.028	0.01	0.02	4	2
Sample 7	0.83	3.06	4.57	0.03	10	0.020	0.01	0.02	2	1
Sample 8	1.23	1.53	2.71	0.07	9	0.014	0.01	0.02	1	1
Sample 9	0.72	1.75	3.41	0.03	13	0.014	0.01	0.02	2	2
Sample 10	0.80	1.12	2.66	<0.01	109	0.008	0.01	0.03	1	2
Sample 11	0.81	1.05	2.24	0.06	183	0.007	0.02	0.05	1	2
Sample 12	0.65	1.20	2.14	0.07	57	0.006	0.01	0.07	1	1
Sample 13	0.41	0.91	1.67	<0.01	125	0.004	0.01	0.09	1	2
Sample 14	0.38	1.94	2.16	0.07	60	0.012	0.06	0.01	3	15
Sample 15	0.38	4.32	5.50	0.09	27	0.005	0.01	0.01	1	4
Sample 16	0.02	2.71	0.90	0.18	173	0.002	0.01	0.01	7	34
Sample 17	0.69	3.02	3.74	0.05	413	0.010	0.08	0.01	1	11
Sample 18	0.42	4.10	6.57	0.11	357	0.003	0.03	0.01	1	7
Sample 19	0.42	1.99	3.47	0.11	37	0.001	0.01	0.04	<1	1
Sample 20	0.89	1.73	1.51	0.09	23	0.033	0.49	0.01	4	55
Sample 21	0.81	2.40	2.12	0.09	27	0.028	0.42	0.02	3	52
Sample 22	0.32	0.95	1.39	0.09	94	0.022	0.11	0.01	7	35
Sample 23	1.36	2.06	2.75	0.08	110	0.065	1.03	0.01	5	76
Sample 24	0.45	2.27	3.39	0.03	65	0.005	0.01	0.04	1	2
Sample 25	0.57	2.97	3.32	0.07	138	0.010	0.01	0.03	2	3
Sample 26	0.40	6.05	7.39	0.07	309	0.010	0.10	0.04	3	24
Sample 27	0.41	2.22	1.71	0.15	232	0.007	0.05	0.06	2	11
Sample 28	0.39	4.61	6.94	0.12	86	0.005	0.01	0.02	1	2
Sample 29	0.26	2.55	3.02	0.13	14	0.004	0.01	0.01	2	3
Sample 30	0.19	1.43	1.70	0.08	128	0.012	0.03	0.01	6	17

Source: GT-K2987, 2011

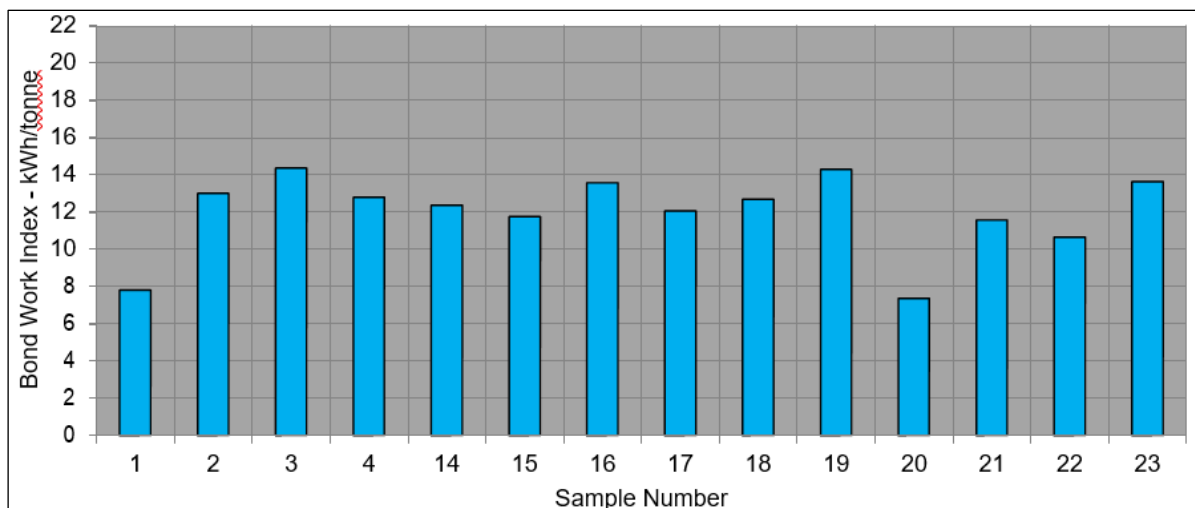
13.2.2 Comminution Test Work

Bond ball work index (BWi) tests were conducted on 14 of the samples using a 106 µm closing screen size. The test results are summarized in Table 13-7 and shown graphically in Figure 13-4. BWIs ranged from 7.4 to 14.3 kWh/t and averaged 12.01 kWh/t and the frequency at the 75th percentile was determined at 13.6 kWh/t. These test results indicate that the Altar samples can be classified as medium hard with respect to ball mill grinding.

Table 13-7: BWi Determination on Selected Variability Samples

Sample	BW _i (kWh/t)
1	7.8
2	13.0
3	14.4
4	12.8
14	12.4
15	11.8
16	13.6
16	12.1
18	12.7
19	14.3
20	7.4
21	11.6
22	10.7
23	13.6
Average	12.0
75 Percentile	13.6

Source: GT KM 2987, 2011

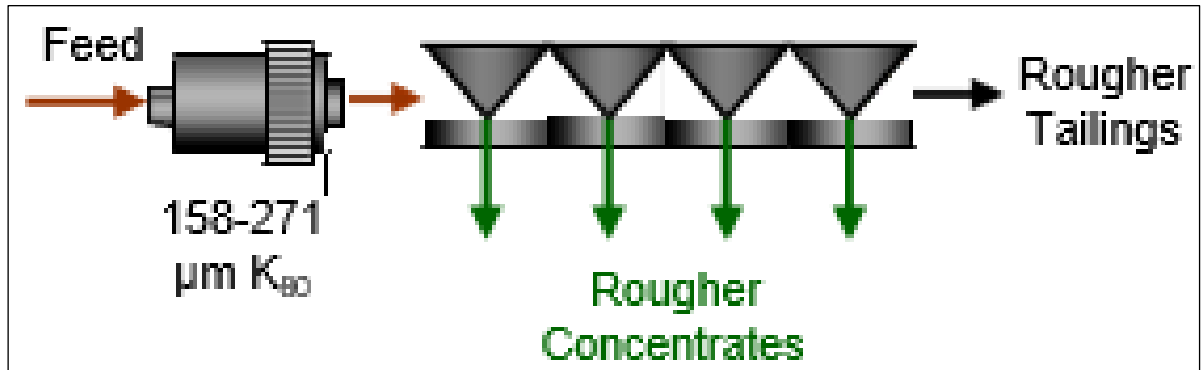


Source: GT-K2987, 2011

Figure 13-4: BWi Determinations on Selected Variability Samples

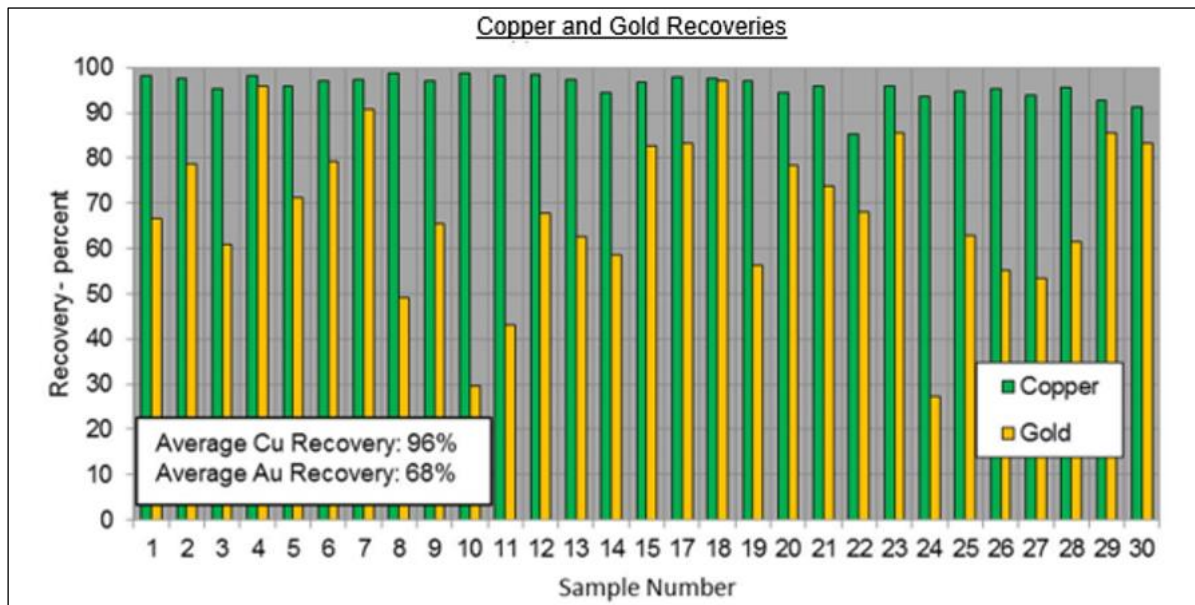
13.2.3 Rougher Flotation

A single kinetic rougher flotation test was conducted on each of the variability samples. A primary grind size of P80 190 µm was targeted for all tests and rougher flotation was conducted at pH 10 with potassium amyl xanthate (PAX) as the collector and methyl isobutyl carbonyl (MIBC) as the frother. The rougher flotation flowsheet used for all rougher flotation tests is shown in Figure 13-5 and the test results are shown graphically in Figure 13-6. On average, 96% of the contained copper was recovered into the rougher flotation concentrate containing 11 wt% of the feed. Gold recovery to the rougher concentrate was variable, ranging from about 27 to 97% and averaging about 68%.



Source: GT-K2987, 2011

Figure 13-5: Rougher Flotation Flowsheet



Source: GT-K2987, 2011

Figure 13-6: Altar Copper and Gold Rougher Flotation Recovery

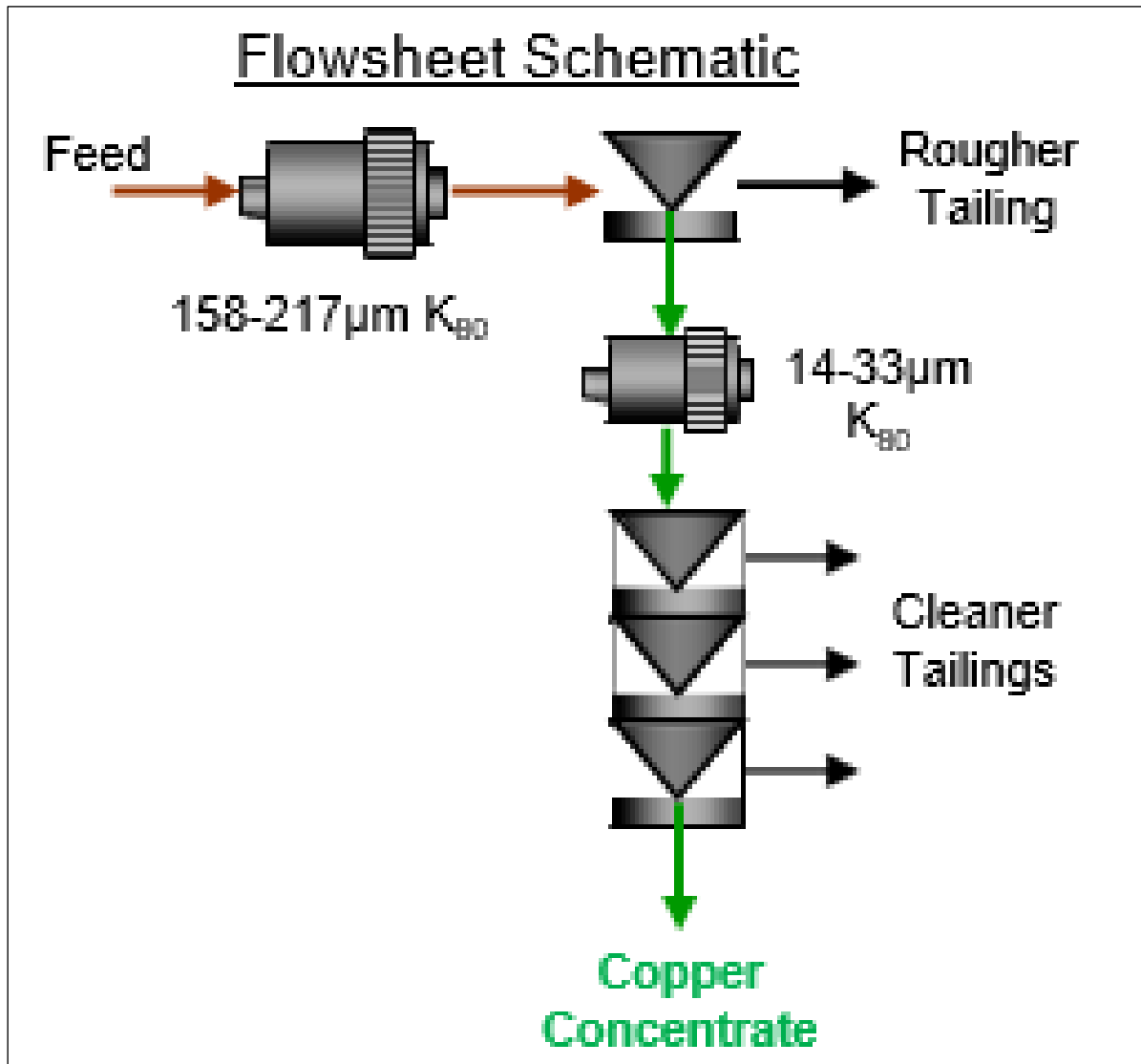
13.2.4 Cleaner Flotation

A cleaner flotation test was conducted on each of the variability samples and included a target primary grind of P80 190 μm and the same rougher flotation conditions that had been established previously. The resulting rougher flotation concentrates were reground for 8 minutes, resulting in concentrate regrind sizes ranging from P80 14 to 33 μm . The cleaner flotation test flowsheet is shown in Figure 13-7 and the test results are shown graphically in Figure 13-8. The following key observations can be made:

- Copper recovery into the cleaner flotation concentrate ranged from 70 - 93% and averaged 85%. Concentrate grades ranged from about 20 – 52% Cu and averaged 32% Cu. The high cleaner flotation concentrate grades reported for some of the test samples are attributed to

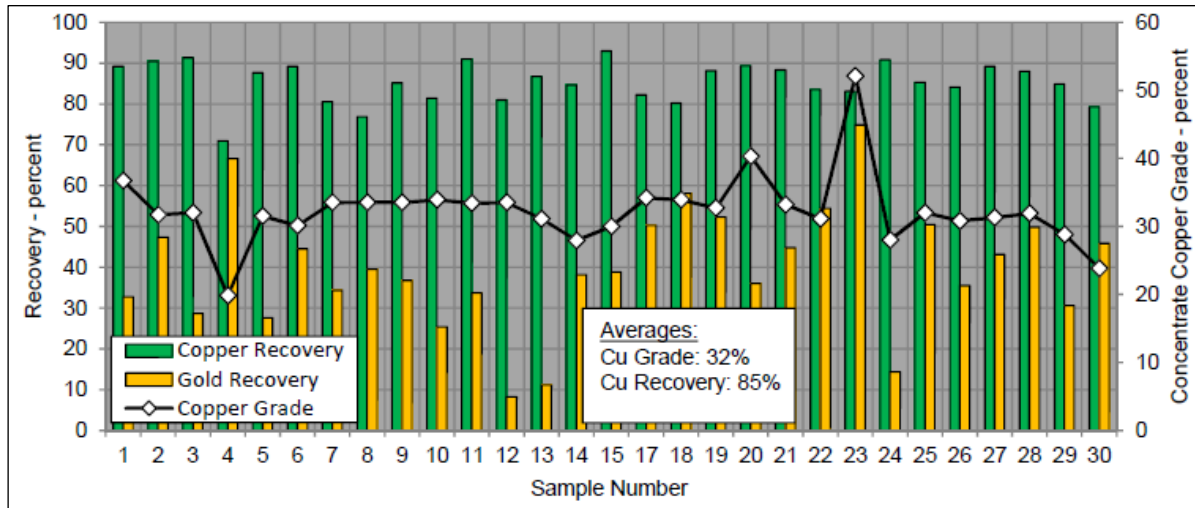
the presence of secondary sulphide copper minerals such as chalcocite, covellite and bornite, which contain higher copper percentages in their mineral structure.

- Gold recovery into the final flotation concentrate ranged from about 8 – 73% and averaged about 40%.
- Although somewhat variable, the arsenic grade in the final concentrate was related to the arsenic content of the flotation feed. About 50% of the test samples resulted in flotation concentrates that would receive an arsenic penalty at the smelter. Table 13-8 provides a tabulation of arsenic in the feed and resulting arsenic content in the final flotation concentrate.



Source: GT-K2987, 2011

Figure 13-7: Altar Cleaner Flotation Test Flowsheet



Source: GT-K2987, 2011

Figure 13-8: Altar Cleaner Flotation Copper and Gold Recovery

Table 13-8: Arsenic in the Feed Versus Arsenic in the Flotation Concentrate

Sample	Arsenic in Feed Vs. Concentrate		
	Cu Feed (%)	Feed As (ppm)	Conc As (%)
Sample 1	0.62	217	0.80
Sample 2	0.49	93	0.20
Sample 3	0.54	13	0.07
Sample 4	1.02	446	3.74
Sample 5	0.66	25	0.04
Sample 6	0.67	14	0.004
Sample 7	0.83	10	0.001
Sample 8	1.23	9	<0.001
Sample 9	0.72	13	0.004
Sample 10	0.80	109	0.04
Sample 11	0.81	183	0.39
Sample 12	0.65	57	0.08
Sample 13	0.41	125	0.41
Sample 14	0.38	60	0.50
Sample 15	0.38	27	0.16
Sample 16	0.02	173	na
Sample 17	0.69	413	1.85
Sample 18	0.42	357	1.88
Sample 19	0.42	37	0.09
Sample 20	0.89	23	0.09
Sample 21	0.81	27	0.09
Sample 22	0.32	94	0.58
Sample 23	1.36	110	0.98
Sample 24	0.45	65	0.14
Sample 25	0.57	138	0.33
Sample 26	0.40	309	1.85
Sample 27	0.41	232	0.97
Sample 28	0.39	86	0.35
Sample 29	0.26	14	0.08
Sample 30	0.19	128	1.56

Source: GT-K2987, 2011

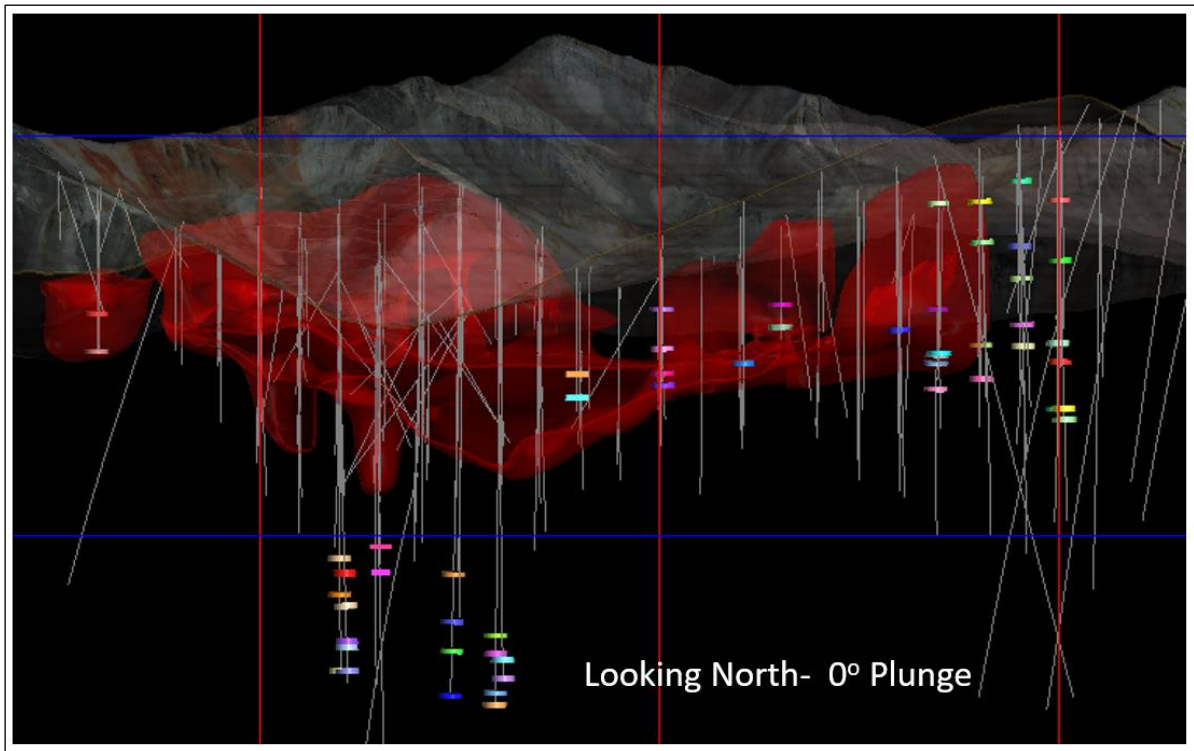
13.3 G & T Metallurgical Services, KM3443, 2012 - 2013

G & T Metallurgical Services conducted a metallurgical program during 2012 -2013 on 53 variability samples from the Altar Central and Altar East deposit. The scope of work for the metallurgical program included:

- Head analyses on each of the 53 variability samples.
- Mineralogical analyses using the QEMSCAN Bulk Mineral Analysis with Liberation (BMAL) technique.
- Bond ball mill work index (BWi) testing on each of the samples.
- Open circuit rougher and cleaner flotation test work.

13.3.1 Variability Sample Locations

The 53 test samples were formulated from selected drill core and intervals. The drill hole and intervals used to formulate each test sample is shown in Figure 13-9 and in Figure 13-10. Test Samples 1–33 are from Altar East and test samples 34 -53 are from Altar Central



Source: Aldebaran Resources, 2025

Figure 13-9: Drill Holes and Intervals Used for Altar Central and Altar East Variability Samples

Sample	Hole	From Interval (m)	To Interval (m)	Interval Samples Included
Met 1	159	60899	60906	7
Met 2	150	55313	55321	7
Met 3	151	60070	60077	7
Met 4	151	60163	60171	7
Met 5	151	60182	60190	8
Met 6	152	60387	60393	7
Met 7	152	60422	60429	8
Met 8	153	55426	55434	9
Met 9	153	55543	55550	7
Met 10	155	60659	60666	8
Met 11	159	60819	60826	7
Met 12	159	60887	60894	8
Met 13	159	60937	60944	8
Met 14	160	51745	51752	7
Met 15	160	51800	51806	7
Met 16	161	55794	55802	8
Met 17	161	55894	55902	8
Met 18	162	61162	61169	7
Met 19	165	52334	52342	8
Met 20	165	52383	52390	8
Met 21	169	56101	56109	8
Met 22	170	61802	61809	7
Met 23	170	61835	61842	8
Met 24	173	56719	56728	8
Met 25	173	56817	56823	7
Met 26	174	53065	53072	8
Met 27	174	53125	53131	7
Met 28	175	62133	62140	7
Met 29	176	62436	62444	8
Met 30	175	62352	62359	7
Met 31	176	62524	62531	7
Met 32	176	62741	62749	8
Met 33	176	62758	62766	8
Met 34	ALD 019	65154	65164	11
Met 35	ALD 019	65203	65211	9
Met 36	ALD 019	65254	65262	8
Met 37	ALD 019	65263	65272	9
Met 38	ALD 019	65299	65306	7
Met 39	ALD 049	65320	65327	7
Met 40	ALD 049	65375	65383	8

Sample	Hole	From Interval (m)	To Interval (m)	Interval Samples Included
Met 41	ALD 049	65485	65493	8
Met 42	ALD 055	65776	65783	7
Met 43	ALD 055	65846	65853	7
Met 44	ALD 055	65889	65895	7
Met 45	ALD 055	65954	65961	8
Met 46	ALD 067	65962	65969	7
Met 47	ALD 067	66047	66053	7
Met 48	ALD 067	66106	66113	8
Met 49	ALD 068	65667	65673	7
Met 50	ALD 068	65751	65758	8
Met 51	ALD 068	65768	65775	8
Met 52	ALD 079	65631	65638	7
Met 53	ALD 079	65659	65666	7

Source: G&T – KM3443, 2012 - 2013

Figure 13-10: Drill Holes and Intervals Used for Variability Test Samples

13.3.2 Head Analyses

Chemical Analyses conducted on each of the variability test samples are shown in Figure 13-11. Copper grades ranged from 0.15 - 1.04% CuT and cyanide soluble copper (CuCN) ranged from 0.005 – 0.82% CuCN and oxide copper ranged from 0.002 – 0.060% CuOx. The CuCN assay is a qualitative indicator of secondary sulphide copper mineralization and CuOX is an indicator of oxide copper mineralization. Arsenic ranges from 0.001 – 0.09% As (10 – 900 ppm), indicating the potential for significant arsenic penalties at the smelter.

Sample	Assays - percent or g/tonne								
	Cu	CuOx	Fe	S	Ag	Au	As	Mo	CuCN
Met 01	0.56	0.023	3.56	5.11	2	0.08	0.16	0.001	0.41
Met 02	0.74	0.020	3.23	4.93	3	0.38	0.018	0.002	0.27
Met 03	0.27	0.008	2.06	1.39	2	0.09	0.015	0.004	0.046
Met 04	0.53	0.030	0.97	0.79	1	0.11	0.010	0.002	0.39
Met 05	0.72	0.042	1.26	0.71	1	0.07	0.008	0.003	0.53
Met 06	0.34	0.026	1.17	1.08	1	0.03	0.012	0.001	0.25
Met 07	0.26	0.025	1.26	1.47	1	0.05	0.057	0.001	0.13
Met 08	0.50	0.008	2.44	4.25	1	0.23	0.017	0.002	0.045
Met 09	0.60	0.019	3.33	5.58	3	0.28	0.028	0.002	0.25
Met 10	0.27	0.004	2.46	3.04	1	0.06	0.002	0.002	0.020
Met 11	0.77	0.050	3.07	3.21	1	0.09	0.025	0.003	0.59
Met 12	0.54	0.035	3.65	4.15	1	0.11	0.030	0.001	0.33
Met 13	0.58	0.033	4.03	7.12	2	0.11	0.090	0.001	0.49
Met 14	1.04	0.060	2.01	0.62	3	0.22	0.005	0.001	0.82
Met 15	0.41	0.023	2.39	1.29	1	0.11	0.001	0.001	0.15
Met 16	0.52	0.018	3.32	5.30	2	0.16	0.038	0.003	0.27
Met 17	0.58	0.008	3.44	4.80	2	0.36	0.001	0.001	0.022
Met 18	0.18	0.009	1.03	0.64	1	0.03	0.000	0.005	0.11
Met 19	0.17	0.002	4.73	6.08	1	0.06	0.003	0.006	0.007
Met 20	0.16	0.004	2.73	3.11	1	0.04	0.006	0.002	0.10
Met 21	0.18	0.003	1.94	5.34	1	0.11	0.029	0.001	0.071
Met 22	0.39	0.004	2.89	5.44	<1	0.08	0.006	0.003	0.012
Met 23	0.22	0.003	3.05	5.02	<1	0.10	0.002	0.002	0.010
Met 24	0.80	0.009	2.82	3.35	1	0.52	0.001	0.002	0.020
Met 25	0.98	0.027	2.94	4.46	4	0.47	0.007	0.001	0.60
Met 26	0.19	0.003	2.45	5.39	1	0.04	0.002	0.001	0.008
Met 27	0.31	0.006	2.65	3.33	<1	0.09	0.063	0.002	0.13
Met 28	0.17	0.002	1.90	3.17	<1	0.04	0.004	0.008	0.005
Met 29	0.25	0.004	2.17	2.95	1	0.12	0.002	0.002	0.005
Met 30	0.15	0.002	1.94	2.55	1	0.04	0.005	0.001	0.010
Met 31	0.53	0.009	2.42	3.61	2	0.39	0.023	0.001	0.054
Met 32	1.06	0.035	3.66	5.54	6	0.60	0.057	0.001	0.64
Met 33	1.00	0.021	3.10	4.46	7	1.03	0.004	0.001	0.34
Met 34	0.28	0.006	3.38	4.65	5	0.05	0.016	0.001	0.027
Met 35	0.44	0.007	2.71	4.00	2	0.03	0.003	0.001	0.013
Met 36	1.16	0.012	2.15	3.12	2	0.02	0.005	0.002	0.030
Met 37	0.69	0.007	1.50	2.70	6	0.05	0.12	0.004	0.086
Met 38	0.75	0.008	1.05	2.32	1	0.01	0.004	0.009	0.036
Met 39	0.45	0.007	2.82	4.26	1	0.05	0.001	0.001	0.021
Met 40	0.73	0.008	3.77	5.34	2	0.06	0.042	0.004	0.054

Sample	Assays - percent or g/tonne								
	Cu	CuOx	Fe	S	Ag	Au	As	Mo	CuCN
Met 41	0.45	0.006	2.49	3.43	2	0.02	0.011	0.007	0.032
Met 42	0.47	0.006	2.78	3.51	3	0.04	0.025	0.005	0.038
Met 43	0.72	0.008	2.92	3.72	3	0.04	0.056	0.029	0.057
Met 44	0.70	0.008	1.63	2.38	2	0.04	0.001	0.016	0.024
Met 45	0.39	0.007	2.26	2.08	1	0.02	0.003	0.012	0.018
Met 46	0.21	0.004	4.59	7.20	1	0.02	0.008	0.003	0.017
Met 47	0.26	0.006	4.04	5.05	<1	0.01997	0.008	0.003	0.010
Met 48	0.19	0.003	2.43	3.46	2	0.00997	0.021	0.006	0.023
Met 49	0.47	0.006	1.60	2.34	2	0.03	0.007	0.010	0.031
Met 50	0.14	0.003	0.84	1.36	1	0.01002	0.022	0.015	0.021
Met 51	0.17	0.003	1.07	1.48	1	0.01	0.014	0.008	0.018
Met 52	0.57	0.010	2.12	2.40	2	0.04995	0.007	0.007	0.031
Met 53	0.37	0.004	1.67	1.86	1	0.01995	0.016	0.009	0.017

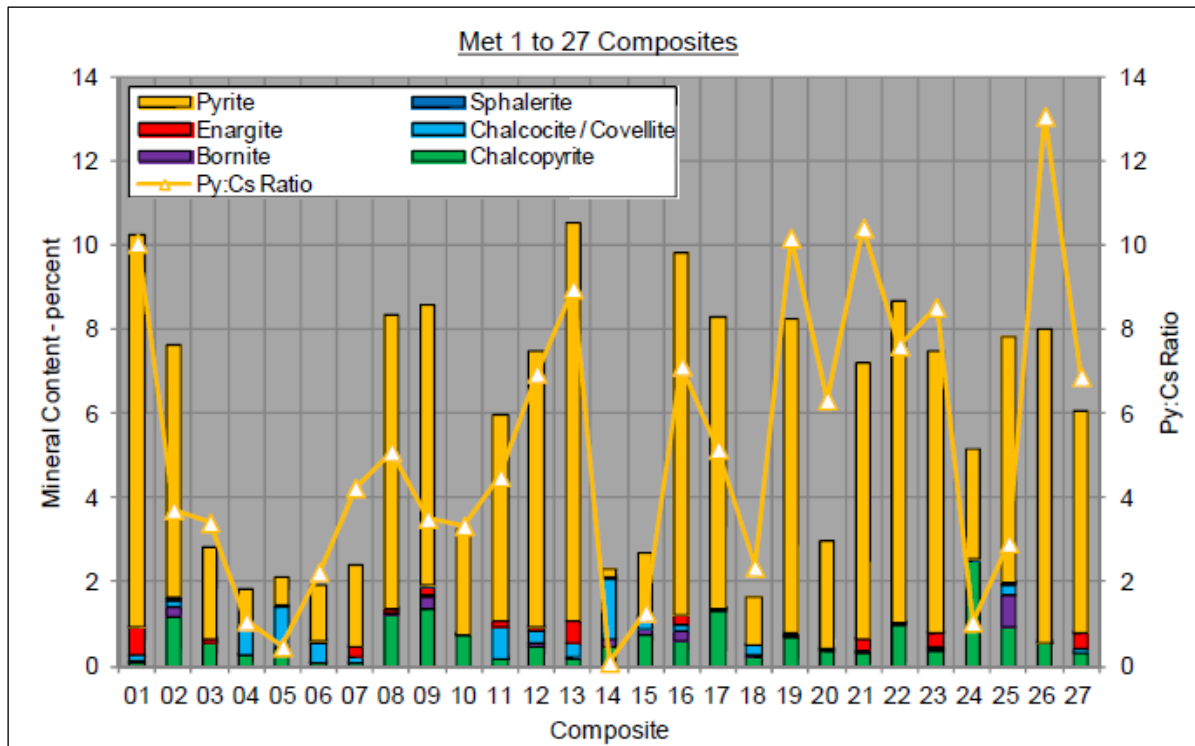
Source: G&T – KM3443, 2012 – 2013

Figure 13-11: Head Analyses of the Variability Test Samples

13.3.3 Mineralogy

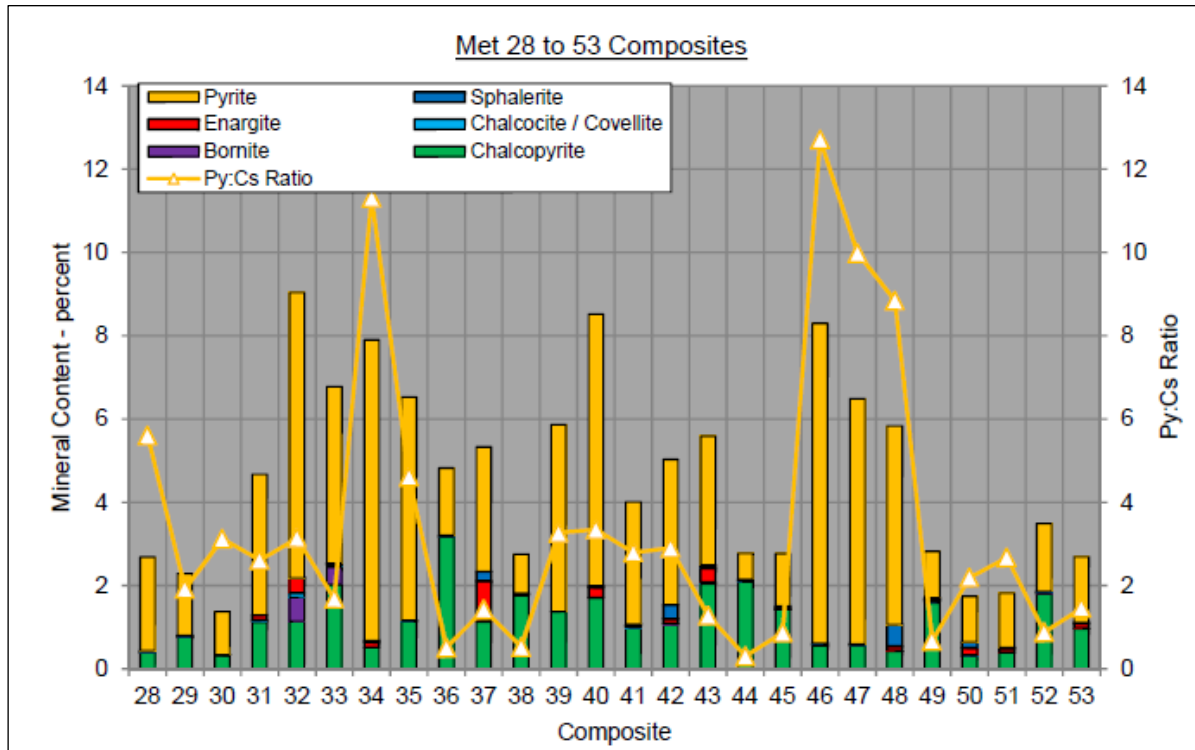
The mineral content, along with preliminary estimates of mineral liberation, were determined using the QEMSCAN BMAL technique on unsized samples. The data are summarized in Figure 13-12 and Figure 13-13, and key observations include:

- The samples contained, on average, about 5.3% sulphides. Pyrite was the dominant sulphide mineral in all the composites, ranging from 0.7% to 9.5%. The average pyrite to copper sulphide ratio was about 4.4:1. This high ratio may require a selective flotation process to produce high grade copper concentrates.
- Copper minerals, in relative order of abundance, include chalcopyrite, enargite, chalcocite, bornite and covellite. Chalcopyrite content averaged 0.90%, compared to the combined average of all other sulphides of 0.32%.
- Some samples contained high levels of enargite, a copper-arsenic sulphide. Average content of enargite was 0.12 %. Samples containing elevated levels of enargite will likely have high levels of arsenic in the copper concentrate.



Source: G&T – KM3443, 2012 - 2013

Figure 13-12: Sulphide Mineral Content in Altar Test composites



Source: G&T – KM3443, 2012 - 2013

Figure 13-13: Sulphide Mineral Content in Altar Test composites

13.3.4 Comminution

Bond ball mill work index (BWi) determinations were conducted on each of the Altar variability samples using a 106-µm closing screen size. The results of these tests are summarized in Figure 13-14 where BWi determinations for samples from both Altar Central and Altar East are provided. BWIs for the Altar Central samples ranged from 10.6 – 18.7 kWh/t and averaged 14.6 kWh/t. BWIs for the Altar East samples ranged from 12.3 – 20.4 kWh/t and averaged 16.3 kWh/t. On average, the samples from Altar East demonstrate a higher resistance to ball mill grinding than the samples from Altar Central. Generally, the Altar samples can be classified as moderately hard.

		BWi			BWi
Sample	Location	kWh/t	Sample	Location	kWh/t
1	Altar East	15.2	34	Altar Central	14.1
2	Altar East	17.2	35	Altar Central	14.2
3	Altar East	12.9	36	Altar Central	14.5
4	Altar East	15.3	37	Altar Central	15.3
5	Altar East	15.3	38	Altar Central	14.6
6	Altar East	13.2	39	Altar Central	14.0
7	Altar East	17.9	40	Altar Central	15.9
8	Altar East	18.3	41	Altar Central	12.8
9	Altar East	15.8	42	Altar Central	17.7
10	Altar East	17.5	43	Altar Central	13.7
11	Altar East	16.7	44	Altar Central	13.8
12	Altar East	16.4	45	Altar Central	10.6
13	Altar East	13.5	46	Altar Central	15.3
14	Altar East	12.3	47	Altar Central	18.9
15	Altar East	13.0	48	Altar Central	18.7
16	Altar East	16.3	49	Altar Central	14.7
17	Altar East	17.6	50	Altar Central	11.7
18	Altar East	16.2	51	Altar Central	12.0
19	Altar East	16.9	52	Altar Central	13.9
20	Altar East	16.9	53	Altar Central	16.4
21	Altar East	16.4			
22	Altar East	17.0			
23	Altar East	16.6			
24	Altar East	17.0			
25	Altar East	16.9			
26	Altar East	20.0			
27	Altar East	12.8			
28	Altar East	19.0			
29	Altar East	18.7			
30	Altar East	20.4			
31	Altar East	17.2			
32	Altar East	14.7			
33	Altar East	15.6			
Average		16.3			14.6
75th Percentile		17.4			15.8

Source: G&T – KM3443, 2012 - 2013

Figure 13-14: Bond Ball Mill Work Indices for Altar Central and Altar East

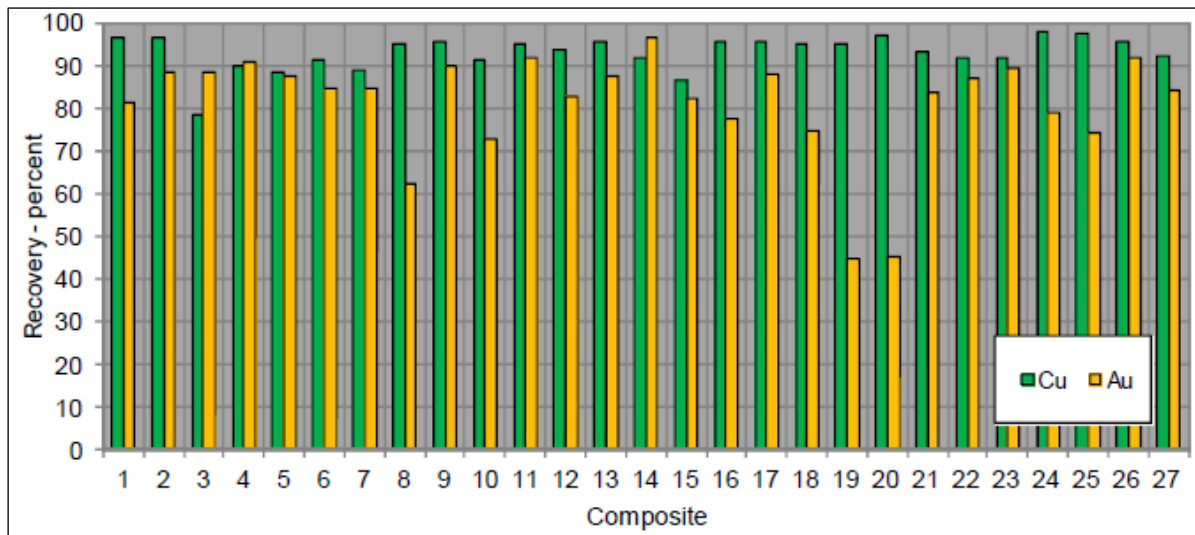
13.3.5 Rougher Flotation

Rougher flotation tests were conducted on the Altar variability samples at a nominal primary nominal grind of P80 190 μ m and a standardized reagent scheme that included:

- Slurry pH: 10
- Collector: Potassium amyl xanthate (PAX)
- Frother: Methyl isobutyl carbinol (MIBC)

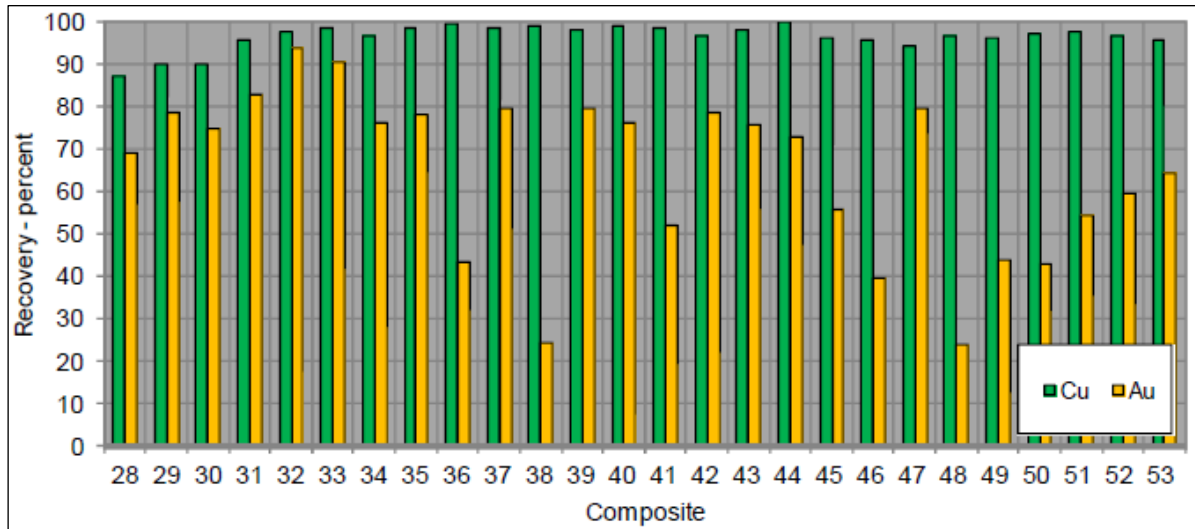
Rougher flotation copper and gold recovery for each test are shown graphically in Figure 13-15 and Figure 13-16. The following key observations can be made regarding these rougher flotation tests:

- About 95% of the copper in the flotation feed was recovered into a rougher flotation concentrate containing about 14 wt% of the feed.
- Gold recovery into the rougher flotation concentrate ranged from 24 – 97 % and averaged 73%.



Source: G&T KM3443, 2012

Figure 13-15: Copper and Gold Rougher Flotation Recovery (1 of 2)



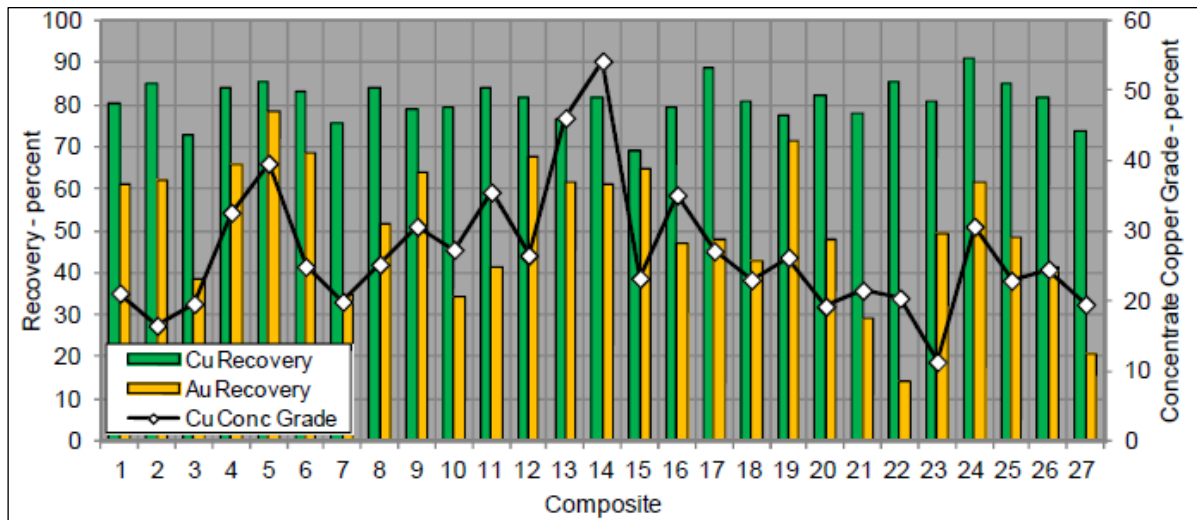
Source: G&T KM3443, 2012

Figure 13-16: Copper and Gold Rougher Flotation Recovery (2 of 2)

13.3.6 Cleaner Flotation

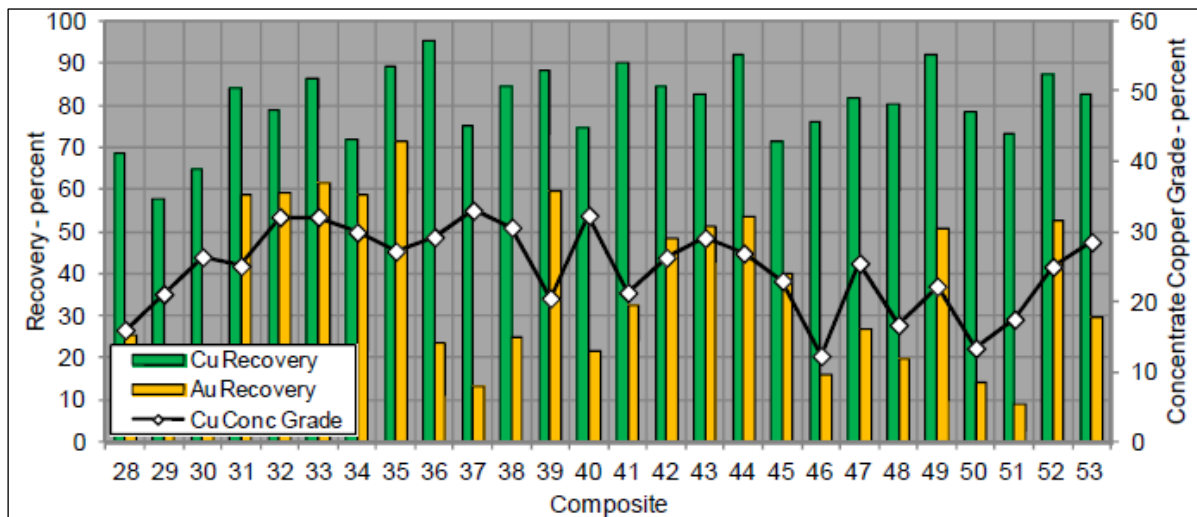
Cleaner flotation tests were conducted on the Altar variability samples. Similar to the rougher tests, the cleaner tests were completed using a nominal primary grind size of P80 190 µm and the same reagent conditions as the rougher flotation tests. The rougher concentrate was reground in a bench-scale stirred regrind mill for 8 minutes, resulting in concentrate regrind sizes that ranged from P80 13 µm to 31 µm. The results of the cleaner flotation tests are shown graphically in Figure 13-17 and Figure 13-18. Key observations include:

- Copper recovery ranged from 58 - 95% and averaged about 81% into cleaner flotation concentrates that averaged about 26% Cu.
- Gold recovery averaged about 44% into cleaner flotation concentrates that averaged 3.6 g/t Au.
- Arsenic in the final concentrates ranged from 0.10 – 7.03% As and average 1.18% As. Arsenic grade in the flotation concentrate was directly related to the arsenic grade in the test sample.
- Arsenic in the copper concentrates will incur significant smelter penalties.



Source: G&T KM3443, 2012

Figure 13-17: Copper and Gold Cleaner Flotation Recovery and Concentrate Grade (1 of 2)



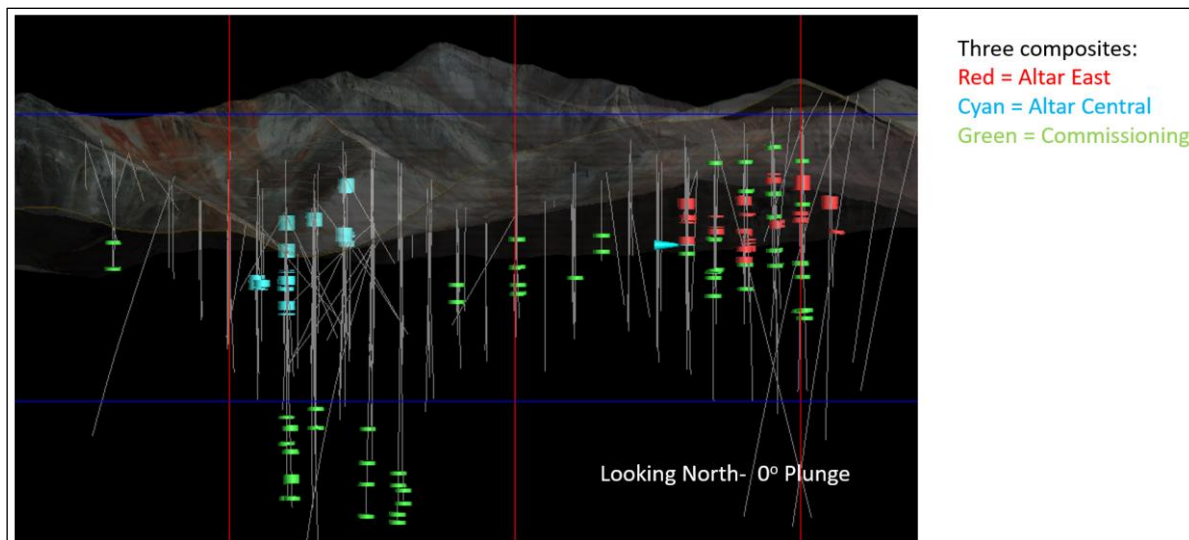
Source: G&T KM3443, 2012

Figure 13-18: Copper and Gold Cleaner Flotation Recovery and Concentrate Grade (2 of 2)

13.4 Pilot Plant Campaign – ALS Metallurgy, 2014

A pilot plant campaign was conducted on bulk test composites from Altar Central and Altar East by ALS Metallurgical Services (ALS) in 2014. Each test composite consisted of about 1.5 tonnes of selected -6 mesh drill core intervals. Drill holes and intervals used to prepare each test composite are shown in Figure 13-19. The Altar Central composite was represented by 11 separate drill holes and the Altar East composite was represented by 13 separate drill holes. The metallurgical program included initial locked cycle flotation testing to confirm pilot plant test conditions followed by pilot plant testing of both Altar Central and Altar East bulk composites. The results of this program are fully

documented in ALS’s report “Pilot Plant Test Work – Altar Project, Stillwater Mining Company, KM4073”, February 17, 2014.



Source: Aldebaran Resources, 2025

Figure 13-19: Drill Holes and Intervals Used to Prepare Altar Central and Altar East Pilot Plant Composites

13.4.1 Test Composited Head Analyses

Head analyses for each of the test composites are shown in Table 13-9. The Altar Central composite contained 0.38% Cu and 0.04 g/t Au. The Altar East composite contained 0.29% Cu and 0.12 g/t Au. About 3-5% of the copper occurred as oxide mineralization that would likely not be recoverable by flotation. Arsenic in the composites ranged from 0.021 - 0.047% As.

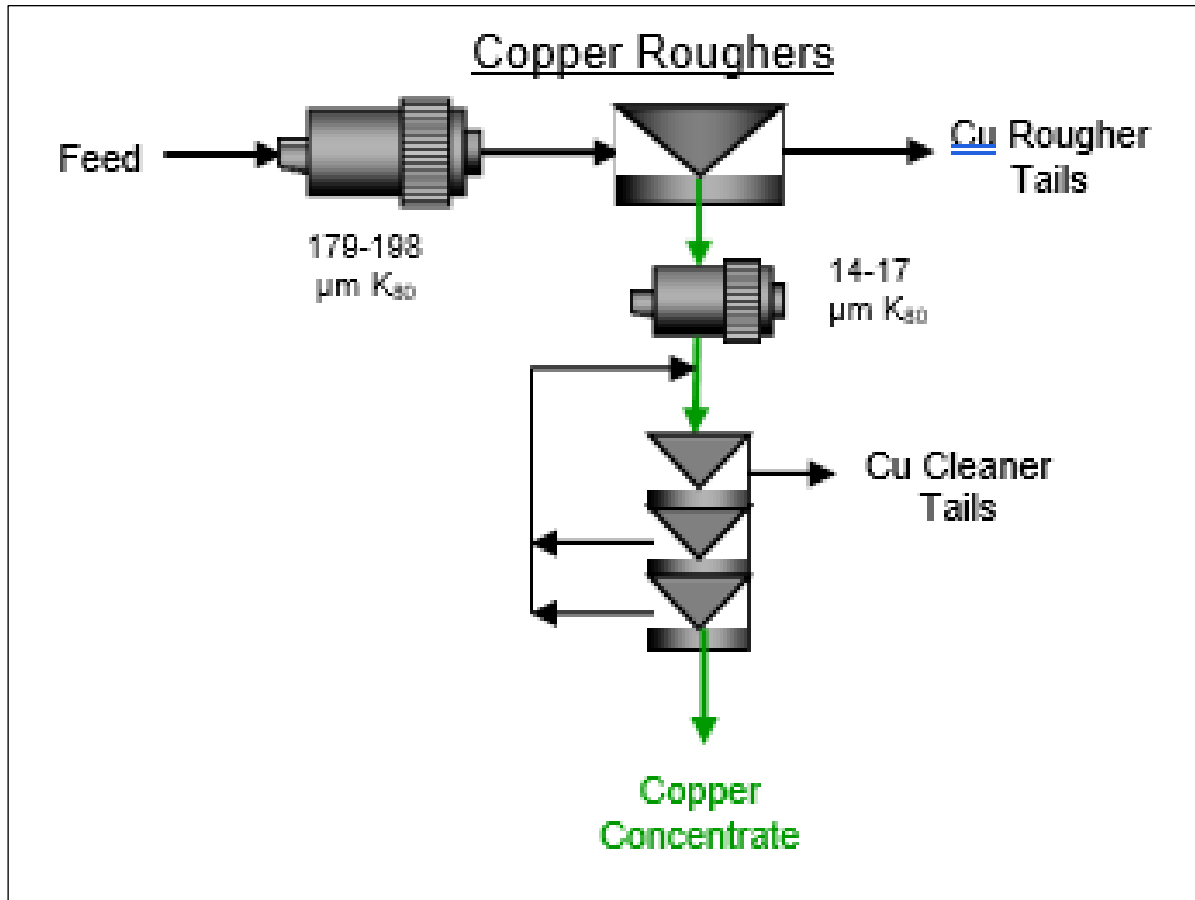
Table 13-9: Test Composite Head Analyses

Composite	Assay - Percent or g/tonne						
	Cu	CuOx	Fe	S	Au	Ag	As
Altar Central	0.38	0.018	2.9	3.76	0.04	<1	0.047
Altar East	0.29	0.010	3.1	4.81	0.12	2	0.021

Source: ALS KM4073, 2014

13.4.2 Locked-Cycle Flotation Test Work

Locked cycle flotation tests were conducted on each of the test composites using the flowsheet shown in Figure 13-20 to confirm metallurgical response using process conditions that had been established during earlier metallurgical investigations. The results of these locked-cycle tests are summarized in Figure 13-21. The Locked-cycle test on the Altar Central composite resulted in 85.6% copper recovery and 58.2% gold recovery into a final copper concentrate containing 32.4% Cu and 4.3 g/t Au. The final copper concentrate also contained 3.9% As, which will be heavily penalized at the smelter. The Locked-cycle test on the Altar East composite resulted in 82.7% copper recovery and 48.2% gold recovery into a final copper concentrate containing 27.2% Cu and 5.9 g/t Au. The final copper concentrate also contained 1.4% As



Source: ALS KM4073, 2014

Figure 13-20: Locked-cycle Test Flowsheet

Composite	Grind (P80 μm)		Feed Grade				CI Conc Grade		Recovery %	
	Rougher	Cleaner	Cu %	Cuox %	Cusul %	Au g/t	Cu%	Au g/t	Cu	Au
Altar Central	198	18	0.40	0.018	0.382	0.08	32.4	4.34	85.6	58.2
Altar East	180	17	0.30	0.010	0.290	0.11	27.2	5.91	82.7	48.2

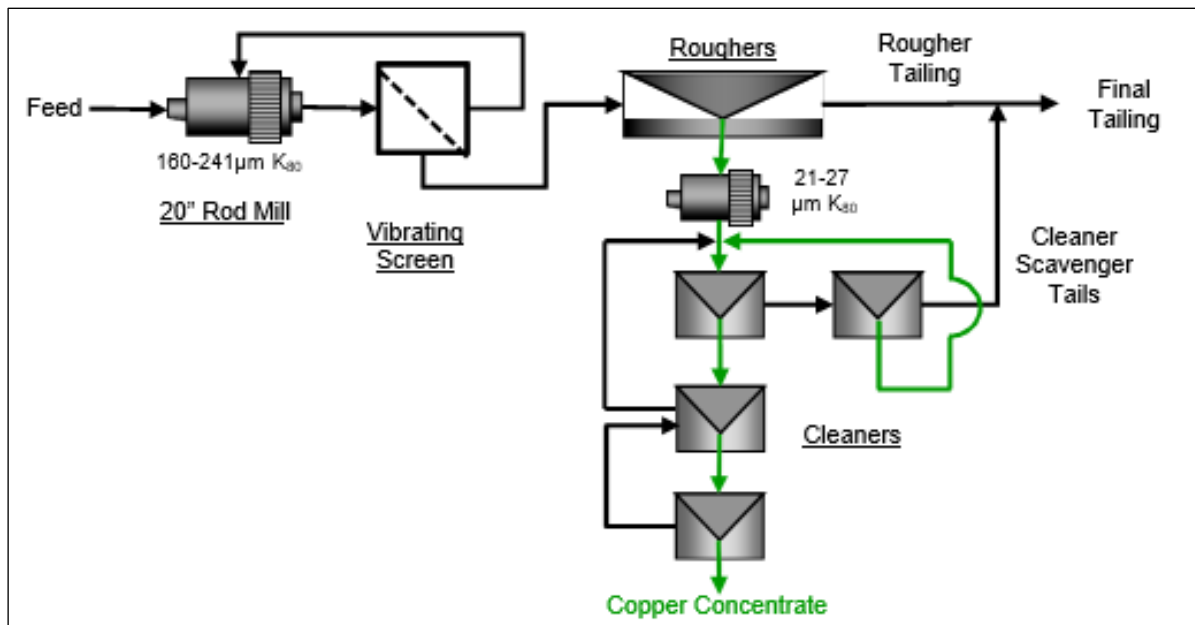
Source: ALS KM4073, 2014

Figure 13-21: Summary of Locked Cycle Tests on Altar Central and Altar East Pilot Plant Test Composites

13.4.3 Pilot Plant Campaign Test Results

The pilot plant campaign was conducted on Altar Central and Altar East test composites using the flowsheet shown in Figure 13-22 and the results of relevant pilot plant runs on both composites are summarized in Figure 13-23. During four pilot plant runs on the Altar Central test composite, copper recovery averaged 85.0% and gold recovery averaged 58.1% into final copper concentrates that averaged 31.9% Cu and 3.59 g/t Au. During four pilot plant runs on the Altar East test composite, copper recovery averaged 82.1% and gold recovery averaged 55.3% into final copper concentrates

that averaged 26.4% Cu and 4.98 g/t Au. Pilot plant results were very similar to the results obtained from the confirmatory locked-cycle test work.



Source: ALS KM4073, 2014

Figure 13-22: Pilot Plant Flowsheet

Pilot Plant Run	Composite	Grind (P80 µm)		Feed Grade				Cl Conc Grade		Recovery %	
		Rougher	Cleaner	Cu %	Cuox %	Cusul %	Au g/t	Cu%	Au g/t	Cu	Au
Central P-3 a	Alter Central	198	18	0.39	0.018	0.37	0.06	32.0	3.24	86.2	52.5
Central P-3 b	Alter Central	198	18	0.39	0.018	0.37	0.07	31.7	4.49	84.4	70.6
Central P-4 a	Alter Central	198	18	0.40	0.018	0.38	0.07	30.8	3.24	84.7	54.7
Central P-4 b	Alter Central	198	18	0.41	0.018	0.39	0.06	33.0	3.38	84.7	54.4
Average	Alter Central	198	18	0.40	0.018	0.38	0.07	31.9	3.59	85.0	58.1
East P-5 a	Alter East	214	25	0.30	0.010	0.29	0.08	24.8	5.51	82.4	67.6
East P-5 b	Alter East	214	25	0.29	0.010	0.28	0.10	26.4	4.80	82.4	59.0
East P-6 a	Alter East	202	22	0.30	0.010	0.29	0.09	27.7	4.90	81.6	48.9
East P-6 b	Alter East	202	22	0.31	0.010	0.30	0.10	26.8	4.70	81.8	45.6
Average	Alter East	208	24	0.30	0.010	0.29	0.09	26.4	4.98	82.1	55.3

Source: ALS KM4073, 2014

Figure 13-23: Summary of Relevant Pilot Plant Results

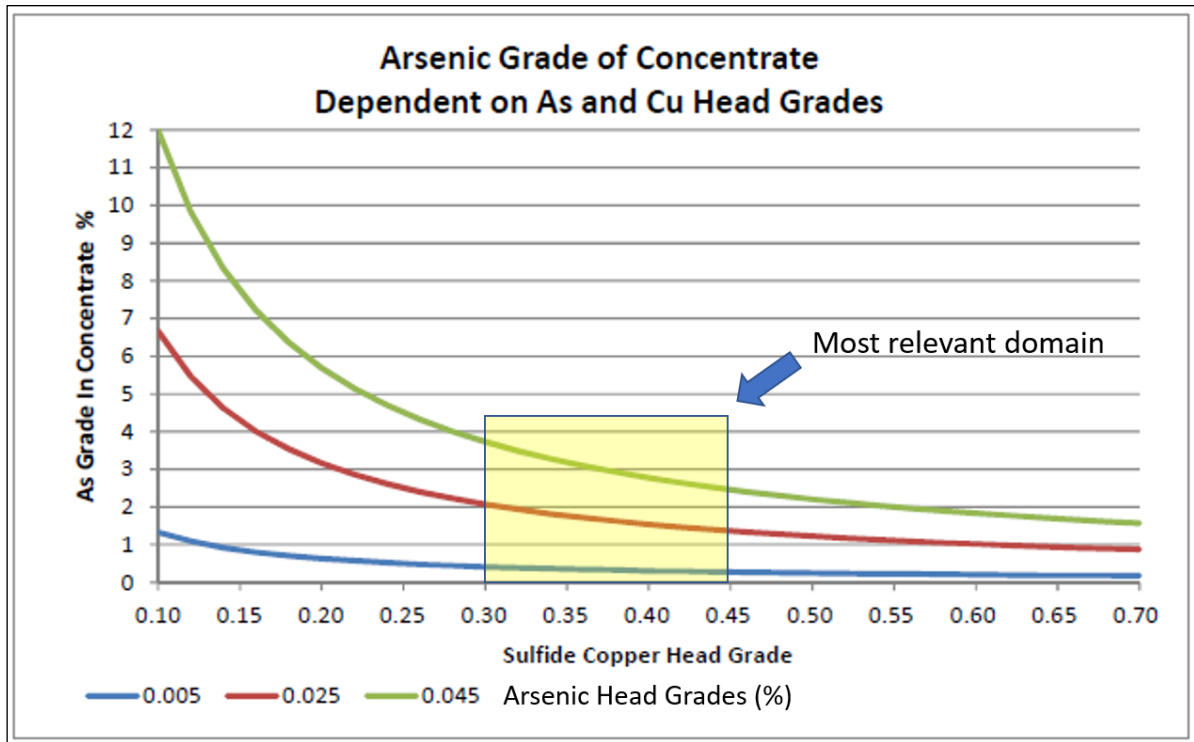
13.5 Concentrate Quality

A summary of the minor element content, together with primary elements for copper concentrates during the pilot plant campaign are shown in Figure 13-24. The copper concentrate produced from the Altar Central composite contained 3.76% arsenic and the concentrate produced from the Altar East composite contained 1.79% arsenic. These high levels of arsenic will attract smelting penalties or result in difficulties with concentrate sales. Figure 13-25 provides a graphical summary of Arsenic grade in the copper concentrate as a function of both the sulphide copper and arsenic feed grades.

Element	Symbol	Units	Central Copper Concentrate	East Copper Concentrate
Aluminum	Al	%	1.41	1.31
Antimony	Sb	%	0.16	0.07
Arsenic	As	%	3.76	1.79
Bismuth	Bi	g/t	70	48
Cadmium	Cd	g/t	18	17
Calcium	Ca	%	0.34	0.64
Carbon	C	%	0.38	0.13
Cobalt	Co	g/t	40	39
Copper	Cu	%	30.0	26.9
Fluorine	F	g/t	160	160
Gold	Au	g/t	4.6	4.6
Iron	Fe	%	21.3	24.5
Lead	Pb	g/t	408	956
Magnesium	Mg	%	0.06	0.09
Manganese	Mn	%	0.01	0.01
Mercury	Hg	g/t	8	9
Molybdenum	Mo	%	0.02	0.06
Nickel	Ni	g/t	180	72
Palladium	Pd	g/t	0.08	<0.01
Phosphorus	P	g/t	184	178
Platinum	Pt	g/t	0.12	0.03
Selenium	Se	g/t	106	63
Silicon	Si	%	2.99	2.74
Sulphur	S	%	32.1	33.3
Silver	Ag	g/t	70	62
Zinc	Zn	%	0.42	0.48

Source: ALS KM4073, 2014

Figure 13-24: Multi-Element Analyses of Pilot Plant Copper Concentrates



Source: Internal Aldebaran Metallurgical Summary Report

Figure 13-25: Arsenic in the Flotation Concentrate Versus Sulphide Copper and Arsenic Feed Grade

Aldebaran requested a study by CRU International (CRU) during 2025 to evaluate current arsenic penalties in copper concentrates. Based on CRU's study, the following arsenic penalties in Table 13-10 can be anticipated.

Table 13-10: Anticipated Arsenic Penalties

Arsenic Content (%)	Penalty (US\$/dmt)
0.5 to 1.0	20
1.0 to 1.5	45
1.5 to 2.0	60
>2.0	259

Source: CRU International, 2025

13.6 Recoverability

SRK developed a copper recovery model for processed material from Altar Central and Altar East by first performing regression analyses on the results from open cycle cleaner flotation tests conducted on 20 variability samples from Altar Central and 33 variability samples from Altar East. The results of these tests are summarized in Figure 13-26 and Figure 13-27 and the corresponding regression analyses are shown in Figure 13-28 and Figure 13-29. These results were then compared to locked-cycle and pilot plant test results that were conducted on test composites from Altar Central and Altar East which are summarized in Figure 13-30 and Figure 13-31. It was observed that that both the locked cycle and pilot plant test programs resulted in about 5% higher overall copper recovery than the open cycle cleaner flotation tests. The higher locked cycle and pilot plant copper recoveries are

attributed to the recycling of cleaner flotation tailings, which simulates actual performance in a commercial flotation concentrator. Based on this analysis, the following copper recovery equations were developed for material from Altar Central and Altar East:

$$\text{Altar Central Cu Recovery} = 13.382 \times \text{Cu\%} + 75.889 + 5$$

$$\text{Altar East Cu Recovery} = 11.686 \times \text{Cu\%} + 74.04 + 5$$

Gold recovery from both Altar Central and Altar East is estimated at 57% based on the locked cycle and pilot plant test results.

Sample	Pit	Grind (P80 µm)		Feed Grade					Cl Conc Grade			Recovery %			Open Circuit (1)		Closed Circuit (2)	
		Rougher	Cleaner	Cu %	Cuox %	Cusul %	Au g/t	As %	As ppm	Cu%	Au g/t	As%	Wt%	Cu	Au	As	Cu Recovery %	Cu Recovery %
34	Altar Central	207	18	0.28	0.009	0.271	0.07	0.016	160	29.9	6.12	1.28	0.79	71.6	58.8	63.4	79.6	84.6
35	Altar Central	193	20	0.46	0.007	0.453	0.03	0.003	30	27.2	1.33	0.16	1.47	89.0	71.3	78.5	82.0	87.0
36	Altar Central	208	15	1.25	0.010	1.240	0.03	0.005	50	29.2	0.17	0.10	4.18	95.2	23.5	93.6	92.6	97.6
37	Altar Central	177	16	0.68	0.010	0.680	0.04	0.120	1,200	33.0	0.31	4.94	1.88	75.0	13.1	77.6	85.1	90.1
38	Altar Central	182	14	0.83	0.010	0.820	0.01	0.004	40	30.6	0.15	0.12	2.50	84.4	24.9	74.9	87.0	92.0
39	Altar Central	185	19	0.48	0.007	0.473	0.03	0.001	10	20.5	0.97	0.01	2.04	88.3	59.8	20.4	82.3	87.3
40	Altar Central	181	19	0.75	0.014	0.736	0.06	0.042	420	32.3	0.70	0.58	2.11	74.4	21.7	29.2	85.9	90.9
41	Altar Central	172	24	0.46	0.006	0.454	0.02	0.011	110	21.3	0.35	0.44	1.88	90.3	32.6	75.2	82.0	87.0
42	Altar Central	189	13	0.48	0.010	0.470	0.04	0.025	250	26.3	1.10	1.30	1.59	84.7	48.1	82.9	82.3	87.3
43	Altar Central	174	19	0.75	0.010	0.740	0.03	0.056	560	29.1	0.83	1.72	2.34	82.5	51.2	72.0	85.9	90.9
44	Altar Central	190	18	0.74	0.006	0.734	0.04	0.001	10	26.9	0.77	0.02	2.50	91.9	53.6	50.0	85.8	90.8
45	Altar Central	177	14	0.38	0.008	0.372	0.03	0.003	30	23.0	0.90	0.18	1.42	71.6	39.9	85.2	81.0	86.0
46	Altar Central	137	22	0.20	0.007	0.193	0.02	0.008	80	12.3	0.30	0.49	1.36	75.8	16.2	83.2	78.6	83.6
47	Altar Central	170	20	0.25	0.006	0.244	0.03	0.008	80	25.5	0.94	0.61	0.83	81.5	27.0	63.0	79.2	84.2
48	Altar Central	160	17	0.19	0.007	0.183	0.02	0.021	210	16.7	0.45	1.73	0.95	80.3	19.8	78.2	78.4	83.4
49	Altar Central	173	19	0.50	0.005	0.495	0.03	0.007	70	22.2	0.75	0.32	1.97	92.2	50.6	90.2	82.6	87.6
50	Altar Central	198	17	0.13	0.003	0.127	0.02	0.023	230	13.4	0.30	2.24	0.80	78.5	13.9	78.1	77.6	82.6
51	Altar Central	176	17	0.14	0.003	0.137	0.02	0.014	140	17.5	0.36	1.79	0.66	73.4	9.0	84.7	77.8	82.8
52	Altar Central	188	17	0.59	0.011	0.579	0.04	0.007	70	25.0	0.90	0.31	2.10	87.3	52.7	92.8	83.8	88.8
53	Altar Central	165	16	0.36	0.004	0.356	0.02	0.016	160	28.5	0.52	1.19	1.08	82.5	29.8	80.5	80.7	85.7
Average		180	18	0.50	0.008	0.488	0.03	0.020	196	24.5	0.91	0.98	1.77	82.5	35.9	88.3	82.5	87.5
												1.18						

Notes
1. Cu recovery from open circuit cleaner flotation testwork
2. Cu recovery adjusted by 5% to reflect Locked-cycle and pilot plant results

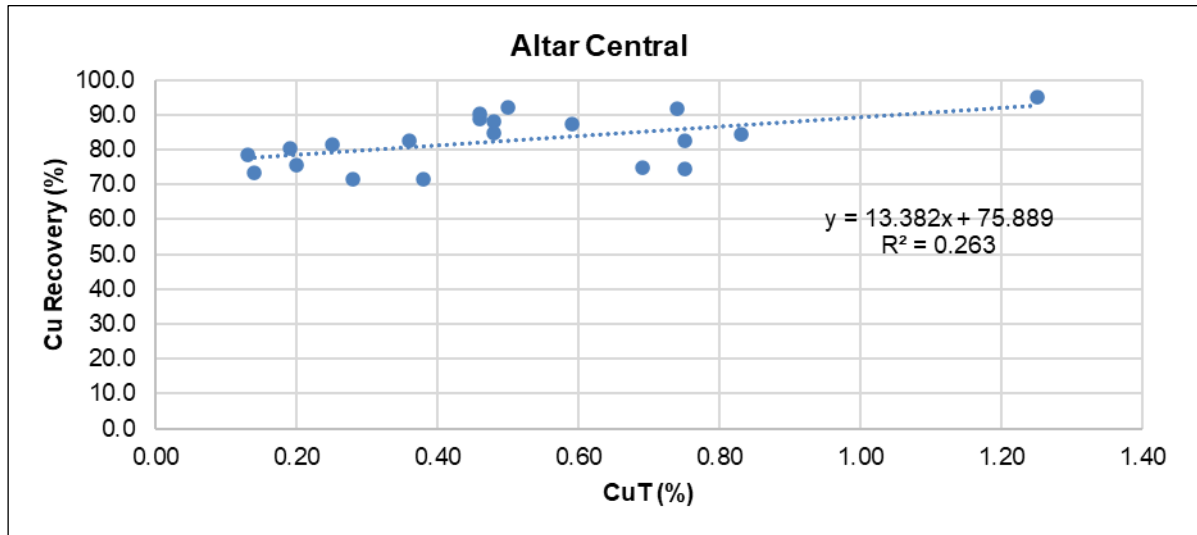
Source: G&T – KM3443, 2012 - 2013

Figure 13-26: Summary of Cleaner Flotation Tests on Altar Central Variability Samples

Sample	Pit	Grind (P80 µm)		Feed Grade					Cl Conc Grade			Recovery %			Open Circuit (1)		Closed Circuit (2)	
		Rougher	Cleaner	Cu %	Cuox %	Cusul %	Au g/t	As %	As ppm	Cu%	Au g/t	As%	Wt%	Cu	Au	As	Cu Recovery %	Cu Recovery %
1	Altar East	205	24	0.55	0.020	0.530	0.06	0.180	1,000	21.1	1.76	5.84	2.23	80.0	60.9	81.3	80.4	85.4
2	Altar East	203	31	0.74	0.030	0.710	0.35	0.018	180	16.5	5.62	0.46	3.92	85.2	62.0	100.0	82.7	87.7
3	Altar East	187	17	0.27	0.008	0.262	0.08	0.015	150	19.6	2.89	0.67	1.13	72.8	38.3	59.6	77.2	82.2
4	Altar East	171	17	0.57	0.030	0.540	0.10	0.010	100	32.6	4.26	0.49	1.50	83.8	65.5	73.4	80.7	85.7
5	Altar East	156	18	0.74	0.040	0.700	0.07	0.008	80	39.6	3.38	0.40	1.64	85.4	78.3	81.9	82.7	87.7
6	Altar East	195	16	0.33	0.020	0.310	0.03	0.012	120	24.9	2.08	0.80	1.10	82.9	68.4	73.2	77.9	82.9
7	Altar East	182	18	0.28	0.020	0.240	0.05	0.057	570	19.9	1.67	4.28	1.07	75.3	34.6	80.5	77.1	82.1
8	Altar East	203	22	0.51	0.010	0.500	0.23	0.017	170	25.2	7.09	0.84	1.72	84.1	51.5	85.0	80.0	85.0
9	Altar East	180	23	0.64	0.020	0.620	0.25	0.028	280	30.6	9.75	1.52	1.81	79.0	63.7	98.2	81.5	86.5
10	Altar East	176	20	0.28	0.004	0.276	0.06	0.002	20	27.3	2.45	0.09	0.84	79.3	34.2	38.0	77.3	82.3
11	Altar East	182	20	0.77	0.050	0.720	0.09	0.025	250	35.5	2.08	1.22	1.91	84.2	41.4	93.2	83.0	88.0
12	Altar East	199	17	0.55	0.030	0.520	0.10	0.030	300	26.5	4.07	1.50	1.77	81.5	67.7	88.7	80.4	85.4
13	Altar East	209	24	0.59	0.030	0.560	0.13	0.090	900	46.1	8.24	7.03	1.10	76.5	61.5	85.9	80.9	85.9
14	Altar East	181	23	1.05	0.040	1.010	0.15	0.005	50	54.2	5.70	0.23	1.77	81.7	61.6	81.3	86.3	91.3
15	Altar East	193	23	0.42	0.020	0.400	0.08	0.001	10	23.2	4.24	0.08	1.52	69.0	64.6	100.0	78.9	83.9
16	Altar East	186	18	0.52	0.020	0.500	0.16	0.038	380	35.1	6.35	3.07	1.26	79.2	47.1	100.0	80.1	85.1
17	Altar East	200	29	0.59	0.009	0.581	0.31	0.001	10	27.1	7.69	0.02	1.87	88.5	47.9	37.4	80.9	85.9
18	Altar East	179	13	0.19	0.010	0.180	0.05	0.001	10	23.0	3.02	0.05	0.67	89.5	42.7	33.6	76.2	81.2
19	Altar East	169	19	0.17	0.005	0.165	0.06	0.003	30	26.2	8.00	0.39	0.53	77.4	71.1	68.3	76.0	81.0
20	Altar East	200	17	0.16	0.007	0.153	0.03	0.006	60	19.2	2.17	0.74	0.67	82.0	48.1	83.1	75.9	80.9
21	Altar East	148	20	0.18	0.004	0.176	0.09	0.029	290	21.5	3.76	3.67	0.68	78.0	29.1	85.9	76.1	81.1
22	Altar East	190	22	0.39	0.007	0.383	0.05	0.006	60	20.4	0.39	0.34	1.60	85.3	13.9	90.5	78.6	83.6
23	Altar East	190	23	0.22	0.006	0.214	0.08	0.002	20	11.3	2.54	0.07	1.59	80.6	49.5	55.6	76.6	81.6
24	Altar East	198	21	0.85	0.011	0.839	0.54	0.001	10	30.6	13.20	0.02	2.47	90.8	61.7	48.4	83.9	88.9
25	Altar East	182	26	0.99	0.035	0.955	0.53	0.007	70	22.9	6.89	0.18	3.92	84.8	48.2	100.0	85.6	90.6
26	Altar East	174	21	0.20	0.005	0.195	0.04	0.002	20	24.5	2.76	0.18	0.66	81.4	41.4	59.8	76.4	81.4
27	Altar East	175	21	0.28	0.006	0.274	0.12	0.063	630	19.5	2.30	4.15	1.18	73.8	20.5	77.8	77.3	82.3
28	Altar East	154	17	0.17	0.003	0.167	0.06	0.004	40	16.0	2.05	0.19	0.86	68.4	25.4	40.9	76.0	81.0
29	Altar East	147	14	0.18	0.004	0.176	0.05	0.002	20	21.1	1.99	0.63	0.69	57.9	18.6	100.0	76.1	81.1
30	Altar East	196	15	0.13	0.003	0.127	0.05	0.005	50	26.4	2.90	0.81	0.40	64.6	13.2	64.2	75.5	80.5
31	Altar East	192	24	0.55	0.009	0.541	0.38	0.023	230	25.1	12.20	1.06	1.87	83.9	58.4	85.3	80.4	85.4
32	Altar East	191	24	1.09	0.050	1.040	0.58	0.057	570	32.1	12.80	2.04	3.12	78.8	59.0	100.0	86.8	91.8
33	Altar East	179	20	1.09	0.040	1.050	0.87	0.004	40	32.1	18.20	0.11	3.12	86.4	61.6	85.7	86.8	91.8
Average		184	21	0.49	0.018	0.473	0.18	0.022	222	26.6	5.26	1.31	1.57	79.8	48.8	92.5	79.8	84.8

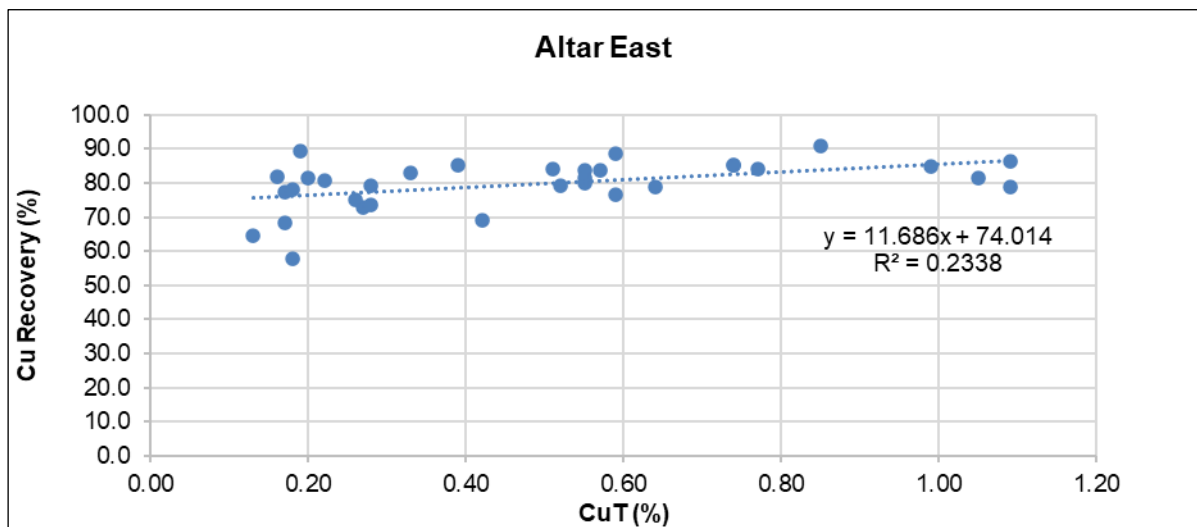
Source: G&T – KM3443, 2012 - 2013

Figure 13-27: Summary of Cleaner Flotation Tests on Altar East Variability Samples



Source: IMC, 2024

Figure 13-28: Regression Analysis of Open Circuit Cleaner Flotation Test Results on Altar Central Variability Samples



Source: IMC, 2024

Figure 13-29: Regression Analysis of Open Circuit Cleaner Flotation Test Results on Altar Central Variability Samples

Composite	Grind (P80 µm)		Feed Grade				Cl Conc Grade		Recovery %		Model
	Rougher	Cleaner	Cu %	Cuox %	Cusul %	Au g/t	Cu%	Au g/t	Cu	Au	Cu Recovery %
Altar Central	198	18	0.40	0.018	0.382	0.08	32.4	4.34	85.6	58.2	86.2
Altar East	180	17	0.30	0.010	0.290	0.11	27.2	5.91	82.7	48.2	82.5

Source: ALS KM4073, 2014

Source: ALS KM4073, 2014

Figure 13-30: Summary Locked Cycle Test Results on Altar Central and Altar East Test Composites Compared to Copper Recovery Model

Sample	Pit	Grind (P80 µm)		Feed Grade				Cl Conc Grade		Recovery %		Model
		Rougher	Cleaner	Cu %	Cuox %	Cusul %	Au g/t	Cu%	Au g/t	Cu	Au	Cu Recovery %
Central P-3 a	Altar Central	198	18	0.39	0.018	0.372	0.06	32.0	3.24	86.2	52.5	86.1
Central P-3 b	Altar Central	198	18	0.39	0.018	0.372	0.07	31.7	4.49	84.4	70.6	86.1
Central P-4 a	Altar Central	198	18	0.40	0.018	0.382	0.07	30.8	3.24	84.7	54.7	86.2
Central P-4 b	Altar Central	198	18	0.41	0.018	0.392	0.06	33.0	3.38	84.7	54.4	86.4
Average	Altar Central	198	18	0.40	0.018	0.380	0.07	31.88	3.59	85.0	58.1	86.2
East P-5 a	Altar East	214	25	0.30	0.010	0.290	0.08	24.8	5.51	82.4	67.6	82.5
East P-5 b	Altar East	214	25	0.29	0.010	0.280	0.10	26.4	4.80	82.4	59.0	82.4
East P-6 a	Altar East	202	22	0.30	0.010	0.290	0.09	27.7	4.90	81.6	48.9	82.5
East P-6 b	Altar East	202	22	0.31	0.010	0.300	0.10	26.8	4.70	81.8	45.6	82.6
Average	Altar East	208	24	0.30	0.010	0.290	0.09	26.43	4.98	82.1	55.3	82.5

Source: ALS KM4073, 2014

Figure 13-31: Summary of Pilot Plant Campaign on Altar Central and Altar East Test Composite compared with Model Recovery Equation

13.7 Significant Factors

- The Altar copper project has been the subject of extensive metallurgical test programs during the period from 2007 – 2014 to investigate flotation as a process option for recovering copper and gold values from the Altar deposit.
- Chalcopyrite is the primary copper mineral in the porphyry test composites along with lesser amounts of secondary sulphide copper mineralization. Copper mineralization in the rhyolite test composites occurs primarily as secondary sulphide copper minerals such as bornite, chalcocite and covellite along with lesser amounts of chalcopyrite. Enargite and tennantite, which are arsenic bearing copper minerals, were identified in most of the test composites, indicating that arsenic in the final copper flotation concentrates may be a concern. Gangue minerals consist mainly of quartz, muscovite and feldspars with relatively low quantities of kaolinite and chlorite.
- Comminution tests, including Bond ball mill work index (BWi), Bond rod mill work index and SAG mill comminution (SMC) were conducted on each of the test composites. BWi tests on the porphyry composites ranged from 12.7 - 16.2 kWh/t and averaged 14.4 kWh/t. BWi tests on the rhyolite composites ranged from 11.6 - 15.7 kWh/t and averaged 12.9 kWh/t, indicating that rhyolite samples are somewhat softer with respect to ball mill grinding than the rhyolite samples. The SMC Axb value for the porphyry samples ranged from 43.5 – 67.1 and averaged 48.2, while the Axb value for the rhyolite samples ranged from 28.2 – 40.1 and averaged 34.7. It should be noted that the lower the Axb value the harder the material is with respect to SAG mill grinding. As such, the rhyolite samples were found to be more resistant to SAG mill grinding than the porphyry samples. The abrasion index (Ai) averaged 0.116 for the porphyry samples and 0.098 for the rhyolite samples, indicating low to moderate abrasivity.
- Copper can be recovered from the Altar deposit using conventional copper flotation technology and a process flowsheet that includes copper rougher flotation, regrinding of the rougher concentrate and three stages of cleaner flotation. Conditions selective against pyrite are required to avoid pyrite flotation into the copper concentrate.
- A primary grind size of 80% passing (P80) 190 µm was selected as the optimal primary grind size. Regrinding of the rougher concentrate to P80 20 - 30 µm is required to achieve adequate mineral liberation and produce high grade copper flotation concentrates.

- Copper concentrates contained high levels of arsenic levels due to the presence of the copper minerals, enargite and tennantite in the ore. It is likely that arsenic will draw significant penalties at the smelter when mineralized material containing high levels of enargite is processed.
- LoM copper recovery is estimated at 85-88% into copper flotation concentrates containing 26-32% Cu.
- SRK developed a copper recovery model for material from Altar Central and Altar East by first performing regression analyses on the results from open cycle cleaner flotation tests conducted on 20 variability samples from Altar Central and 33 variability samples from Altar East.
 - Altar Central Cu Recovery = $13.382 \times \text{Cu\%} + 75.889 + 5$
 - Altar East Cu Recovery = $11.686 \times \text{Cu\%} + 74.014 + 5$
- Gold recovery from both Altar Central and Altar East is estimated at 57% based on the locked cycle and pilot plant test results.
- Silver recovery from both Altar Central and Altar East is estimated at 50% based on the locked cycle and pilot plant test results.

14 Mineral Resource Estimate

The mineral resources at the Altar project are contained in two separate areas (See Figure 10-1) by about 3.5 km. Those two areas are:

- 1) Altar: copper, gold, silver, and moly porphyry deposit
- 2) QDM: A gold, silver occurrence near the surface with an adjacent deep porphyry style mineral trend called the Radio Porphyry.

The Altar deposit is made up of 4 named areas:

- 1) Altar Central
- 2) Altar East
- 3) Altar United
- 4) Altar North

Altar Central, East, and United are all components of the Altar porphyry system and the naming convention is generally based on historical drilling locations that correspond to the centre of intrusions. The Altar North area is separated from the other three to the northwest by about 1.5 km.

The Altar areas named above are contained within one large block model. QDM is contained within a separate model that is in contact and alignment with the Altar model. The two models could be combined into one large model if required for future mine planning.

Block grades were estimated for copper, gold, silver, moly, arsenic, lead, sulphur, antimony, iron, zinc, and pyrite. Economic value for mineral resources at Altar was applied to copper, gold, and silver only. The mineral resource was established using open pit optimization software.

The QDM model and mineral resource was not updated during 2024. The information reported here for QDM dates from the work completed in 2021. The Altar and QDM models will each be discussed separately.

The qualified persons for the mineral resource are John Marek and Jacob Richey of Independent Mining Consultants, Inc. (IMC). Drilling and geologic interpretation were provided to IMC during September of 2025 and includes all drilling completed through the end of the 2024 drilling season.

14.1 Altar Model

14.1.1 Model Location

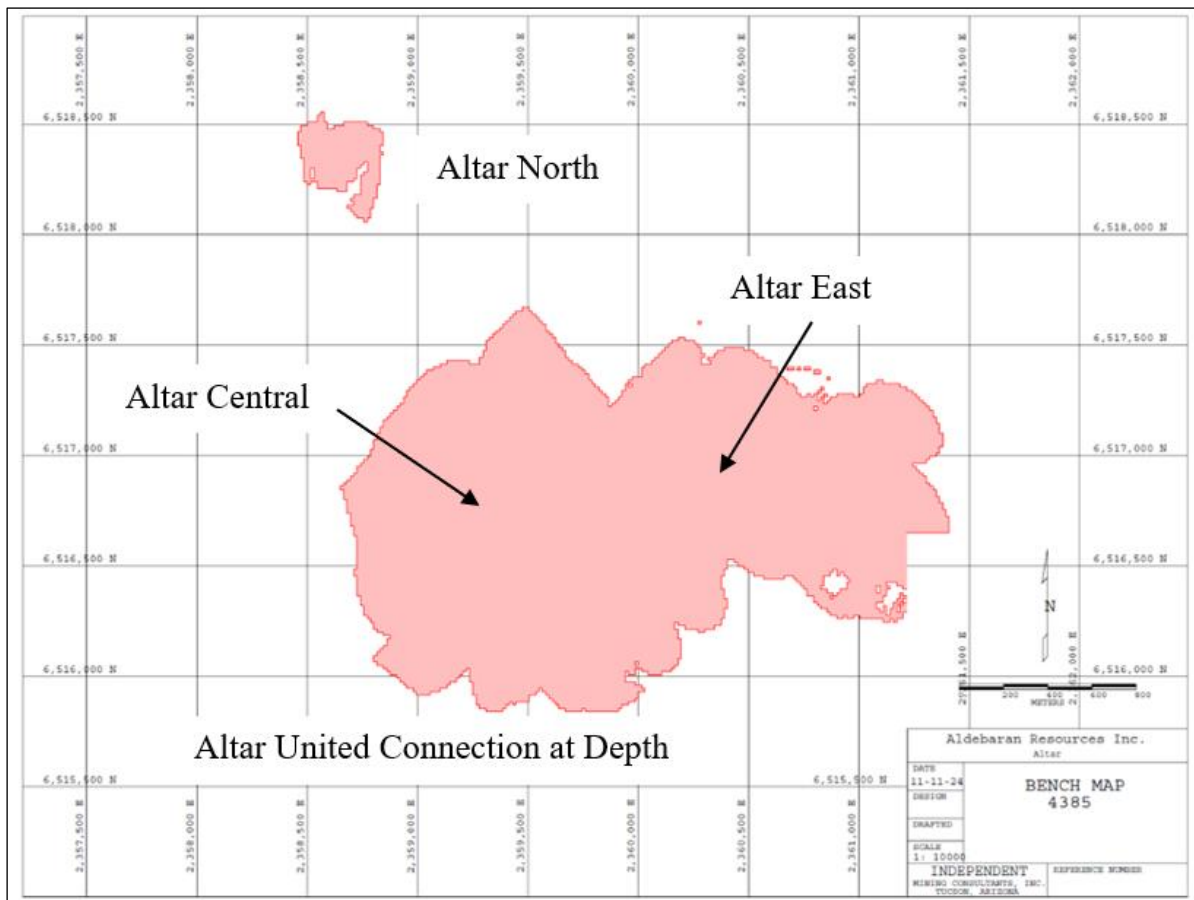
The Altar Model is based on blocks that are 15- x 15- x 15-m cubes. The model was sized to cover the area of the open pit resource as well as any potential underground evaluation of the Altar deposit.

The project coordinate system is the Gauss Kruger Argentina Zone 2 (POSGAR 94). Table 14-1 summarizes the size and location of the block model.

Table 14-1: Altar Model Size and Location, November 2024

Model Limits	Altar Model Corner Coordinates			
	Southwest	Northwest	Northeast	Southeast
Easting	2,357,210	2,357,210	2,362,490	2,362,490
Northing	6,515,000	6,518,990	6,518,990	6,515,000
Elevation Range	1,700 to 4,400 meters, 180 benches			
Rotation	None			
Number of Blocks	East, Columns = 352; North, Rows = 266			
Block Size	15 x 15 x 15 meters			

Source: IMC, 2024



Source: IMC, 2024

Note: 500-m grid, north is up, deposits shown in red

Figure 14-1: Altar Project Areas and Total Model Area

14.1.2 Altar Drill Hole Data

All of the drill data for the Altar project has been diamond core. Table 14-2 summarizes the amount of data in each area of the deposits. Altar Central, East, and United are combined on this table as they are in contact with each other and some drill holes cross from one area to another.

Table 14-2: Drilling Summary for the Altar Project

Altar Project Area	Number of Holes	Number of Assay Intervals	Drilling (m)
Altar Main + East + United	219	67,574	134,595
Altar North	10	1,903	3,924

Source: IMC, 2024

The elemental and sequential assay information that was analyzed for Altar is summarized on Table 14-3. The sequential assays are primarily in the supergene zone and mixed mineral zones of Altar. The sequential copper assay process starts with a sulphuric acid soluble assay followed by a cyanide soluble assay on the residue of the acid soluble, followed by a total copper assay on the residue from the cyanide soluble assay.

Table 14-3: Basic Assay Statistics by Project Area

Assayed Parameter	Altar Main + East + United		Altar North	
	Number	Mean	Number	Mean
Copper (%)	67,278	0.254	1,893	0.073
Gold (gm/t)	67,279	0.060	1,893	0.056
Silver (gm/t)	67,278	1.027	1,893	0.96
Moly (ppm)	67,278	32.07	1,893	102.35
Arsenic (ppm)	67,278	252.8	1,893	116.8
Iron (%)	59,262	2.789	1,893	2.661
Lead (ppm)	60,634	0.003	1,893	0.005
Sulfur (%)	52,854	3.116	1,893	1.528
Antimony (ppm)	60,663	19.07	1,893	5.53
Zinc (ppm)	60,663	0.009	1,893	0.019
Acid Soluble Cu (%)	12,027	0.028	4	0.091
Cn Soluble Cu (%)	12,026	0.142	4	0.141
Residue Cu (%)	12,027	0.171	4	0.135

Source: IMC, 2024

The assay information, composite data, and geologic interpretation were used to establish the domains for grade estimation at Altar. The lithology, structure, and oxidation state interpretations used in the model will be discussed in the next section.

14.1.3 Altar Model Geology

The details of local geology were presented in Sections 7 and 8. This section is intended to explain the sub-set of that information that was applied to the block model. All the geologic interpretation was completed by the Aldebaran geology team and transferred to IMC for application to the block model. The qualified person has reviewed these interpretations and tested them against the logged data and assay distributions and has accepted them for application to the mineral resource model.

Four different sets of interpretation were applied to the block model:

- 1) Structure
- 2) Lithology
- 3) Mineral Zone
- 4) Arsenic Bearing Structures

Each will be discussed in the following paragraphs.

14.1.4 Structure

The Aldebaran geology team interpreted major faults in the Altar area. There are 11 major fault blocks within the Altar model area that were interpreted as wire frame solids. Figure 14-2 illustrates the major fault blocks within the Altar model with the outlined numbers.

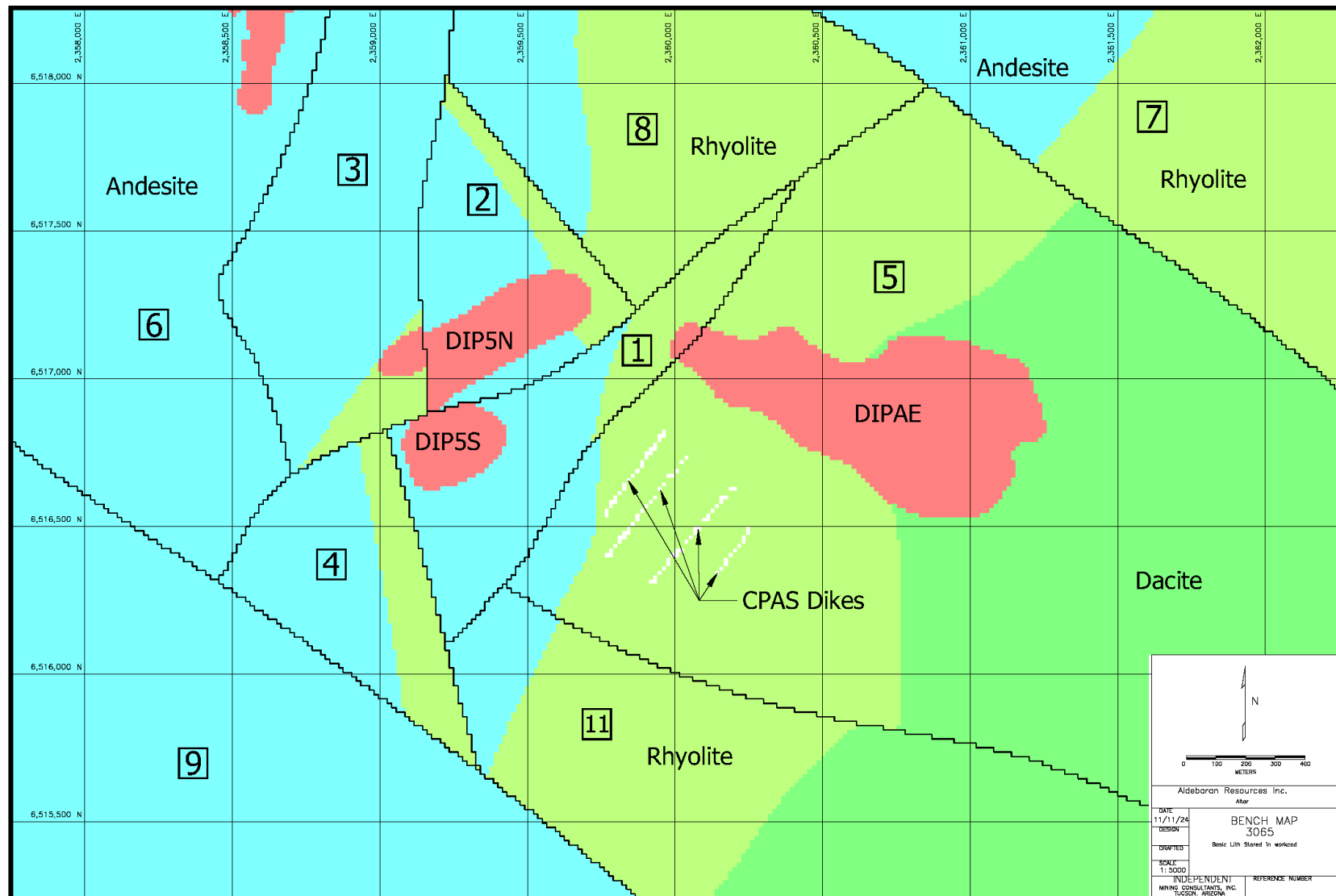
14.1.5 Lithology

Significant effort was completed by the Aldebaran geology team to establish a consistent understanding and representation of the lithologic logging. Table 14-4 summarizes the rock types within the Altar model area. Figure 14-2 illustrates the locations of the units.

Table 14-4: Interpreted Lithologic Units in the Altar Project

Lith Code	Lithology Family Description
OVB	Overburden
AND	Includes Early Miocene aged Fragmental, massive and porphyritic Andesitic rocks.
RHY	Pyroclastic Rhyodacitic to Rhyolitic rocks
DACv	Pyroclastic unit (Crystal tuff and fragmental units)
RHY2	Rhyolite dyke
DIP5S	Crowded texture Diorite to qtz-Diorite Porphyry - Altar Main
DIP5N	Crowded texture Diorite to qtz-Diorite Porphyry - Altar Main
DIPAE	Diorite to quartz-Diorite Porphyry - Altar East
CPAS	Crowded Porphyry Altar South
RMB	Rock milled breccia. Polymictic rock-flower matrix supported breccia, Altar North
HB	Hydrothermal Breccia, Altar North
NP4	Medium grained porphyritic diorite, displaying a crowded population of plagioclase, Altar North
NP5	Medium-grained porphyritic diorite, displaying a bimodal crowded population of plagioclase phenocrysts, Altar No
NP6	Light-gray medium-grained porphyritic diorite, Altar North

Source: IMC, 2024



Source: IMC, 2024

Figure 14-2: Fault Block and Lithology Illustration, Numbers in Boxes Represent Fault Block

The lithology solids that were provided to IMC were separated by fault block. When assigned to the model, IMC utilized the fault block codes along with a numeric code for the rock types. Table 14-5 is a summary of the combined fault blocks and lithology codes assigned to the model.

Table 14-5: Model Codes for Lithology and Fault Block

Fault Block	Lith Code	Model Code
	Ovb	1
1	Rhy	122
1	Rhy2	123
1	DIP5S	151
1	AND	12
1	DIPAE	132
1	DACv	14
2	RHY	222
2	DIP5N	25
2	AND	22
2	DACv	24
3	RHY	322
3	DIP5N	35
3	AND	32
4	RHY	422
4	AND	42
4	DACv	44
5	RHY	522
5	RHY2	523
5	AND	52
5	DIPAE	532
5	DACv	54
5	CPAS	515
6	AND	62
6	NP4	610
6	NP5	611
6	NP6	612
6	HB	69
6	RMB	624
7	RHY	722
7	AND	72
7	DACv	74
8	RHY	822
8	AND	82
9	AND	92
11	RHY	1122
11	AND	112
11	DACv	114

Source: IMC, 2024

14.1.6 Leach Cap, Supergene, and Mixed Mineral Zones

The Altar geologic team interpreted the copper mineralization into four categories:

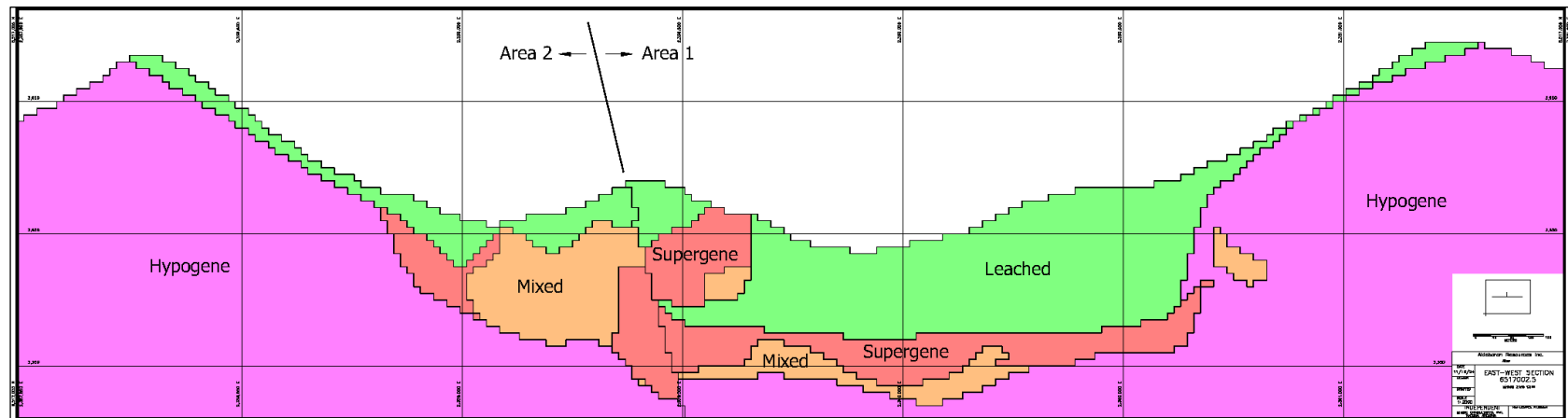
- 1) Leached Cap: Code = 11, 21, 31
- 2) Supergene – Secondary Enrichment: Code = 12, 22, 32
- 3) Mixed Zone: Code = 13, 23, 33
- 4) Hypogene – Primary Mineralization: Code = 14, 24, 34

This interpretation was based on logging of mineralogy, along with copper grade, and sequential copper assays where they exist in the Altar deposit. The cyanide soluble and residual sequential assays were used as the primary guide for interpretation of the mineral zones.

- Leach Cap: CuTot generally < 0.075%
- Supergene Defined as $Cures/(CnSol + Cures) < 0.50$
- Mixed Zone Defined where $Cures/(CnSol + Cures)$ between 0.5 and 0.8
- Hypogene defined as $Cures/(CnSol + Cures) > 80\%$
- CnSol = Cyanide soluble sequential assay after acid soluble
- Cures = Residual total copper after cyanide soluble assay
- CuTot = Total Copper initial assay.

The Aldebaran team completed the interpretation and provided wire frame solids of the above mineral zones. The mineral zone interpretations were separated into 3 areas that reflect changes in lithology and fault block. Some of the rock units were not as permeable to supergene fluids as others. The Area 1 (codes 11,12,13,14) is southeast of the major NW trending fault and is generally comprised of fault blocks 1, 5 and 11. Area 2, is northwest of the NW fault and is comprised of fault blocks 2, 3, 6. Area 3 is in the southwest of the model in fault blocks 4 and 9. The area codes of 1, 2, and 3, are reflected in the first number of the pair for mineral zone code. For example, mineral codes 11, 12, 13, and 14, are all in Area 1 described above.

Figure 14-3 is an example cross-section through the Altar Central and Altar East zones. The fault boundary between Areas 1 and 2 is illustrated. Area 3 is south of this section.



Source: IMC, 2024

Note: Showing the mineral zone interpretation; horizontal grid is 500 m

Figure 14-3: EW Cross-Section Looking North 6,517,000 North

14.1.7 Arsenic Structures

A substantial amount of work by the Aldebaran geology team went into the interpretation of the arsenic bearing structural corridors within the Altar deposits. They were interpreted based on drill hole assay information using a grade threshold of 300 ppm arsenic.

The 300-ppm value is supported statistically by cumulative frequency plots of the arsenic assays which show a change in slope on the cumulative frequency plot at approximately 300 ppm.

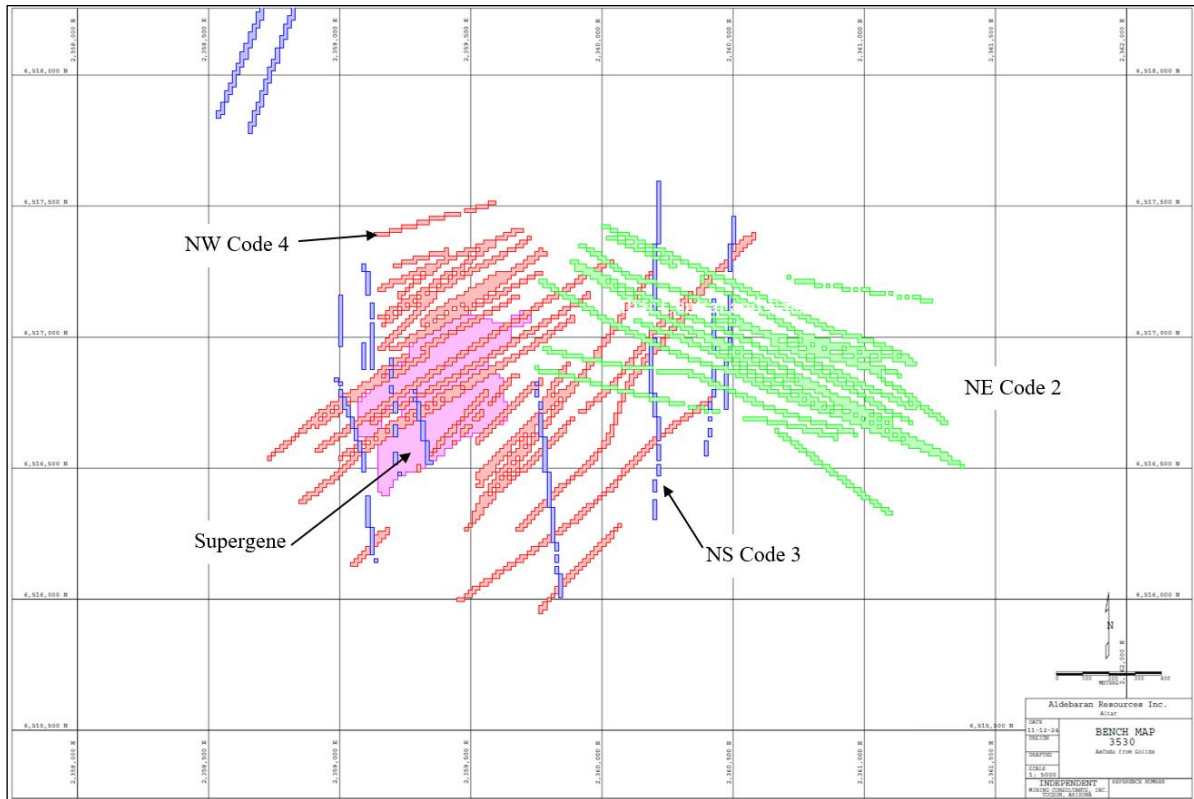
Most of the arsenic occurs as the mineral enargite in sub-vertical veinlets that form corridors/structures, with higher density in the upper portions of the deposit. High arsenic values are often associated with the supergene zone of the deposit. As a result, a “supergene” zone of arsenic has been interpreted as a massive area superimposed over the leached cap and supergene copper zone.

The arsenic structures were assigned to the 15-m model blocks with two codes: 1) A code for the arsenic structure type, and 2) the fraction of the block that is within the arsenic structure. Many of the structures are significantly narrower than the model blocks.

The Arsenic structure orientations and codes are as follows:

- Code 1= Supergene area, generally massive shape.
- Code 2 = Northeast trending structures
- Code 3 = North-South trending structures
- Code 4 = Northwest trending structure

Figure 14-4 is a horizontal slice through the Altar model on the 3,530-elevation illustrating the orientation and general location of the Arsenic structures. Keep in mind that the whole block representation on Figure 14-4 does not reflect the fractional blocks that are used to respect the width of the enargite-bearing structures.



Source: Aldebaran Resources and IMC, 2024

Figure 14-4: Illustration of Arsenic Structure Solids

14.1.8 Assay Caps

Individual assays were capped prior to compositing. The caps were based on detailed reviews of cumulative frequency plots for each element within each domain and mineral zone. The assay caps were not aggressive and typically addressed the outliers that were the highest 0.5% of the distribution or less.

Table 14-6 summarizes the caps for all estimated elements within each domain and mineral zone.

Table 14-6: Assay Caps by Domain and Mineral Zone

Domain Definition		Lith Code	Domain Code	Assay Count	Copper (%)			Gold (ppm)			Silver (ppm)			Moly (ppm)			Arsenic (ppm)			Iron (%)			Lead (%)			Zinc (%)			Antimony (ppm)		
					Hypo	Mixed	Super	Hypo	Mixed	Super	Hypo	Mixed	Super	Hypo	Mixed	Super	Hypo	Mixed	Super	Hypo	Mixed	Super	Hypo	Mixed	Super	Hypo	Mixed	Super	Hypo	Mixed	Super
Block 5	Andesite	2	52	3,040	2.00	NC	NC	0.20	NC	NC	35.0	NC	NC	800	NC	NC	5000	NC	NC	7.0	NC	NC	0.10	NC	NC	0.40	NC	NC	700	NC	NC
Block 5	Rhyolite + Dacite	22, 23, 4	524	18,343	1.50	1.00	1.75	1.00	0.40	0.80	7.5	7.5	7.5	600	300	300	5,000	NC	7,000	16.0	7.5	7.5 0.	25	NC	0.25	0.60	0.28	0.20	700	NC	700
Block 5	DIPAE	32	532	12,572	2.50	NC	1.50	1.00	NC	0.40	20.0	10.0	10.0	1,800	100	9	4,000	NC	4,000	15.0	15.0	15.0	0.50	0.50	0.50	1.00	0.10	0.10	1,100	500	500
Block 5	CPAS	15	515	432	NC	NC	NC	0.19	NC	NC	8.0	NC	NC	45	NC	NC	NC	NC	NC	NC	NC	NC	0.025	NC	NC	0.10	NC	NC	600	NC	NC
Block 1	Andesite	2	12	5,217	1.40	1.70	2.20	0.30	0.20	0.30	25.0	6.0	6.0	600	110	110	3,000	2,500	NC	15.0	NC	15.0	0.18	0.005	0.005	0.50	0.01	0.01	600	300	NC
Block 1	Rhyolite	22, 23	1223	7,373	0.90	1.50	1.90	0.18	0.40	0.70	10.0	4.0	3.5	500	150	200	3,400	3,400	3,400	12.0	12.0	12.0	0.10	0.005	0.005	0.40	0.02	0.04	2,500	500	NC
Block 1	DIP5S	51	151	4,576	3.00	2.50	3.00	0.40	0.40	0.40	10.0	5.0	8.0	800	NC	50	3,100	3,100	3,100	15.0	NC	15.0	0.15	NC	NC	0.30	0.02	0.02	1,000	NC	200
Block 1	DIPAE	32	132	230	NC	NC	NC	0.05	NC	NC	11.0	NC	NC	900	NC	NC	2,700	NC	NC	NC	NC	NC	0.05	NC	NC	NC	NC	NC	700	NC	NC
Block 2/3	Rhyolite	22, 23	2322	4,378	0.90	0.90	1.60	0.20	0.30	0.30	6.5	6.5	5.5	180	180	180	2,000	2,000	3,000	12.0	12.0	12.0	0.04	NC	NC	0.20	0.07	0.02	800	800	NC
Block 2/3	DIP5N	5	235	3,496	1.60	2.50	0.90	0.25	0.25	0.25	20.0	NC	18.0	1,900	150	NC	2,000	2,000	2,000	12.0	12.0	12.0	0.10	NC	NC	0.60	0.07	0.05	1,200	200	200
Block 2	Andesite	2	22	334	NC	NC	NC	NC	NC	NC	1.8	NC	NC	600	NC	NC	1,000	NC	NC	9.0	NC	NC	0.10	NC	NC	0.01	NC	NC	350	NC	NC
Block 4	Rhyolite	22, 23	422	3,924	1.00	0.80	1.50	0.30	0.30	0.30	8.0	4.0	NC	320	100	230	2,000	2,000	3,000	9.0	9.0	90.0	0.01	NC	0.003	0.10	0.018	0.018	250	250	250
Block 4	Andesite	2	42	917	0.70	NC	NC	0.10	NC	NC	6.5	NC	NC	150	NC	NC	2,000	NC	NC	8.0	NC	NC	0.10	NC	NC	0.15	NC	NC	550	NC	NC
Block 11	Andesite	2	112	736	0.70	NC	NC	0.10	NC	NC	2.2	NC	NC	180	NC	NC	2,000	NC	NC	12.0	NC	NC	0.025	NC	NC	0.05	NC	NC	500	NC	NC
Block 11	Rhyolite	22, 23	1122	934	0.70	NC	0.90	0.30	0.30	0.30	5.0	NC	NC	22	NC	22	2,000	NC	NC	8.0	NC	8.0	NC	NC	NC	0.06	NC	0.01	600	NC	NC
Block 6	Andesite	2	62	191	NC	NC	NC	NC	NC	NC	2.0	NC	NC	NC	NC	NC	100	NC	NC	NC	NC	NC	0.015	NC	NC	0.04	NC	NC	NC	NC	NC
Block 6	Intrusives	9,10,11,24	610		NC	NC	NC				10.0	NC	3.0	NC	NC	NC	NC	NC	4.0	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: IMC, 2024
NC: No cap applied

14.1.9 Drill Hole Composites

Prior to block grade estimation, the drill hole data was composited for input to block grade estimation. Three separate composite files were used for the Altar Model.

- 1) Nominal 15-m length composites bounded by domain for most elements.
- 2) A separate set of arsenic composites bounded by the arsenic structure boundaries.
- 3) A separate set of logged pyrite composite files for pyrite estimation.

The domain boundaries are discussed in the next section. Sufficient initial work to determine domain boundaries was completed on the assay level, so that the selected hypogene domain boundaries were used to control the down hole composite process. IMC utilizes a unique but simple process when compositing to rock type or domain boundaries. The average length of the composites within each population are adjusted slightly so that there are no short composites to deal with as the composite process approaches the domain boundary.

For example, a drill hole intercept of a given domain code is 147 meters. All composites in that domain are calculated at a length of 14.7 meters rather than 15 m with a short 12-m composite at the end. This approach keeps all composites at lengths close to the 15-m target, removing some of the questions regarding change of support with short interval composites at the end of the interval.

The IMC composite process was applied to the capped assays. Calculated grade composites for: Cu, Au, Ag, Mo, As, Fe, Pb, Sb, Zn, S, CuHs, CuCn, CuRes were weighted by drill interval length. The following variables were assigned based on the largest contained percentage within the composite: lithology, mineral zone, arsenic code, fault block, and domain.

Specific Gravity information was bound by domain and combined into the composite output file for specific gravity interpretation.

The arsenic composite file respected the interpreted arsenic structures discussed previously. Many composites inside the structures were less than 15 m due to the narrow width of many of the structures. Outside of the structures, the low-grade arsenic was composited to nominal 15-m down hole composites.

Prior to compositing the sequential data, two additional variables were calculated:

$$\text{Acid_rat} = \text{Acid Soluble Ratio} = \text{Acid Sol} / (\text{Acid Sol} + \text{Cn Sol} + \text{Residual Cu})$$

$$\text{CN_rat} = \text{Cyanide Soluble Ratio} = \text{Cn Sol} / (\text{Acid Sol} + \text{Cn Sol} + \text{Residual Cu})$$

These ratios were composited along with the total copper and the sequential assays.

14.1.10 Domains

Domain boundaries were established with significant effort considering that there are a number of potential boundaries to be analyzed including: 11 major lithology types, 10 major structural blocks, 4 mineral zones for both base and precious metals which respond differently at some of the boundaries.

Boundary analysis was completed in a systematic way to address all of the domain boundaries. IMC adds a hypothesis test component to the standard graphical boundary analysis. For a number of alternative distances across the tested boundary, the following hypothesis tests are completed:

Smith-Satterthwaite T test, Paired T Test, Binomial Test, Komologorov-Smirnoff Test

The Smith-Satterthwaite T test is a large population test to determine if the means could have come from similar populations. That and the Paired T Test are generally the analysis we rely on the most along with the simple statistics of the populations from both sides of the tested boundary.

Some combinations of structure block and lithology did not have enough samples to provide reliable tests. In those cases, common sense was often applied in setting the domain boundaries. For example, copper and other sulphide minerals expect to have major changes at the leached to supergene, and supergene to mixed boundary. Gold, however, would not typically be expected to change at those same boundaries.

The first step for all elements was to determine if the mineral zones between leached, supergene, mixed, and hypogene were boundaries for the tested element. Once that was established, the rock type and structural boundaries were identified.

The rock types often change with offsets at the structure blocks, so rock type testing and structure testing are often identical at many boundaries. The basic domain boundaries were first established by analysis of the hypogene zone. The basic boundaries in hypogene reflect the host lithology differences and the major post mineral structural offsets. These domains were combined differently within the supergene zone due to migration of minerals in the supergene process. Table 14-7 summarizes the mixed and hypogene domains for total copper and many other minerals.

For gold, silver, moly, lead, zinc, and antimony, the domain boundaries on Table 14-7 were applied and the mineral zones were all considered as soft boundaries. Sequential copper assays treated the mineral zones as hard boundaries and combined the basic domains somewhat differently within each mineral domain. Sulphur, iron, and pyrite applied a hard boundary between the leach and other mineral zones, but still applied the basic domain boundaries on Table 14-7 to both leach and the combined supergene, mixed and hypogene mineral zones for those elements.

Further understanding of the grade domains will become clearer during the discussion of grade estimation parameters.

Table 14-7: Basic Structural and Rock Type Domain Boundaries

Model Domain Code	Lith
Fault Block 5	
52	Andesite
524	Rhy+Dac
532	DIPAE
Fault Block 1	
12	Andesite
1223	Rhyolite
151	DIP5S
132	DIPAE
Fault Block 2	
2322	Rhyolite
235	DIP5N
22	Andesite
422	Rhyolite
42	Andesite
112	Andesite
1122	Rhyolite
Altar North	
62	Andesite
610	Intrusives

Source: IMC, 2024

The domains on Table 14-7 were modified within the supergene mineral zone for both total copper and sequential copper ratios. Most of the domain boundaries in the supergene zone are search orientation changes. The only hard boundary applied to sequential is fault block 4. Table 14-8 illustrates the hard domain boundaries in the supergene zone.

Table 14-8: Copper and Sequential Copper Domains in Supergene

Supercudom Domain Code	Fault Block	Lithology
Hard Boundary Domains for Total Copper in Supergene		
1	1, 5, 11 5	Rhy and And
2	1, 11 1	And and DIP5S
3	1, 5 5	DIPAE and Dac
4	2,3,4	All Lith
5	6	All Lith Altar North
Supercurat Domain Code	Fault Block	Lithology
Hard Boundary Domains for Sequential Copper Ratios in Supergene		
4	4	Rhy and Dac
1, 2, 3, 5,6	All but 4	All Lith Codes

Source: IMC, 2024

14.1.11 Variography

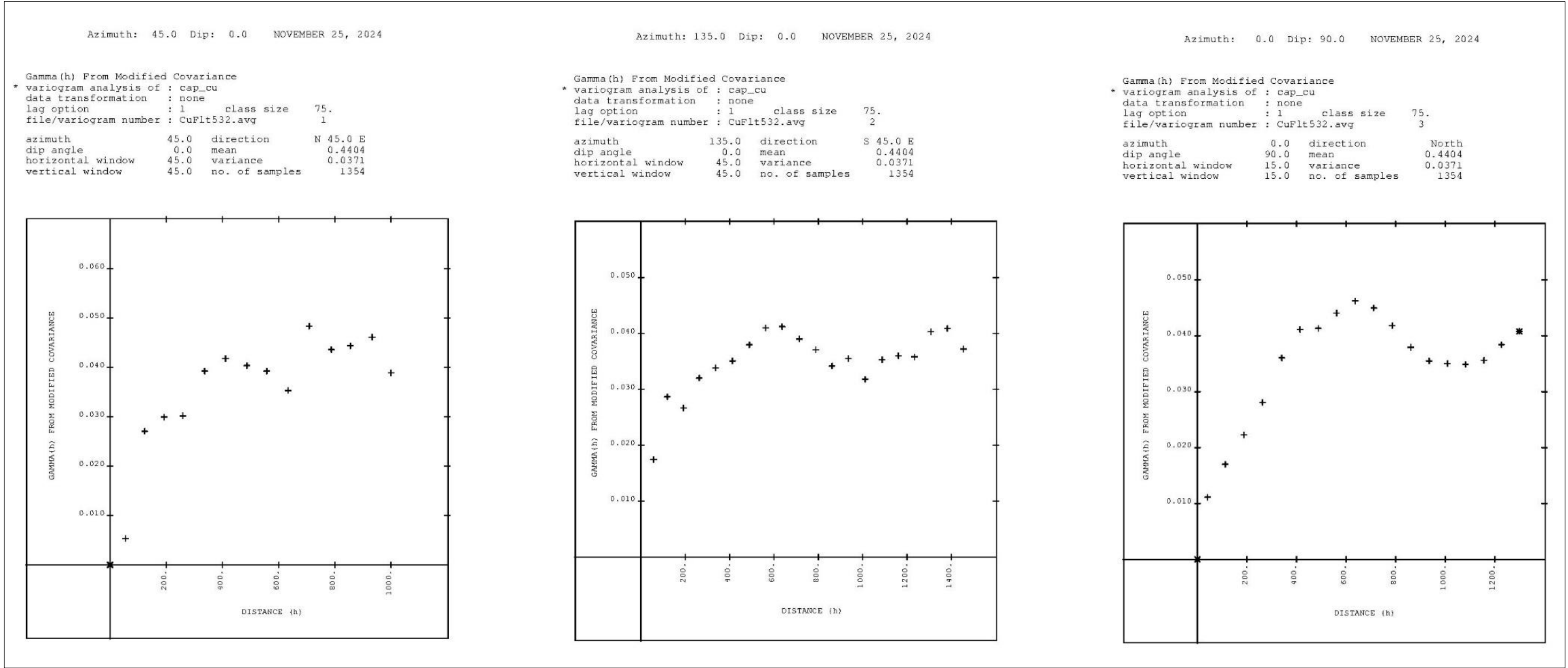
Variograms were run for each of the metals in each of the domains defined on the previous tables. The intent was to provide some guidance to the search orientation and search radii that should be combined during grade estimation. The 15-m down hole irregular composites bounded by rock type were used as input for the metal variograms. Many domains were lacking sufficient samples to provide quality variograms.

Within the Hypogene units of Altar Central and East, there are two predominate orientations from the variograms. The fault blocks (1,2,3,4) that are north of a northwest striking fault generally have variograms with a 45-degree bearing. Fault blocks 5 and 11, that are south of the fault, generally have primary orientations of 135 degrees.

Of interest on the Altar variograms is the apparent extensive vertical range. This is caused by two phenomena: 1) extensive closely spaced data down hole, and 2) grade drift within the deposit. When one considers that the horizontal drill spacing is roughly 100 m, and the vertical spacing of composites down hole is 15 m, the down hole variograms tend to look reliable implying a long vertical range. The grade drift occurs when the mean grade changes consistently when moving through the deposit, in this case downward. In both Altar Central and Altar East Hypogene mineralization, the bench average copper grades increase continuously from the surface down to about the 2,500-m elevation. This occurrence further misleads the variograms to indicate long continuous ranges.

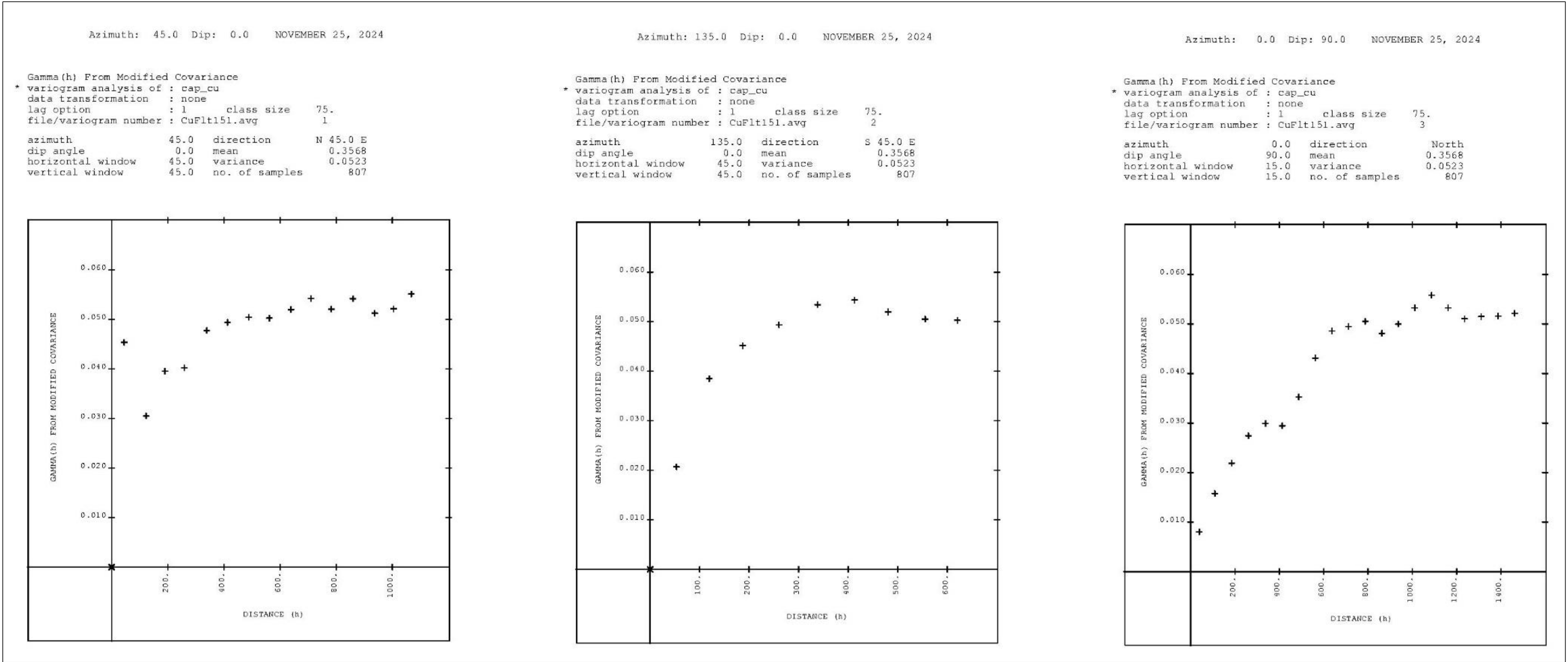
In this case, long vertical searches would result in substantial local bias, bringing high grade from depth to upper levels of the model, and correspondingly pulling high elevation low grades down to underestimate the low elevation portions of the deposit. When drilling is predominately vertical as at Altar, there is no reason to over smooth the grade distribution with long vertical searches, because blocks will be populated even if a short vertical search is used, respecting the local data and providing a better Swath Plot check.

A large number of variograms were developed by element, domain, and mineral zone. A few illustrative copper variograms are presented in Figure 14-5, Figure 14-6, and Figure 14-7 for total copper. Figure 14-5 and Figure 14-6 are indicative of the two primary orientations in Hypogene. Figure 14-7 is an example of the total copper variogram in one of the important supergene copper domains.



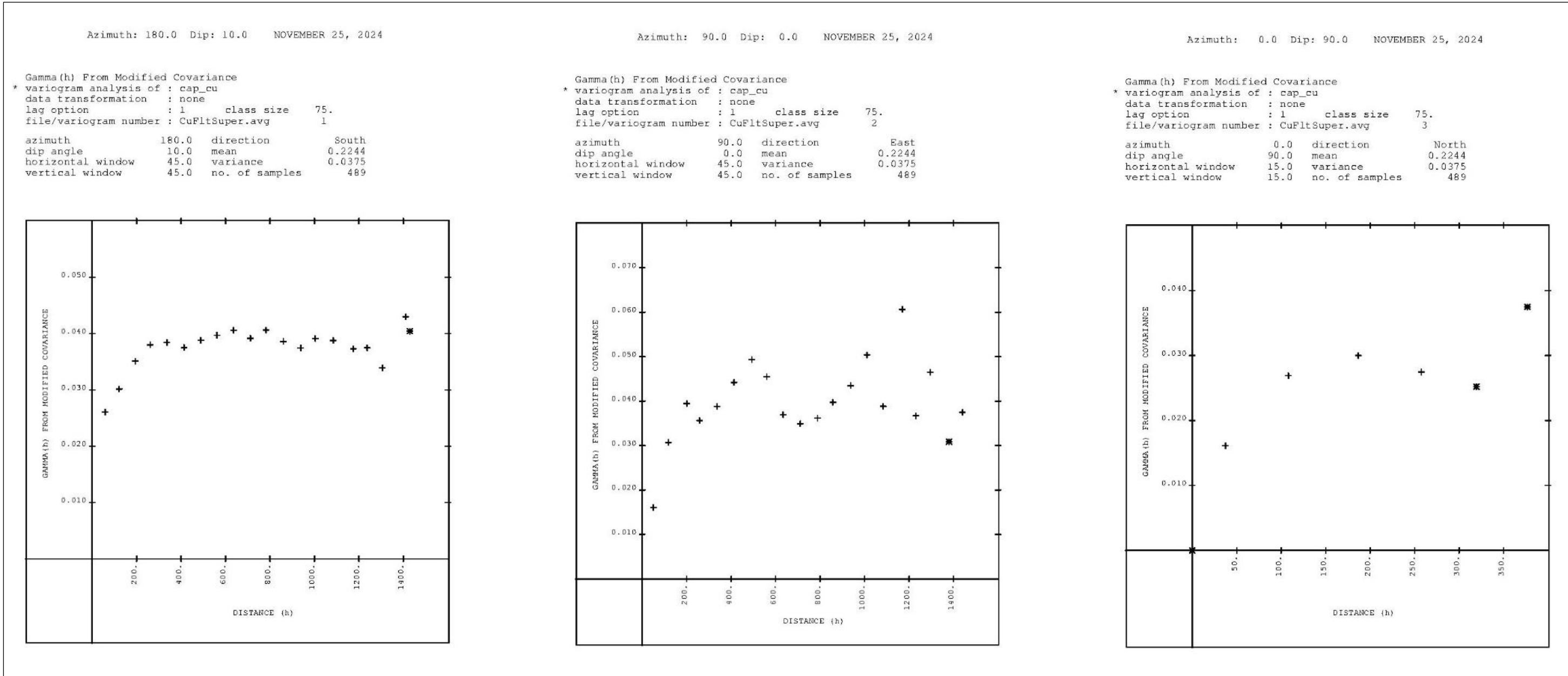
Source: IMC, 2024
Note: Bearings of 45, 135, and vertical

Figure 14-5: Copper Variograms for Mixed + Hypogene, Altar East, DIPAE Intrusive



Source: IMC, 2024
Note: Bearings of 45, 135, and vertical

Figure 14-6: Copper Variograms for Mixed+Hypogene, Altar Central DIP5N and DIP5S



Source: IMC, 2024
Note: Bearings of 180, 90, and vertical

Figure 14-7: Total Copper Variograms, Supergene Zone 1, Fault Block 1, Rhyolite

14.1.12 Altar Block Grade Estimation

The mineralization at Altar is likely the result of multiple mineralizing events followed by oxidation and supergene enrichment, combined with pre- and post-mineral faulting.

The combination of occurrences has led to the use of the fault block domains, the lithologic types, and the mineral zonation to define grade domains that include both hard grade boundaries during estimation and soft orientation boundaries.

The selected grade estimation method for Altar is inverse distance with a power weight of 3. The intent of selection of this method is to minimize the smearing or averaging of grades within each domain so that the block grades closely follow the local composite grades. The method results in a higher block variance and is intended to provide a more realistic estimate of mined tonnage and grade when alternative mining methods and cutoff grades are applied in the planning process.

The inverse distance results have been compared with ordinary linear kriging and nearest neighbor methods to assure there is no overall bias in the application of the selected methods. Those tests will be discussed later in this section.

In many of the domains, a 2-stage approach was applied to block grade estimation. Initial searches in the range of 250 x 150 m were applied to establish measured, indicated, and some inferred blocks. Then, a second longer search of 375 x 225 m was applied, the resulting additional estimated blocks were all categorized as inferred.

Each element will be discussed in the following sub-sections.

Total Copper

Total copper was estimated in the mixed and hypogene zones using the 2 -stage approach noted above. The leached cap was estimated using the domains on Table 14-7. Mixed and hypogene were combined, and the Table 14-7 domains were applied.

Supergene estimation utilized 5 hard grade boundaries but applied 10 orientation domains to change the search parameters to best model the geometry of the mineralization.

Tale 14-9 summarizes the procedures applied to estimation of total copper in the leached cap, mixed and hypogene zones. The second pass to expand the search was not applied to the leached cap. The leach cap copper grade is sufficiently low that there was no reason to expand the inferred mineralization estimate.

Table 14-9: Total Copper Estimation Parameters in Leach Cap, Mixed + Hypogene

Leach Cap Estimation Parameters				First Pass Search 1/D3				
Model Domain	Lith	Composites		Primary Direction and Distance			Secondary Distance (m)	Vertical Distance (m)
		Min_zone	Domain	Direction (°)	Plunge (°)	Distance (m)		
Fault Block 5								
52	Andesite	11,21,31	52	135	0	250	150	65
524	Rhy+Dac	11,21,31	524	220	10	250	150	65
532	DIPAE	11,21,31	532, 132	135	0	250	150	65
Fault Block 1								
12	Andesite	11,21,31	12	45	0	250	150	65
1223	Rhyolite	11,21,31	1223	50	0	250	150	65
151	DIP5S	11,21,31	151	0	0	150	150	65
132	DIPAE	11,21,31	532, 132	135	0	250	150	65
Fault Block 2								
2322	Rhyolite	11,21,31	2322	220	25	250	150	65
235	DIP5N	11,21,31	235	0	0	200	200	65
22	Andesite	11,21,31	22	0	0	200	200	65
422	Rhyolite	11,21,31	422	0	0	200	200	65
42	Andesite	11,21,31	42	0	0	200	200	65
112	Andesite	11,21,31	112	135	0	250	150	65
1122	Rhyolite	11,21,31	1122	135	0	250	150	65
Altar North								
62	Andesite	11,21,31	62	0	0	200	200	65
610	Intrusives	11,21,31	610	0	0	200	200	65

Mixed + Hypogene Estimation Parameters				First Pass Search 1/D3					Second Pass Search 1/D3 Distance (m)		
Model Domain	Lith	Composites		Primary Direction and Distance			Secondary Distance (m)	Vertical Distance (m)	Primary	Secondary	Vertical
		Min_zone	Domain	Direction (°)	Plunge (°)	Distance (m)					
Fault Block 5											
52	Andesite	13,23,33, 14,24,24	52	135	0	250	150	65	375	225	90
524	Rhy+Dac	13,23,33, 14,24,24	524	135	25	250	150	65	375	225	90
532	DIPAE	13,23,33, 14,24,24	532, 132	135	0	250	150	65	375	225	90
Fault Block 1											
12	Andesite	13,23,33, 14,24,24	12	45	0	250	150	65	375	225	90
1223	Rhyolite	13,23,33, 14,24,24	1223	45	0	250	150	65	375	225	90
151	DIP5S	13,23,33, 14,24,24	151	0	0	150	150	65	225	225	90
132	DIPAE	13,23,33, 14,24,24	532, 132	135	0	250	150	65	375	225	90
Fault Block 2											
2322	Rhyolite	13,23,33, 14,24,24	2322	45	0	250	150	65	375	225	90
235	DIP5N	13,23,33, 14,24,24	235	0	0	200	200	65	300	300	90
22	Andesite	13,23,33, 14,24,24	22	0	0	200	200	65	300	300	90
422	Rhyolite	13,23,33, 14,24,24	422	0	0	200	200	65	300	300	90
42	Andesite	13,23,33, 14,24,24	42	0	0	200	200	65	300	300	90
112	Andesite	13,23,33, 14,24,24	112	135	0	250	150	65	375	225	90
1122	Rhyolite	13,23,33, 14,24,24	1122	135	0	250	150	65	375	225	90
Altar North											
62	Andesite	62	0	0	200	200	65	300	300	90	62
610	Intrusives	610	0	0	200	200	65	300	300	90	610

Source: IMC, 2024

Note: All Cases utilized 1/D3, Maximum of 10 composites, Minimum of 1 composite, Maximum of 3 per drill hole

The estimation of total copper within the supergene zone utilized hard mineral zone boundaries so that only supergene composites were used to estimate supergene blocks. As noted previously, most boundaries in the supergene area were soft boundaries and were applied to change the search orientation to better align with the geometry of mineralization.

Table 14-10: Total Copper Estimation Parameters in the Supergene Zone

Total Copper Supergene Domain	Fault Block	Lithology	Composites Used		Primary Direction and Distance				Secondary Distance (m)	Vertical Distance (m)
			Mineral Zone	Supercudom Domain	Direction (°)	Plunge (°)	Rot Clk Deg.	Distance (m)		
1	1	Rhy	12	1	180	10	0	250	250	65
2	1	Rhy	12	1	0	10	45	250	200	65
	5	Rhy+And	12	1						
	11	Rhy	12	1						
3	1	Rhy	12	1	230	10	20	250	250	65
	5	Rhy+And	12	1						
	11	Rhy	12	1						
4	1	AND+Dip5S	12	2	30	15	30	250	200	65
5	5	DAC+DIPAE	12	3	215	0	0	250	250	65
	1	DIPAE								
6	5	DAC+DIPAE	12	3	250	15	65	250	200	65
7	4	Rhy+DAC	32	4	0	0	0	200	200	65
8	2	RHY+AND+Dip5N+DAC	22	4	80	0	45	250	200	65
	3	Rhyolite								
9	1	DIP5S	12	2	180	10	0	250	250	65
10	6	All Lith Codes	22	5	0	45	0	250	250	65

Source: IMC, 2024

Note: All Cases utilized 1/D3, Maximum of 10 composites, Minimum of 1 composite, Maximum of 3 per drill hole

Sequential Copper Block Grade Estimation

Aldebaran completed a significant number of sequential copper assays targeting the supergene and surrounding mineral zones of the deposit. The sequential process applied at Altar was to initially complete a sulphuric acid soluble assay, followed by rinsing and a cyanide soluble assay on the residual of the acid soluble. The residue remaining after the cyanide soluble assay was rinsed and subject to a total copper assay. The intent is to indicate the copper mineral species that are available in the rock mass.

IMC has chosen to estimate the ratios of the sequential assays to total copper rather than the assays themselves. This procedure is applicable when the number of sequential assays is not consistent with the number of total assays. It also reflects the distribution of chemical leaching and enrichment, independent of the original total copper grade of the sample location. Tests of alternative methods were completed and are reported later in this section regarding model checks.

The sequential grades were assigned to the leached cap, supergene, mixed, and hypogene zones. There are minor sequential results in the upper portion of the hypogene zone. Table 14-11 summarizes the procedure applied to the estimate of sequential ratios.

Table 14-11: Estimation Procedures for Sequential Ratio Estimation

Superatdom Domain Code	Description	Composites Used		Primary Direction and Distance				Secondary Distance (m)	Vertical Distance (m)
		Mineral Zone	Fault Block	Direction (°)	Plunge (°)	Rotation Clkw Deg.	Distance (m)		
Acid Ratio and Cyanide Ratio Estimation Procedures in Leached Cap									
32	West Min Zones	21,31	1,2,3,5,11	30	15	30	250	200	65
33	East Min Zones	21,31	1,2,3,5,11	250	15	65	250	150	65
34		31	4	0	0	0	250	250	65
35		21	1,2,3,5,11	180	10	0	250	250	65
26	Central 12	11	1,2,3,5,11	230	10	20	250	250	65
Acid Ratio and Cyanide Ratio Estimation Procedures in Supergene									
1	Floating Zone	12, 22, 32	1,2,3,5,11	180	10	0	250	250	65
2	West Min Zones	22, 32	1,2,3,5,11	30	15	30	250	200	65
3	East Min Zones	22, 32	1,2,3,5,11	230	10	20	250	250	65
4		32	4	0	0	0	250	250	65
5		22	1,2,3,5,11	180	10	0	250	250	65
6	Central 12	12	1,2,3,5,11	230	10	20	250	250	65
Acid Ratio and Cyanide Ratio Estimation Procedures in Mixed									
12	West Min Zones	23, 33	1,2,3,5,11	180	10	0	250	250	65
13	East Min Zones	23, 33	1,2,3,5,11	30	15	30	250	200	65
14		33	4	0	0	0	250	250	65
15		23	1,2,3,5,11	180	10	0	250	250	65
16	Central 12	13	1,2,3,5,11	230	10	20	250	250	65
Acid Ratio and Cyanide Ratio Estimation Procedures in Hypogene									
22	West Min Zones	24, 34	1,2,3,5,11	30	15	30	250	200	65
23	East Min Zones	24, 34	1,2,3,5,11	250	15	65	250	150	65
24		34	4	0	0	0	250	250	65
25		24	1,2,3,5,11	180	10	0	250	250	65
26	Central 12	14	1,2,3,5,11	230	10	20	250	250	65

Source: IMC, 2024

Note: All Cases utilized 1/D3, Maximum of 10 composites, Minimum of 1 composite, Maximum of 3 per drill hole

There was no need to apply the extended search to the sequential ratio estimation because only a few blocks within the supergene zone were not estimated at the radii indicated.

A few un-estimated blocks of sequential ratios within the supergene zone were assigned default values based on the estimated block average of the domain.

Once the ratios were assigned to the blocks, the estimates of acid soluble copper and cyanide soluble copper were assigned to the blocks by multiplying the total copper grade by the appropriate ratio.

Gold, Silver, Molybdenum, and Accessory Element Block Grade Estimation

The estimation of gold, silver, molybdenum, lead, zinc, and antimony did not respect the mineral zone boundaries. Boundary analysis confirmed that mineral zones do not have an impact on these element's mineralization. The domains as shown on Table 14-7 were used to estimate these elements using inverse distance to the three power. Table 14-12 summarizes the procedures applied to gold, silver, molybdenum, lead, zinc, and antimony.

Table 14-12: Estimation Parameters for Gold, Silver, Moly, Lead, Zinc, Antimony

All Mineral Zones Combined				First Pass Search 1/D3					Second Pass Search 1/D3 Distance (m)		
				Primary Direction and Distance			Secondary Distance (m)	Vertical Distance (m)	Primary	Secondary	Vertical
Model Domain	Lith	Composites		Direction (°)	Plunge (°)	Distance (m)					
		Min_zone	Domain								
Fault Block 5											
52	Andesite	All mineral zones	52	135	0	250	150	65	375	225	90
524	Rhy+Dac	All mineral zones	524	135	25	250	150	65	375	225	90
532	DIPAE	All mineral zones	532, 132	135	0	250	150	65	375	225	90
Fault Block 1											
12	Andesite	All mineral zones	12	45	0	250	150	65	375	225	90
1223	Rhyolite	All mineral zones	1223	45	0	250	150	65	375	225	90
151	DIP5S	All mineral zones	151	0	0	150	150	65	225	225	90
132	DIPAE	All mineral zones	532, 132	135	0	250	150	65	375	225	90
Fault Block 2											
2322	Rhyolite	All mineral zones	2322	45	0	250	150	65	375	225	90
235	DIP5N	All mineral zones	235	0	0	200	200	65	300	300	90
22	Andesite	All mineral zones	22	0	0	200	200	65	300	300	90
422	Rhyolite	All mineral zones	422	0	0	200	200	65	300	300	90
42	Andesite	All mineral zones	42	0	0	200	200	65	300	300	90
112	Andesite	All mineral zones	112	135	0	250	150	65	375	225	90
1122	Rhyolite	All mineral zones	1122	135	0	250	150	65	375	225	90
Altar North											
62	Andesite	All mineral zones	62	0	0	200	200	65	300	300	90
610	Intrusives	All mineral zones	610	0	0	200	200	65	300	300	90

Source: IMC, 2024

Note: All Cases utilized 1/D3, Maximum of 10 composites, Minimum of 1 composite, Maximum of 3 per drill hole

Antimony was assigned default values if there was a total copper grade in the block and antimony was not estimated because it was beyond the search radius. The default values were based on the average grade of that domain. Defaults were not assigned for lead or zinc because their values were all low (generally less than 0.004%). The antimony defaults are summarized on Table 14-13.

Table 14-13: Antimony Default Values Where Required

Domain	Antimony (ppm)
12	24.080
52	28.980
62	36.050
524	13.900
1122	18.810
1223	22.240
2322	11.650

Source: IMC, 2024

Iron, Sulphur, and Pyrite Block Grade Estimation

Iron, sulphur, and pyrite used the same boundary controls during estimation. The boundary between the leached mineral zone and the supergene zone was a hard boundary. Within the leached mineral zone and the combined supergene, mixed, and hypogene zones, the domains as outline on Table 14-7 were applied. Table 14-15 summarizes the procedures applied to iron, sulphur, and pyrite. Pyrite estimation is based on the visual estimate of pyrite percentage by the Aldebaran geologists during the logging process. By contrast, iron and sulphur are based on laboratory assays.

Default values were assigned for iron and sulphur if the total copper grade was present and there was no value of iron or sulphur in the block. The default value is the average of the estimated block values in each domain. Table 14-14 summarizes the default values that were assigned.

Table 14-14: Default Values for Iron, Sulphur, and Pyrite

Mineral Zones, Not Leached 12,22,32,13,23,33,14,24,34				Leached Mineral Zones 11,21,31		
Domain	Iron (%)	Sulfur (%)	Pyrite (%)	Iron (%)	Sulfur (%)	Pyrite (%)
12	3.269	3.980	2.29	NA	NA	0.53
52	3.152	2.286	0.95	NA	NA	0.52
62	4.378	2.648	1.32	NA	NA	0.52
151	NA	3.828	NA	NA	NA	0.91
422	2.540	2.077	2.23	NA	NA	0.31
524	2.466	NA	1.71	2.173	1.025	0.92
1122	2.660	2.429	2.06	NA	NA	NA
1223	3.133	3.432	2.60	NA	NA	NA
2322	1.825	2.028	1.42	1.093	0.390	0.27
235	NA	NA	NA	1.552	1.074	0.42
132	NA	NA	NA	NA	NA	0.20
532	NA	NA	NA	NA	NA	0.24
610	NA	NA	NA	NA	NA	0.68

Source: IMC, 2024

Table 14-15: Estimation Parameters for Iron, Sulphur, and Pyrite

Model Domain	Lith	Composites		First Pass Search 1/D3					Second Pass Search 1/D3 Distance (m)		
				Primary Direction and Distance			Secondary Distance (m)	Vertical Distance (m)	Primary	Secondary	Vertical
		Min_zone	Domain	Direction (°)	Plunge (°)	Distance (m)					
Leached Mineral Zone											
Fault Block 5											
52	Andesite	11,21,31	52	135	0	250	150	65	375	225	90
524	Rhy+Dac	11,21,31	524	135	25	250	150	65	375	225	90
532	DIPAE	11,21,31	532, 132	135	0	250	150	65	375	225	90
Fault Block 1											
12	Andesite	11,21,31	12	45	0	250	150	65	375	225	90
1223	Rhyolite	11,21,31	1223	45	0	250	150	65	375	225	90
151	DIP5S	11,21,31	151	0	0	150	150	65	225	225	90
132	DIPAE	11,21,31	532, 132	135	0	250	150	65	375	225	90
Fault Block 2											
2322	Rhyolite	11,21,31	2322	45	0	250	150	65	375	225	90
235	DIP5N	11,21,31	235	0	0	200	200	65	300	300	90
22	Andesite	11,21,31	22	0	0	200	200	65	300	300	90
422	Rhyolite	11,21,31	422	0	0	200	200	65	300	300	90
42	Andesite	11,21,31	42	0	0	200	200	65	300	300	90
112	Andesite	11,21,31	112	135	0	250	150	65	375	225	90
1122	Rhyolite	11,21,31	1122	135	0	250	150	65	375	225	90
Altar North											
62	Andesite	11,21,31	62	0	0	200	200	65	300	300	90
610	Intrusives	11,21,31	610	0	0	200	200	65	300	300	90
Supergene, Mixed, and Hypogene Combined											
Fault Block 5											
52	Andesite	12,22,32,13,23,33,14,24,34	52	135	0	250	150	65	375	225	90
524	Rhy+Dac	12,22,32,13,23,33,14,24,34	524	135	25	250	150	65	375	225	90
532	DIPAE	12,22,32,13,23,33,14,24,34	532, 132	135	0	250	150	65	375	225	90
Fault Block 1											
12	Andesite	12,22,32,13,23,33,14,24,34	12	45	0	250	150	65	375	225	90
1223	Rhyolite	12,22,32,13,23,33,14,24,34	1223	45	0	250	150	65	375	225	90
151	DIP5S	12,22,32,13,23,33,14,24,34	151	0	0	150	150	65	225	225	90
132	DIPAE	12,22,32,13,23,33,14,24,34	532, 132	135	0	250	150	65	375	225	90
Fault Block 2											
2322	Rhyolite	12,22,32,13,23,33,14,24,34	2322	45	0	250	150	65	375	225	90
235	DIP5N	12,22,32,13,23,33,14,24,34	235	0	0	200	200	65	300	300	90
22	Andesite	12,22,32,13,23,33,14,24,34	22	0	0	200	200	65	300	300	90
422	Rhyolite	12,22,32,13,23,33,14,24,34	422	0	0	200	200	65	300	300	90
42	Andesite	12,22,32,13,23,33,14,24,34	42	0	0	200	200	65	300	300	90
112	Andesite	12,22,32,13,23,33,14,24,34	112	135	0	250	150	65	375	225	90
1122	Rhyolite	12,22,32,13,23,33,14,24,34	1122	135	0	250	150	65	375	225	90
Altar North											
62	Andesite	12,22,32,13,23,33,14,24,34	62	0	0	200	200	65	300	300	90
610	Intrusives	12,22,32,13,23,33,14,24,34	610	0	0	200	200	65	300	300	90

Source: IMC, 2024
Note: All Cases utilized 1/D3, Maximum of 10 composites, Minimum of 1 composite, Maximum of 3 per drill hole

Arsenic Block Grade Estimation

Enargite rich vein structures as illustrated on Figure 14-4 account for most of the higher grade arsenic in the Altar deposit. Many of the vein structures are interpreted to be narrow and near vertical in orientation. In order to estimate the arsenic grade inside and outside of the structures, a separate composite file was developed for arsenic where the arsenic values were composited inside of the structures to respect interpreted wire frame boundaries. Outside of the structures, nominal 15-m down hole composites were calculated during the composite process.

Arsenic grade estimation is accomplished in two passes: 1) Estimation of grades inside the arsenic structures using composites from inside the structures, and 2) Estimation of grades outside of the arsenic structures using composites that are outside of the structures.

The result is generally two arsenic grades stored within every block, the in-structure grade, and the out-of-structure grade. The final average arsenic grade for the block is calculated as a weighted average of those two variables, weighted by the block fraction in-structure versus out-of-structure.

Estimation inside of the structures was based on inverse distance cubed with search radii of 300 x 300 meters parallel to the structure and 75 m perpendicular to the structure. Structures were treated as hard boundaries when estimating arsenic inside the structures. If an arsenic block containing an arsenic structure was not estimated due to distance from a sample, the average grade of the structure was assigned based on all of the block fractions in the structure that had been estimated. The default values inside the structures were:

Grade assigned inside the structure

- Code 2: NE strike: 580.38 ppm
- Code 4: NW strike: 610.17 ppm
- Code 1 in the supergene area did not require default assignments.

Outside of the structures, the two stage estimation process was applied utilizing the same domain boundaries as summarized on Table 14-7 with the same search parameters that were used for hypogene total copper.

CPAS Block Grade Estimation

The northeast striking Crowded Porphyry Dikes (CPAS) that are in the southern portion of the Altar deposit are interpreted to be late-stage occurrences and are typically lower grade than the rest of the deposit average. Separate grade estimates were developed for the CPAS dikes to reflect this low-grade trend.

In many cases, the CPAS dikes are narrower than the 15-m model blocks. The blocks that contain the dikes were coded based on the CPAS solids provided by Aldebaran personnel.

The grade of those blocks was estimated using the composite intervals that were logged as CPAS by inverse distance cubed with a search of 300 x 300 x 65 that was aligned with the strike and dip of the CPAS dikes (128 strike and 90 dip). Blocks that were still coded as containing CPAS material that were not estimated by inverse distance were assigned the following defaults to reflect the lower grade of the dikes compared to the surrounding mineralization. Table 14-16 summarizes the default values assigned to the CPAS dikes if they were not estimated by inverse distance.

Table 14-16: CPAS Dike Default Grades if not Estimated

Mineral Zone		Copper (%)	Gold (ppm)	Silver (ppm)	Moly (ppm)
Description	Codes				
Leached	11 21 31	0.010	0.194	2.42	7.29
Supergene	12 22 32	0.174	0.089	3.78	3.25
Mixed	13 23 33	0.162	0.053	1.11	6.18
Hypogene	14 24 34	0.162	0.053	1.11	6.18

Source: IMC, 2024

Block Density Estimation

Density was estimated based on the density data collected by Aldebaran and prior owners. In total there were 3,529 density determinations available in the Altar model area. The specific gravity data in the assay database was assigned to the composite database for convenience. In this process there was no effective composting.

Block densities were estimated from that data respecting the rock type and fault block using inverse distance cubed and a search radius of 275 m circular on plan and 200 m vertical. Within the DIPAE unit, the search was rotated to be 275 x 200 on plan and 275 m vertical. In all cases, a maximum of 10 composites, a minimum of 1 and a maximum of 3 per hole was applied. The limit of 3 per hole effectively limits the vertical averaging of the 200-m search.

Blocks that were not estimated were assigned the defaults on Table 14-17 based on the average density of the rock type, and mineral zone that was calculated from the density data.

Table 14-17: Default Densities if not Estimated by Inverse Distance

Model Lithology	Model Lithology Codes	Default SG by Mineral Zone			
		Leach 11 21 31	Supergene 12 22 32	Mixed 13 23 33	Hypogene 14 24 34
AND	12 22 32 42 52 62 2 82 92 112	2.38	2.52	2.52	2.68
CPAS	515	2.38	2.65	2.65	2.65
DACVv	14 24 44 54 74 114	2.43	2.53	2.67	2.67
DIP5N	25 35	2.42	2.49	2.63	2.68
DIP5S	151	2.35	2.51	2.51	2.67
DIPAE	132 532	2.34	2.44	2.58	2.69
NP 4,5,6	610611 612	2.38	2.56	2.56	2.69
RHY	122 222 322 422 522 722 822 1122	2.47	2.58	2.58	2.58
RHY2	123 523	2.47	2.58	2.58	2.63
RMB	624	2.36	2.47	2.47	2.64
Overburden	1	2.00	2.00	2.00	2.00

Source: IMC, 2024

Classification

Block classification was assigned to individual blocks following the guidelines set forth in the CIMM best practices that accompany NI 43-101. The determination was based on the estimation of copper, since copper, gold, and silver have the same number of available assays within the data set. Copper sample density is consequently the same for the other two positive economic minerals of gold and silver.

A separate inverse distance estimation run was completed that ignored the structure, lithology, and mineral zone boundaries. The grade estimate from this run was ignored but the average distance of composites used to estimate the block and the number of composites used to estimate the block were

stored. The intent of this procedure was to base the classification on the drill density and present a classification scheme that appears logical when reviewed on plan and section.

As with copper grade estimation, a two-pass procedure was applied. The first pass utilized the search parameters for the initial pass shown on Table 14-9. All of the boundaries on Table 14-9 were treated as soft boundaries in this case. From that initial run, the following procedures were applied to the entire Altar model.

- Measured = Number of Composites ≥ 10 , Average Distance ≤ 85 m, Code 1
- Indicated = Number of Composites ≥ 4 , Average Distance ≤ 140 m, Code 2
- Inferred = Any other estimated block, Code 3

Then, any blocks that had copper grades using the two pass procedures on Table 14-9, that were not coded as measured or indicated from the first pass, were assigned the code for inferred.

Model Verification

A number of tests were performed to confirm that the model is a reasonable representation of the data for the determination of mineral resources. Substantial time was spent checking cross-sections and plans against the supporting composite data during the model assembly process.

The numeric tests applied by IMC were:

- 1) Bias Check and Comparison between ID3, Nearest Neighbor, and Kriging
- 2) Swath Plots
- 3) IMC Smear Check
- 4) Classification Check
- 5) Estimation Method Check for Sequential Copper

Bias Check

IMC completed a nearest neighbor estimate for total copper using the same domain boundaries as applied to the inverse distance estimate of copper. The nearest neighbor estimate represents a de-clustered estimate of the average grade of composite data for each domain. That value was compared to the inverse distance estimate at a zero-cutoff grade. In addition, an ordinary kriging estimate was completed using the same search parameters as the inverse distance estimate. The kriging result is also provided for comparison.

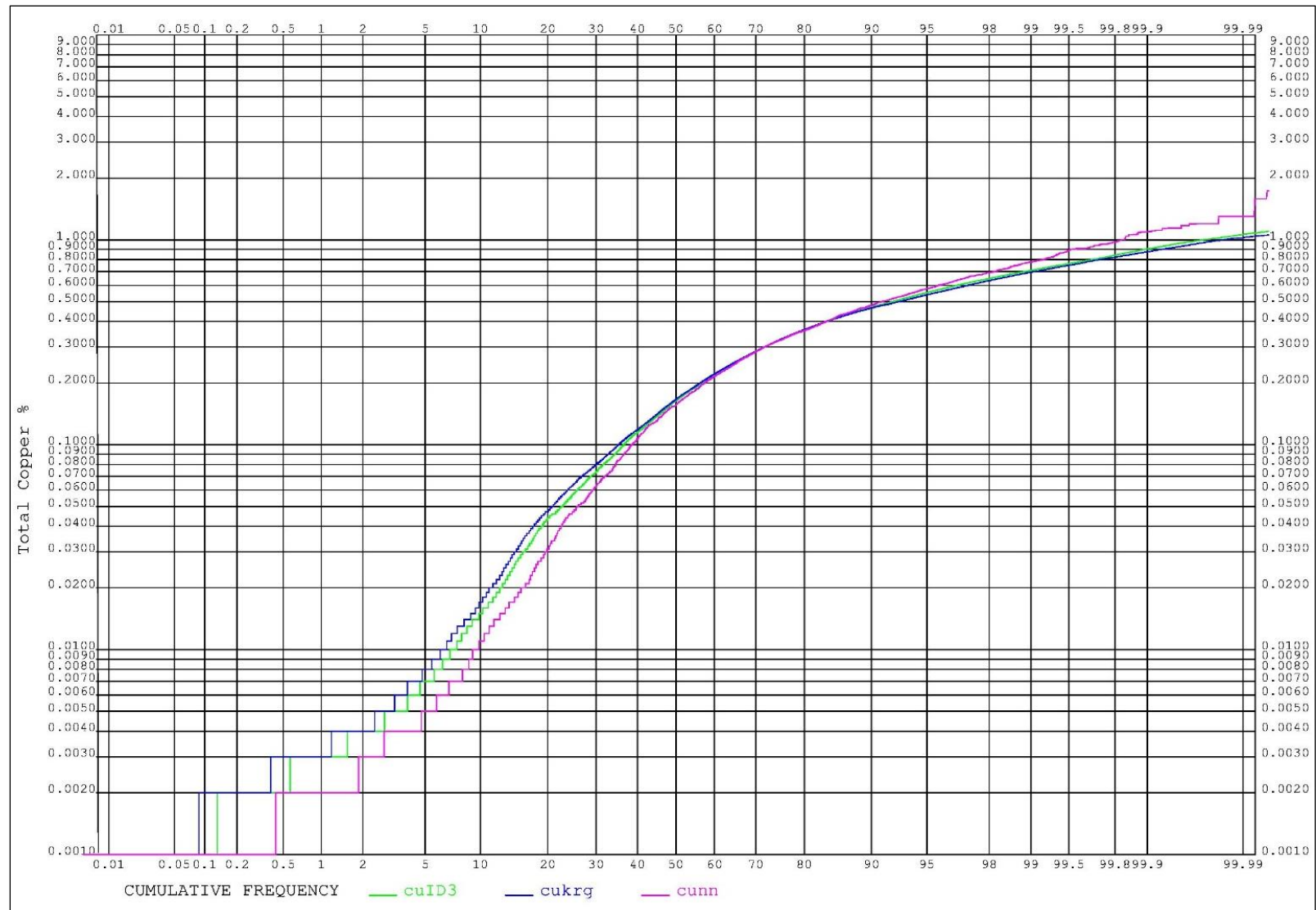
Table 14-18 summarizes the bias check results for the supergene, mixed, and hypogene mineral zones in each of the domains. The means of all methods are comparable.

Table 14-18: Bias Check of Total Copper

Supergene, Mixed, and Hypogene Blocks Combined								
Domain	Lith	Number of Blocks	Inverse Distance (%)		Nearest Neighbor (%)		Ordinary Kriging (%)	
			Mean	StdDev	Mean	StdDev	Mean	StdDev
Fault Block 5								
532	DipAE	120,237	0.438	0.1629	0.433	0.2005	0.433	0.1530
52	Andesite	85,006	0.358	0.1118	0.364	0.1276	0.363	0.0967
524	Rhy-Dac	438,024	0.118	0.1114	0.118	0.1250	0.121	0.1085
Fault Block 1								
12	Andesite	55,699	0.418	0.1553	0.414	0.1815	0.419	0.1429
1223	Rhyolite	51,631	0.141	0.1178	0.141	0.1336	0.141	0.1148
151	Dip5S	21,205	0.561	0.2010	0.557	0.2535	0.555	0.1896
132	DipAE	2,042	0.486	0.1395	0.480	0.1682	0.488	0.1370
Fault Block 2								
2322	Rhyolite	87,094	0.141	0.1051	0.139	0.1169	0.142	0.1020
235	Dip5N	32,669	0.206	0.1021	0.205	0.1267	0.206	0.0960
22	Andesite	9,047	0.234	0.1281	0.236	0.1319	0.234	0.1272
Fault Block 4								
422	Rhyolite	40,450	0.208	0.1276	0.204	0.1514	0.207	0.1210
42	Andesite	17,805	0.312	0.1155	0.311	0.1185	0.310	0.1142
Fault Block 11								
112	Andesite	15,352	0.109	0.0842	0.108	0.0936	0.111	0.0718
1122	Rhyolite	35,244	0.070	0.0531	0.069	0.0647	0.070	0.0520
Fault Block 6 (Altar North)								
62	Andesite	13,134	0.006	0.0021	0.006	0.0022	0.006	0.0020
All Estimated Blocks		1,024,639	0.212		0.211		0.213	

Source: IMC, 2024

The overall comparison of copper distribution for inverse distance, nearest neighbor and ordinary kriging, are summarized on Figure 14-8. All domains and mineral zones are combined on the graph. As expected, the highest block variance occurs with nearest neighbor and the lowest with ordinary kriging. The inverse distance estimate properly falls between the other two estimates.



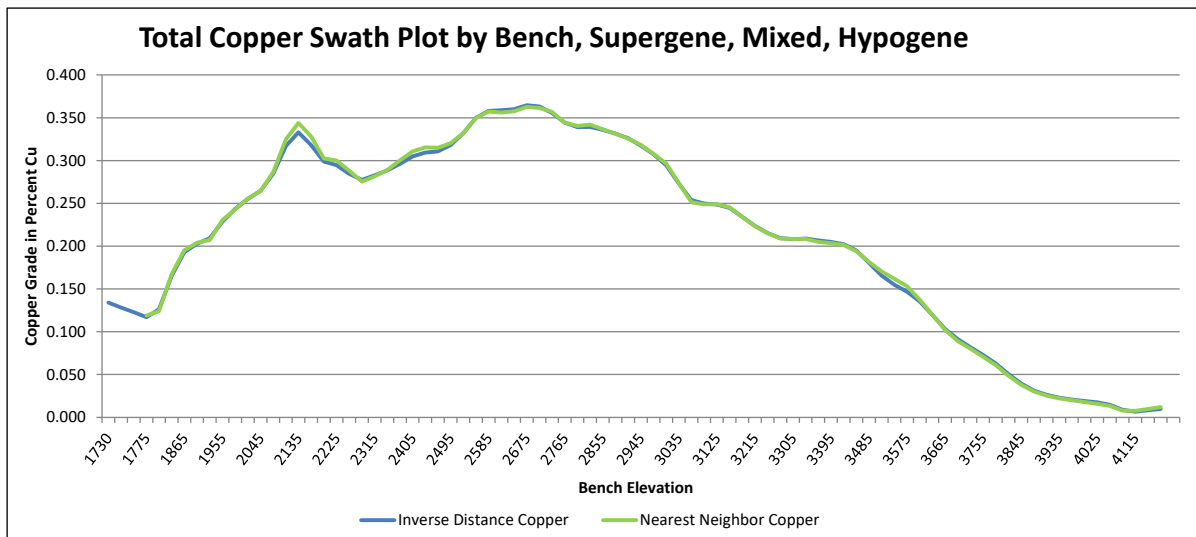
Source: IMC, 2024

Note: Comparing the Distribution of Inverse Distance, Nearest Neighbor and Ordinary Kriging

Figure 14-8: Cumulative Frequency Plot for Copper, All Domains, All Mineral Zones

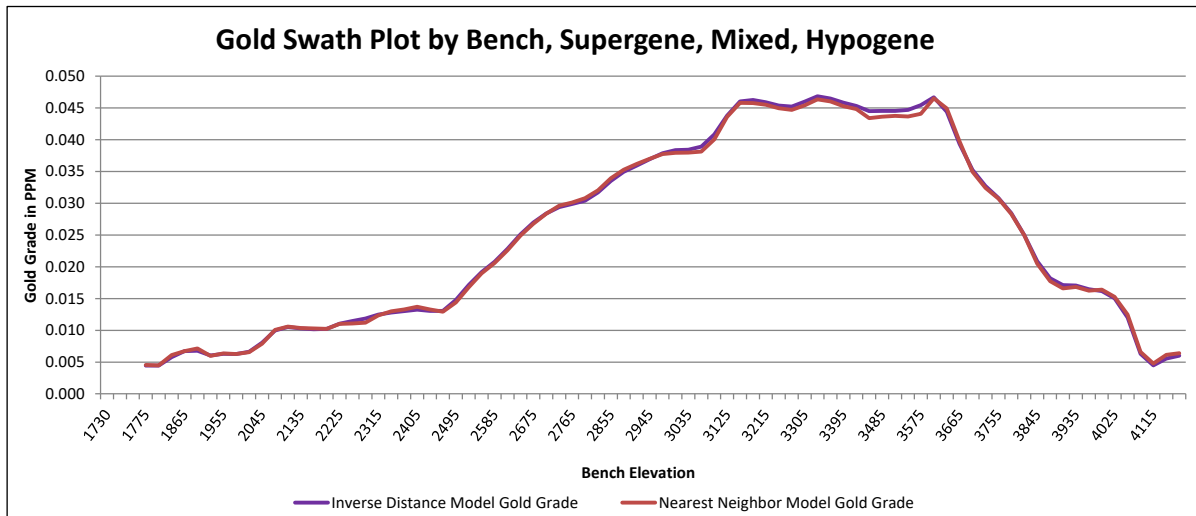
14.1.13 Swath Plots

Swath plots were generated by bench for total copper, gold, and silver. To eliminate issues with clustering, the nearest neighbor mean on each 30-m horizontal slice was compared to the inverse distance model result on the same horizontal slice. These swath plots were generated for the first pass of block grade estimate and cover the material that is measured, indicated and a portion of the inferred. Figure 14-9, Figure 14-10, and Figure 14-11 illustrate the swath plots for copper, gold, and silver.



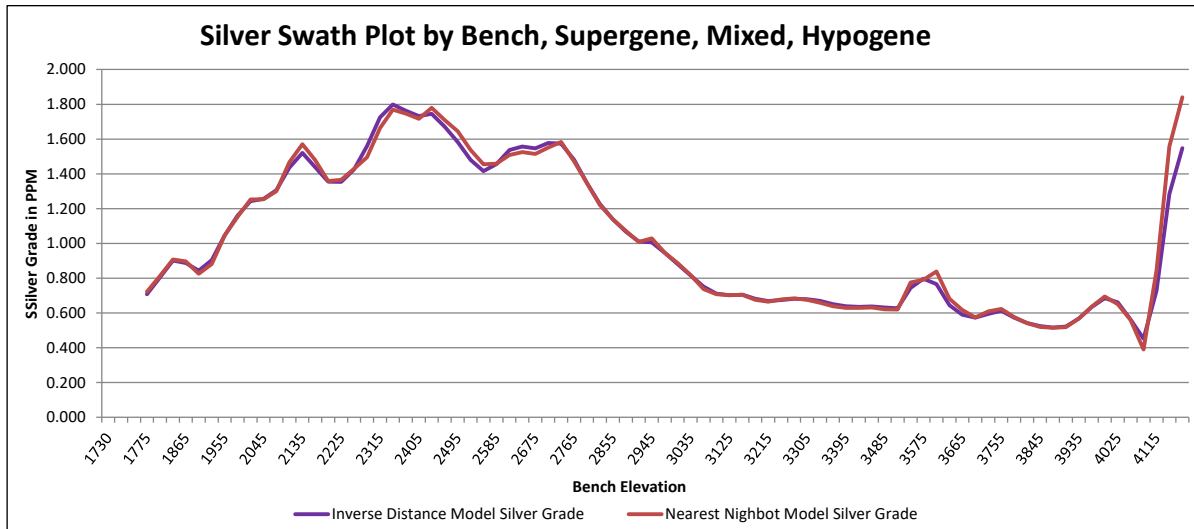
Source: IMC, 2024

Figure 14-9: Total Copper Swath Plot



Source: IMC, 2024

Figure 14-10: Gold Swath Plot



Source: IMC, 2024

Figure 14-11: Silver Swath Plot

14.1.14 IMC Smear Check

IMC has developed a simple test to understand how well the block model follows local grade changes by comparing the block model to the contained composites. A range of cutoff grades is tested. At each cutoff, the blocks above cutoff within the model were selected. All composites within those block cutoff outlines were found and compared to the block grades.

The column labeled “Percent less than cutoff” is a tabulation of the percentage of the composites within the model shape that are less than the selected cutoff. Values in the range of 20% or greater often indicate that the model would not provide a good local estimates of head grade versus cutoff. The low percentages for Altar indicate that the model has not over smoothed the deposit distribution and that grade – tonnage estimates should be indicative of the mining response to the application of a cutoff grade.

In addition, the average block grade on Table 14-19 should always be less than the average grade of the contained composites. This is because the block grades relied on some composites that are outside of the grade envelop in the estimation process. Table 14-19 illustrates the results for Altar supergene, mixed, and hypogene mineralization.

Table 14-19: Comparison of Block Grades Versus Contained Composite Grades

Total Copper					
Cut-Off Tested	Composites Less than Cut-Off (%)	Number of Composites in Shape	Composite Grade in Shape (%)	Number of Blocks in Shape	Model Grade (%)
0.00	0.00	9,098	0.246	1,504,623	0.194
0.10	1.85%	6,040	0.353	906,402	0.299
0.20	2.83%	4,525	0.419	610,898	0.372
0.30	3.13%	3,133	0.494	384,045	0.447
0.40	5.42%	1,975	0.581	216,665	0.524
0.50	6.44%	1,196	0.668	99,023	0.617
Gold					
Cut-Off Tested	Composites Less than Cut-Off (ppm)	Number of Composites in Shape	Composite Grade in Shape (ppm)	Number of Blocks in Shape	Model Grade (ppm)
0.00	0.00%	9,098	0.059	1,526,093	0.034
0.05	4.91%	3,482	0.114	300,246	0.093
0.10	7.03%	1,380	0.181	79,368	0.167
0.15	7.21%	680	0.243	35,112	0.226
0.20	4.75%	379	0.308	17,659	0.279
0.25	3.38%	207	0.376	9,027	0.335
Silver					
Cut-Off Tested	Composites Less than Cut-Off (ppm)	Number of Composites in Shape	Composite Grade in Shape (ppm)	Number of Blocks in Shape	Model Grade (ppm)
0.00	0.00%	9,098	0.948	1,523,157	0.828
0.50	4.87%	5,806	1.305	902,915	1.188
1.00	7.01%	3,068	1.822	438,114	1.691
2.00	13.57%	862	2.921	94,681	2.827
3.00	13.01%	269	4.256	23,669	4.185
4.00	8.33%	96	6.112	7,851	5.759
5.00	2.38%	42	8.387	3,708	7.280

Source: IMC, 2024

14.1.15 Classification Check

Some practitioners have adopted a confidence criteria for the declaration of measured and indicated mineralization. The general criteria is as follows:

- Measured: The + or - 90% confidence bound on grade for 3 months of mineralization is less than + or – 15% of the average quarterly grade.
- Indicated: The + or – 90% confidence bound on grade for 1 year of mineralization is less than + or – 15% of the average annual grade.

To complete this test, IMC selected three test areas within the Altar East and Altar Central zones of the deposit. The three areas are important zones of Altar mineralization. The first is in the DIPAE or Altar East Diorite Porphyry. The selected zone has been coded as measured in the block model. The second test is in the DIP5S rock unit, or the south diorite porphyry within the Altar Central area. The second test is also measured mineralization. The third test is within andesite in fault block 1 which was coded as indicated. All tests are on total copper grade in the hypogene mineral zone.

The annual production rate is not known, but the expectation is that Altar will be a high production operation, so relatively large tonnage geometries were selected for the test. Table 14-20 summarizes the results of the tests.

The 90% confidence band was established for each test area by estimating the grade of the entire test volume with all the contained and surrounding data in the search radius using ordinary kriging. The search parameters were identical to the first pass inverse distance estimate (typically 250 x 150 m). The sill was set to the variance of the population with a nugget at 10% of the sill. This is not to be confused with kriging of the resource model blocks. The entire test volume of 12,300 Ktonnes was kriged in the first test on Table 14-20.

The first test zone in DipAE was selected in an area categorized as measured resources. Two tests were completed: 1) A quarter of production at 135,000 tpd, and 2) A quarter of production at 54,700 tpd. The kriged variance for the tested volume was converted to a standard deviation by taking the square root. That standard deviation was multiplied by 1.645 to establish the 90% confidence limit on the estimate. The mean of the same volume was multiplied by 0.15 to establish the 15% grade range on the quarterly. The 90% confidence band is compared to the 15% grade range. If the confidence band is smaller, the test is marked as “Pass” to indicate that the criteria are met.

The second test zone is in Dip5S for similar production rates. As in the DipAE, the tests indicate that the material could be considered as measured at both tested production rates.

The third test zone is andesite in fault block1. In this case, the tested areas amount to one year at 74,800 tpd and one quarter at 70,200 tpd. The annual case meets the test criteria, but the quarterly case does not. The result is that the zone is properly categorized as indicated because it meets the criteria for annual production, but it does not meet the criteria for quarterly confidence at 70,000 to 74,000 tpd.

Table 14-20: Classification Check Using 90% Confidence Bound on Annual and Quarterly Test Areas

Description of Test Area	Bench Range		Number of Blocks in Test	Ktonnes In Test Volume	Shape Grade TotCu (%)	Shape Stan Dev TotCu (%)	90% Conf Range + - TotCu (%)	15% Grade Range + - TotCu (%)	Result
	From	To							
Domain 532, DipAE, Coded as Measured									
Measured Zone, assuming one quarter of production is 12,300 Kt or roughly 135,000 tpd									
Test 1	3,440	3,380	1,343	12,300	0.459	0.031	0.051	0.069	Pass
Measured Zone, assuming one quarter of production is 4,994 Kt or roughly 54,700 tpd									
Test 2	3,440	3,425	544	4,994	0.479	0.032	0.053	0.072	Pass
Domain 151 Dip5S, Fault Block 1, Coded as Measured									
Measured Zone, assuming one quarter of Production at 12,272 Kt or roughly 135,000 tpd									
Test 1	3,365	3,305	1,407	12,272	0.507	0.039	0.064	0.076	Pass
Measured Zone, assuming one quarter of Production at 4,758 Kt or roughly 52,100 tpd									
Test 2	3,365	3,350	550	4,758	0.579	0.041	0.067	0.087	Pass
Domain 12, Andesite, Fault Block 1, Coded as Indicated									
Indicated Zone, assuming 1 Year of Production at 27,303 Kt/yr = 74,800 tpd									
Test 1	2945	2825	2985	27,313	0.43968	0.032133	0.053	0.066	Pass
Indicated Zone, assuming 1 Qtr of Production at 6,404 Kt/Qtr or roughly 70,200 tpd									
Test 2	2900	2885	700	6,404	0.413	0.037	0.061	0.062	Fail

Source: IMC, 2024

14.1.16 Estimation Method Check on Sequential Copper

A previous section described how IMC estimated the grades of cyanide soluble copper and acid soluble copper for the Altar deposit. In summary, the IMC method for sequential copper estimation is as follows:

- 1) IMC calculates the ratio of cyanide soluble to total copper and the ratio of acid soluble to total copper using the assays, and
- 2) Composites those ratios to 15-m down hole composites.
- 3) Assign the ratios to the blocks by inverse distance methods.
- 4) Calculate the block grade of cyanide soluble and acid soluble by multiplying the respective ratio times the total copper grade.

Other practitioners prefer to estimate the cyanide soluble grade and acid soluble grades directly to the blocks as independent variables. The direct estimation method is summarized below:

- 1) Composite the cyanide soluble and acid soluble assays into 15-m composites.
- 2) Estimate the block grades by inverse distance (in this case) using the composites where total copper, cyanide soluble copper, and acid soluble copper composites all exist.
- 3) Optionally, correct or factor the cyanide and acid soluble grades when their total exceeds the estimated total copper for the block.

IMC completed both methods in the supergene zone. The domains for estimating sequential copper grades differed between the "IMC method" and the "direct estimation" method because the direct estimation method requires that the sequential copper estimates be performed with the same search orientations and domains as total copper (Table 14-10). Search orientations and domains used in the estimate for sequential ratios for the "IMC method" were provided in Table 14-11.

A comparison of the two methods was completed by calculating the mean of the resulting cyanide and acid soluble block grades within the supergene mineral zone. Table 14-21 summarizes the results.

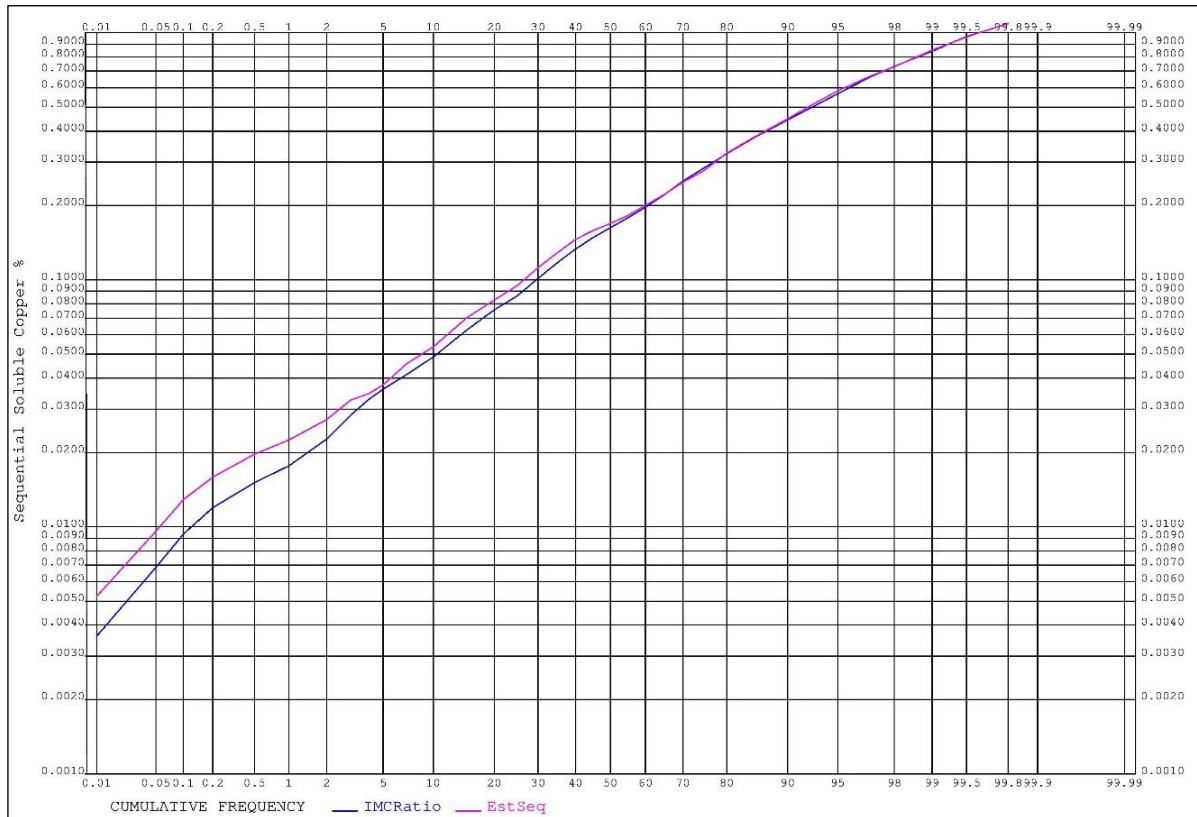
Table 14-21: Sequential Copper Grade Estimate Comparison of Methods, Supergene Mineral Zone

Sequential Copper Parameter	Number of Blocks Estimated by Both Methods	IMC Ratio Method Mean (%)	Direct Estimate Mean (%)	Corrected Direct Estimate Mean (%)
Acid Soluble Copper	51,111	0.0374	0.0368	0.0355
Cyanide Soluble Copper	51,111	0.1756	0.1816	0.1735

Source: IMC, 2024

Prior to any adjustments to the block grades by the Direct method, the total of acid soluble + cyanide soluble for the two methods are within 2.5% of each other with the direct method being higher. There were, however, 12.5% of the blocks where the direct method had estimated the total of cyanide plus acid soluble to be greater than total copper. After correction of those values so that they do not exceed total copper, the IMC method and the Direct method are within 2% with Direct low.

To check the impact on the grade distribution, cumulative frequency plots of the combined total of acid soluble plus cyanide soluble were completed. This value represents the total soluble copper that would be available to a conventional heap leach operation.

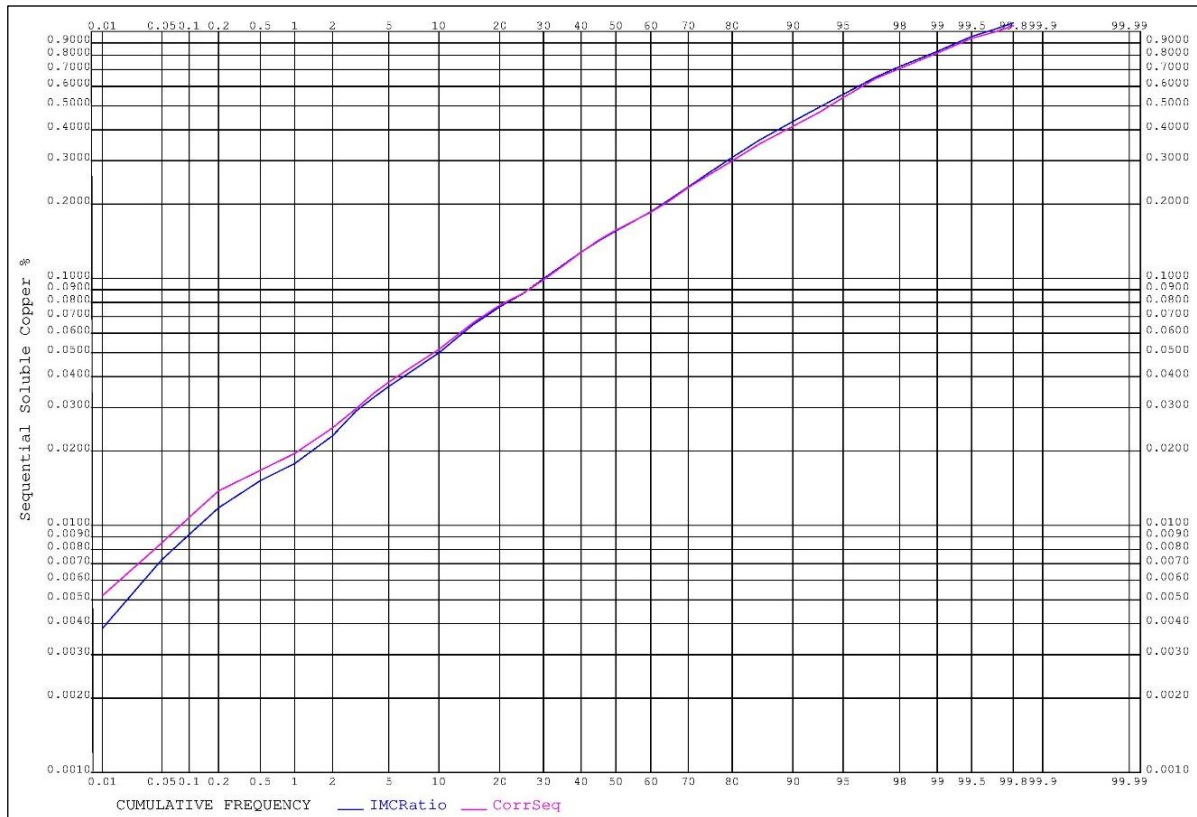


Source: IMC, 2024

Figure 14-12: Comparison of IMC Sequential Method to Uncorrected Direct Method

The blue line represents the IMC method estimating ratios. The magenta line represents the uncorrected result from assignment of cyanide soluble copper and acid soluble copper by the direct method.

If the 12.5% of the blocks where the total sequential values are greater than total copper, the result is summarized on Figure 14-13.



Source: IMC, 2024

Figure 14-13: Comparison of IMC Sequential Method to the Corrected Direct Method

The blue line represents the IMC method, and the magenta line represents the Direct method after the total of sequential assays are corrected so they do not exceed total copper.

In summary the IMC method and the Direct method produce similar results.

14.2 Quebrada de la Mina Model

The QDM model was not updated during 2024. This section summarizes the work completed during 2021 that was reported in the previous Technical Report dated 22 March 2021. QDM is a gold and silver occurrence near surface with an adjacent deep porphyry style copper mineral trend called the Radio Porphyry. For more detail, please reference the 2021 Technical Report.

At that time the QDM deposit was contained within a large block model that included both QDM and Altar. During 2024, Altar was broken out into a separate block model.

The mineral resource at QDM was developed using pit optimization software. Economic benefit was applied to gold and silver only.

The qualified person for the mineral resource at QDM is John Marek of Independent Mining Consultants, Inc. (IMC). Drilling and geologic interpretation were provided to IMC in late October 2020 and includes all drilling completed at site, including that during the 2019 and early 2020 season. Jacob Richey visited the QDM and Altar sites during April of 2024. Mr. Richey is also a QP on QDM along with John Marek.

14.2.1 Model Location

As noted above, QDM was contained within a larger block model that encompassed both QDM and Altar. The coordinates and location of the component of the model that contained the QDM mineralization and mineral resource is summarized on Table 14-22.

Table 14-22: Location of the QDM Portion of the 2021 Block Model

Model Limits	QDM Portion of the 2021 Block Model, Corner Coordinates			
	Southwest	Northwest	Northeast	Southeast
Easting	2,354,600	2,354,600	2,357,500	2,357,500
Northing	6,516,500	6,519,000	6,519,000	6,516,500
Elevation Range	1700 to 4400 meters, 270 Benches			
Rotation	None			
Number of Blocks	East, Columns = 290; North, Rows = 250			
Block Size	10 x 10 x 10 meters			

Source: IMC, 2024

14.2.2 Drill Hole Data

There were 42 drill holes available during late 2020 for the assembly of the QDM block model. Those 42 holes contained 9,110 assay intervals within 18,493.5 meters of drilling. Table 14-23 summarizes the number of assays for each element that were used in the QDM model.

Table 14-23: Assay Data at QDM for 2021 Model

Assayed Parameter	QDM + Radio	
	Number	Mean
Copper (%)	9,065	0.142
Gold (gm/t)	9,065	0.197
Silver (gm/t)	9,065	1.284
Moly (ppm)	9,065	16.25
Arsenic (ppm)	9,065	117.1
Iron (%)	9,065	3.529
Lead (ppm)	9,065	52.20
Sulfur (%)	9,065	2.220
Antimony (ppm)	9,065	5.033
Zinc (ppm)	9,065	763.4

Source: IMC, 2024

14.2.3 Assay Caps

Assays were capped prior to compositing based on the lithology. Copper, gold, and arsenic assays were capped after review of cumulative frequency plots. Table 14-24 summarizes the cap values.

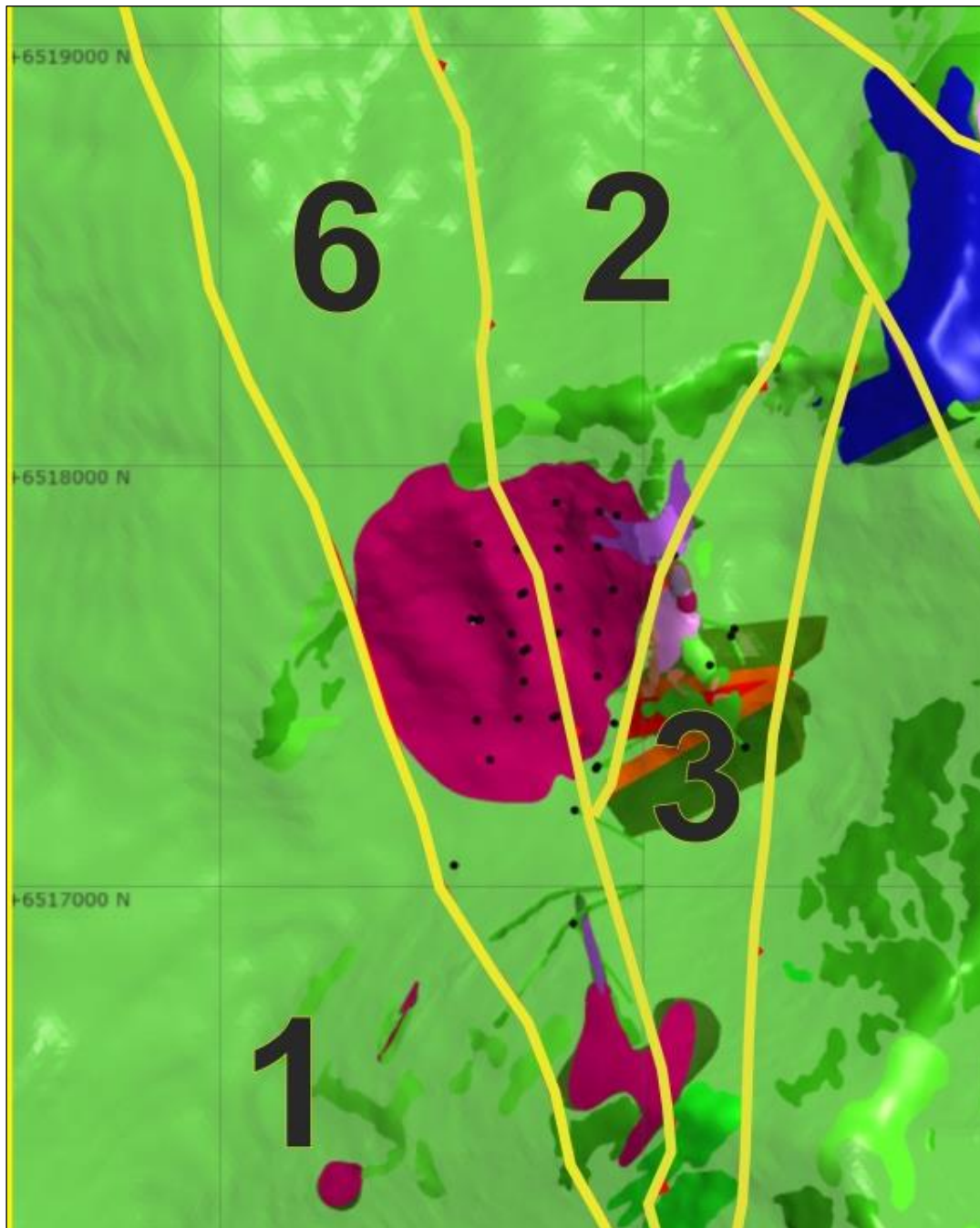
Table 14-24: QDM Assay Caps

Model Lith Code	Lithology Family Description	Cap Level		
		Copper (%)	Gold (ppm)	Arsenic (ppm)
AND	Andesite	2.50	2.00	500
DAC	Porphyritic dacite	0.30	4.00	2,000
RAD1	Radio Diorite Porphyry 1	2.0	2.0	1,200
RAD2	Radio Diorite Porphyry 2	0.5	0.4	300
RMB	Rock Milled Breccia	No Cap	1.50	2,000

Source: IMC, 2024

14.2.4 QDM Geology

Geologic solids were interpreted by Altar personnel and provided to IMC for review and model assembly. The primary rock types are listed on Table 14-24. The structure blocks were defined by two northwest striking and two north east striking blocks, resulting in four major fault blocks. Figure 14-14 illustrates the fault blocks that intersect QDM.



Source: Aldebaran Resources, 2021
Note: 1,000-m grid, north up

Figure 14-14: QDM Structure Blocks

Interpretated solids were also provided to define mineral zone and arsenic veins. The mineral zones were: Leached, Supergene, and Hypogene. Arsenic structures were assigned to the block model with a block fraction to represent the component of the block contained in the arsenic bearing vein.

14.2.5 Compositing

QDM utilized 10-m down-hole composites. Copper, silver, zinc, sulphur, gold, moly, antimony, lead, and iron composites respected the lithologic wire frame boundaries. Arsenic composites respected the arsenic wire frame boundaries.

14.2.6 Domains and Block Grade Estimation

Domains were established based on boundary analysis and evaluated lithology, mineral zone, and fault block boundaries. Interpreted arsenic vein solids established the arsenic domains and were hard boundaries for arsenic grade estimation.

Once the domains were established, the block grades were assigned by inverse distance cubed in an effort to improve the mine planning response of the block model to changes in mining method and changes in cutoff grade.

Table 14-25 summarizes the domains and estimation parameters applied to QDM.

Table 14-25: QDM Domains and Estimation Parameters

Oxidation	Estimate Lith	Use Lith Composites	Structure Blocks	Search Strike	Search Distance (m)
Copper, Silver, Zinc, Sulfur					
1 = Leached	All	All	All		200 x 200 x 50
2 = Supergene	All	All	All		200 x 200 x 50
1, OVB, Not Estimated					
3 = Hypogene	2, And +	2, And +	2	22.5	250 x 150 x 50
	4, DAC +	4, DAC +			
	24, RMB	24, RMB			
	31, MHB	31, MHB			
3 = Hypogene	2, And +	2, And +	6	22.5	250 x 150 x 250
	4, DAC +	4, DAC +			
	24, RMB +	24, RMB +			
	28, IB +	28, IB +			
3 = Hypogene	31, MHB	31, MHB	3	22.5	250 x 150 x 250
	2, And +	2, And +			
	4, DAC +	4, DAC +			
	24, RMB +	24, RMB +			
3 = Hypogene	15, RAD1 +	15, RAD1 +	2,3,4	0	200 x 200 x 250
3 = Hypogene	16, RAD1	16, RAD1	2,3,4	0	200 x 200 x 250
Gold, Moly, Antimony, Lead, Iron					
1, OVB, Not Estimated					
1=Leached +	2, And +	2, And +	2	22.5	250 x 150 x 50
2=Supergene+	4, DAC +	4, DAC +			
3 = Hypogene	24, RMB	24, RMB			
	31, MHB	31, MHB			
1=Leached +	2, And +	2, And +	6	22.5	250 x 150 x 250
2=Supergene+	4, DAC +	4, DAC +			
3 = Hypogene	24, RMB +	24, RMB +			
	28, IB +	28, IB +			
	31, MHB	31, MHB	3	22.5	250 x 150 x 250
1=Leached +	2, And +	2, And +			
2=Supergene+	4, DAC +	4, DAC +			
3 = Hypogene	24, RMB +	24, RMB +			
	28, IB +	28, IB +	3	22.5	250 x 150 x 250
	31, MHB	31, MHB			
1 + 2 + 3	15, RAD1 +	15, RAD1 +	2,3,4		200 x 200 x 250
1 + 2 + 3	16, RAD1	16, RAD1	2,3,4		200 x 200 x 250
1 + 2 + 3	18, RDcd	15, 16, 18	All		200 x 200 x 250
Arsenic					
1, OVB, Not Estimated					
1=Leached +	All	All	Inside		300 x 300 x 250
2=Supergene+			Arsenic		
3 = Hypogene			Veins		
1=Leached +	2, And +	2, And +	Outside		200 x 200 x 50
2=Supergene+	4, DAC +	4, DAC +	Arsenic		
3 = Hypogene	24, RMB	24, RMB	Veins		
	31, MHB	31, MHB	Struct= 2		
1=Leached +	2, And +	2, And +	Outside		200 x 200 x 50
2=Supergene+	4, DAC +	4, DAC +	Arsenic		
3 = Hypogene	24, RMB	24, RMB	Veins		
	31, MHB	31, MHB	Struct=6		
1=Leached +	2, And +	2, And +	Outside		200 x 200 x 250
2=Supergene+	4, DAC +	4, DAC +	Arsenic		
3 = Hypogene	24, RMB	24, RMB	Veins		
	31, MHB	31, MHB	Struct=3		

Source: IMC, 2024

14.2.7 Density

Density was estimated based on the density data collected by Aldebaran and prior owners. Block densities were estimated from that data respecting the oxidation state variable using inverse distance cubed and a search radius of 275 m circular on plan and 200 m vertical.

Blocks that were not estimated were assigned defaults based on the average density of the rock type and oxidation state. Table 14-26 summarizes the default densities assigned at QDM if the block density was not estimated.

Table 14-26: QDM Default Block Densities

QDM		
Oxidation State	Lithology	Default Density
1 Leached	2 AND	2.4195
2 Supergene	2 AND	2.5487
3 Hypogene	2 AND	2.6558
1 Leached	4 DAC	2.3859
3 Hypogene	4 DAC	2.5055
3 Hypogene	15 RAD 1	2.6711
3 Hypogene	15 RAD 2	2.6730
3 Hypogene	24 RMB	2.5791
NA	1 Overburden	2.0000
If Not Assigned		
1 Leached		2.4084
2 Supergene		2.5485
3 Hypogene		2.6160
Global		2.6692

Source: IMC, 2024

14.2.8 Classification

The parameters that were used to define the measured, indicated, and inferred categories at QDM are summarized below.

- QDM and radio porphyries:
 - Measured = Number of Composites ≥ 10 , Average Distance ≤ 85 m
 - Indicated = Number of Composites ≥ 4 , Average Distance ≤ 120 m
 - Inferred = Any other estimated block

14.2.9 Model Verification

The QDM component of the 2021 model was checked by a bias check, the IMC smear check described in the Altar model section, and swath plots. Visual comparisons on section and plan were also completed between the block model and the composite grades.

The metal of primary economic interest at QDM was gold. As a result, the checks were applied to the estimated gold grades.

Table 14-27 summarizes the bias check against composites and the IMC smear check.

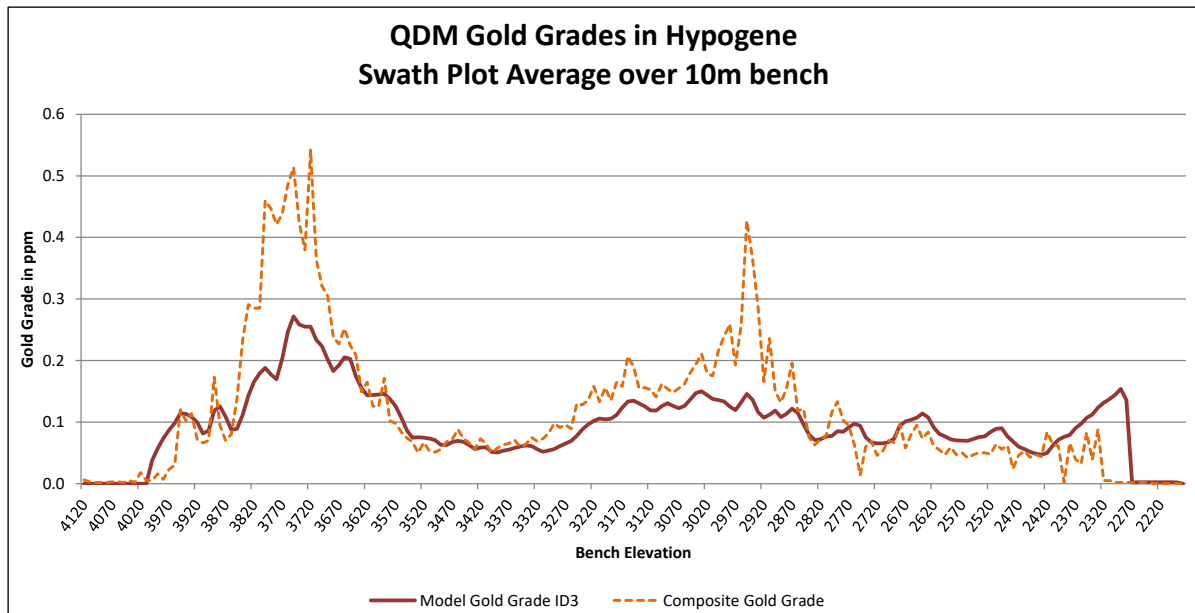
Table 14-27: QDM Comparison of Composite Values to Block Grade Estimation

QDM Gold					
Cut-Off Gold (ppm)	Number of Contained Composites	Average Comp Grd Gold (gm/t)	Percent Less than Cut-Off	Number of Model Blocks	Model Avg Grd Gold (gm/t)
0.00	1,822	0.187	0.0%	680,181	0.113
0.10	852	0.350	4.7%	254,040	0.227
0.20	498	0.498	8.2%	104,968	0.350
0.30	327	0.638	6.7%	43,097	0.505
0.40	222	0.781	8.6%	23,518	0.641
0.50	155	0.924	6.5%	14,552	0.762
0.60	113	1.071	5.3%	9,540	0.875
0.70	94	1.151	3.2%	6,515	0.982
0.80	73	1.257	9.6%	4,516	1.088

Source: IMC, 2024

The percent less than cutoff is less than 10%, indicating that the block grades respect the changes in composite grades. In all cases, the block grade at a cutoff is properly less than the mean of the contained composites because the block grades were estimated with additional composites that are outside of the tested cutoff shape.

Figure 14-15 is a horizontal swath plot of QDM gold in the hypogene mineral zone. The actual composite grades were used on this swath plot rather than a comparison between the model grades and a declustered nearest neighbor estimate. The local differences where composite grades are higher than block grades are due to clustering of the composite samples.



Source: IMC, 2024

Figure 14-15: QDM Horizontal Swath Plot for Gold

14.3 Mineral Resources

The mineral resources for Altar and QDM were based on the application of the floating cone algorithm to the block models to establish the component of the deposit that has “reasonable prospects of economic extraction.” The mineral resources are therefore contained within computer generated open pit geometries where economic value has been assigned to measured, indicated, and inferred material.

14.3.1 Altar Resource Estimate

The Altar resource has been developed based on the following conceptual flow sheet:

- 1) Crushing
- 2) Comminution
- 3) Flotation
- 4) Shipment of concentrate to a smelter

The Altar mineral resource assumes that Altar arsenic bearing concentrates would be accepted by specialty smelters. Altar has commissioned a smelter study and found that there are a few smelters that will accept the type of concentrate that would be produced at Altar.

Cutoff grade was determined on a Net Smelter Return (NSR, Net of Refining) basis inclusive of smelter penalties. NSR is algebraically the same as copper equivalent (or gold equivalent at QDM), and both NSR cutoffs and an approximate equivalent copper cutoffs are provided for reference in this statement of mineral resources. The equivalent copper calculation would change block by block due to the incorporation of smelter penalties.

Cost estimates for the resource parameters were scaled from other projects or developed from published cost indexes. In some cases, the costs applied in the 2021 mineral resource statement have been factored upward by about 7% to reflect the increase in costs since that time.

The NSR calculation applied at Altar is summarized as follows:

- Copper Contribution:
 - Float Recoverable Copper Grade x 22.0462 x (3.75-TCRC) less 1% smelter deduct
 - Flotation Recoverable Copper Grade = (Copper Grade – 0.01)*0.92
 - The calculated TCRC includes the smelter penalties in these calculations
- Gold Contribution:
 - (Gold Grade in ppm x 0.55 /31.1035) x (1800-4.00) less 1 gm smelter deduct
- Silver Contribution
 - (Silver grade in ppm x 0.50/31.1035) x (23.00 -0.30) less 30 gm smelter deduct

Table 14-28 summarizes the input parameters to the Altar resource determination. Economic credit was applied to measured, indicated, and inferred categories of mineralization. No constraints have been applied to the resource regarding tailing or waste storage capacities.

The Altar resource estimate was prepared prior to the rest of the work completed for this Technical Report. As a result, economic inputs used to define the Mineral Resource and reported in Table 14-28 may differ from economics presented in other sections of this report.

Table 14-28: Altar Mineral Resource Parameters

Parameter	Value
Mining Cost	
Base	US\$1.50/tonne material
Plus	US\$0.03/bench above 3490
Plus	US\$0.03/bench below 3490
Flotation Process Cost per Tonne Ore	US\$5.00/tonne ore
Flotation Recoveries for Supergene, Mixed, and Hypogene	
Cu	$(\text{TotalCu}-0.01)*0.92$
Au	55%
Ag	50%
As	80%
Smelting Treatment Charges	
Copper Con Grade	24%
TC/tonne Con	US\$90.00/tonne con
RC/lb Cu	US\$0.09/lb Cu
Concentrate Freight	US\$100.00/tonne con
Au Ref	US\$4.00/oz
Ag Ref	US\$0.30/oz
Deducts	
Cu	1.00%
Au	1.00 gm/t
Ag	30 gm/t
Arsenic Penalty Calculation, US\$/tonne of concentrate	
As in Con	
GT 0.2	$(\text{CongradeAs}-0.2)/0.1*2.5$
GT 0.5	$(\text{CongradeAs}-0.5)/0.1*6+(0.5-0.2)/0.1*2.5$
GT 1.0	$(\text{CongradeAs}-1)/0.1*7.5+(1-0.5)/0.1*6+(0.5-0.2)/0.1*2.5$
GT 1.5	$(\text{CongradeAs}-1.5)/0.1*12+(1.5-1)/0.1*7.5+(1-0.5)/0.1*6+(0.5-0.2)/0.1*2.5$
Base Case Metal Price	
Cu	US\$3.75/lb
Au	US\$1,800/oz
Ag	US\$23.00/oz
Overall Slope Angles	45°

Source: IMC, 2024

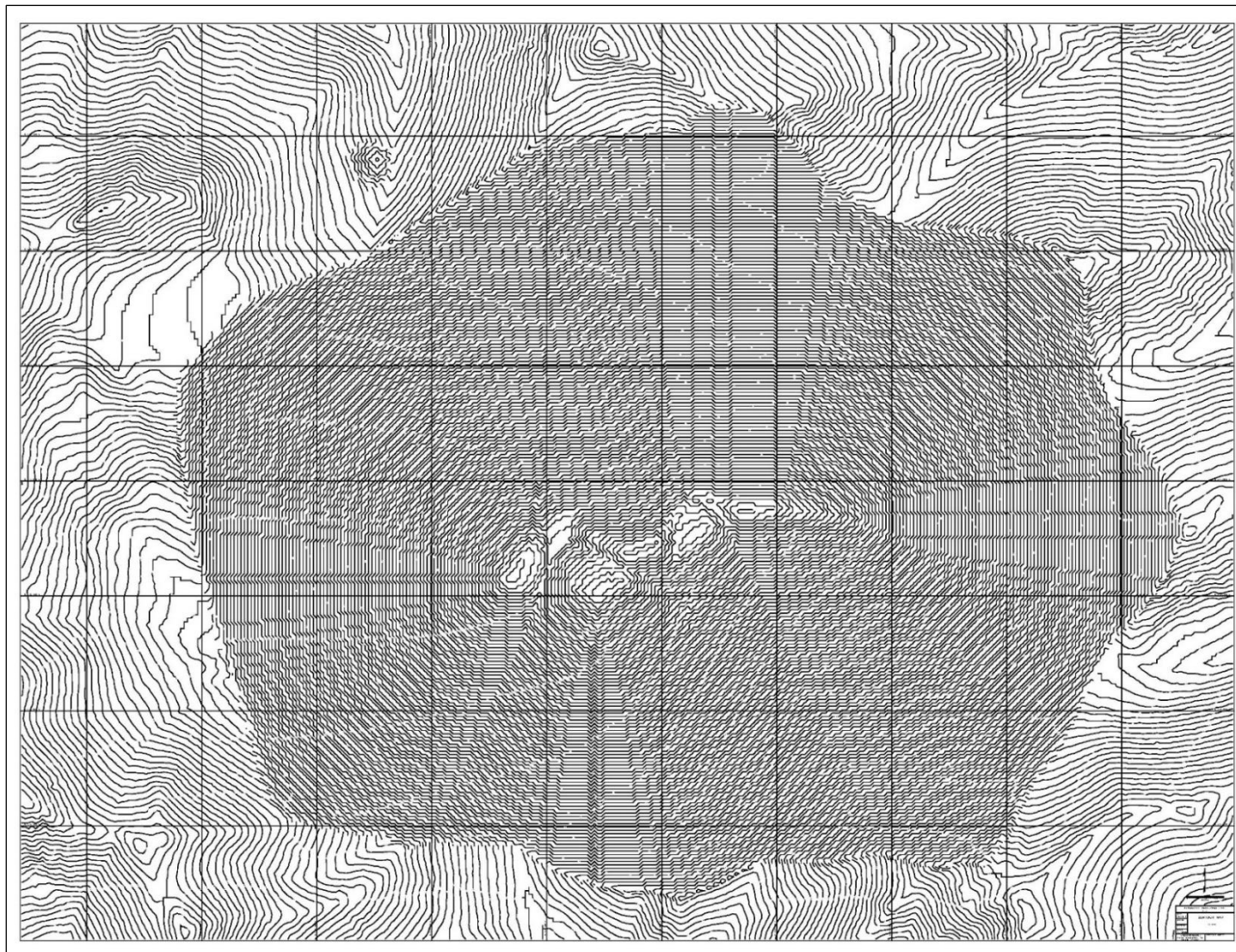
The parameters on Table 14-28 would result in an internal cutoff grade of US\$5.00 NSR/tonne. However, Aldebaran has elected to use US\$13.99 NSR/tonne to be consistent with the previous statement of mineral resources reported in 2021. The application of a slightly elevated cutoff implies the resource is somewhat conservative. The resulting mineral resource at Altar is summarized on Table 14-29.

Figure 14-16 illustrates the geometry of the Altar resource pit. The pit was limited on the north side to respect the Altar property boundary.

Table 14-29: Altar Mineral Resources, 31 December 2024

Material Type	Resource Class	Cu Price (US\$/lb)	Cut-Off		ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Contained Metal		
			US\$NSR/T	EqCu (%)								Cu (Mlb)	Au (Moz)	Ag (Moz)
Supergene Mineralization														
Supergene	Measured	3.75	13.99	0.237	121,884	34.44	0.549	0.080	1.07	21	289	1,475	0.31	4.19
	Indicated	3.75	13.99	0.237	80,007	23.33	0.362	0.060	0.93	19	123	639	0.15	2.39
	Measured + Indicated	3.75	13.99	0.237	201,891	30.04	0.475	0.072	1.01	20	223	2,114	0.47	6.59
	Inferred	3.75	13.99	0.237	24,850	29.17	0.459	0.073	1.01	19	213	251	0.06	0.81
Mixed Mineralization														
Mixed	Measured	3.75	13.99	0.237	109,510	24.11	0.378	0.068	1.22	23	192	913	0.24	4.30
	Indicated	3.75	13.99	0.237	19,208	20.55	0.320	0.055	1.11	23	139	136	0.03	0.69
	Measured + Indicated	3.75	13.99	0.237	128,718	23.58	0.369	0.066	1.20	23	184	1,049	0.27	4.98
	Inferred	3.75	13.99	0.237	1,386	19.32	0.290	0.070	1.00	13	111	9	0.00	0.04
Hypogene Mineralization														
Hypogene	Measured	3.75	13.99	0.237	549,385	27.60	0.410	0.099	0.98	20	120	4,966	1.75	17.31
	Indicated	3.75	13.99	0.237	1,517,339	26.62	0.415	0.053	1.33	54	114	13,882	2.59	64.88
	Measured + Indicated	3.75	13.99	0.237	2,066,724	26.88	0.414	0.065	1.24	45	116	18,848	4.33	82.19
	Inferred	3.75	13.99	0.237	1,189,513	23.28	0.365	0.043	1.26	46	96	9,572	1.64	48.19
Supergene + Mixed + Hypogene Combined														
Total Supergene Mixed Hypogene	Measured	3.75	13.99	0.237	780,779	28.18	0.427	0.092	1.03	21	156	7,354	2.30	25.80
	Indicated	3.75	13.99	0.237	1,616,554	26.39	0.411	0.053	1.31	52	115	14,657	2.77	67.96
	Measured + Indicated	3.75	13.99	0.237	2,397,333	26.97	0.416	0.066	1.22	42	128	22,011	5.08	93.76
	Inferred	3.75	13.99	0.237	1,215,749	\$23.39	0.367	0.044	1.25	45	98	9,832	1.71	49.04
15,984,418 ktonnes total material														

Source: IMC, 2024



Source: IMC, 2024

Note: 500-m grid, north is up

Figure 14-16: Altar Resource Pit

14.3.2 QDM Resource

For this resource, the QDM mineralization was assumed to be transported to Altar and processed on a campaign basis through the Altar mill. The input parameters that were used for the QDM resources are tabulated on Table 14-30. The NSR and Equivalent gold calculations for QDM are:

$$\begin{aligned} \text{NSR in Oxide} &= (1500 - 6.0) \times 0.40 \times 0.975 \times 0.32151 \times \text{Au} \\ &+ (20 - 0.55) \times 0.51 \times 0.975 \times 0.032151 \times \text{Ag} \end{aligned}$$

$$\begin{aligned} \text{NSR in Sulphide} &= (1500 - 6.0) \times 0.70 \times 0.975 \times 0.32151 \times \text{Au} \\ &+ (20 - 0.55) \times 0.51 \times 0.975 \times 0.032151 \times \text{Ag} \end{aligned}$$

$$\begin{aligned} \text{Converting to gold equivalent AuEq ppm} &= \text{Au ppm} + 0.0166 \times \text{Ag ppm, in oxide} \\ \text{AuEq ppm} &= \text{Au ppm} + 0.0078 \times \text{Ag ppm, in sulphide} \end{aligned}$$

Table 14-31 summarizes the QDM mineral resources based on the procedures and parameters established during 2021.

Table 14-30: QDM Mineral Resource Parameters

Parameter	Value
Mining Cost	
Base	US\$1.40/tonne material
Additional Haulage	US\$0.50/tonne material
Plus	US\$0.013/bench above 3730
Plus	US\$0.013/bench below 3730
Flotation Process per Tonne Ore	US\$4.20/tonne ore
G&A Cost per Tonne Ore	US\$0.47/tonne ore
POX Process per Tonne Ore	US\$8.50/tonne ore
Flotation Process Recovery	
Gold Oxide	40%
Gold Sulphide	85%
Silver	51%
Smelting, Refining, and Freight	
Gold Refining	US\$6.00 /troy ounce gold
Silver Refining	US\$0.55 /troy ounce silver
Payable Metal	
Gold	97.50%
Silver	97.50%
Royalty	Not applied
Overall Slope Angles (Everywhere)	40 degrees
2021 Resource Cone Metal Prices	
Copper (N/A)	US\$3.00/lb Cu
Gold	US\$1,500.00/troy ounce gold
Silver	US\$20.00/troy ounce silver

Source: IMC, 2024

Table 14-31: QDM Mineral Resources, as of March 22, 2021, and December 31, 2024

Quebrada de La Mina Gold and Silver Mineralization (QDM), from 2021														
Material Type	Resource Class	Au Price, \$/Oz (US\$)	Cut-Offs		QDM Mineralization with Altar Process							Contained Metal		
			US\$NSR/T	AuEq (ppm)	ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Cu (Mlb)	Au (Moz)	Ag (Moz)
Oxide Plus Sulphide	Measured	1,500	13.17	0.33 to 0.70	15,818	\$31.70	0.061	0.810	3.59	2	168	21	0.41	1.83
	Indicated	1,500	13.17	0.33 to 0.70	4,162	\$25.28	0.055	0.678	3.74	2	164	5	0.09	0.50
	Measured + Indicated	1,500	13.17	0.33 to 0.70	19,980	\$30.36	0.060	0.783	3.62	2	167	26	0.50	2.33
	Inferred	1,500	13.17	0.33 to 0.70	1,195	\$21.32	0.031	0.582	5.34	2	153	1	0.02	0.21

Source: IMC, 2024

Table 14-32 summarizes the combined mineral resource for Altar and QDM. The qualified persons for the estimation of Mineral Resource are John Marek and Jacob Richey of Independent Mining Consultants, Inc.

Significant metal price changes could materially change the estimated mineral resources in either a positive or a negative direction. There are risks regarding costs and actual acceptance of Altar concentrates within the smelter market.

Part of the land position at Altar is a group of concessions called Rio Cenicero. There is an option agreement in place regarding the Rio Cenicero concession that is summarized in Section 4. The component of the mineral resource that is contained on the Rio Cenicero concessions is broken out on Table 14-33. The material on Table 14-33 is contained within the total resource reported on Table 14-32.

Table 14-34 and Table 14-35 summarize the resource sensitivity to alternative cutoff grades. All of the mineralization on Table 14-34 and Table 14-35 are contained within the pit shells that defined the mineral resources on Table 14-32.

Table 14-32: Combined Altar and QDM Mineral Resources, December 31, 2024

Material Type	Resource Class	Cu Price (US\$/lb)	Cut-Off		Mineralization							Cu (Mlb)	Au (Moz)	Ag (Moz)
			US\$NSR/T	EqCu (%)	ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)			
Total Altar Deposit, US\$13.99 NSR Cutoff to Match 2021														
Supergene	Measured	3.75	13.99	0.237	121,884	34.44	0.549	0.080	1.07	21	289	1,475	0.31	4.19
	Indicated	3.75	13.99	0.237	80,007	23.33	0.362	0.060	0.93	19	123	639	0.15	2.39
	Measured + Indicated	3.75	13.99	0.237	201,891	30.04	0.475	0.072	1.01	20	223	2,114	0.47	6.59
	Inferred	3.75	13.99	0.237	24,850	29.17	0.459	0.073	1.01	19	213	251	0.06	0.81
Mixed	Measured	3.75	13.99	0.237	109,510	24.11	0.378	0.068	1.22	23	192	913	0.24	4.30
	Indicated	3.75	13.99	0.237	19,208	20.55	0.320	0.055	1.11	23	139	136	0.03	0.69
	Measured + Indicated	3.75	13.99	0.237	128,718	23.58	0.369	0.066	1.20	23	184	1,049	0.27	4.98
	Inferred	3.75	13.99	0.237	1,386	19.32	0.290	0.070	1.00	13	111	9	0.00	0.04
Hypogene	Measured	3.75	13.99	0.237	549,385	27.60	0.410	0.099	0.98	20	120	4,966	1.75	17.31
	Indicated	3.75	13.99	0.237	1,517,339	26.62	0.415	0.053	1.33	54	114	13,882	2.59	64.88
	Measured + Indicated	3.75	13.99	0.237	2,066,724	26.88	0.414	0.065	1.24	45	116	18,848	4.33	82.19
	Inferred	3.75	13.99	0.237	1,189,513	23.28	0.365	0.043	1.26	46	96	9,572	1.64	48.19
Total Supergene + Mixed + Hypogene Combined	Measured	3.75	13.99	0.237	780,779	28.18	0.427	0.092	1.03	21	156	7,354	2.30	25.80
	Indicated	3.75	13.99	0.237	1,616,554	26.39	0.411	0.053	1.31	52	115	14,657	2.77	67.96
	Measured + Indicated	3.75	13.99	0.237	2,397,333	26.97	0.416	0.066	1.22	42	128	22,011	5.08	93.76
	Inferred	3.75	13.99	0.237	1,215,749	23.39	0.367	0.044	1.25	45	98	9,832	1.71	49.04
15,984,418 Ktonnes Total Material					Total M+I+I									
Quebrada de La Mina Gold and Silver Mineralization (QDM), From 2021														
Material Type	Resource Class	Au Price, \$/oz (US\$)	Cut-Offs		QDM Mineralization with Altar Process							Contained Metal		
			US\$NSR/T	AuEq (ppm)	ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Cu (Mlb)	Au (Moz)	Ag (Moz)
Oxide Plus Sulphide	Measured	1,500	13.17	0.33 to 0.70	15,818	31.70	0.061	0.810	3.59	2	168	21	0.41	1.83
	Indicated	1,500	13.17	0.33 to 0.70	4,162	25.28	0.055	0.678	3.74	2	164	5	0.09	0.50
	Measured + Indicated	1,500	13.17	0.33 to 0.70	19,980	30.36	0.060	0.783	3.62	2	167	26	0.50	2.33
	Inferred	1,500	13.17	0.33-0.70	1,195	21.32	0.031	0.582	5.34	2	153	1	0.02	0.21
Total Altar + QDM Mineral Resources														
Material Type	Resource Class	Cu Price, (US\$/lb)	Cut-Off (US\$NSR/T)	Supergene + Mixed + Hypogene Combined							Contained Metal			
				ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Cu (Mlb)	Au (Moz)	Ag (Moz)	
Total Supergene + Mixed + Hypogene	Measured	3.75	13.17 to 13.99	796,597	\$28.25	0.420	0.106	1.08	20	157	7,375	2.71	27.62	
	Indicated	3.75	13.17 to 13.99	1,620,716	\$26.38	0.410	0.055	1.31	52	115	14,662	2.86	68.46	
	Measured + Indicated	3.75	13.17 to 13.99	2,417,313	\$27.00	0.413	0.072	1.24	41	129	22,037	5.58	96.08	
	Inferred	3.75	13.17-13.99	1,216,944	23.39	0.367	0.044	1.26	45	98	9,833	1.73	49.24	

Source: IMC, 2024

Notes:

1) Copper grades are in percent of dry weight. Gold, Silver, Moly and Arsenic grades are in units of parts per million = grams/tonne dry weight.

2) Contained metal units are millions of pounds of copper, millions of troy ounces for gold, and millions of troy ounces for silver.

3) The Altar mineral resource was updated during 2024.

4) The QDM resource has not been updated since 2021.

5) All mineral resources are contained in pit geometries based on the following metal prices.

6) Mineral Resources for Altar are based on metal prices of US\$3.75/lb copper, US\$1.800/oz gold, US\$23.00/oz silver

7) Mineral Resources for QDM are based on metal prices of US\$1,500/oz gold, US\$20.00/oz silver

8) There are no mineral reserves at Altar or QDM at this time.

9) Cutoff grades are based on calculations of net smelter return (NSR) assuming the processing by flotation to produce a copper concentrate and smelting of that concentrate.

10) The Altar NSR is defined as:

a. Copper Contribution:

i. Float Recoverable Copper Grade x 22.0462x(3.75-TCRC) less 1% smelter deduct

ii. Flotation Recoverable Copper Grade = (Copper Grade – 0.01)*0.92

b. Gold Contribution: (Gold Grade in ppm x 0.55 /31.1035) x (1800-4.00) less 1 gm smelter deduct

c. Silver Contribution: (Silver grade in ppm x 0.50/31.1035) x (23.00 -0.30) less 30 gm deduct

d. Arsenic grades vary by block in the model and smelter terms including arsenic penalties vary by block. Average Smelter terms including arsenic penalties for the Altar Mineral Resource is approximately US\$0.71/lb copper

11) The QDM NSR is defined as: 18.733 x Au ppm + 0.311 x Ag in Oxide and 39.808 x Au ppm + 0.311 x Ag in Sulphide

12) Equivalent copper cutoff grade calculations at Altar are approximate due to the complexities of arsenic penalty calculations by block.

13) NSR and all economic calculations applied to the mineral resources are summarized in Section 14.

14) Tables may not balance exactly due to rounding.

15) The Qualified Persons for the Mineral Resources are John Marek RM-SME, and Jacob Richey PE, of Independent Mining Consultants, Inc.

Table 14-33: Altar and QDM Mineral Resources on Rio Cenicero Concession, December 31, 2024

RCA Component Altar Deposit, US\$13.99 NSR Cutoff														
Material Type	Resource Class	Cu Price (US\$/lb)	Cut-Off		Mineralization							Contained Metal		
			US\$NSR/T	EqCu (%)	ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Cu (Mlb)	Au (Moz)	Ag (Moz)
Supergene	Measured	3.75	13.99	0.237								0	0.00	0.00
	Indicated	3.75	13.99	0.237								0	0.00	0.00
	Measured + Indicated	3.75	13.99	0.237	0	0.00	0.000	0.000	0.00	0	0	0	0.00	0.00
	Inferred	3.75	13.99	0.237								0	0.00	0.00
Mixed	Measured	3.75	13.99	0.237								0	0.00	0.00
	Indicated	3.75	13.99	0.237								0	0.00	0.00
	Measured + Indicated	3.75	13.99	0.237	0	0.00	0.000	0.000	0.00	0	0	0	0.00	0.00
	Inferred	3.75	13.99	0.237								0	0.00	0.00
Hypogene	Measured	3.75	13.99	0.237	36,073	33.39	0.450	0.199	1.40	13	102	358	0.23	1.62
	Indicated	3.75	13.99	0.237	92,049	29.75	0.427	0.130	1.31	25	96	867	0.38	3.88
	Measured + Indicated	3.75	13.99	0.237	128,122	30.77	0.433	0.149	1.34	22	98	1,225	0.62	5.50
	Inferred	3.75	13.99	0.237	57,053	22.38	0.328	0.087	1.14	28	76	413	0.16	2.09
Total Supergene + Mixed + Hypogene Combined	Measured	3.75	13.99	0.237	36,073	33.39	0.450	0.199	1.40	13	102	358	0.23	1.62
	Indicated	3.75	13.99	0.237	92,049	29.75	0.427	0.130	1.31	25	96	867	0.38	3.88
	Measured + Indicated	3.75	13.99	0.237	128,122	30.77	0.433	0.149	1.34	22	98	1,225	0.62	5.50
	Inferred	3.75	13.99	0.237	57,053	22.38	0.328	0.087	1.14	28	76	413	0.16	2.09
15,984,418 ktonnes Total Material														
Quebrada de La Mina Gold and Silver Mineralization (QDM), Rio Cenicero														
Material Type	Resource Class	Au Price, \$/oz (US\$)	Cut-Off		QDM Mineralization with Altar Process							Contained Metal		
			US\$NSR/T	AuEq (gm/t)	ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Cu (Mlb)	Au (Moz)	Ag (Moz)
Oxide Plus Sulphide	Measured	1,500	13.17 to 13.99		2,237	21.45	0.045	0.559	2.83	2	130	2	0.04	0.20
	Indicated	1,500	13.17 to 13.99		1,197	18.89	0.036	0.590	4.21	1	121	1	0.02	0.16
	Measured + Indicated	1,500	13.17 to 13.99		3,434	19.61	0.042	0.570	3.31	2	127	3	0.06	0.37
	Inferred	1,500	13.17 to 13.99		588	21.37	0.029	0.645	6.12	1	140	0	0.01	0.12
Total Altar + QDM Mineral Resources														
Material Type	Resource Class	Cu Price \$/lb	Cut-Off (US\$NSR/T)		Supergene + Mixed + Hypogene Combined							Contained Metal		
					ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Cu (Mlb)	Au (Moz)	Ag (Moz)
Total Supergene + Mixed + Hypogene Combined	Measured	3.75	13.17 to 13.99		38,310	32.69	0.426	0.220	1.48	12	104	360	0.27	1.83
	Indicated	3.75	13.17 to 13.99		93,246	29.61	0.422	0.136	1.35	25	96	868	0.41	4.04
	Measured + Indicated	3.75	13.17 to 13.99		131,556	30.48	0.423	0.160	1.39	21	98	1,228	0.68	5.87
	Inferred	3.75	13.17 to 13.99		57,641	22.37	0.325	0.093	1.19	28	77	413	0.17	2.21

Source: IMC, 2024

Table 14-34: Altar Resource Sensitivity to Cutoff Grade

Cut-Off (US\$NSR/T)	Approx EqCu Cut-Off (%)	Measured							Indicated							Inferred							Contained Metal		
		ktonne	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	ktonnes	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	ktonne	US\$NSR/T	Cu (%)	Au (ppm)	Ag (ppm)	Mo (ppm)	As (ppm)	Cu (Mlb)	Au (Moz)	Ag (Moz)
5.00	0.096	1,018,765	\$23.91	0.367	0.080	0.93	20	165	2,530,775	\$20.30	0.319	0.044	1.06	41	111	2,587,700	15.64	0.248	0.036	0.92	33	98	40,257	9.25	192.71
8.00	0.144	957,444	\$25.02	0.382	0.083	0.96	20	161	2,241,956	\$22.08	0.346	0.047	1.13	44	111	1,983,244	18.44	0.291	0.040	1.04	38	99	37,934	8.50	176.62
11.00	0.190	870,938	\$26.55	0.404	0.088	1.00	20	160	1,917,475	\$24.20	0.378	0.050	1.22	48	112	1,566,764	20.83	0.327	0.041	1.15	42	98	35,046	7.56	161.03
13.99	0.237	780,779	\$28.18	0.427	0.092	1.03	20	156	1,616,554	\$26.39	0.411	0.053	1.31	51	115	1,215,749	23.25	0.364	0.044	1.26	45	96	31,843	6.78	142.80
16.00	0.267	714,782	\$29.39	0.445	0.095	1.06	20	155	1,440,803	\$27.78	0.433	0.055	1.37	54	116	1,014,689	24.88	0.389	0.046	1.34	47	96	29,425	6.22	131.49
19.00	0.314	609,269	\$31.44	0.474	0.102	1.10	20	154	1,210,221	\$29.74	0.463	0.057	1.46	59	118	784,220	27.08	0.423	0.049	1.44	52	96	26,003	5.44	114.68
22.00	0.360	499,877	\$33.83	0.508	0.110	1.16	19	157	984,692	\$31.86	0.495	0.059	1.54	65	120	596,087	29.18	0.455	0.052	1.50	58	97	22,339	4.62	96.33
25.00	0.406	398,156	\$36.48	0.546	0.120	1.22	18	161	783,221	\$34.02	0.529	0.062	1.62	71	124	440,257	31.19	0.486	0.053	1.53	63	98	18,626	3.86	78.21
28.00	0.453	312,573	\$39.23	0.585	0.131	1.28	18	167	614,342	\$36.10	0.560	0.065	1.70	78	126	303,812	33.28	0.519	0.055	1.57	69	98	15,086	3.13	61.73
31.00	0.499	241,886	\$42.09	0.626	0.142	1.35	17	173	452,714	\$38.46	0.596	0.068	1.81	85	129	176,273	35.98	0.560	0.060	1.65	75	102	11,462	2.44	46.20
34.00	0.547	188,311	\$44.84	0.665	0.152	1.41	17	179	328,214	\$40.73	0.630	0.071	1.93	93	130	100,126	38.83	0.603	0.063	1.77	83	106	8,646	1.86	34.70
37.00	0.596	146,766	\$47.50	0.703	0.162	1.48	17	186	224,026	\$43.18	0.667	0.073	2.04	104	132	56,942	41.44	0.642	0.069	1.82	88	107	6,375	1.42	25.03

Source: IMC, 2024

Table 14-35: QDM Resource Sensitivity to Cutoff Grade

Cut-Offs			Measured							Indicated							Inferred						
US\$NSR/T	Oxide AuEq	Sulphide AuEq	ktonne	US\$NSR/T	AuEq (ppm)	Cu (%)	Au (ppm)	Ag (ppm)	As (ppm)	ktonne	US\$NSR/T	AuEq (gm)	Cu (%)	Au (ppm)	Ag (ppm)	As (ppm)	ktonne	US\$NRS/T	AuEq (gm)	Cu (%)	Au (ppm)	Ag (ppm)	As (ppm)
13.17	0.703	0.331	15,818	31.70	0.840	0.061	0.810	3.59	168	4,162	25.28	0.715	0.055	0.678	3.74	164	1,195	21.32	0.639	0.031	0.582	5.34	153
15.00	0.801	0.377	14,839	32.86	0.866	0.063	0.835	3.61	170	3,531	27.28	0.772	0.058	0.733	3.79	168	956	23.13	0.702	0.032	0.640	5.77	157
20.00	1.068	0.502	12,120	36.31	0.948	0.066	0.916	3.77	176	2,365	32.12	0.854	0.068	0.822	3.52	176	543	27.25	0.696	0.039	0.652	5.38	158
25.00	1.335	0.628	9,333	40.40	1.042	0.068	1.009	4.06	180	1,609	36.76	0.925	0.075	0.898	3.36	180	314	30.80	0.774	0.039	0.730	5.54	167
30.00	1.601	0.754	6,847	45.23	1.158	0.067	1.122	4.41	187	1,077	41.49	1.042	0.074	1.013	3.74	183	156	34.32	0.862	0.042	0.822	5.18	164

Source: IMC, 2024

15 Mineral Reserve Estimate

There are no mineral reserves at Altar or QDM currently.

16 Mining Methods

16.1 Overview Process Design

In this study, the proposed mining method is divided into open pit mining for the surface part of the deposit and underground caving for the deeper parts. The open pit will use well-known truck and shovel operations with 12.5-m bench intervals. Haul trucks will be used for hauling mineralized material to the crushing plant and long-term stockpile facilities. Waste rock will be hauled to the closest WRSF. Underground operations will handle material in bulk using block caving methods. Open pit mining will take place during the first 9 years of the project while UG development is taking place.

Open pit mining operations will use small-scale equipment to allow skinnier phasing and diving into the highest margin phases sooner. The small-scale equipment fleet will include 8 m³ hydraulic excavators and 100 t capacity haul trucks.

Final pit is approximately 1,500 m long (N-S) and 1,600 m wide (E-W) with a pit depth of 850 m.

Other important facilities supporting the Project and the mining process are the crusher pad, mineral process plant, the TSF, and the north and south WRSF.

The mining sequence consists of 6 phases. The Project has a mine life of 48 years, which includes 3 years of construction and 2 years of pre-stripping for the open pit. The mine production plan contains 991 M tonnes of mineralized material with an average grade of 0.54% CuEq which will be processed at the mill. 223 M tonnes of mineralized material will be mined via the open pit and 768 M tonnes will be mined through underground mining methods.

16.2 Groundwater Considerations

Although mine dewatering typically provides a water source for mine operations, preliminary hydrogeological studies indicate that limited groundwater will be available for mine operations. The groundwater level in the pit is estimated to be at El. 3,462 m asl and would be intersected in Year 3 of open pit development. Depending on rock mass permeability and fault compartmentalization, slope depressurization measures may need to be implemented to maintain stable slopes. Further characterization and evaluation is required to characterize the groundwater impact on slope stability.

Groundwater inflow rates to the open pit and underground mine are estimated to vary from effectively zero (early in operations) to in the order of 50 m³/hr (later operations). Accordingly, this potential water source has been considered negligible at this stage of development and would be used to augment water supply for mine operations rather than a primary source.

16.3 Geotechnical Considerations

16.3.1 Overall Approach

For the PEA of the Altar Project, SRK Consulting collaborated closely with Aldebaran Resources to undertake a comprehensive review of available geotechnical data relevant to open pit design and underground block caving options. This evaluation builds upon foundational geotechnical work previously completed and documented by Call & Nicholas, Inc. (CNI), whose prior scoping study established baseline rock mass characterizations, pit slope recommendations, and key data collection guidelines.

SRK’s review incorporated current understanding of lithology, rock mass quality, structural controls, and hydrogeology across the deposit. Where appropriate, SRK referenced the CNI scoping report’s methodologies, conclusions, and proposed work plans, maintaining consistency with earlier interpretations while advancing the detail and confidence level of the geotechnical groundwork for the PEA. This approach aims to address outstanding data gaps, mitigate key mining risks, and provide robust design parameters for safe and effective open pit and UG development at Altar.

16.3.2 Open Pit Rock Mass Characterization

Rock mass quality across the planned pit area is primarily defined by oxidation domains—leached cap, supergene, and hypogene zones. Key geotechnical parameters used to describe the rock mass include:

- **RQD:** The hypogene zone demonstrates good rock mass quality, with RQD values exceeding 90%. The leached cap and supergene zones show moderate quality, with average RQD values about 55%. Variability in observed fracture frequency was supported through core photo review, to understand spatial variability considerations. Lower RQD zones will need to be domained during future characterization and considered in the slope stability assessments.
- **Hardness:** The leached and supergene zones generally meet R3-R5 hardness, while the deeper hypogene zone surpasses R5-R6. Weaker altered zones were noted in the supergene that need to be characterized and reviewed in future studies.

In terms of structural geology, regional and cell mapping campaigns have collected data on joint spacings, orientations, and important fault structures. This, along with proposed future geotechnical and televiewer drilling, will support ongoing definition of critical fault structures and structural domains in 3D that will be crucial for future slope and bench stability analysis.

Hydrogeological conditions show a shallow phreatic surface, implying that depressurization measures such as horizontal drains and pumping wells may be needed for maintaining stable slopes. A full hydrogeological evaluation will need to be undertaken in the next phase of the study to assess the risks groundwater pose to the proposed open pit slopes.

16.3.3 Open Pit Slope Recommendations

SRK’s review of the available data and previous reports is consistent with guidance provided by CNI in the Altar Project Geotechnical Pit Slope Design Scoping Study. SRK notes that

final Geotech design parameters can be improved for interim phases (given the shallower pit depth). Table 16-1 provides the recommended open pit geotechnical design parameters.

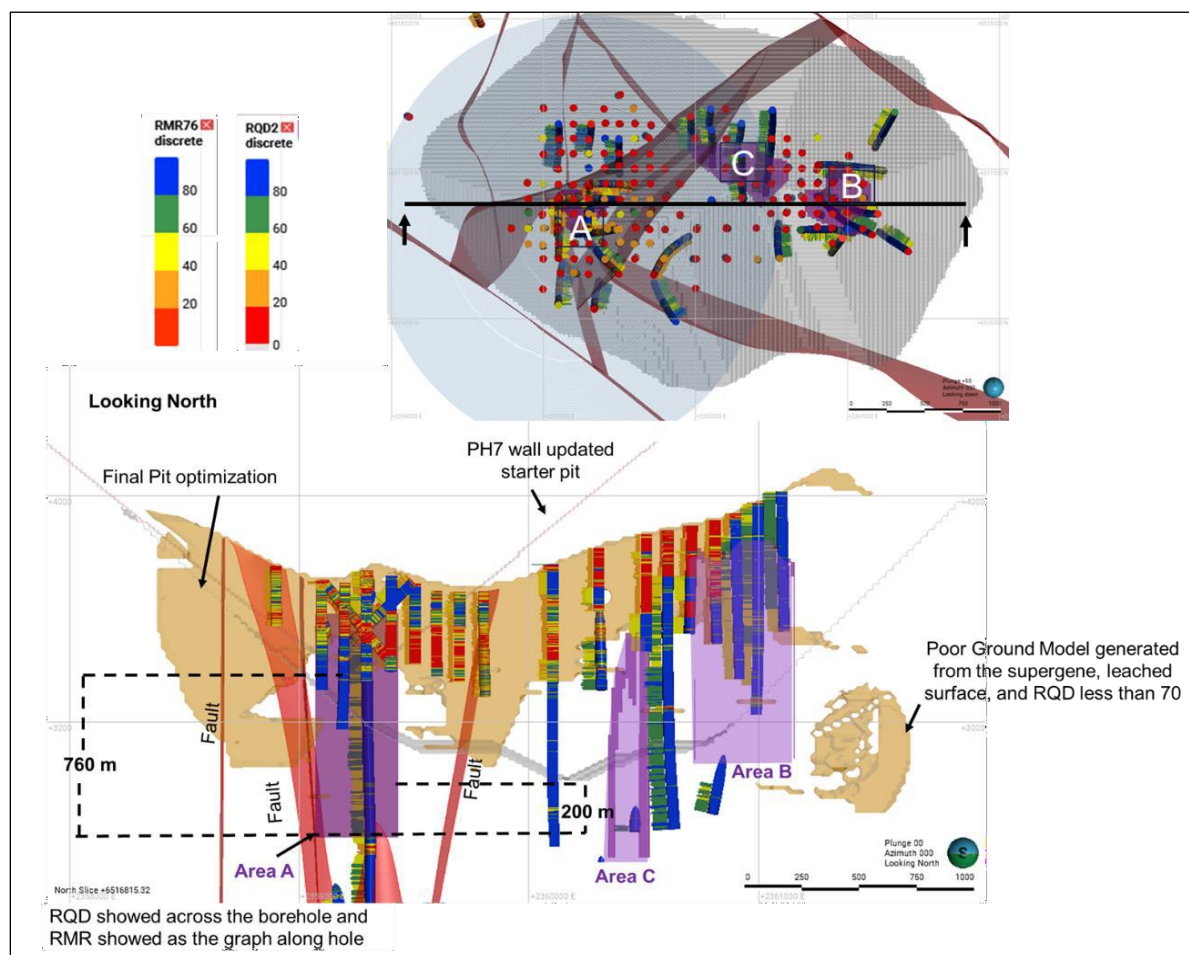
Table 16-1: Open Pit Slope Design Parameters

Single Bench - 12.5 m								
Pit Phase(s)	GT Domain	Domain Volume	Bench Height (m)	Max Stack Height (m)	GT Berm Width (m)	IRA	BFA	Bench Width (m)
Interim	Supergene, Leached	IRA Low	12.5	100	20	41	70	10
	Hypogene	IRA High	12.5	175	20	47	70	7
LoM	Supergene, Leached	IRA Low	12.5	100	20	41	70	10
	Hypogene	IRA High	12.5	175	20	45	70	8

Source: SRK, 2025

16.3.4 Underground Rock Mass Characterization

An underground caving approach for the Altar Copper-Gold Porphyry deposit was also considered as part of the PEA-level assessment. Since only limited geotechnical information is available for the proposed Altar Caving Areas at this stage, SRK undertook a basic geotechnical assessment to determine caveability and cave footprint size requirements, and the likely draw rates that may be achieved. The three possible caving areas were determined using the caving footprint finder: Areas A, B, and C (Figure 16-1). The following geotechnical information summaries are provided for the different proposed cave panel areas.



Source: SRK, 2025

Figure 16-1: A Location of Proposed Caving Areas A, B and C Relative to the Phase 7 Starter Pit, With the RQD Along the Drill Holes and Where Available, the RMR as a Graph Along the Borehole

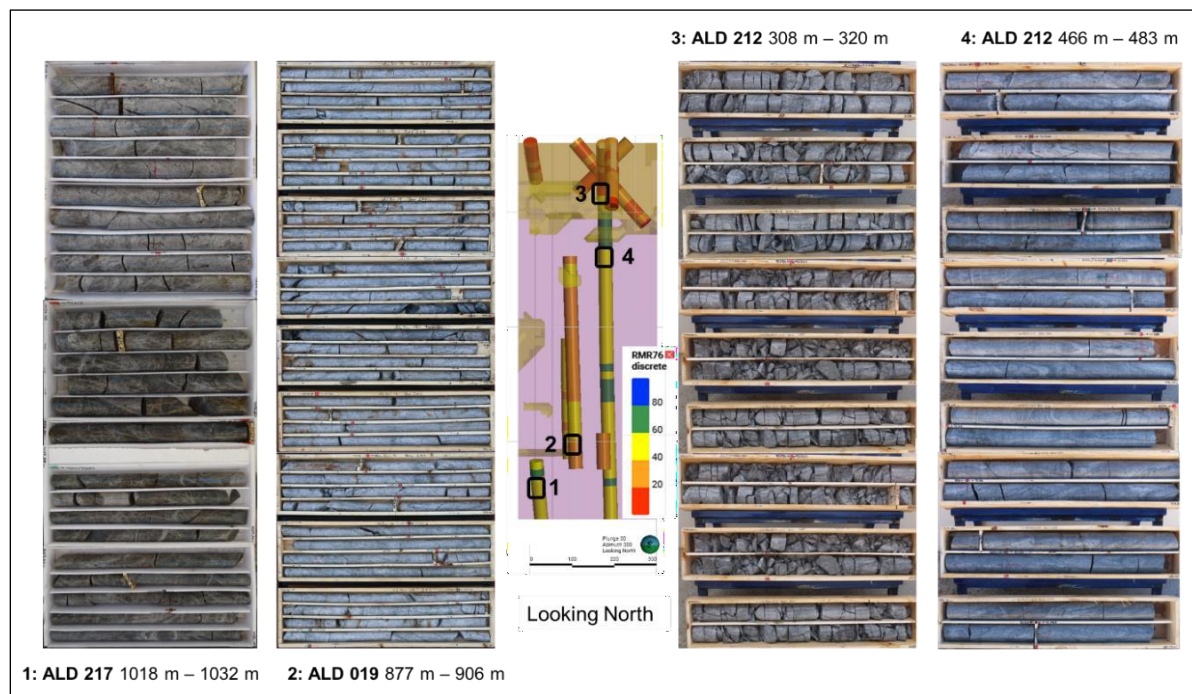
The following datasets were available for the geotechnical assessment:

- Geological models extending into the caving areas, including lithology, alteration and structural models.
- RQD information, available from most drill holes, and some RMR and Q parameters from a limited selection of holes.
- Televiewer orientation data from limited drill holes
- Core Photography from the majority of drill holes. These were qualitatively reviewed as part of the underground assessment.

Using this available information, simple geotechnical domain models were established for the caving column areas and representative rockmass parameters developed for the separate caving areas, that are discussed for each separate area below.

Area A (HOD A)

Based on the current litho-structural model, Cave Area A is the more complex, with intersection of major fault structures (Faults 03,05 and 04) and weaker ground to the west of the proposed draw column (Figure 16-2). The draw column area is divided into two domains with the upper 200 m comprising of weak, Poor-quality rock (RMR76 less than 40) and the rest of the column in Fair quality rock (RMR76 range 47 -58) with some weaker and stronger areas. Further geotechnical evaluation is likely needed to domain the better-quality rock mass areas in the lower part of the draw column. The influence of the major fault structures on cave and draw performance will need to be evaluated.



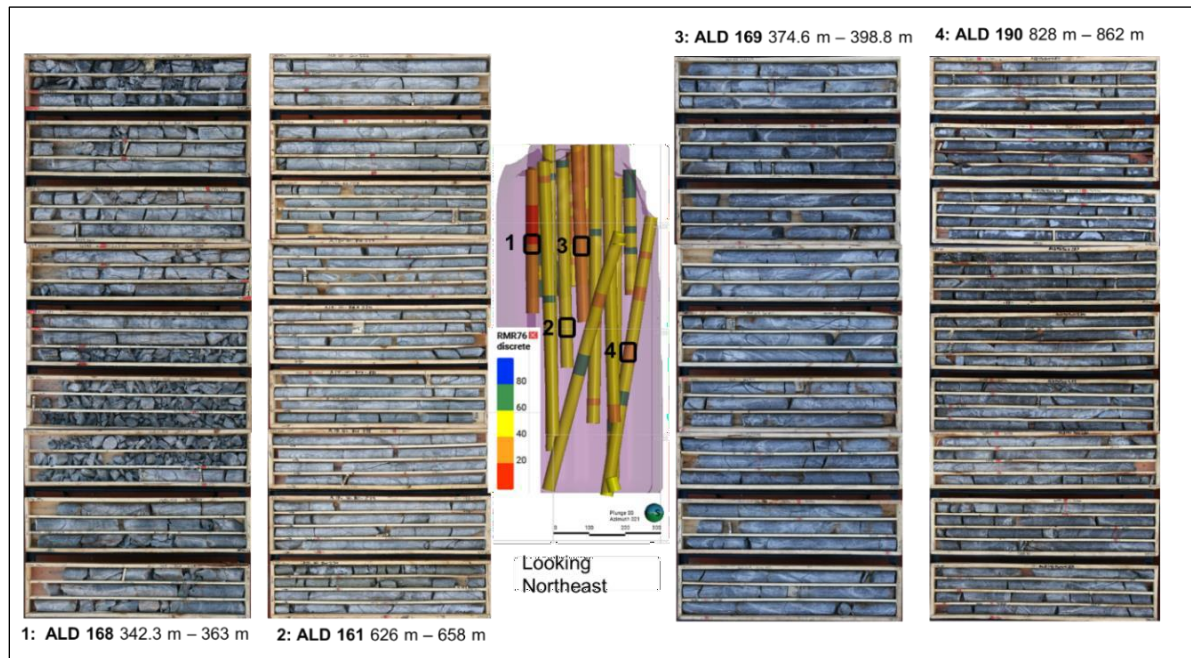
Source: SRK, 2025

Figure 16-2: Example Core Photographs of Sections of Drill Holes within the Cave Column of Area A, Showing the Variability of Rockmass Conditions

Area B (HOD B)

Drill hole review of the proposed cave area suggests two domains (Figure 16-3), but with the weaker domains only being more limited in the upper area of the proposed column which will need further definition the ongoing studies. The Fair ground part of the column has

a RMR76 range of 47-57, but there are some areas with values as high as 73. As with the other proposed caving areas, the impact of veining on block strength will need to be evaluated in detail as to the cave effects.

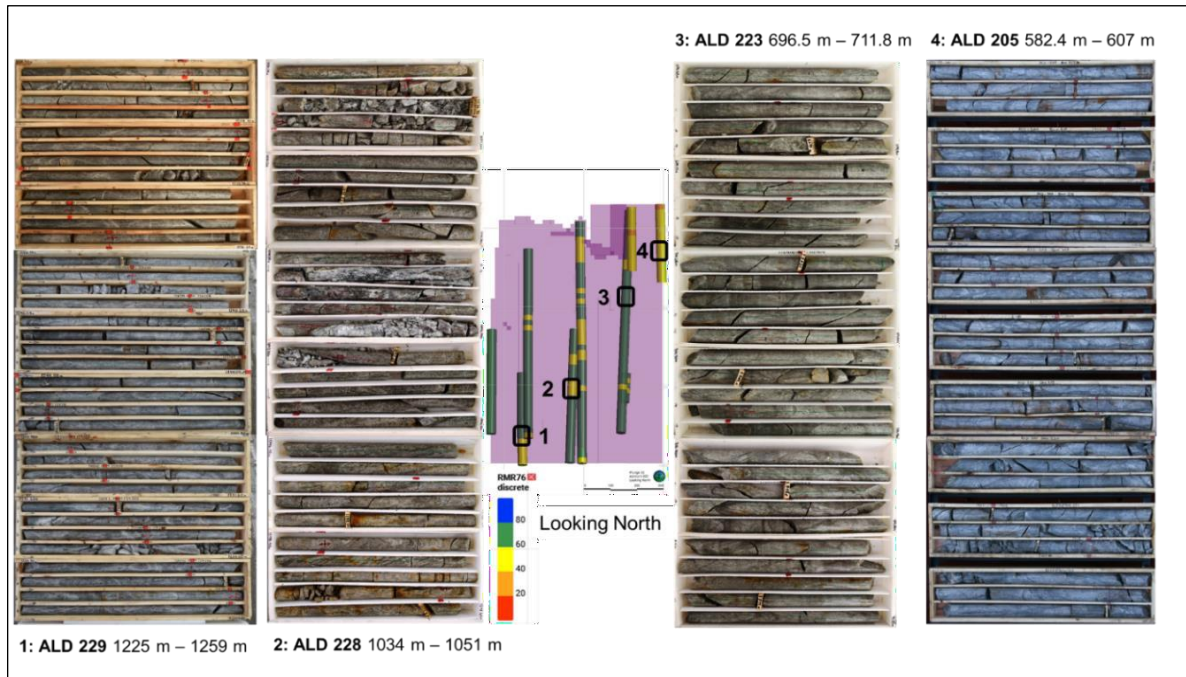


Source: SRK, 2025

Figure 16-3: Example Core Photographs of Sections of Drill Holes within the Cave Column of Area B, Showing the Variability of Rockmass Conditions

Area C (HOD C)

The borehole data within the draw column indicates a Fair rock quality zone (RMR76: 49 – 65) in the upper east of the column the rest of the column being good quality rock (RMR76: 62 - 68). The draw footprint narrows substantially towards the top of the proposed draw column and the caveability impacts will need to be considered (Figure 16-4). Fault 04 is modeled to be cutting through the northwestern part of the proposed cave column and its impact on cave and draw performance will need to be evaluated in future studies.



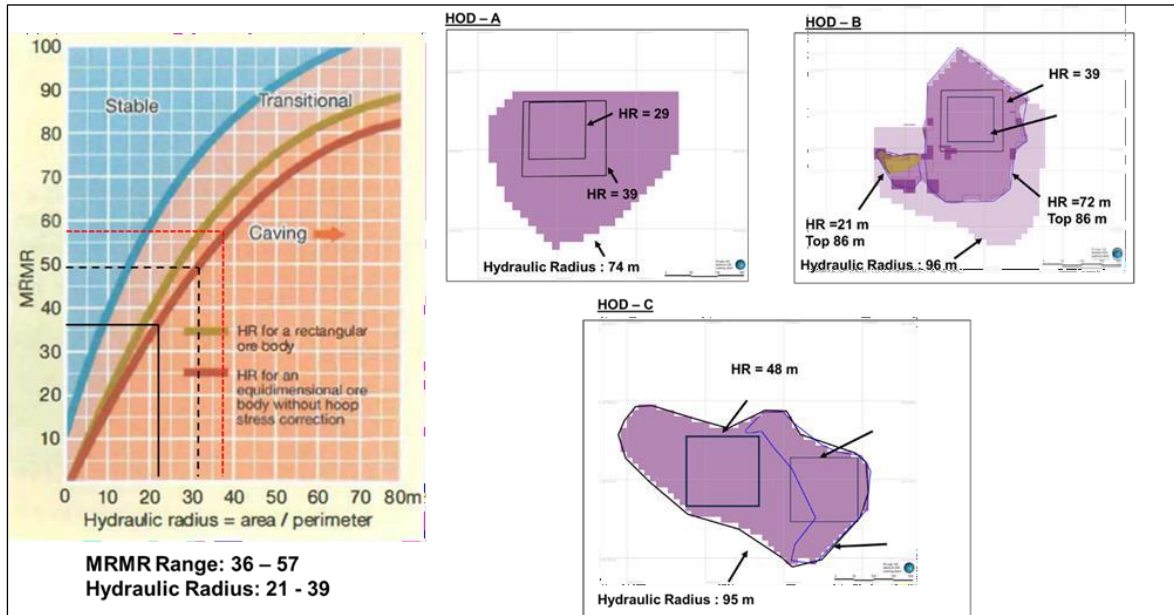
Source: SRK, 2025

Figure 16-4: Example Core Photographs of Sections of Drill Holes within the Cave Column of Area C, Showing the Variability of Rockmass Conditions

Caveability Assessment

SRK completed an empirical caveability assessment using Laubscher's empirical method (Laubscher & Jakubec, 2000). Laubscher developed a method for predicting the cave initiation using relationship between the hydraulic radius and the MRMR classification system. The hydraulic radius is the ratio of the surface area to the perimeter of that excavated surface which is the unsupported area of the cave back or undercut.

To come up with the likely ranges of MRMR to be used in the caveability assessment the following adjustments were applied – Joint Orientation: 85% and 95 to 110% for the impact of mining induced stress. This resulted in a general MRMR range for the better ground domains of 36 – 57 and the determined hydraulic radius to be approximately in the 21 – 29 m range, that can be used to guide the design (Figure 16-5).



Source: SRK, 2025

Figure 16-5: Laubscher's Caveability Chart Marked Up with Estimated MRRM Values and HR Requirements to Cave. Also Shown are the Footprint Sizes of the Three Proposed Caving Areas A, B and C

16.1.1 Underground Caving Recommendations

Based on the rock mass assessments and consideration of the influence of the sub-vertical structures, as well as prevailing experience, the following general guidelines are given for the cave height and draw rate to be used at this early stage in the cave performance evaluation:

Maximum Height of Draw: 400 – 500m

Caving Rate: For areas A and B where rock mass conditions are Fair, a rate of 300mm/day can be used; in Area C with the better rock mass conditions, a rate of 220mm should be used.

Further Work:

As the project advances, further caving studies will need to be undertaken to optimize the cave mining method performance. This will require the collection of additional geotechnical and structural information, as well as detailed information on the vein strength variability within the rock mass to be caved. Additional studies will need to include the following considerations:

- Updated caveability assessment of weak and stronger domains, as well as the waste rock.
- Updated cave propagation assessments, caving impacts on open pit slopes and subsidence forecasts.
- Fragmentation assessment of the ore, waste rock, and overburden and impacts on draw performance.
- Stress characterization and rock burst potential.
- Structural analysis and the assessment of the possibility for large wedge formation.
- Assessment of potential for mudrush and fines ingress.

16.4 Open Pit

16.4.1 Key Design Criteria

The following criteria were used to guide the mine design process for the Altar Project:

- Pit optimization, mine design and mine planning are based on the Resource block model (Resource Model) provided by IMC, which consists of a block size of 15 m wide x 15 m long x 15 m high. The model contains mineralized copper, molybdenum, gold, silver, arsenic and sulfur grades, as well as specific gravities and mineral resource classifications.
- The Resource Model was re-blocked to 15 m wide x 15 m long x 12.5 m high blocks to create the Engineering Model for the purposes of pit optimization, mine design, and mine planning. This is better aligned with open pit mining bench height and equipment limitations.

16.4.2 Pit Optimization

Pit optimization was conducted using Vulcan Pit Optimization (Maptek) software and using the Pseudoflow algorithm. This algorithm considers factors including resource grades, resource classification, and specific gravity for each block within the block model. It assesses costs and revenues for potential pit shells, expanding from the highest-grade blocks outward and downward until the last block breaks even economically.

Various pit shells are generated by incrementally changing metal prices while keeping metallurgical recoveries, costs, and pit slopes consistent. Each pit results in varying resource tonnes, grades, and waste tonnages. Economic margins for each pit were assessed, and the ultimate pit shell was chosen based on project objectives. In the case of the Altar Project, the primary goals for the open pit were to optimize cashflow, minimize waste movement, and ensure a sustainable, long mine life for continued operations. This process maximizes value while minimizing risk.

At the pit optimization stage, the economic analysis was conducted solely for comparison purposes to select the optimal pit shell and does not represent the actual financial outcomes of the mine plan.

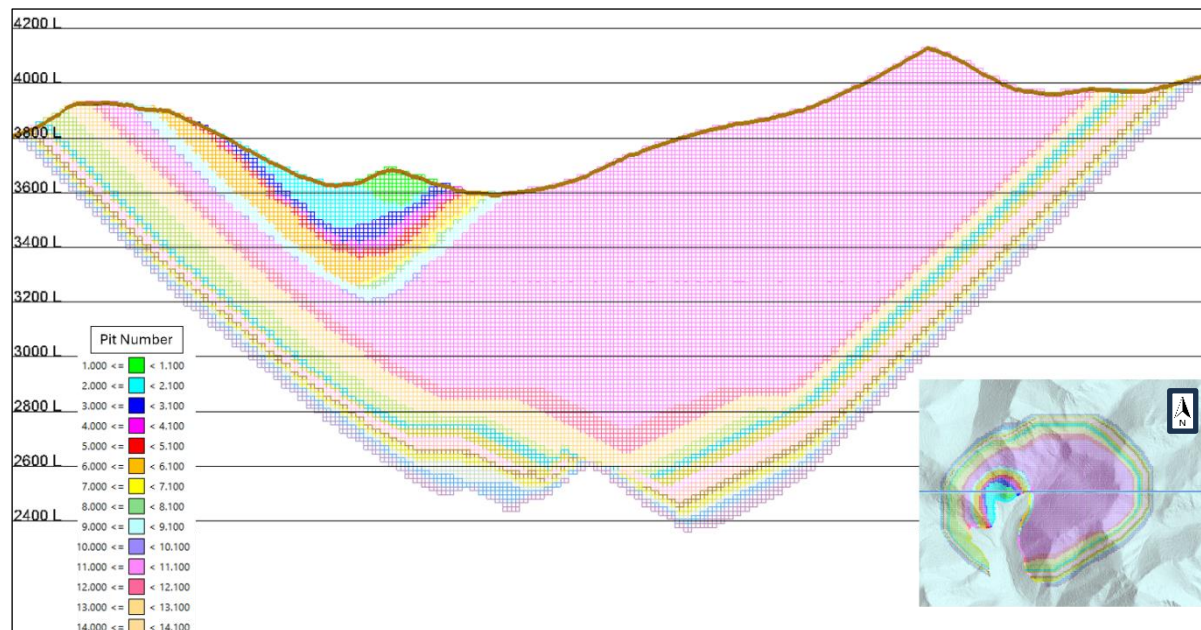
The pit optimization inputs used in this study are shown in Table 16-2. Geotechnical parameters were provided by SRK (Vancouver). Metallurgical recoveries, metal prices, process operating costs, G&A, and selling costs are aligned with industry averages for this type of deposit in this region. Mining dilution and mining recovery were incorporated by SRK during the mine design and scheduling process. Mine operating costs and mine sustaining capital costs were estimated and applied in the pit optimization.

Table 16-2: Pit Optimization Input Parameters

Item	Value	Unit
Mineral Classification	Measured, Indicated, Inferred	
Metal Prices		
Cu	4	US\$/lb
Mo	0	US\$/lb
Au	2,000	US\$/oz
Ag	28.00	US\$/oz
Operating Costs		
Mining Cost	2.25	US\$/t mined
Incremental Mining Cost per bench	0.028	US\$/12.5 m bench
Processing Cost	8	US\$/t
G&A	1	US\$/t
Metal Selling costs		
Cu	0.6	US\$/lb
Au	150	US\$/oz
Ag	4	US\$/oz
Recovery formula		
Cu	$(13.382 \times \text{Cu}\%) + 75.889 + 5$	%
Au	60%	%
Ag	50%	%

Source: SRK, 2025

Pit optimization results show that there is a massive stripping hurdle once a certain metal price is reached. Figure 16-6, Table 16-3, and Figure 16-7 illustrate these results. The graph shows that NPV in the Best Case is very close to the peak value for pit 10, meaning there is not a significant advantage to mining the massive pit 11.



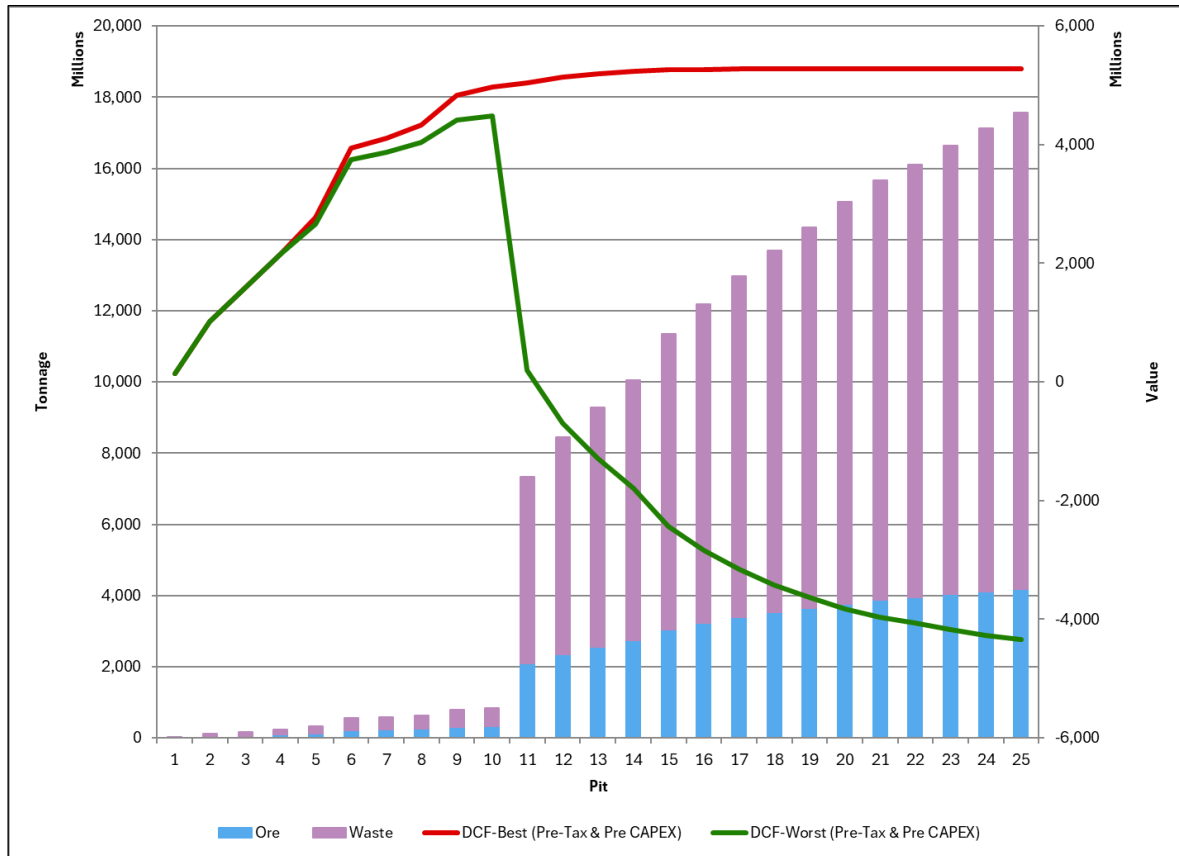
Source: SRK, 2025

Figure 16-6: Cross-Section of Pit Optimization Results

Table 16-3: Pit Optimization Results

Revenue Factor	Pit Shell	Mill Feed (Mt)	Waste (Mt)	Strip Ratio	TCU (%)	Au (g/t)	Ag (g/t)	As (%)
0.4	1	5	8	1.75	0.66	0.11	1.66	703.79
0.425	2	33	83	2.51	0.70	0.09	1.64	451.90
0.45	3	59	118	1.98	0.61	0.09	1.53	392.08
0.475	4	91	150	1.65	0.55	0.08	1.41	356.07
0.5	5	130	198	1.52	0.52	0.08	1.33	318.45
0.525	6	223	329	1.48	0.47	0.07	1.22	262.77
0.55	7	237	345	1.46	0.47	0.07	1.19	260.68
0.575	8	260	371	1.43	0.46	0.07	1.15	257.31
0.6	9	316	473	1.50	0.44	0.07	1.12	240.08
0.625	10	334	506	1.51	0.43	0.07	1.10	234.97
0.65	11	2,086	5,245	2.51	0.38	0.07	1.06	135.58
0.675	12	2,356	6,090	2.58	0.38	0.07	1.08	132.23
0.7	13	2,561	6,734	2.63	0.39	0.07	1.10	130.30
0.725	14	2,739	7,315	2.67	0.39	0.07	1.11	128.72
0.75	15	3,052	8,301	2.72	0.38	0.06	1.11	125.85
0.775	16	3,221	8,956	2.78	0.38	0.06	1.13	125.36
0.8	17	3,384	9,590	2.83	0.38	0.06	1.14	124.99
0.825	18	3,522	10,169	2.89	0.38	0.06	1.15	124.40
0.85	19	3,640	10,691	2.94	0.38	0.06	1.17	123.84
0.875	20	3,770	11,281	2.99	0.38	0.06	1.18	123.12
0.9	21	3,879	11,778	3.04	0.38	0.06	1.18	122.46
0.925	22	3,958	12,151	3.07	0.38	0.06	1.19	121.87
0.95	23	4,045	12,584	3.11	0.38	0.06	1.19	121.26
0.975	24	4,117	13,016	3.16	0.38	0.05	1.20	120.68
1	25	4,178	13,379	3.20	0.38	0.05	1.20	120.20

Source: SRK, 2025



Source: SRK, 2025

Figure 16-7: Pit Optimization Results

16.4.3 Final Pit Selection

In order to fairly compare scenarios, SRK developed a pre-liminary cashflow analysis. For this analysis, SRK estimated mining and processing CAPEX and SUSEX for both mining and processing rates at a very high level. Phase designs were done and scheduled to simulate mineralized material deliveries and preliminary cashflows were compared. SRK compared scenarios using a process rate of 120 ktpd, 60 ktpd, 45 ktpd and 30 ktpd. A very high level UG design and schedule were also created for this evaluation. The results of this analysis are summarized in Table 16-4 below. Based on the results for this comparative analysis, SRK selected pit 6 (at Revenue Factor 0.525), with the rest of the deposit being mined through underground methods and incorporated into the schedule. The processing rate selected was 60 ktpd.

Table 16-4: Scenario Comparison Table with Preliminary Results and Selected Base Case Highlighted in Orange

	Preliminary Initial Capital (\$US)	Post-Tax NPV @ 8% (\$US)	Post-Tax IRR (%)
30 ktpd	675,897,093	488,208,332	16
30 ktpd + 30 ktpd Expansion	675,897,093	636,348,570	19
30 ktpd + 30 ktpd Expansion OP + UG	675,897,093	1,268,528,420	20
45 ktpd	942,424,103	634,254,980	17
60 ktpd	1,037,601,276	789,579,700	19
60 ktpd OP + UG	1,037,601,276	1,525,157,145	20
120 ktpd	2,515,871,291	1,387,105,086	14

Source: SRK, 2025

16.4.4 Pit Design Parameters

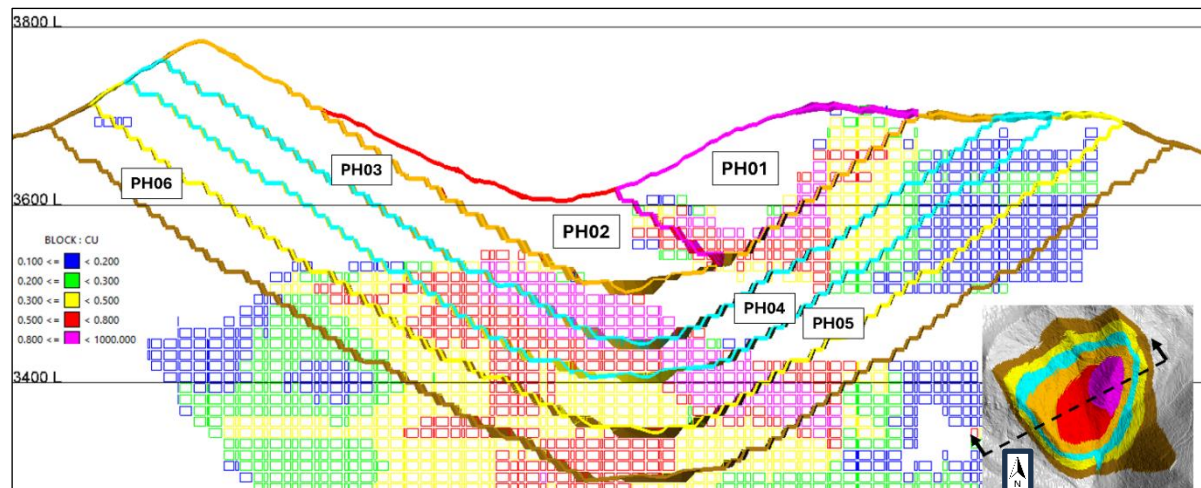
The open pit was designed using Vulcan software by Maptek. The design uses a 12.5 m bench height to maintain the selected mining unit (SMU) in the vertical (“z”) dimension that was used in the Engineering Model. The pit optimization results were used as a guide for the phase design.

Final pit haul roads were designed to have a total width of 20 m and a maximum gradient of 10%. These parameters are sufficient to facilitate two-way traffic for 100-t haul trucks while considering provisions for appropriate berms and drainage. The last 5 benches were designed with a reduced ramp width of 10 m for single-lane traffic to maximize the extraction of mineralized material.

Bench configuration parameters are specified in Table 16-2 in Section 16.3.3.

16.4.5 Pit Design

The final pit design consists of 6 phases. Figure 16-8 shows a cross-section through all the phases, and Table 16-5 shows the total material and the breakdown by phase. Figure 16-9 and Figure 16-10 show the topography mined to the ultimate pit.



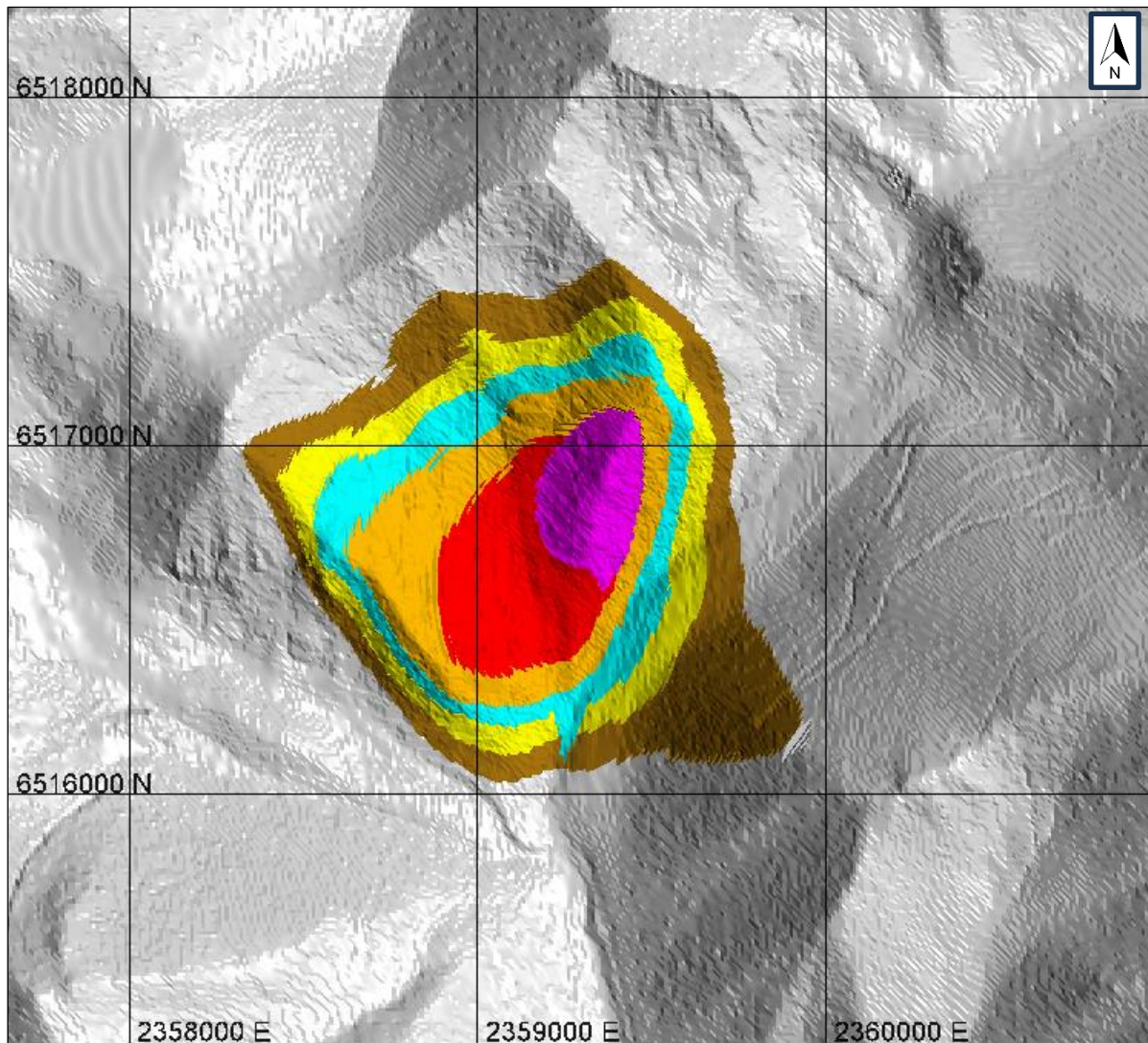
Source: SRK, 2025

Figure 16-8: Cross-Section of Pit Design

Table 16-5: Material Breakdown by Phase and Total for Open Pit Design

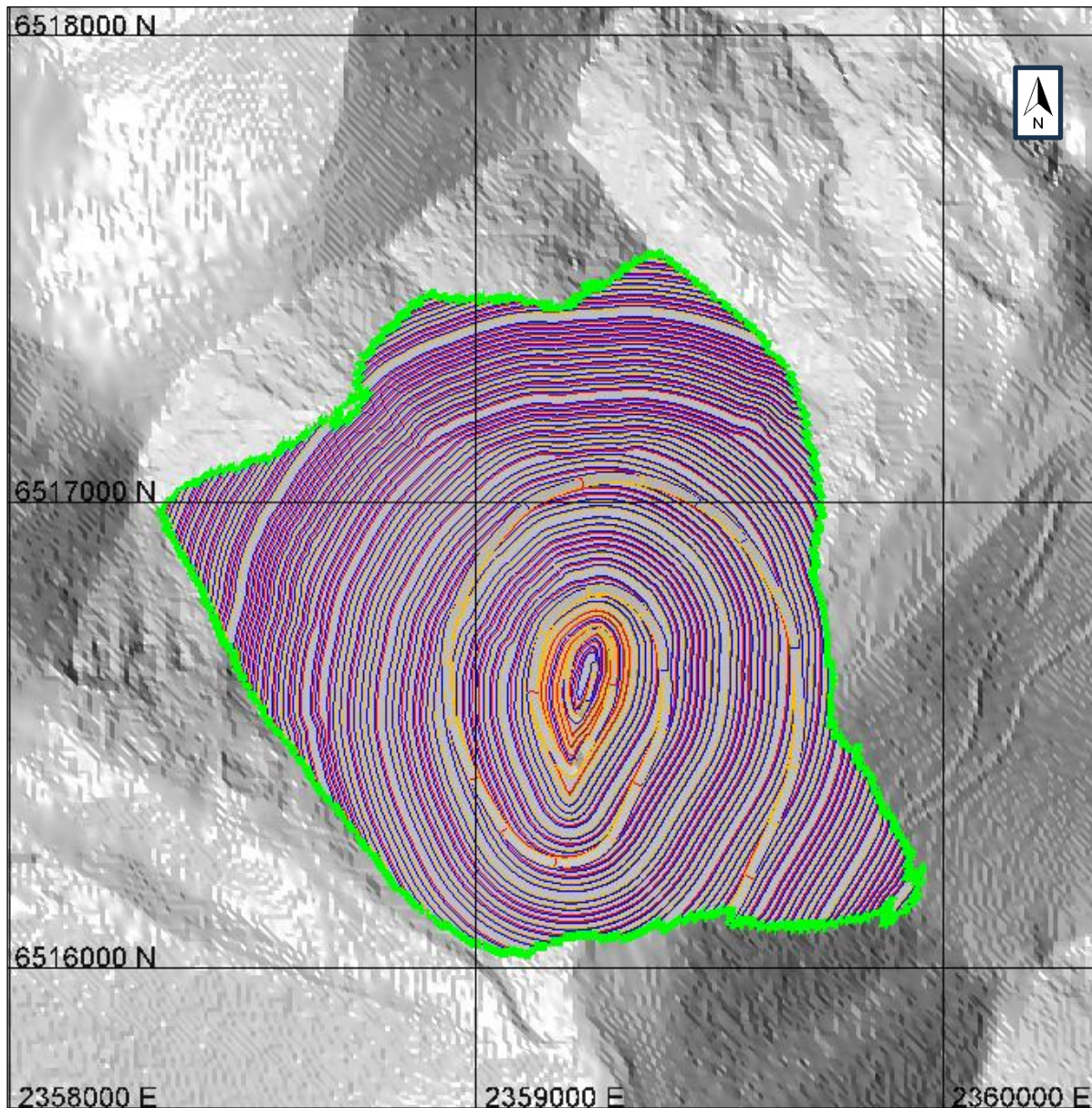
Phase	Mineralized Material (Mt)	Waste (Mt)	S/R	Cu (%)	Au (g/t)	Ag (g/t)	As (g/t)
1	3.9	11.2	2.85	0.66	0.11	1.80	664
2	2.1	25.1	12.03	0.61	0.10	1.44	582
3	21.7	52.8	2.43	0.60	0.09	1.61	519
4	38.8	54.7	1.41	0.51	0.08	1.44	310
5	63.2	79.0	1.25	0.43	0.07	1.16	244
6	92.8	118.0	1.27	0.38	0.06	0.95	208
Ultimate Pit	222.6	340.9	1.53	0.44	0.07	1.18	278

Source: SRK, 2025



Source: SRK, 2025

Figure 16-9: Plan View of Pit Phases

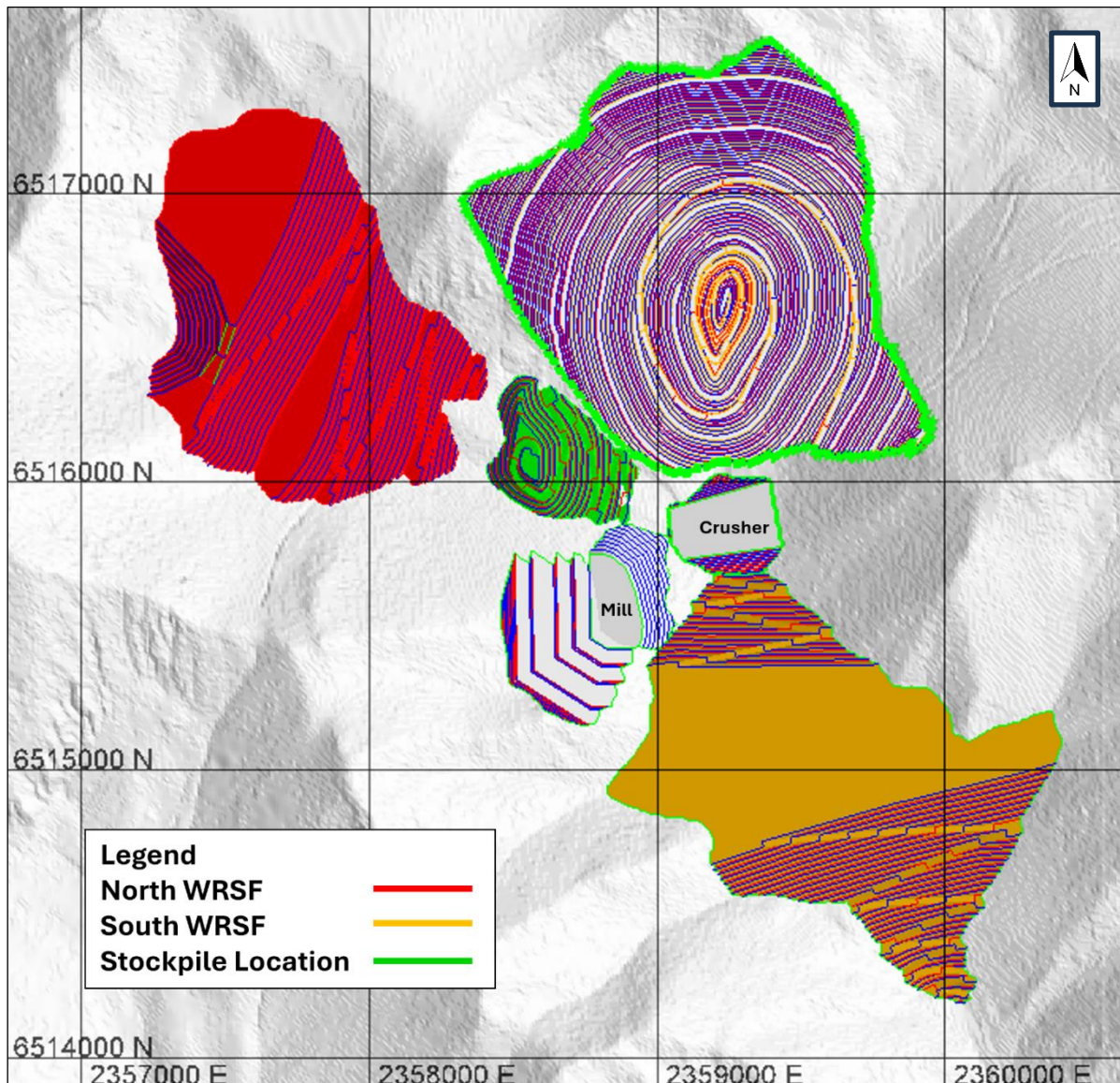


Source: SRK, 2025

Figure 16-10: Plan View of Final Pit Design

16.4.6 Waste Storage Facilities and Stockpiles

SRK designed waste rock storage facilities with the purpose of reducing haulage cycle times. Figure 16-11 illustrates the location of the designed WRSFs. The South WRSF will be the main dump location early in the mine life, which significantly reduces truck cycle times for waste material. The north WRSF is used later in the mine life as stripping the top benches from the last three phases has a shorter haul to this destination. Table 16-11 shows volume and tonnage capacity for all dumps. The current pit design requires 341 M tonnes of waste storage capacity.



Source: SRK, 2025

Figure 16-11: Plan View of WRSFs, Pit, Stockpile, Crusher Pad, and Mill

Table 16-6: WRSF Capacity

WRSF	Volume (M cu-m)	Tonnes (Mt)
South	111	200
North	83	150
Total	194	350

Source: SRK, 2025

16.4.7 Pit Mining Sequence/Mine Schedule

Open pit operations will take place with regular open pit truck and excavator mining. The pit schedule requires one year of pre-stripping, eight years of regular mine operations and multiple years of

stockpile rehandle to complement the mineral inventory tonnes coming from the underground operations. The production schedule is based on the following parameters:

- Operations are scheduled on annual periods.
- Maximum bench sinking rate is 12 benches per year.
- Mineralized and waste materials are classified using 0.18% Cu cut-off value.
- Temporary stockpiles will be available in the crusher pad. Long term stockpile will be located close to the pit and is shown in Figure 16-11 in Section 16.4.6.
- Within a given phase, each bench is fully mined prior to progressing to the next bench.
- Phases are mined simultaneously with sufficient lag between phases to advance the stripping of waste material and maintain throughput to the mill.
- Rehandling of material is only executed by front-end wheel loaders.

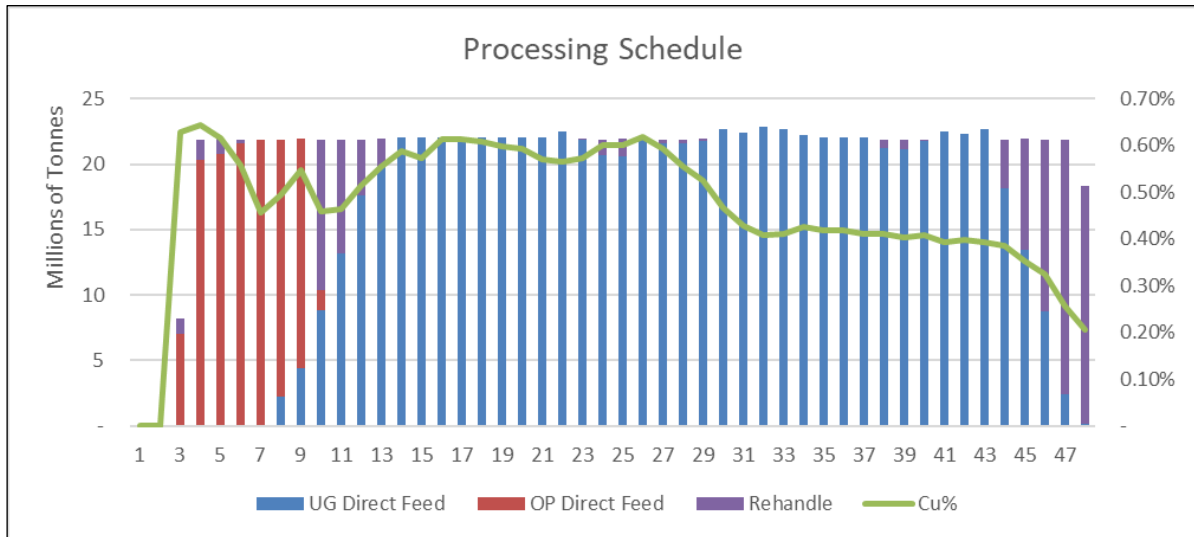
To prioritize higher-grade material sent to the mill, lower-grade material is stockpiled and rehandled later during the mine operation.

Figure 16-3 and Table 16-7 detail the open pit mine production schedule and the global milling schedule.

Table 16-7: Open Pit Mining Schedule

Year	Mined						Total Mined
	Waste (Mt)	Mineralized Material (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	As (g/t)	Mt
Yr1	47.9	7.1	0.32	0.08	1.53	273	55.0
Yr2	55.6	14.4	0.47	0.09	1.55	532	70.0
Yr3	56.3	28.7	0.55	0.08	1.57	431	85.0
Yr4	52.2	32.8	0.50	0.08	1.34	298	85.0
Yr5	50.8	34.2	0.45	0.06	1.27	220	85.0
Yr6	46.9	34.3	0.38	0.07	0.86	225	81.2
Yr7	30.7	36.9	0.39	0.05	1.06	211	67.7
Yr8	0.3	32.6	0.44	0.08	0.82	210	32.9
Yr9	0.0	1.6	0.52	0.08	0.73	160	1.6
Total	340.9	222.6	0.44	0.07	1.18	278	563.5

Source: SRK, 2025



Source: SRK, 2025

Figure 16-12: Milling Schedule (OP + UG)

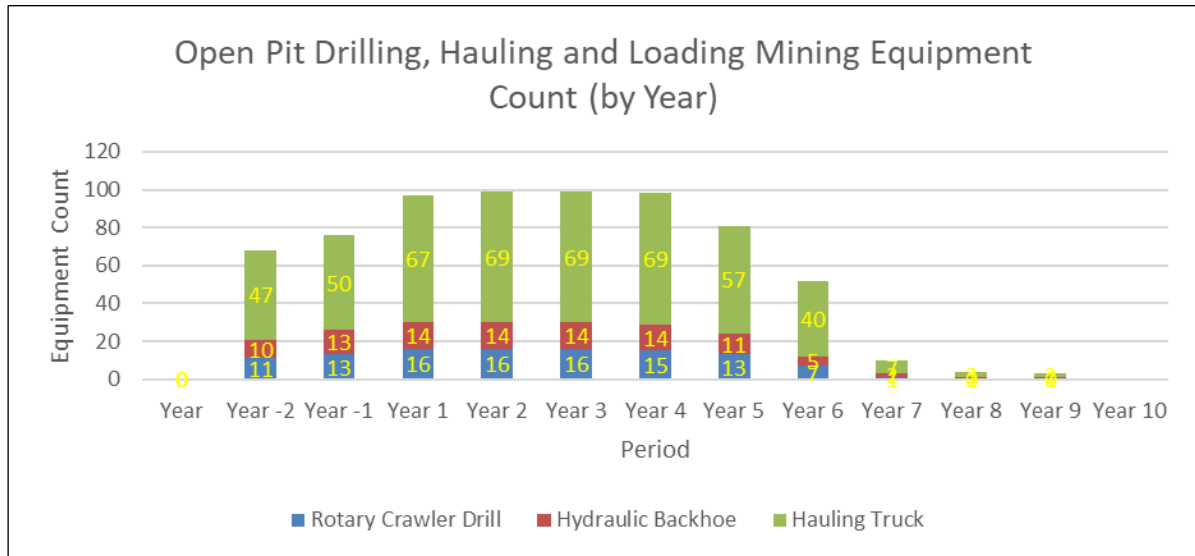
The first two years are a construction period. Processing starts half-way through Year 3 with a total capacity of 8.2 Mt. All mill feed will be stockpiled until the construction of the Mill is completed. The mining rate is progressively increased each year until it reaches a maximum of 85 Mtpa in Year 3.

16.4.8 Mining Operations and Equipment

The mining equipment described below is based on standard surface mining equipment fleets typically utilized in open pit operations. The mine will utilize a traditional truck and shovel open pit mining method with the support of ancillary equipment. For the purposes of this PEA, it has been assumed that mining operations will use two fleets, with a transition from predominantly small-scale mining equipment early in the mine life to predominantly large-scale mining equipment later in the mine life (if an open pit expansion is executed). The small-scale equipment fleet will include 200 mm diameter blast hole drills, 8 m³ hydraulic shovels and 100 t capacity haul trucks.

The rationale for deploying a predominantly small-scale equipment fleet in the early years of the Project is that the open pits have been designed to initially use multiple smaller pit phases to reduce waste stripping and allow for faster access to mineralized materials. These smaller phases have narrower access roads that require the use of small-scale haul trucks (100 t capacity).

Figure 16-13 displays the drilling, loading, and hauling unit requirements over the LoM.



Source: SRK, 2025

Figure 16-13: Loading and Hauling Unit Requirements

Ancillary equipment, such as motor graders, dozers, and water trucks, has been selected based on experience and benchmarking to support smooth and safe operations. This equipment will be utilized for maintaining haul roads, loading areas, waste dumps, stockpiles, and other areas around the mine. Table 16-8 details the loading, hauling, drilling and ancillary equipment for the Altar Project. Table 16-9 details the service and support equipment necessary to support the open pit mining operation.

Table 16-8: Loading, Hauling, Drilling and Ancillary Mining Equipment

Equipment	Capacity	Peak No. of Units on Site
Drilling Equipment		
Production Drill	200 mm and 250 mm	16
Pre-Split Drill	127 mm	1
Loading Equipment		
Hydraulic Mining Shovel (Small)	8 m ³	14
Hauling Equipment		
Small Mining Truck	100 t	69
Ancillary Equipment		
Track Dozer	4.9 m	5
Wheel Dozer	6.3 m	5
Small Motor Grader (narrow roads)	4.9 m	1
Large Motor Grader (wide roads)	7.3 m	2
Water Truck (narrow roads and drills)	34,000 L	2
Water Truck (wide roads and dumps)	121,000 L	2
Excavator	5.2 m ³	1
Wheel Loader (medium)	4.7 m ³	1

Source: SRK, 2025

Table 16-9: Mine Service and Support Equipment List

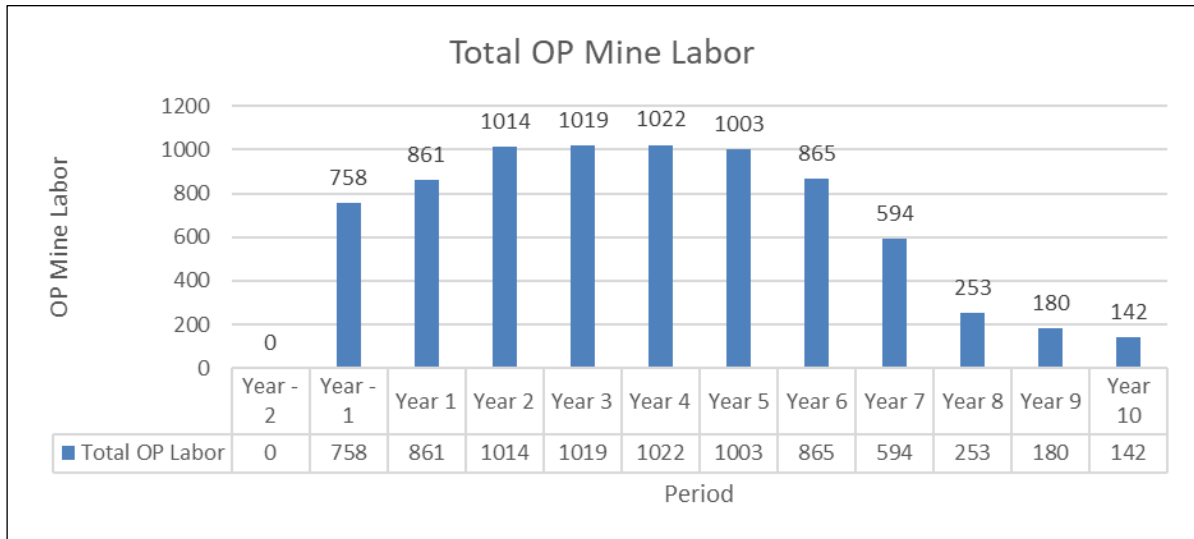
Equipment	Peak No. of Units on Site
Service Equipment	
Tire Handler	2
Fuel and Lube Truck	3
Rock Hammer Attachment	2
Maintenance Welding Truck	2
Maintenance Maintainer w/ Crane	2
Flatbed Truck	2
Man Basket Truck	2
Support Equipment	
Centre Pivot Backhoe Loader	2
Portable Pressure Washers	2
Mobile Generator	3
Portable Heaters	1
Portable Trash Pump	2
Portable Welders	2
Industrial Crane	2
Knuckle Boom Manlift	2
Portable Compressor	1
Semi-Truck and Lowboy Trailer	1
Forklift (large)	2
Forklift (small)	3
Barrel Handling Attachment	2
Telehandler Forklift	2
Scissors Lift	2
Telescopic Boom Lift	2
Shop Floor Sweeper	1
Portable Light Plants	20
Personnel Van/Bus	12
Pickups	80

Source: SRK, 2025

In addition to the equipment detailed in Table 16-8 and Table 16-9, the mining operation will have a dispatch system, a communications network, mine radios, and geotechnical monitoring equipment. There will also be typical provisioning for computer hardware and software, survey equipment, office furniture, initial spare parts, and maintenance shop tools.

16.4.9 Mine Staffing

The Open Pit LoM technical, operations, and maintenance staffing profile is presented on Figure 16-14. The peak staffing level occurs in Year 8 with 1,022 employees (includes all OP shifts on and off).



Source: SRK, 2025

Figure 16-14: Mine Open Pit Staffing Profile

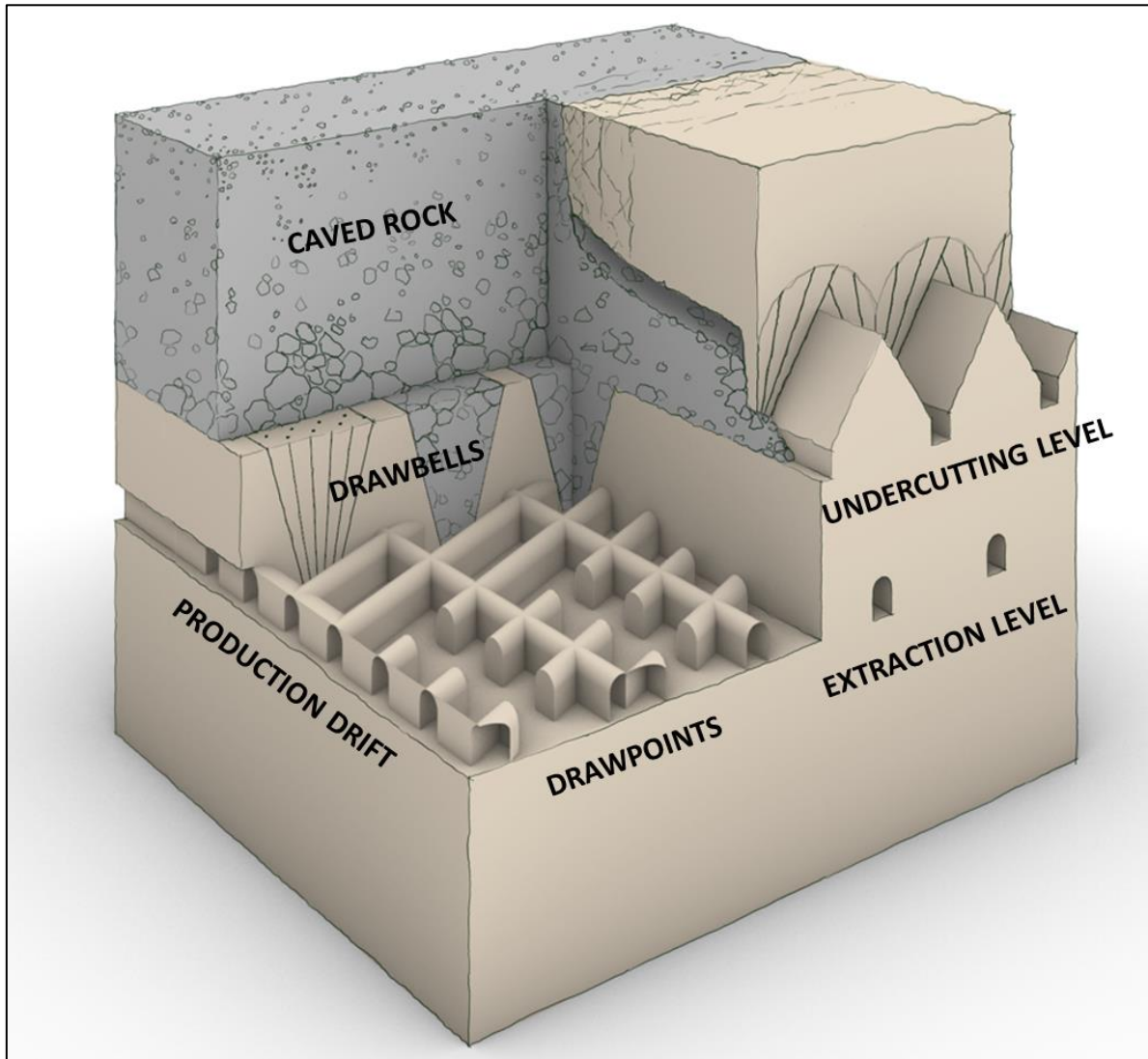
16.5 Underground

16.5.1 Block Caving Description

Block caving is a bulk underground mining method that typically has the lowest operating cost per tonne of mined material for all underground methods. This low-cost advantage is offset by lower selectivity, reduced flexibility and higher upfront capital costs compared to other underground mining methods.

The low cost and limited selectivity make block caves best suited to massive deposits with both lateral and vertical continuity. The low cost allows for the inclusion of low-grade material and internal dilution that would be uneconomic using higher cost underground methods.

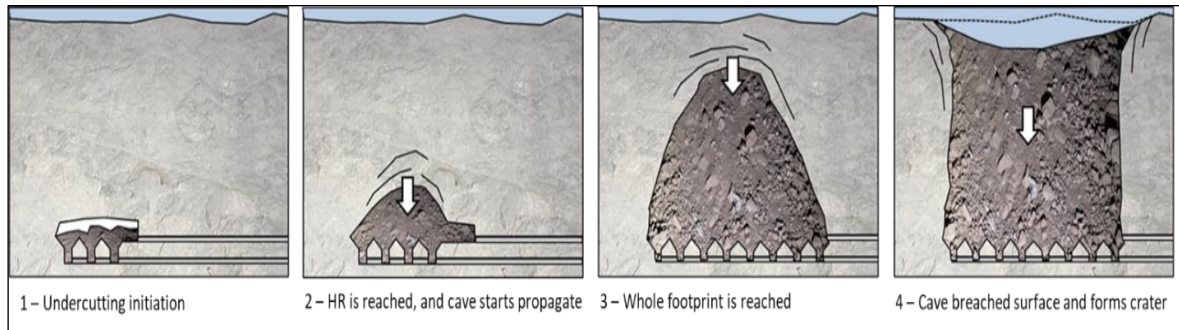
Block caving works by undercutting the deposit and creating an unsupported expanse that is large enough to induce caving. Figure 16-15 provides a 3-D illustration of a typical block cave layout.



Source: Jakubec, 2023

Figure 16-15: Illustration of a Block Cave

The caving process is illustrated in Figure 16-16. The caved material is extracted from an array of drawbells excavated into the rock beneath the undercut. As the caved material is extracted from the drawbells on the extraction level the void beneath the deposit is maintained and the cave continues to progress vertically to surface where it will form a subsidence zone.

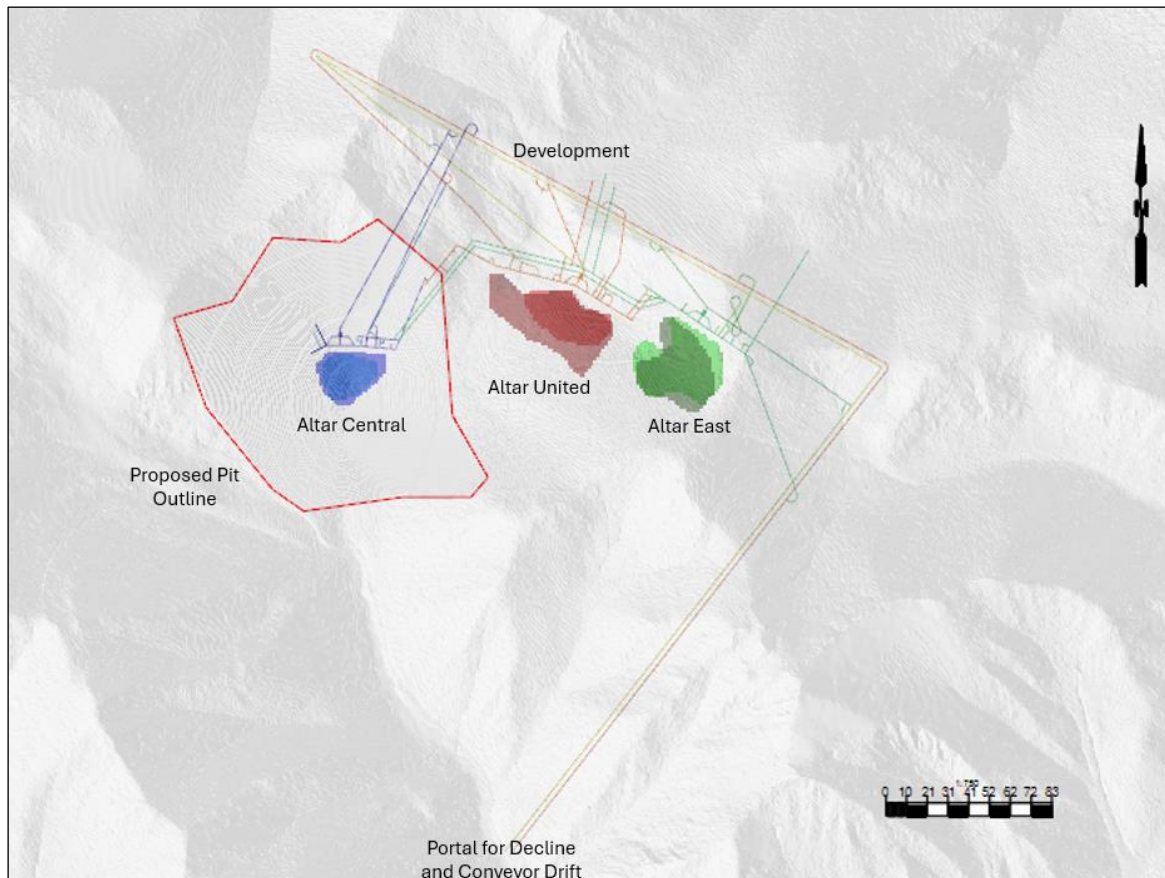


Source: Jakubec, 2023

Figure 16-16: Caving Process

16.5.2 Underground Mine Development

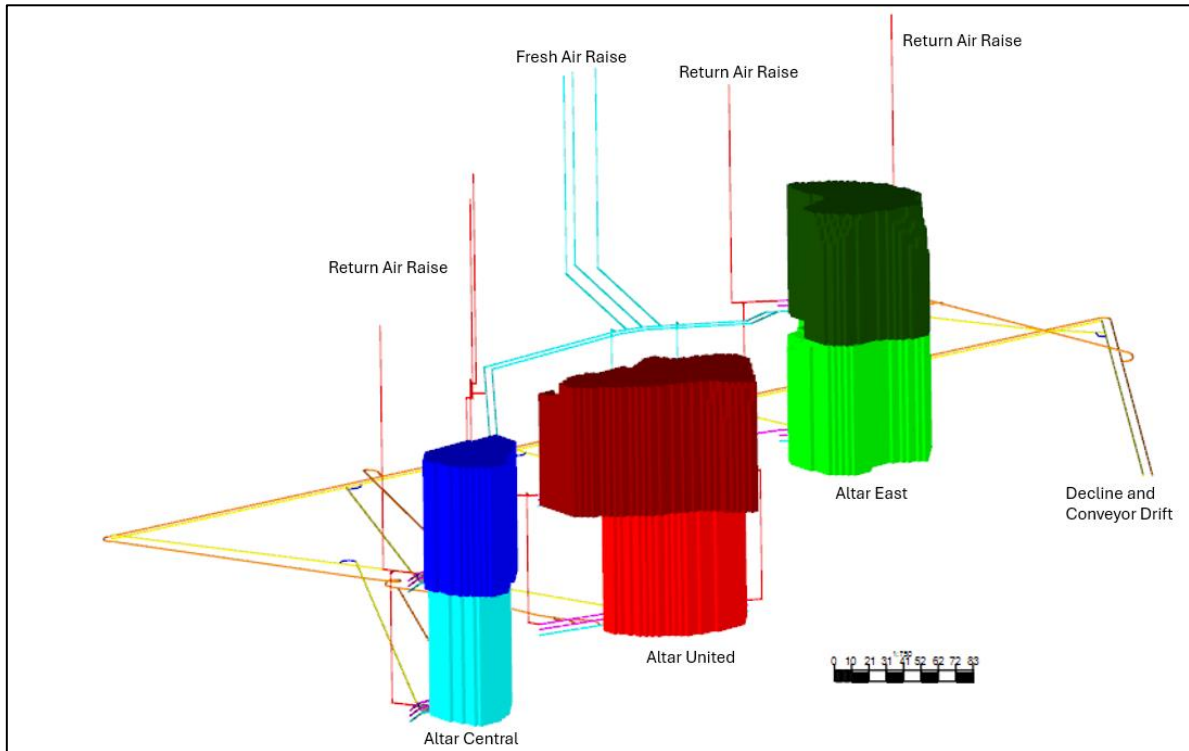
Underground access to the mining areas will be through a portal and conveyor drift from the south of the proposed pit. All lateral developments are designed to 5.5 m wide and 5.5 m high to allow for equipment and ventilation. Drift gradients will vary from -15% to +15% to reach the desired elevation. Figure 16-17 shows the development design for the underground caving. Vertical development for ventilation are raisebored to 5 m in diameter. Draw bells and extraction drifts for the caves were not designed in detail. The development cost was accounted for using factors in the cost model.



Source: SRK, 2025

Figure 16-17: General Layout of Mine Design

Figure 16-18 shows an orthogonal view of the mine design.



Source: SRK, 2025

Figure 16-18: Orthogonal View of Mine Design

16.5.3 Underground Caving Design

GEOVIA's Footprint Finder was used to produce the caving footprints and generate the mineral inventories.

Footprint Finder is a tool developed to rapidly evaluate and compare multiple caving footprints and strategies. It uses Laubscher vertical mixing algorithm to blend the blocks within the block model columns. It then calculates the best height of draw (BHOD) that maximizes the net cashflow (NSR - Operating Cost) of the column on a discounted basis. The column values are then summed to get the total value of the footprint. Footprint Finder will calculate the value of a footprint at various elevations and plot how footprint value varies with the extraction level elevation. Footprint Finder can also generate and compare production schedule values that consider undercutting rates, vertical mining rate and ramp up periods to produce a discounted operating cashflow.

Figure 16-19 lists the primary inputs and assumptions used in Footprint Finder to generate the footprints and their associated mineral inventories.

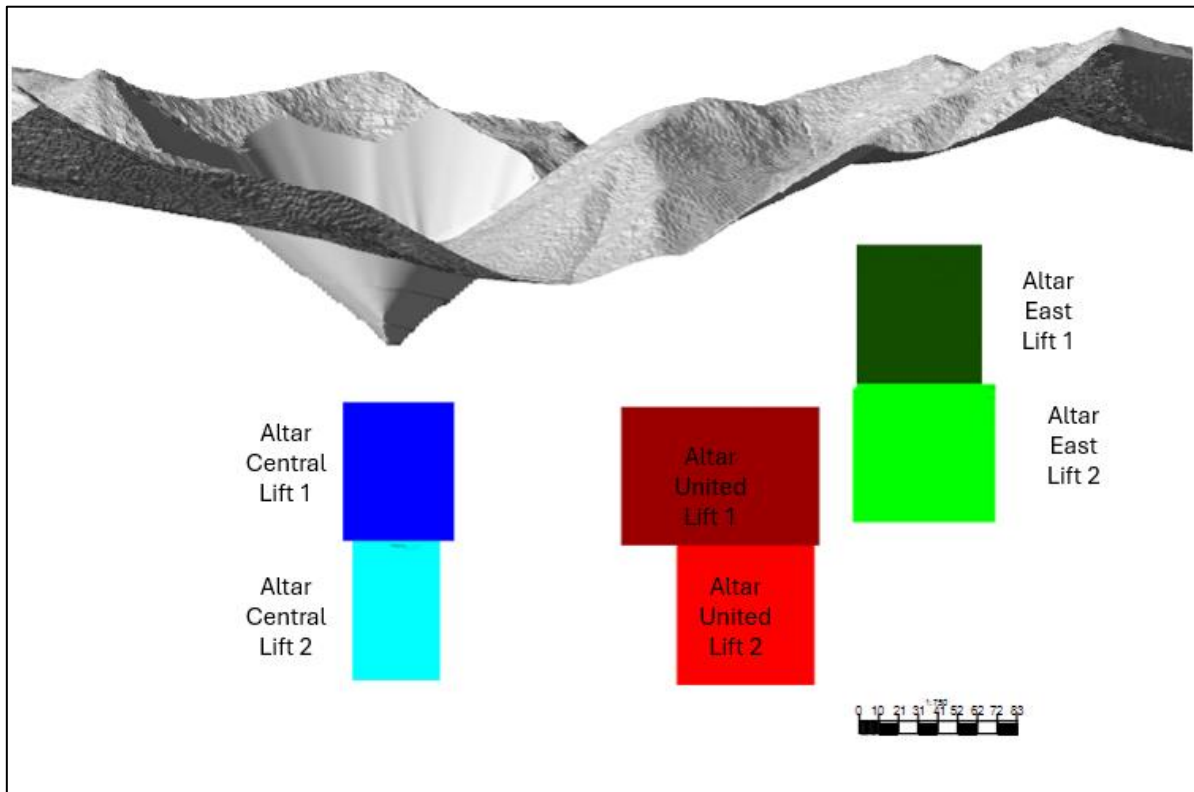
Parameter	Value	Unit	Comment
Operating Cost	17.27	\$/t	Includes mining, processing and G&A
Discount Rate	10	%	Higher discount rates favor increasing grade over resource utilization
Vertical Mining Rate (Footprints A&B)	110	m/yr	300 mm/day. Estimated cave back propagation based on rock mass characterization.
Vertical Mining Rate (Footprints C)	80	m/yr	220 mm/day. Can't exceed due to risk of forming an air gap.
Max Height of Draw	450	m	
Production Limit per Cave	11	Mtpa	External production limit, smaller footprints may not achieve this
Ramp Up Period	4	yrs	Time to full production cannot occur faster than this.

Source: SRK, 2025

Figure 16-19: Footprint Finder Key Inputs and Assumptions

The operating cost of \$17.27/t was applied as a shutoff to the NSR encoded in the block, however the final height of draw for most columns was limited by the maximum height of draw of 450 m rather than being shutoff controlled.

Due to the maximum height of draw, each of the three deposits was divided into two lifts for a total of six caves, as shown on Figure 16-20. Within each deposit, the lift elevations were chosen to maximize the combined discounted operating cashflow of both lifts.



Source: SRK, 2025

Figure 16-20: Caves Generated from Footprint Finder

Figure 16-21 presents the mined tonnes and grades from each cave.

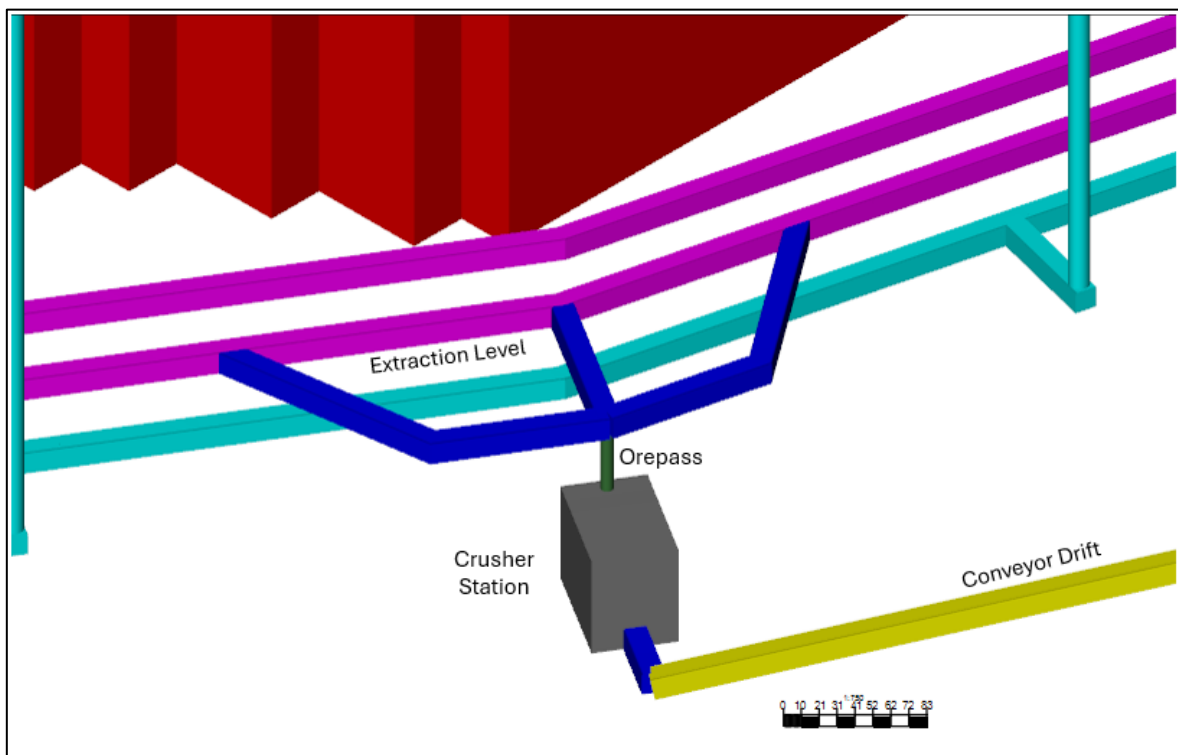
Deposit	Lift	Elevation (m RL)	Total				Measured				Indicated				Inferred			
			Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)
A	1	2555	91.2	0.597	0.031	1.08	21.1	0.620	0.039	0.91	56.0	0.587	0.030	1.09	14.1	0.603	0.023	1.30
	2	2105	61.9	0.385	0.008	1.22	-	0.000	0.000	0.00	26.3	0.386	0.009	1.23	32.5	0.421	0.008	1.32
B	1	3065	151.7	0.518	0.208	1.48	83.5	0.522	0.227	1.51	60.6	0.512	0.185	1.44	7.6	0.517	0.182	1.47
	2	2615	167.9	0.401	0.054	1.29	5.4	0.467	0.105	1.24	113.3	0.424	0.057	1.35	42.9	0.393	0.048	1.34
C	1	2540	196.6	0.626	0.034	2.24	2.9	0.741	0.043	2.15	167.4	0.631	0.034	2.29	26.2	0.586	0.035	1.93
	2	2090	98.9	0.410	0.015	1.86	-	0.000	0.000	0.00	29.6	0.478	0.016	2.20	62.1	0.425	0.017	1.92

Source: SRK, 2025

Figure 16-21: Block Cave Mineral Inventories

16.5.4 Underground Material Handling System

During the initial development phase, development waste rock will be hauled to surface using 45 t trucks. Once the production lifts are established, the mineralized material is extracted from the lift using LHDs to the crusher system. The crushed material will then be transferred to the conveyor system and brought to surface. A crusher station is planned at each lift, with an orepass and grizzly system. Mobile rockbreakers will provide secondary breaking at the grizzlies. Figure 16-22 shows conceptual design for the crusher system.



Source: SRK, 2025

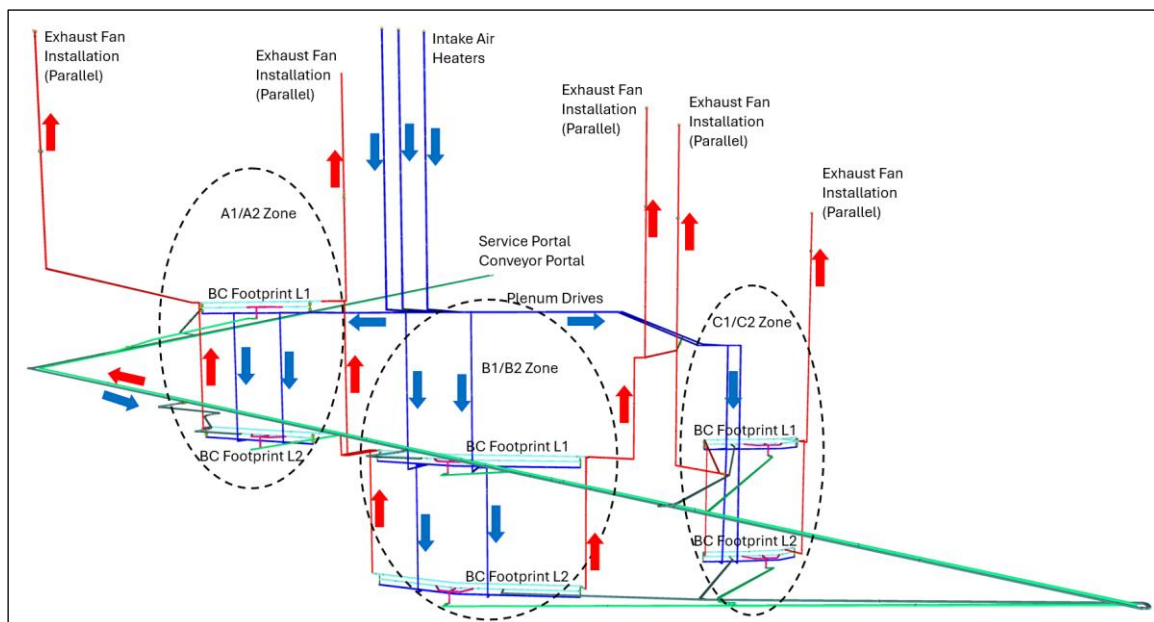
Figure 16-22: Crusher System Conceptual Design

16.5.5 Mine Ventilation

The ventilation of the Altar project will incorporate standard block cave design features which include: one pass ventilation on the undercut level, fresh air being drawn onto the extraction level at the front and exhausted toward the back side of the level, separate ventilation splits for the crusher/crusher dump. Because of the tonnages involved only a single LHD will be operated in an extraction drive, the drives will not be split. Airflow will downcast the service access decline and will be forced to upcast the conveyor decline (small booster fans located in the fresh air raises leading into the conveyor). The ventilation system is designed to support two active caving units, and one cave development unit.

Ventilation Layout

The layout of the ventilation system includes three main fresh air raises (5-m raisebore), five exhaust raises (5-m raisebore), one service decline (intaking), and one conveyor (exhausting) as shown on Figure 16-23. Several plenum drives will be utilized to spread the airflow across the length of the mining blocks, with additional sub-raises developed to reach the lower mining units. Each of the five exhaust raises will have a parallel exhaust fan installation constructed at the collar, the three fresh air raises will have air heaters installed on them.



Source: SRK, 2025

Figure 16-23: Overall Ventilation System Layout

Equipment

The main production equipment will consist of 24 – 18 t LHDs (12 per active cave). The development equipment will be set with 14 t LHDs feeding 45 t haul trucks. In addition to the main equipment, there will be a significant amount of support equipment. It is assumed that there will be approximately 3,045 kW of equipment operating in each cave with approximately 3,136 kW of development equipment.

Airflow Requirement

In addition to the airflow required for diesel dilution, each block cave unit is assumed to have:

- Small shop/office – 35 m³/s
- Crusher – 30 m³/s
- Conveyor – 35 m³/s (added at each mining unit, with the air velocity held to a maximum of 3.5 m/s, homotropical flow)
- 9 additional production drives waiting for equipment – 63 m³/s

This results in a minimum airflow requirement of approximately 400 m³/s per block cave unit (two block cave units are assumed in full production).

The ventilation for the development area is based on the airflow required for diesel dilution (3 haul trucks and two LHDs) and a crusher which reflects a requirement of approximately 250 m³/s (one dedicated development zone is assumed).

It is anticipated that as production in one unit slows, the production in another unit will increase. The ventilation raises extending from the upper ventilation plenum drives will allow for flexibility within the ventilation system to draw airflow from the required areas. All of the ventilation raises have been standardized at 5 m. The exhaust raises could be slightly smaller and the fresh air raises could be slightly larger; however, considering the longer raise depths and the potential for ground control issues, these raise sizes should be sufficient.

Exhaust Fans

The performance requirements for the exhaust fans have been determined by examining a cursory ventilation model representing the fresh air and exhaust raises, ventilation plenum drives and lateral extension, and declines. The actual losses within the mining blocks are typically minimized by the parallel airways (extraction drifts), airway regulators, and auxiliary fans.

The operating duty of each principal fan installation will be approximately 250 m³/s at 3.8 kPa with an installation power of approximately 1100 kW. Each fan installation will incorporate 2 parallel fans of approximately 550 kW each). There will be variability between the fans during production at different block cave zones.

Fresh Air Heaters

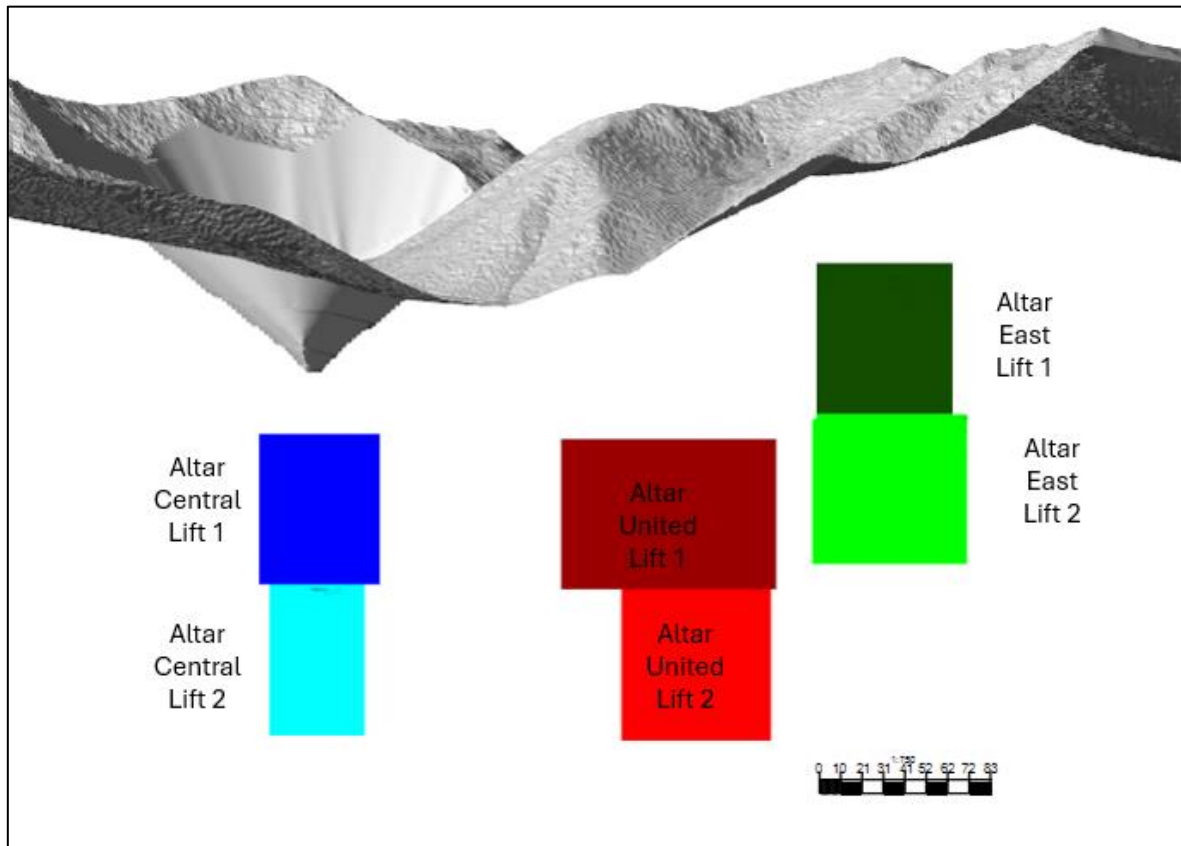
The fresh air raises have been grouped together so that the incorporation of the air heaters can be simplified both for construction and maintenance. The air heaters at the top of each fresh air raise will be required to achieve a maximum duty based on a 45°C temperature rise passing approximately 350 m³/s (11.62 MW per shaft). The air heaters would not operate at the highly elevated level, rather this represents a maximum duty point that should cover the majority of the winter season. During periods outside of this operation point, the airflow through the ventilation system could be temporarily turned down to provide the necessary temperature rise.

16.5.6 Cave Sequencing

The caves are divided into two lifts and mined from top down. The Altar caves (Cave A) are below the pit and will be mined when the pit is finished. The Altar East caves (Cave B) will be mined first, followed by the Altar United caves (Cave C). The general sequence of the cave is:

1. B1 – Altar East Lift 1 starts in Y5 and reaches full production in Y9
2. C1 – Altar United Lift 1 starts in Y7 and reaches full production in Y11
3. A1 – Altar Central Lift 1 starts in Y19 and reaches full production in Y23
4. B2 – Altar East Lift 2 starts in Y25 and reaches full production in Y29
5. C2 – Altar United Lift 2 starts in Y27 and reaches full production in Y31
6. A2 – Altar Central Lift 2 starts in Y36 and reaches full production in Y40

Figure 16-24 shows the different caves and lifts.



Source: SRK, 2025

Figure 16-24: UG Cave Lifts

16.5.7 Underground Production Scheduling

The production schedule is based on the mine design discussed in previous sections and was completed using Microsoft Excel. The production schedule targets 60,000 t/d of mineralized material to the process facility. This productivity is aligned with the general orebody size, shape, access, and mine design strategy. Each lift will require four years to ramp up to 30,000 t/d, with at least two lifts in production at once to meet the total production requirement. Development rates are shown in Table 16-10 and the production schedule is shown in Table 16-11.

Table 16-10: Development Productivities

Development Profile	Development Rate
Decline and Conveyor Drift	3 m/d
Level Access, Drawbells, Extraction Drifts and Ventilation Drifts	4.5 m/d
Vertical Development	2 m/d
Cave Production (per lift)	30,000 t/d

Source: SRK, 2025

Table 16-11: UG Cave Production Schedule

Period	Total Mineralized Tonne (kt)	Cu Grade (%)	Au Grade (g/t)	Ag Grade (g/t)	As Grade (ppm)	Contained Cu (M lbs)	Contained Au (t.oz)	Contained Ag (t.oz)	Total Waste (kt)
Y1	0	0.00	0.00	0.00	0.00	0	0	0	202
Y2	0	0.00	0.00	0.00	0.00	0	0	0	202
Y3	0	0.00	0.00	0.00	0.00	0	0	0	313
Y4	0	0.00	0.00	0.00	0.00	0	0	0	778
Y5	2,200	0.58	0.22	1.80	104.18	2,793	15,405	127,287	564
Y6	4,400	0.61	0.26	1.95	118.23	5,952	36,589	275,980	541
Y7	8,800	0.56	0.19	1.86	116.11	10,946	55,163	525,073	276
Y8	13,200	0.56	0.17	1.87	114.68	16,210	70,587	791,593	2
Y9	17,600	0.56	0.16	1.80	108.33	21,724	89,225	1,017,316	
Y10	19,800	0.58	0.15	1.82	111.45	25,270	97,033	1,159,612	
Y11	22,000	0.59	0.14	1.76	112.01	28,479	98,497	1,246,451	
Y12	22,000	0.57	0.13	1.66	117.17	27,819	95,084	1,176,467	
Y13	22,000	0.61	0.13	1.80	113.05	29,803	91,387	1,272,446	
Y14	22,000	0.61	0.13	1.83	118.05	29,705	90,751	1,293,448	
Y15	22,000	0.61	0.13	1.89	122.81	29,442	88,638	1,336,439	
Y16	22,000	0.60	0.11	1.88	128.15	29,017	80,730	1,332,136	
Y17	22,000	0.59	0.11	1.85	132.00	28,770	74,632	1,310,077	23
Y18	22,000	0.57	0.10	1.80	131.47	27,659	69,873	1,273,914	180
Y19	22,531	0.56	0.08	1.84	138.75	28,047	58,589	1,332,390	227
Y20	21,896	0.57	0.06	1.87	150.66	27,652	43,450	1,318,769	197
Y21	20,659	0.60	0.04	1.97	152.87	27,467	27,545	1,305,564	158
Y22	20,560	0.62	0.03	1.92	148.41	28,060	21,254	1,271,843	249
Y23	22,048	0.62	0.03	1.82	151.83	30,083	20,859	1,286,892	403
Y24	21,614	0.59	0.03	1.71	141.95	28,331	20,477	1,186,338	340
Y25	21,582	0.56	0.03	1.47	125.70	26,562	22,674	1,021,389	203
Y26	21,774	0.53	0.04	1.29	111.75	25,285	26,313	900,230	17
Y27	22,658	0.47	0.04	1.17	100.58	23,341	28,022	850,919	
Y28	22,442	0.43	0.04	1.20	100.85	21,206	31,889	867,184	
Y29	22,818	0.41	0.04	1.22	89.71	20,574	32,086	896,835	
Y30	22,710	0.41	0.04	1.39	92.14	20,584	31,502	1,013,153	
Y31	22,247	0.43	0.04	1.60	90.72	20,887	30,904	1,141,397	
Y32	22,000	0.42	0.04	1.58	82.57	20,295	30,129	1,119,826	
Y33	22,000	0.42	0.04	1.64	88.51	20,286	25,436	1,159,495	131
Y34	22,000	0.41	0.03	1.65	91.95	19,952	23,972	1,165,262	316
Y35	21,249	0.41	0.03	1.61	99.67	19,272	23,191	1,097,844	60
Y36	21,177	0.40	0.03	1.54	97.74	18,762	22,742	1,050,798	
Y37	21,797	0.41	0.03	1.59	98.89	19,563	20,009	1,116,578	
Y38	22,527	0.39	0.03	1.59	108.90	19,487	18,974	1,148,272	
Y39	22,304	0.40	0.03	1.45	116.91	19,559	18,371	1,042,607	
Y40	22,709	0.39	0.02	1.35	114.10	19,662	17,829	985,368	
Y41	18,114	0.38	0.02	1.19	123.58	15,139	12,271	691,464	
Y42	13,468	0.39	0.02	0.97	137.87	11,555	8,972	421,700	
Y43	8,735	0.40	0.02	0.94	135.60	7,725	5,178	264,277	
Y44	2,435	0.39	0.01	0.98	112.16	2,098	808	77,051	
Y45	173	0.31	0.01	0.81	72.85	119	44	4,475	
Total	768,225	0.50	0.07	1.61	115.96	855,140	1,677,085	39,876,160	5,384

Source: SRK, 2025

Approximately 32% of the Altar East caves are within the Rio Cenicero concession (IPEEM). Table 16-12 shows a breakdown of the Altar East cave schedule within the concession and outside of it.

Table 16-12: Altar East Cave Production Breakdown by Concession

Period	Altar East Tonnage	Altar East Cu	Altar East Au	Altar East Ag	Altar East As	Altar East Tonnage	Altar East Cu	Altar East Au	Altar East Ag	Altar East As
	Inside RCC (kt)	Inside RCC (%)	Inside RCC (g/t)	Inside RCC (g/t)	Inside RCC (ppm)	Inside Altar (kt)	Inside Altar (%)	Inside Altar (g/t)	Inside Altar (g/t)	Inside Altar (ppm)
Y5	727.17	0.60	0.25	1.98	98.97	1,472.83	0.55	0.19	1.62	109.39
Y6	1,454.34	0.64	0.30	2.15	112.31	2,945.66	0.58	0.22	1.76	124.14
Y7	2,181.51	0.60	0.29	2.02	109.54	4,418.49	0.55	0.21	1.65	121.07
Y8	2,908.67	0.57	0.26	1.86	101.36	5,891.33	0.52	0.19	1.52	112.03
Y9	3,635.84	0.57	0.26	1.87	95.96	7,364.16	0.52	0.20	1.53	106.06
Y10	3,635.84	0.58	0.28	1.91	95.23	7,364.16	0.53	0.21	1.56	105.26
Y11	3,635.84	0.57	0.28	1.80	90.15	7,364.16	0.52	0.21	1.48	99.63
Y12	3,635.84	0.56	0.27	1.70	86.33	7,364.15	0.50	0.20	1.39	95.41
Y13	3,635.84	0.57	0.26	1.72	91.98	7,364.16	0.52	0.19	1.41	101.66
Y14	3,635.84	0.56	0.25	1.66	94.62	7,364.16	0.51	0.19	1.36	104.58
Y15	3,635.84	0.55	0.25	1.61	98.68	7,364.16	0.50	0.18	1.32	109.06
Y16	3,635.84	0.53	0.22	1.50	102.03	7,364.16	0.48	0.16	1.23	112.77
Y17	3,635.84	0.52	0.20	1.38	106.42	7,364.15	0.47	0.15	1.13	117.62
Y18	3,635.84	0.50	0.19	1.26	102.85	7,364.16	0.45	0.14	1.03	113.67
Y19	3,084.04	0.47	0.18	1.23	105.88	6,246.53	0.42	0.13	1.00	117.03
Y20	2,147.03	0.44	0.16	1.21	119.66	4,348.66	0.40	0.12	0.99	132.25
Y21	1,011.21	0.40	0.13	1.12	120.21	2,048.13	0.36	0.10	0.92	132.87
Y22	251.33	0.34	0.11	0.94	97.19	509.06	0.31	0.08	0.77	107.42
Y23	15.93	0.31	0.10	0.84	95.33	32.26	0.28	0.07	0.68	105.36
Y24										
Y25	691.94	0.34	0.05	0.98	37.21	1,508.06	0.34	0.03	1.20	55.82
Y26	1,383.88	0.38	0.06	1.07	59.55	3,016.12	0.38	0.04	1.31	89.33
Y27	2,075.82	0.41	0.08	1.08	69.15	4,524.18	0.41	0.05	1.32	103.73
Y28	2,767.76	0.41	0.09	1.05	70.97	6,032.24	0.41	0.06	1.29	106.45
Y29	3,459.70	0.40	0.08	1.05	67.59	7,540.30	0.40	0.05	1.29	101.39
Y30	3,459.70	0.40	0.08	1.13	77.12	7,540.30	0.40	0.05	1.38	115.68
Y31	3,459.70	0.42	0.08	1.11	80.61	7,540.29	0.42	0.05	1.35	120.92
Y32	3,459.70	0.41	0.08	1.09	79.65	7,540.30	0.41	0.05	1.33	119.47
Y33	3,459.70	0.41	0.07	1.19	79.16	7,540.30	0.41	0.04	1.45	118.74
Y34	3,459.70	0.40	0.06	1.24	85.08	7,540.30	0.40	0.04	1.52	127.63
Y35	3,459.71	0.41	0.06	1.23	92.91	7,540.30	0.41	0.04	1.51	139.36
Y36	3,459.70	0.41	0.06	1.23	92.76	7,540.29	0.41	0.04	1.50	139.15
Y37	3,459.70	0.41	0.05	1.30	92.13	7,540.29	0.41	0.04	1.59	138.19
Y38	3,459.70	0.40	0.05	1.34	98.72	7,540.30	0.40	0.03	1.63	148.08
Y39	3,459.70	0.40	0.05	1.28	105.58	7,540.30	0.40	0.03	1.57	158.37
Y40	3,410.14	0.40	0.05	1.24	104.15	7,432.27	0.40	0.03	1.51	156.23
Y41	2,267.16	0.37	0.05	1.15	116.70	4,941.19	0.37	0.03	1.40	175.05
Y42	1,462.96	0.37	0.05	0.86	123.96	3,188.47	0.37	0.03	1.06	185.94
Y43	683.77	0.37	0.05	0.65	110.77	1,490.25	0.37	0.03	0.79	166.16
Y44	10.65	0.26	0.04	0.42	54.82	23.21	0.26	0.03	0.51	82.23

Source: SRK, 2025

16.5.8 Underground Mine Equipment

Underground mining equipment will consist of standard diesel mining equipment. Initial development will be done using twin boom jumbos, 15 t LHDs and 45 t trucks. Once the extraction levels and drawbells are established, 21 t LHDs and a conveyor system will be used to extract the mineralized material and convey it to surface. Table 16-13 shows the required equipment fleet at peak mine production.

Table 16-13: Required Equipment Fleet

Description	Count
2 Boom Jumbo	2
Production Drill	4
Mechanical Bolter	3
Cablebolter	1
Development Loader	1
Production Loader	5
Shotcrete Sprayer	1
Transmixer	1
LHD, 8.8 m ³ , 21 t	24
LHD, 7.5 m ³ , 15 t	1
Haulage Truck, 45 t	4
Grader	2
Scissor Lift	2
Scissor Lift Attachments	1
Crane Cassette - Boom Truck	2
Mechanic Cassette - Flat Deck Truck	2
Personnel Cassette - Fuel/Lube Truck	2
Cassette - Water Sprayer	1
Cassette - Forklift/Telehandler	2
Cassette - Mechanics Truck	3
Cassette - Personnel Carrier (22 person)	3
Personnel Carrier Toyota	4
Cassettes System Prime Mover	2
Mobile Rockbreaker	2

Source: SRK, 2025

16.5.9 Underground Mine Labor

The underground mine will operate 24 hours per day, seven days per week. Operations workforce will be divided into four crews scheduled to work 14 out of every 28 days. Table 16-14 shows the estimated number of technical and management personnel and Table 16-15 shows the estimated number of operating and maintenance personnel.

Table 16-14: Technical and Management Labor Estimate

Description	Count
UG Mine Manager	1
UG Mine General Foreman	1
Chief Mining Engineer	1
Senior Mining Engineer	1
Long Term Planning Engineer	1
Short Term Planning Engineer	2
Stope Designer Engineer	1
Ventilation Engineer	1
Ventilation Technician	2
Surveyors	2
Senior Geotechnical Engineer	1
Geotechnical Engineer	1
Geotechnical Technician	4
Chief Mine Geologist	1
Senior Mine Geologist	2
Junior Geologist	4
Senior Modelling Geologist	1
Infill Drilling Supervisor	2
Senior Field Logging Geologist	1
Core Logger	2
Maintenance Superintendent	1
Maintenance General Foreman	1
Maintenance Planning Coordinator	1
Maintenance Planning Engineer	1
Maintenance Planning Technician	2

Source: SRK, 2025

Table 16-15: Operating and Maintenance Labor Estimate

Description	Count
Development Supervisor	1
Jumbo Operator	4
Bolter Operator	6
Cablebolter Operator	4
Service Crew	4
Construction Crew	2
Production Supervisor	1
Truck Driver	8
LHD Operator	49
Production Drill Operator	4
Lead Blaster	12
Grader Operator	1
Fuel / Lube Truck Operator	2
Utility / Laborer / Nipper / Helper	6
Shotcrete Operator	4
Transmixer Driver	2
UG Shop Supervisor	1
UG Shop Mechanic	12
UG Millwright	2
UG Shop Electrician	6
UG Shop Welder	4
UG Shop Mechanic Helper	6
UG Shop Electrician Helper	3
UG Shop Welder Helper	2

Source: SRK, 2025

16.6 Resources Mined in the PEA

Resources Mined in the PEA are summarized in Table 16-5 for both the open pit and underground operations.

Table 16-16: Resources Mined in the PEA

Category	Zone	Tonnes (Mt)	Average Grade					In-Situ Metal				
			CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	As (g/t)	CuEq (M lb)	Cu (M lb)	Au (Moz)	Ag (Moz)	As (Mt)
Measured	OP-Altar	207.7	0.50	0.45	0.07	1.21	288	2,290	2,061	0.47	8.08	59,818
	UG-Altar	83.5	0.65	0.55	0.17	1.37	118	1,202	1,016	0.45	3.68	9,834
	UG-RCC (IPEEM)	29.3	0.65	0.52	0.22	1.50	110	420	335	0.21	1.41	3,237
	Total Measured-Altar	291.2	0.54	0.48	0.10	1.26	239	3,492	3,077	0.92	11.76	69,652
	Total Measured	320.5	0.55	0.48	0.11	1.28	227	3,911	3,412	1.13	13.17	72,889
Indicated	OP-Altar	14.0	0.36	0.33	0.04	0.85	140	111	102	0.02	0.38	1,960
	UG-Altar	397.6	0.58	0.54	0.05	1.77	128	5,101	4,774	0.64	22.68	50,739
	UG-RCC (IPEEM)	55.7	0.52	0.46	0.10	1.38	115	638	559	0.18	2.48	6,414
	Total Indicated-Altar	411.6	0.57	0.54	0.05	1.74	128	5,212	4,876	0.66	23.06	52,699
	Total Indicated	467.3	0.57	0.53	0.06	1.70	127	5,851	5,435	0.84	25.54	59,112
Inferred	OP-Altar	0.9	0.24	0.24	0.00	0.09	56	5	5	0.00	0.00	50
	UG-Altar	185.0	0.39	0.37	0.03	1.32	83	1,611	1,522	0.16	7.85	15,380
	UG-RCC (IPEEM)	17.1	0.97	0.91	0.06	3.23	204	365	345	0.04	1.78	3,484
	Total Inferred-Altar	185.9	0.39	0.37	0.03	1.31	83	1,615	1,527	0.16	7.85	15,430
	Total Inferred	203.0	0.44	0.42	0.03	1.48	93	1,980	1,872	0.19	9.63	18,914
Total	OP-Altar	222.6	0.49	0.44	0.07	1.18	278	2,383	2,167	0.49	8.47	61,829
	UG-Altar	666.2	0.54	0.50	0.06	1.60	114	7,914	7,312	1.25	34.21	75,952
	UG-RCC (IPEEM)	102.1	0.63	0.55	0.13	1.73	129	1,423	1,239	0.43	5.66	13,134
	Total-Altar	888.8	0.53	0.48	0.06	1.49	155	10,297	9,480	1.74	42.68	137,780
	Total	990.8	0.54	0.49	0.07	1.52	152	11,742	10,719	2.16	48.34	150,914

Source: SRK, 2025

Notes:

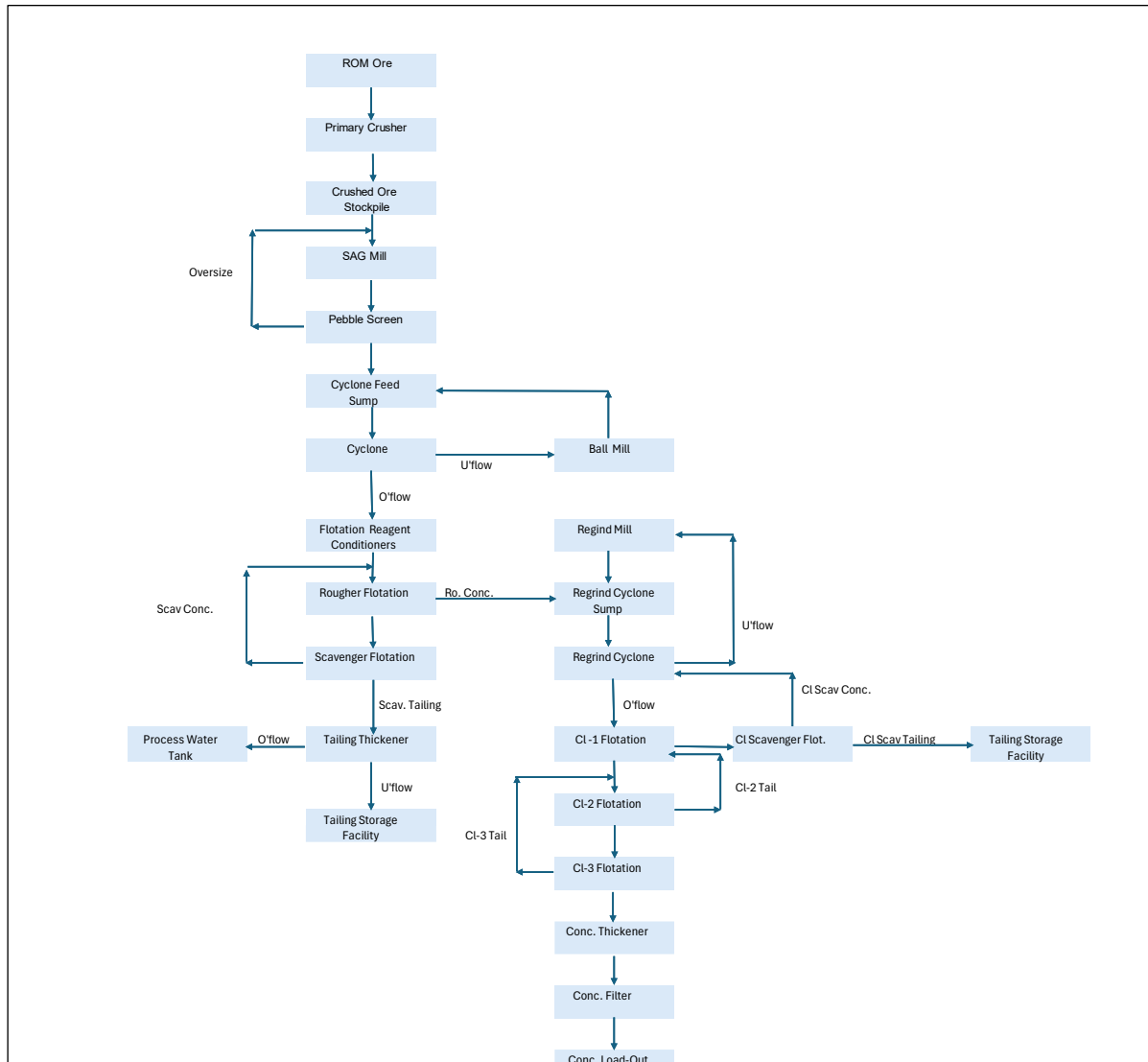
- Resources mined are not mineral reserves and do not have demonstrated economic viability.
- Abbreviations used in the table above include Mt = million metric tonnes, Kt = thousand metric tonnes, % = percent, g/t = grams per metric tonne, M lb = million pound, and Moz = million troy ounces.
- All figures are rounded to reflect the relative accuracy of the estimates. Totals may not sum or recalculate from related values in the table due to rounding of values in the table, reflecting fewer significant digits than were carried in the original calculations.
- At this stage of the Project, it is the Company's opinion that all the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold.
- All dollar amounts are presented in US dollars.
- Bulk density is estimated on a block basis using specific gravity data collected on diamond drill core.
- The in-situ economic copper cutoff grade (CoG) used was 0.18% Cu.
- Equivalent Copper (CuEq) percent is calculated with the formula $CuEq\% = ((Cu\text{ grade} * Cu\text{ recovery [87.76\% average]} * Cu\text{ price}) + (Au\text{ grade} * Au\text{ recovery [57\%]} * Au\text{ price}) + (Ag\text{ grade} * Ag\text{ recovery [50\%]} * Ag\text{ price})) / (Cu\text{ price} * Cu\text{ recovery})$. It assumes that the Altar Project will produce a conventional (flotation) copper concentrate product based on average metal recoveries at 87.76% Cu, 57% Au, and 50% Ag based on initial preliminary metallurgical test work.
- Reported contained individual metals in t table above represent in-situ metal, calculated on a 100% recovery basis, except for CuEq% (see Note 8).
- Mined resources in the PEA for the Project were calculated by Fernando P. Rodrigues, BSc, MBA MMSAQP #01405QP of SRK Consulting, Inc. in accordance with the Canadian Securities Administrators National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and generally accepted Canadian Institute of Mining, Metallurgical and Petroleum "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines ("CIM Guidelines"); and
- Resources mined effective date: September 1, 2025.

17 Recovery Methods

Extensive metallurgical test work has demonstrated that the contained copper and gold values can be effectively recovered in a flotation concentrator that would produce a single gold-bearing copper concentrate using industry-accepted technologies. The copper concentrate would be sent to a smelter, but due to expected high arsenic grades, it is likely that the copper concentrate will incur penalties for high arsenic content and will require blending with low arsenic concentrates prior to smelting.

17.1 Process Description

A preliminary flotation concentrator flowsheet is shown in Figure 17-1 and preliminary design criteria are shown in Figure 17-2. The flowsheet includes primary crushing followed by grinding in a SAG (semi-autogenous grinding) mill/ball mill grinding circuit, rougher flotation, regrinding of the rougher concentrate and three stages of cleaner flotation. It is anticipated that the concentrator would be constructed with a capacity to process 60,000 tpd and operated on a 365 day/year, 24 hour/day schedule.



Source: SRK, 2025

Figure 17-1: Preliminary Concentrator Flowsheet

Parameter	Units	Criteria
Production Schedule		
Operating days per year	days	365
Hours per day	hours	24
Ore tonnes per day	tpd	60,000
Ore tonnes per hour	tph	2,717
Operating availability	%	92
Ore Grade (LOM)		
Cu	%	0.47
Au	g/t	0.08
Estimated Average Recovery (LOM)		
Cu	%	85 -87
Au	%	55
Estimated Concentrate Quality		
Cu	%	26 - 32
Au	g/t	3 - 5
As	%	0.98 - 1.3
Comminution		
SMC, A ₈₀		41.5
CW _i		
-Porphyry	kWh/t	7.89
- Rhyolite	kWh/t	5.86
A _i	g	0.11
BW _i (75th percentile)	kWh/t	16.6
Primary grind size	P80 µm	190
Conc regrind size	P80 µm	18
Rougher Flotation		
Reagents		
-Lime	g/t	1,000
-Potassium amyl xanthate	g/t	7
-MIBC	g/t	16
pH (adjusted with lime)		10.5
Flotation retention time (1)	minutes	23
Cleaner -1 Flotation		
Reagents		
-Lime	g/t	400
-Potassium amyl xanthate	g/t	7
-MIBC	g/t	8
pH		11
Retention time (1)		15
Cleaner - 2 Flotation		
Reagents		
-Potassium amyl xanthate	g/t	2
-MIBC	g/t	as needed
pH		11
Retention time (1)		12.5
Cleaner -3 Flotation		
Reagents		
-Potassium amyl xanthate	g/t	1
-MIBC	g/t	as needed
pH		11
Retention time (1)		10
Concentrate Thickening & Filtration		TBD
Tailing Thickening & Filtration		TBD
Source: ALS KM4073 Report, 2014 and SRK 2025		
Notes:		
1. laboratory retention time x 2.5		

Source: ALS KM 4073 Report, 2014, and SRK, 2025

Figure 17-2: Preliminary Process Design Criteria

17.1.1 Crushing

Run of mine (ROM) material averaging about 0.47% Cu and 0.08 g/t Au will be trucked to the primary gyratory crusher and either direct dumped into the crusher feed bin or dumped on the stockpile in front of the crusher. Any material dumped on the stockpile would be rehandled and fed to the primary crusher with a front-end loader. ROM material will be crushed to about -6 inches and conveyed to the crushed stockpile.

17.1.2 Grinding

Material will be reclaimed from the crushed material stockpile with variable speed belt feeders that will feed the material onto the SAG mill feed conveyor. The 40 ft x 26 ft EGL SAG mill will discharge across a pebble screen, and the pebble screen oversize will be conveyed back to the SAG mill feed (the need for a pebble crusher will be assessed during the next phase of study). The screen undersize will be classified in a cluster of cyclones. The cyclone underflow will feed a 26 ft diameter x 40.7 ft ball mill operated in closed circuit with the cyclones. The cyclone overflow, classified at 80% passing P80 180 µm, will advance to the copper rougher flotation circuit.

17.1.3 Flotation

The cyclone overflow from the grinding circuit will flow to the rougher flotation conditioner where the slurry will be conditioned with the collector potassium amyl xanthate (PAX) at pH 10.5 adjusted with lime and then advanced to the rougher flotation circuit where a rougher flotation concentrate and a final rougher flotation tailing will be produced. The rougher flotation tailing will be pumped to the tailing storage facility (TSF) and the rougher flotation concentrate will be reground to about P80 18 – 20 µm in a stirred media regrind mill (tower mill) operated in closed circuit with cyclones. The reground rougher concentrate will then be upgraded in three stages of cleaner flotation to produce a final flotation concentrate containing about 26 - 32% Cu and 3-5 g/t Au. Copper recoveries are expected to average about 85 - 88% and gold recoveries are expected to average about 57%. Silver recovery is expected to average about 50%. The grade of the flotation concentrate will vary depending on whether supergene or hypogene material are being fed to the concentrator. Supergene material will contain secondary copper sulphide minerals such as chalcocite and covellite that have a higher copper content, whereas hypogene material will consist primarily of chalcopyrite with a lower copper content. Arsenic in the concentrate is expected to be variable ranging from about 0.5 – 2.2% As. The highest arsenic levels are expected when supergene material is being processed due to the presence of the arsenic-bearing copper mineral enargite (AsCu_3S_4).

17.1.4 Concentrate Thickening and Filtration

The final flotation concentrate will be pumped to a thickener and thickened to about 55-60% solids and then filtered in a filter press to about 9% moisture. The filtered concentrate will drop into a covered load-out area pending loading onto trucks and transporting to the designated shipping facility. The thickener overflow and the filtrate from the pressure filter will be recycled to the process water tank for reuse in the process.

17.1.5 Tailings Thickening and TSF

Rougher flotation tailings and cleaner-scavenger flotation tailings will be combined in the tailing thickener and thickened to about 55% solids and then pumped to the tailing storage facility (TSF) for

final disposal. The thickener overflow will be pumped to the process water tank for reuse in the process. In addition, water will be reclaimed from the TSF and pumped to the process water tank.

Alternatively, the tailings could be disposed of in a dry stack TSF. If this method of tailings disposal is selected, the thickened tailings would be filtered in a filter press to about 15% moisture and then stockpiled in the filter area pending loading and transport to the dry tailing storage facility. Dry stack tailings disposal will increase the capex and opex of the project.

18 Project Infrastructure

18.1 Overview

Infrastructure Analysis for the Altar Project: Phase I and Phase II (Future Expansion – Not Costed and Designed).

The infrastructure requirements for the Altar Project have been thoroughly analyzed to support both Phase I, with a planned throughput of 60,000 tpd, and Phase II, which envisions an expanded throughput of 120,000 tpd. The phased approach ensures that the initial infrastructure is designed to meet the needs of Phase I while also accommodating the future expansion to Phase II. This forward-thinking strategy minimizes the need for costly retrofits and ensures operational continuity as the project scales up.

18.2 Infrastructure and Logistics

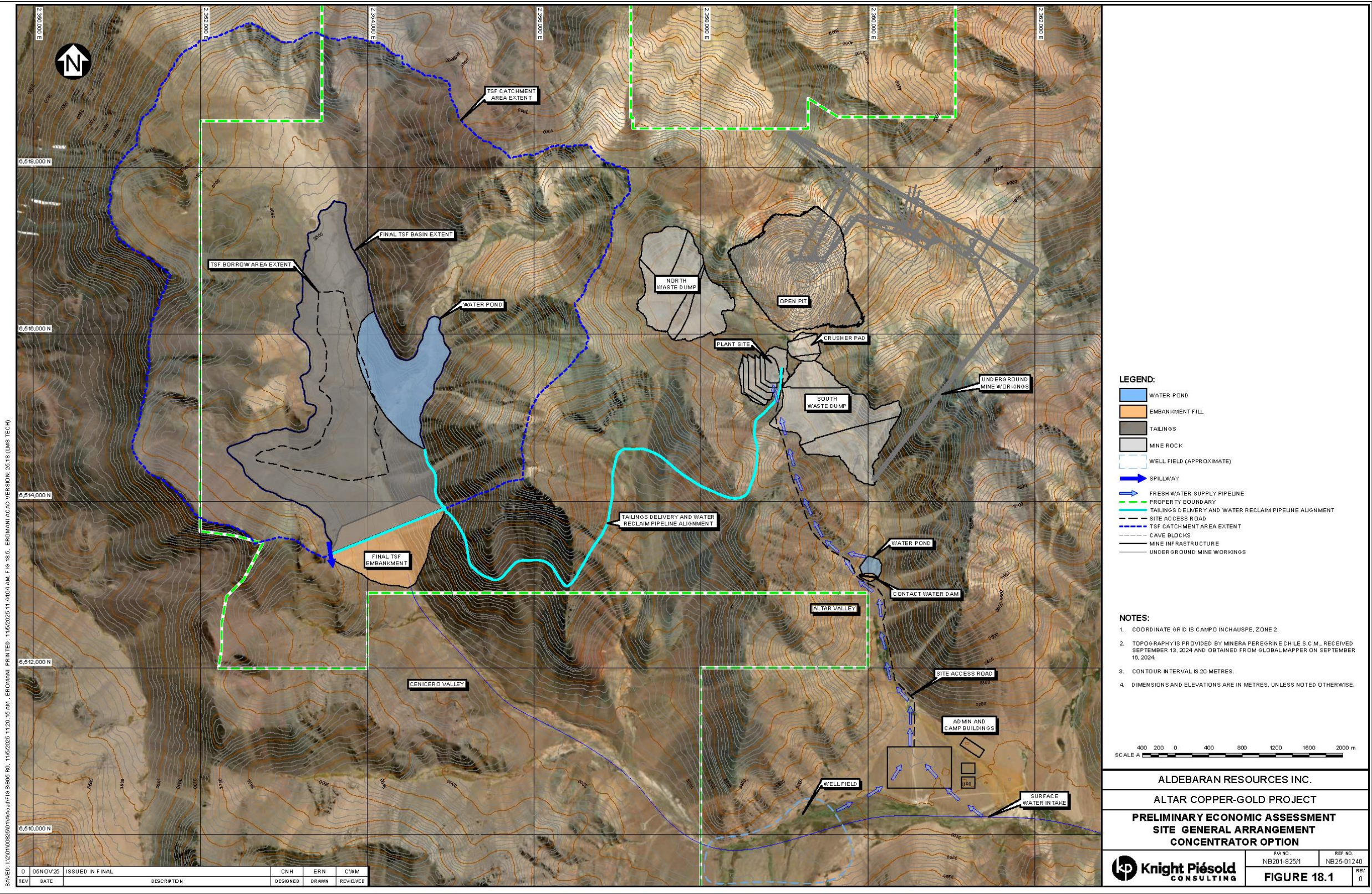
The only project infrastructure that is in place at this time is the exploration camp and the road to that camp. Infrastructure requirements for alternative types and sizes of mine operations have been considered along with supply and concentrate transport options. However, testing and evaluation are in progress to provide a better understanding of the infrastructure requirements.

18.2.1 General Layout

The general project layout is illustrated in plan on Figure 18-1. The open pit is located at the top of the Altar Valley, with the Crusher Pad and Plant Site located within the Altar Valley, south of the open pit. Waste dumps will be situated to both the east (North Waste Dump) and south (South Waste Dump) of the Open Pit within the Altar Valley. A Contact Water Dam (CWD) will be located within the Altar valley downstream of the South Waste Dump. The CWD will collect contact water and manage sediment from the mine development. Water collected in the CWD will be used to supplement process water for the mine operations.

Tailings from the metallurgical process will be pumped from the Plant Site to the TSF located in the Cenicero Valley west of the Altar Valley. Supernatant water will be reclaimed from the TSF and pumped back to the Plant Site for reuse as process water. The tailings delivery and water reclaim pipelines will be located along the same 7.3 km long corridor.

The administration and camp buildings will be located at the outlet of the Altar Valley adjacent to the Pantanosa River.



Source: Knight Piésold, 2025

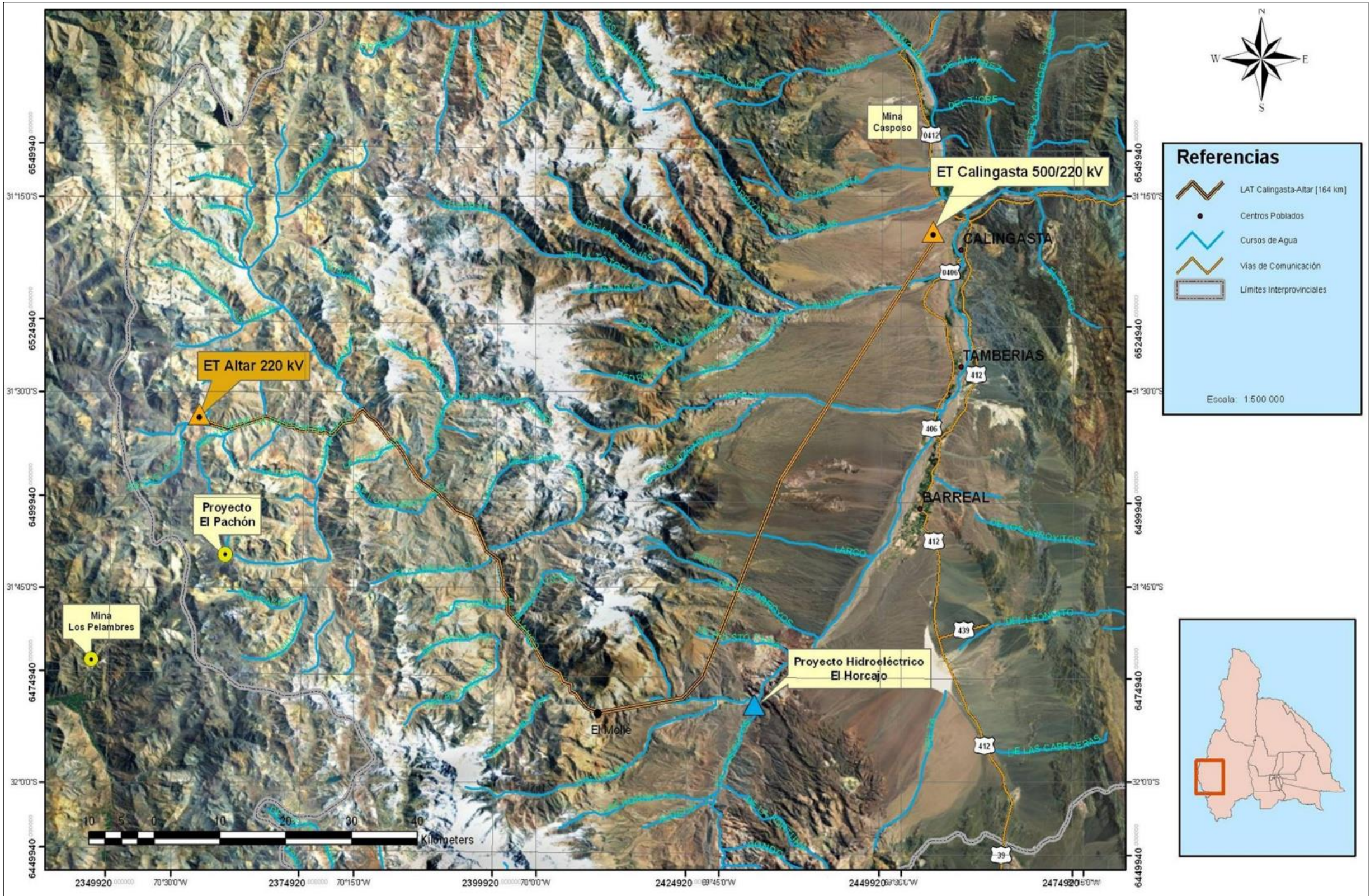
Figure 18-1: PEA Site General Arrangement

18.2.2 Power Supply

The Project's maximum power requirement is 175 MW. Conceptual level arrangements were developed for the Project power supply based on the current condition of the Provincial and Regional Transmission System within the Argentine Interconnected System (SADI).

The conceptual level layout includes the following components, illustrated in plan on Figure 18-2:

- Expansion of the existing 500 kV/220 kV Calingasta Substation (ET Calingasta).
- Construction of a new 220 kV Double Circuit Transmission Line (DT) from ET Calingasta to El Molle (85 km).
- Construction of a new double circuit per phase, single circuit line (ST) from El Molle to ET ALTAR (80 km).
- Construction of a new 220 kV ALTAR Substation (ET ALTAR). The short-circuit power at the Medium Voltage Busbar of ET ALTAR is 1000 MVA.



Source: PEMET-ALTR-IN-01-B Electric Power Supply. Peregrine Metals Ltd. – Altar Project, SIEyE 2011.

Figure 18-2: Power Supply Layout

18.2.3 Water Supply

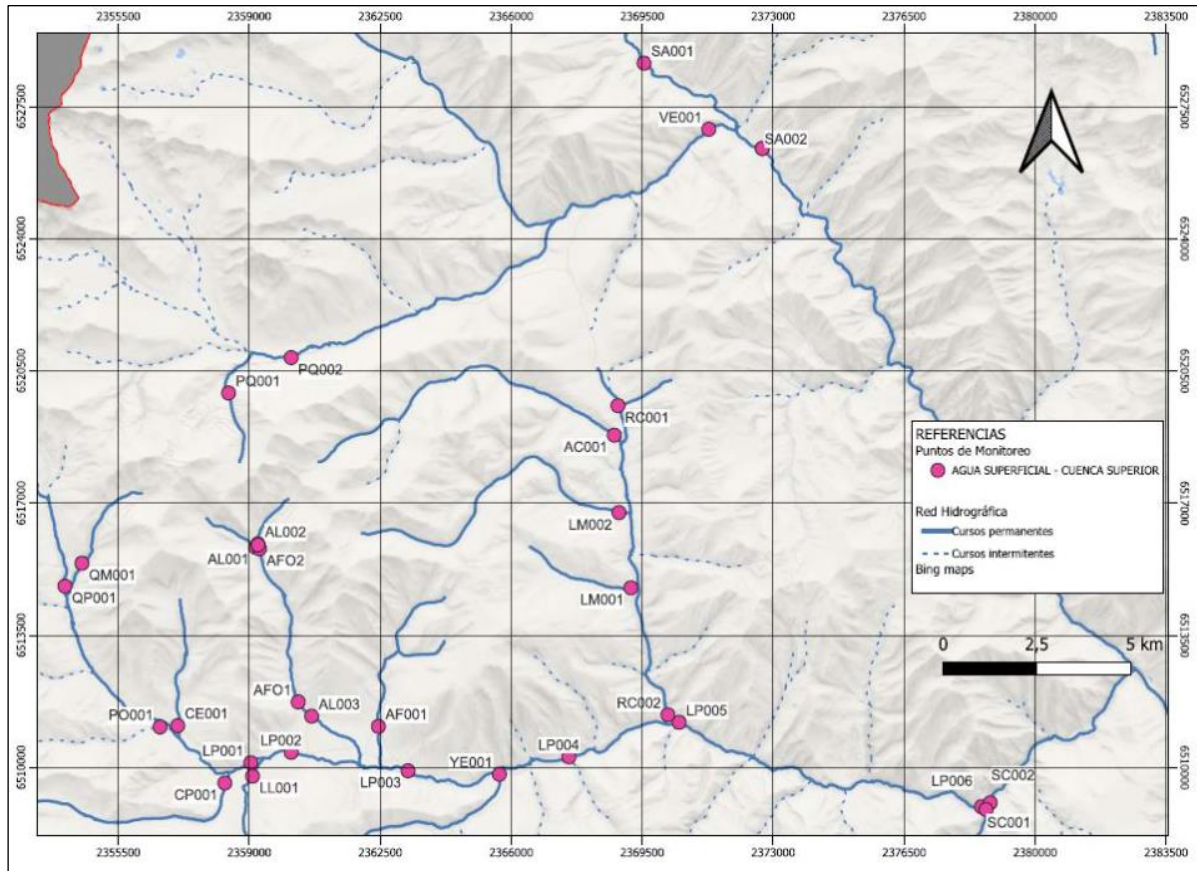
The estimated water supply for the Project is approximately 1,380 m³/hr (12.1 M m³/yr) including reclaim and freshwater make-up for the Plant, dust control water and potable water for the camp. Based on available studies, preliminary sources have been identified. A multi-source supply strategy will be used, including collection of site contact water and surface water runoff, water from the La Pantanosa River, groundwater extraction, and off-site supply. Water supply requirements from off-site are estimated to range from about 480 to 1,180 m³/hr.

Surface Runoff

Baseline hydrological information included records from local meteorological stations, spot streamflow gauge measurements on site (Figure 18-3), and discharge records from the La Pantanosa stream-gauging station (located near point LP003, as illustrated on Figure 18-3). Analyses of the gauge measurements indicated that the data was consistent, except during the winter months, when the La Pantanosa station recorded maximum discharges. Due to the risk of freeze-up during winter months (and potential data inaccuracies), the months of July and August were excluded from the data set.

Average monthly discharges were estimated for the La Pantanosa River, immediately downstream of the Camp, for the available historical data set. The estimated surface water available in the river at this location ranges from approximately 120 to 420 m³/hr, excluding July and August.

The site is considered suitable for a surface water intake to supply water for the Project. Current regulations in San Juan province specify a minimum 30% of mean river flow must be maintained during exploration activities. Temporary water abstraction permits for drilling, domestic use, etc. may be obtained during this period. A water concession permit for mining use must be obtained, subject to several technical conditions, during the permitting period for the project. The volume of water that may be removed from the La Pantanosa River while maintaining environmental base flows in the river remains to be confirmed.



Source: Aldebaran Resources, 2025.

Figure 18-3: Surface Water Monitoring Points

Groundwater

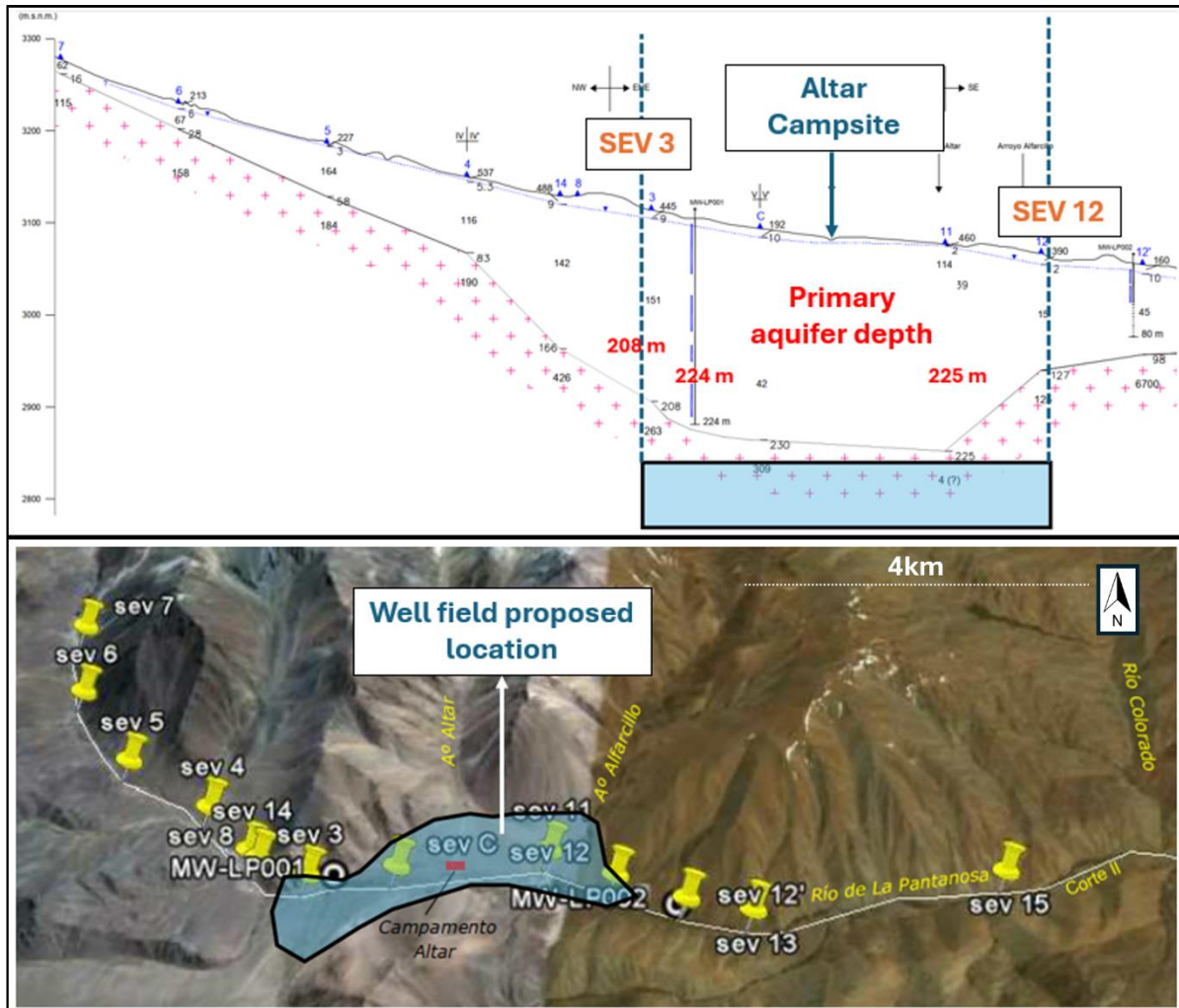
Although mine dewatering typically provides a water source for mine operations, preliminary hydrogeological studies indicate that limited groundwater will be available for mine operations. The groundwater level in the pit is estimated to be at El. 3,462 m asl and would be intersected in Year 3 of open pit development. Groundwater inflow rates to the open pit and underground mine are estimated to vary from effectively zero (early in operations) to in the order of 50 m³/hr (later operations). Accordingly, this potential water source has been considered negligible at this stage of development and would be used to augment water supply for mine operations rather than a primary source.

Prior studies^{1,2} indicate groundwater extraction potential in the following two areas outside the open pit and block cave areas:

- La Pantanosa Valley near the proposed camp, as illustrated on Figure 18-4. The water storage reserve in the aquifer near the camp was estimated to be approximately 38 million m³ (Teotop, 2011) based upon an assumed porosity. It is estimated that approximately 50% of the water available in the aquifer may be accessible for mine operations. Longer duration pumping tests are required to determine the long-term viability of the aquifer and to confirm if sufficient water supply may be available.
- North of the open pit, along the Piuquenes River. Additional hydrogeologic investigations will be required in subsequent phases to assess technical feasibility and to estimate the aquifer's sustainable yield and water quality.

¹Teotop, May 2011. Preliminary considerations on the quantification and sustainability of groundwater for the Altar Project.

²Teotop, July 2011. Preliminary geoelectric survey in an area of the Altar Project.



Notes: Scale for bottom

Source: Teotop, May 2011. Preliminary consideration on the quantification and sustainability of groundwater for the Altar Project.

Figure 18-4: Proposed Camp Wellfield – Plan and Profile

Off-Site Water Supply

It is expected that additional offsite sources will be required to supply water over the proposed life of mine. Potential offsite sources will be required to be further evaluated and may include the Piuquenes River Valley north of the open pit or areas further downstream in the La Pantanosa Valley. Water from these areas would be pumped to site via a series of pump stations and water supply pipelines.

18.2.4 Phase I Infrastructure: Supporting 60,000-t/d Throughput

For Phase I, the Altar Project includes a comprehensive suite of on-site and off-site infrastructure designed to support the initial throughput of 60,000 t/d. The infrastructure has been planned to ensure efficient operations, safety, and environmental compliance. Key components of the Phase I infrastructure are as follows:

On-Site Infrastructure

1. **Earthworks Development:** Extensive earthworks will be undertaken to prepare the site for construction and operations. This includes leveling and grading for the process plant, ancillary facilities, and other critical infrastructure.
2. **Crushing and Process Plant Facilities:** The process plant will include primary, secondary, and tertiary crushing circuits, as well as grinding, flotation, and concentrate handling facilities. These facilities are designed to efficiently process the mineralized material and produce high-quality concentrate.
3. **Ancillary Buildings:** Supporting infrastructure includes warehouses, workshops, and administrative buildings. These facilities will house spare parts, maintenance equipment, and provide office space for operational and administrative staff.
4. **On-Site Roads:** A network of on-site roads will connect key facilities, ensuring safe and efficient transportation of materials, equipment, and personnel within the project area.
5. **Water Management Systems:** Water management infrastructure will include collection, storage, and distribution systems to support processing operations, dust suppression, and other site needs. Stormwater management systems will also be implemented to prevent erosion and manage runoff.
6. **Site Electrical Power Facilities:** Electrical infrastructure, including substations and distribution lines, will be installed to power the process plant, ancillary facilities, and other on-site operations.

Off-Site and Additional Infrastructure

1. **Site Access Road:** A dedicated access road will connect the project site to regional transportation networks, facilitating the movement of equipment, supplies, and personnel.
2. **Plant Roads:** Roads connecting the process plant to other off-site facilities, such as WRSFs and the TSF, will be constructed to ensure efficient material handling.
3. **Freshwater Supply:** A freshwater supply system will be developed to meet the needs of the process plant and other site operations. This includes the construction of pipelines, pumps, and storage tanks.
4. **Power Supply (Transmission Line):** A high-voltage power transmission line will be constructed to deliver electricity from the regional grid to the project site. This infrastructure is critical to supporting the energy-intensive processing operations.
5. **WRSFs:** Two WRSFs will be constructed to store waste rock generated during mining operations. These facilities will be designed to minimize environmental impacts and ensure long-term stability.
6. **TSF:** A TSF will be constructed to safely store tailings generated by the processing plant. The design will incorporate best practices for tailings management, including measures to prevent seepage and ensure structural stability.

18.2.5 Phase II Infrastructure: Supporting 120,000-tpd Throughput

While the detailed infrastructure requirements for Phase II (120,000 tpd throughput) are not presented in this document, SRK has ensured that a comprehensive study was conducted to evaluate the feasibility of the expansion. The study focused on ensuring that the placement and design of Phase I infrastructure would seamlessly integrate with the additional infrastructure required for Phase II. This includes considerations for:

- **Expansion of the Process Plant:** The process plant will be designed with modularity in mind, allowing for the addition of new crushing, grinding, and flotation circuits to handle the increased throughput.
- **Additional Waste Rock and Tailings Storage Capacity:** The WRSFs and TSF will be designed with sufficient flexibility to accommodate the increased volumes of waste rock and tailings generated during Phase II.
- **Power Supply Upgrades:** The power transmission line and on-site electrical facilities will be designed to handle the increased energy demands of Phase II operations.
- **Water Management Systems:** Water supply and management systems will be scaled up to meet the additional requirements of the expanded operation.

18.2.6 Integrated Planning for Phases I and II

A key aspect of SRK's analysis was ensuring that the infrastructure placement and design for Phase I would not conflict with or hinder the development of Phase II. This integrated planning approach minimizes the risk of costly rework and ensures that the transition from Phase I to Phase II can be executed efficiently. By considering the long-term needs of the project during the initial design phase, SRK has provided a robust framework for the successful development and expansion of the Altar Project.

The infrastructure analysis for the Altar Project demonstrates a well-planned and phased approach to mine development. Phase I infrastructure is designed to support an initial throughput of 60,000 t/d, with all necessary on-site and off-site facilities in place to ensure efficient and sustainable operations. The forward-looking design also accommodates the future expansion to Phase II, with a throughput of 120,000 t/d, ensuring that the project can scale up seamlessly as conditions permit.

18.3 Site Wide Water Management

18.3.1 Surface Water Management

The surface water management strategy for the Project includes for the collection of contact water for Project use and the diversion of non-contact water to the environment. The surface water management plan is illustrated on the Site General Arrangement (Figure 18-1). The following key surface water management structures are included for in the site arrangement:

- **Cenicero Valley:**
 - Non-contact water from catchment areas upstream of the TSF will be collected and temporarily stored in the TSF for use as process water. The TSF will include sufficient freeboard to manage the Inflow Design Flood (IDF) resulting from the Probable Maximum Flood event.
 - Runoff water management collection ditches will be located along the downstream toe of the TSF to collect and manage runoff and sediment from the downstream slope of the TSF.

- **Altar Valley:** A Contact Water Dam will be constructed downstream of the mine infrastructure to collect contact water from mine infrastructure and waste dumps. The dam will be constructed of earth fill with a geosynthetic liner on the upstream face of the dam. The CWD arrangement includes for the installation of an overflow spillway on the west abutment. The dam will be constructed in 2 stages using downstream construction methods. The initial CWD arrangement will be constructed to crest El. 3,252.8 m asl to manage runoff from a 1 in 100-year 24-hour storm event. The final CWD arrangement will be constructed to crest El. 3,257.3 m asl to manage runoff from a 1 in 1,000-year 24-hour storm event.

18.3.2 Hydrological Analyses

Hydrological analyses have been completed to estimate return period storm events for the Project. Runoff characterization was based on Project baseline datasets. Aldebaran operates and maintains local meteorological stations, streamflow gauges, and surface-water monitoring networks; the data is reviewed and endorsed by the Hydraulic Research Institute (IDIH), Faculty of Engineering, National University of San Juan.

Meteorological data, together with continuous and spot discharge measurements, were used to calibrate rainfall–runoff models and to derive site-adjusted local design storm depth estimates. Design storm events were estimated from the baseline meteorological record by extracting daily maximum precipitation totals from the stations and adjusting them in accordance with World Meteorological Organization (WMO) recommendations. Best-fit statistical distributions were selected to extrapolate higher return period events. Results are presented in Table 18-1 and Figure 18-5.

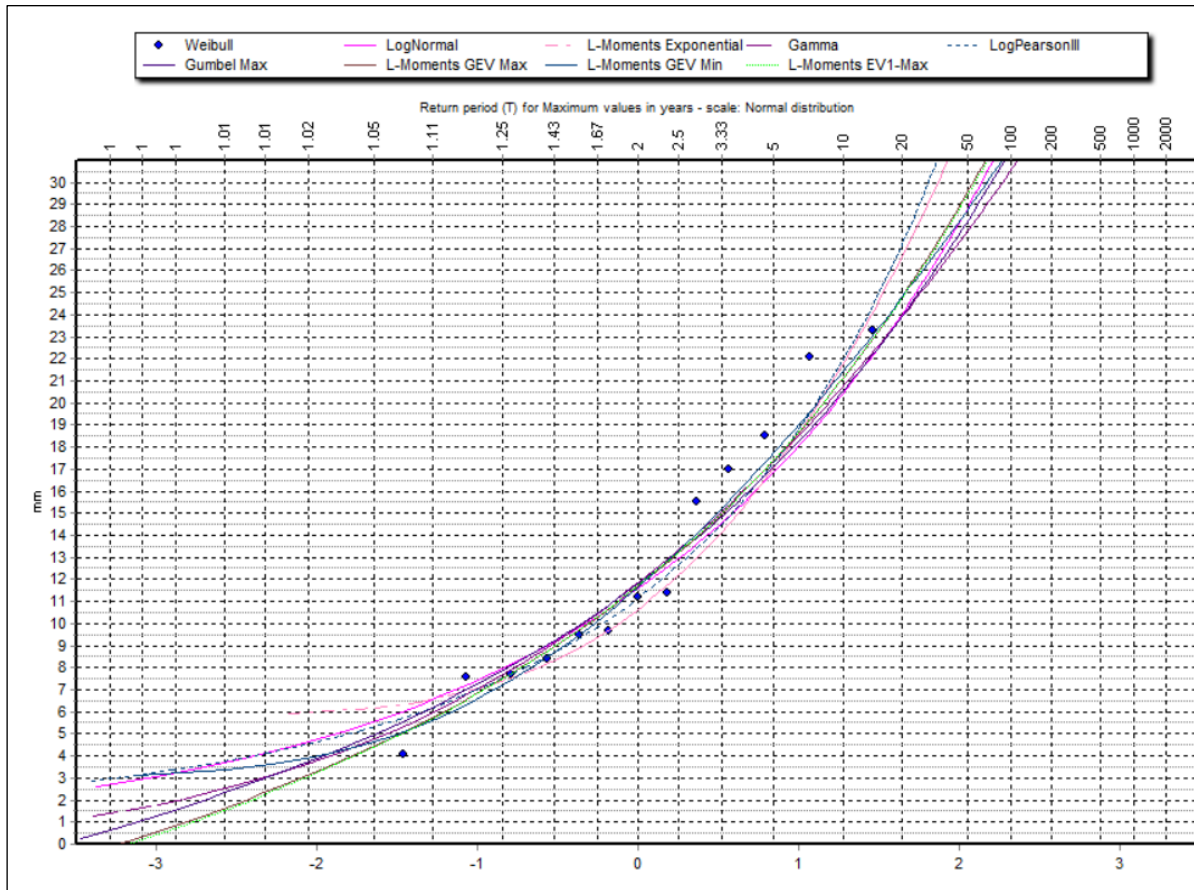
The rainfall-runoff model was calibrated with available precipitation data and continuous streamflow records (through October 7, 2024) using HEC-HMS. The combination of design-storm derivation and runoff-model calibration provided a suitable level of confidence for the conceptual level sizing of the surface water management structures.

Table 18-1: Storm Event Depth Estimates

Statistics Series	Return Period (Years)								
	5	10	20	25	50	100	200	500	1000
LogNormal	16.82	20.45	24.03	25.19	28.82	32.53	36.34	41.57	45.68
Exponential (L-Moments)	16.99	21.80	26.61	28.15	32.96	37.77	42.57	48.92	53.73
Gamma	17.33	20.76	23.90	24.86	27.77	30.55	33.25	36.70	39.25
Log Pearson III	17.23	22.00	27.16	28.92	34.75	41.19	48.33	58.95	68.01
EV1-Max (Gumbel)	17.06	20.56	23.91	24.97	28.24	31.49	34.73	39.00	42.23
EV3-Min (Weibull)	17.79	20.85	23.42	24.17	26.35	28.32	30.13	32.34	33.88
GEV-Max (L-Moments)	17.35	21.14	24.79	25.95	29.55	33.14	36.73	41.51	45.15
GEV-Min (L-Moments)	17.71	21.44	24.77	25.77	28.75	31.54	34.18	37.48	39.85
EV1-Max (Gumbel, L-Moments)	17.38	21.14	24.74	25.88	29.40	32.89	36.37	40.96	44.43
Min =	17.79	22.00	27.16	28.92	34.75	41.19	48.33	58.95	68.01
Max =	16.82	20.45	23.42	24.17	26.35	28.32	30.13	32.34	33.88
Median =	17.3	21.1	24.8	26.0	29.6	33.3	37.0	41.9	45.8

Note: Precipitation depth estimates are provided in millimeters.

Source: Knight Piésold, 2025



Source: Knight Piésold, 2025

Figure 18-5: Comparative Storm Distribution Curves

18.3.3 Site-Wide Water Balance

A conceptual level site-wide water balance for a typical operating year was developed to assess Project water demands and available supply. The water balance summary is provided on Figure 18-6 and accounts for available water sources within the Project footprint, operational water requirements and supplemental make-up water requirements. Supplemental make-up water would be provided from groundwater extraction and off-site water supply.

The water balance accounts for the following water usage:

- Domestic use (Altar Camp): The Camp will accommodate approximately 700 individuals, based on an estimated daily water consumption rate of 300 liters/day (0.3 m³/day) per person
- Process Plant Fresh Water: The estimated fresh water required for the Plant is approximately 23,000 m³/day
- Process Plant Reclaim Water: The estimated reclaim water required from the TSF to Plant is approximately 8,700 m³/day
- Dust Control: An estimated water usage of about 1,040 m³/day has been allocated for dust suppression activities. This volume estimate is based on consumption rates observed at similar projects within the region.

It is noted that water recovered in the tailings thickener will provide approximately 80,100 m³/day of water for reuse in the Plant and is omitted from the water balance summary table.

Month	Water Supply				Water Usage					Supplemental Make-up Water Required	
	Available Surface Water from Proposed La Pantanosa River Intake	Available Surface Water from Contact Water Dam and Pit	Available Reclaim from TSF	Total	Potable Water for Camp	Reclaim Water for Process	Fresh Water Required for Process	Dust Control	Total		
	(m ³ /month)	(m ³ /month)	(m ³ /month)	(m ³ /month)	(m ³ /month)	(m ³ /month)	(m ³ /month)	(m ³ /month)	(m ³ /month)	(m ³ /month)	(m ³ /hr)
Jan	144,700	18,000	-	162,700	6,500	269,700	713,000	32,100	1,021,300	858,600	1,150
Feb	110,500	13,800	-	124,300	5,900	243,600	644,000	29,000	922,500	798,200	1,190
Mar	204,800	25,400	20,900	251,100	6,500	269,700	713,000	32,100	1,021,300	770,200	1,040
Apr	92,300	11,500	159,300	263,100	6,300	261,000	690,000	31,100	988,400	725,300	1,010
May	93,200	11,600	353,500	458,300	6,500	269,700	713,000	32,100	1,021,300	563,000	760
Jun	177,300	22,100	380,700	580,100	6,300	261,000	690,000	31,100	988,400	408,300	570
Jul	-	-	318,800	318,800	6,500	269,700	713,000	32,100	1,021,300	702,500	940
Aug	-	-	318,800	318,800	6,500	269,700	713,000	32,100	1,021,300	702,500	940
Sep	250,400	31,200	365,400	647,000	6,300	261,000	690,000	31,100	988,400	341,400	470
Oct	305,200	38,000	248,300	591,500	6,500	269,700	713,000	32,100	1,021,300	429,800	578
Nov	245,900	20,700	88,300	354,900	6,300	261,000	690,000	31,100	988,400	633,500	880
Dec	180,600	22,500	-	203,100	6,500	269,700	713,000	32,100	1,021,300	818,200	1,100
Annual Total (m3)	1,804,900	214,800	2,254,000	4,273,700	76,600	3,175,500	8,395,000	378,100	12,025,200	7,751,500	

Source: Knight Piésold, 2025

Figure 18-6: Conceptual Site Water Balance

The conceptual water balance indicates that the Project will operate under a hydrological deficit and that between approximately 470 and 1,180 m³/hour of supplemental make-up water will be required for mine operations.

18.4 Tailings Storage Facility

The TSF will be located in the Cenicero valley and provide capacity for approximately 991 Mt of tailings. The TSF will consist of a valley type impoundment with a containment embankment constructed across the valley. The proposed TSF arrangement has been designed in a series of stages which is summarized below.

18.4.1 Design Criteria

The key criteria used to develop the conceptual level TSF, and water management arrangements are provided in Table 18-2.

Table 18-2: TSF Design Criteria

Item	Description	Un.	Value	Source
1	GENERAL & LOCATION			
1.1	General location	-	Within property boundary	AL
1.2	Location valley	-	Cenicero	AL
1.3	Topographic survey	-	Public domain surveys	AL
1.4	TSF type	-	Valley Impoundment	KP
2	PRODUCTION, TAILINGS & WATER RECLAIM			
2.1	Tailings Settled Dry Density	tonnes/m ³	1.4	KP
2.2	Mine production rate	Mtn/y	21.9 (60,000 tonnes/day)	AL
2.3	Total Mineralized Material Production	Mtn	991.0	AL
2.4	Total Tailings Volume	M m ³	566.3	KP
2.5	Tailings Thickenings (% solids by weight)	%	65	SRK
2.6	Total Process Water	ktpd	111.4	SRK
2.7	Recycle Water from Thickener	ktpd	80.1	SRK
2.8	TSF Reclaim Water	ktpd	8.7	SRK
2.9	Fresh Water	ktpd	23.0	SRK
2.10	Stage 1 TSF Capacity (3 years)	Mtn	46.9	KP
2.11	Stage 2 TSF Capacity (6 years)	Mtn	93.8	KP
2.12	Stage 3 TSF Capacity (9 years)	Mtn	140.8	KP
2.13	Final TSF Capacity (Life of Mine)	Mtn	708	KP
3	WATER MANAGEMENT			
3.1	Design storm recurrence time (operation)	years	2,500 to 10,000	KP
3.2	Design storm duration	h	24	KP
3.3	Precipitation	mm	TBC	KP
4	EMBANKMENT DESIGN			
4.1	GISTM Dam Classification	-	High to Very High	KP
4.2	Embankment Type	-	Rockfill, Downstream Construction	AL
4.3	Upstream Embankment Slopes	H:V	2.5:1	KP
4.4	Interim Downstream Embankment Slopes	H:V	2:1	KP
4.5	Final Downstream Embankment Slopes	H:V	2.5:1	KP
4.6	Crest Width	m	20	KP
4.7	Minimum Embankment Freeboard	m	2	KP

Source: Knight Piésold, 2025

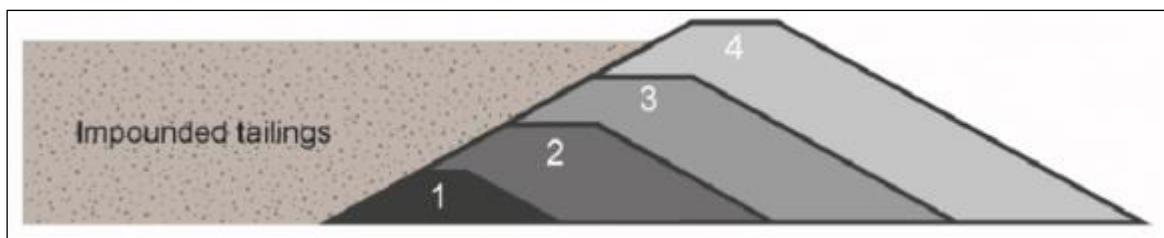
18.4.2 Embankment Construction

The TSF Stage 1 embankment will be 122 m in height with a 20 m wide embankment crest constructed to El. 3,372 m. The starter embankment will be primarily constructed with rockfill with a 2.5H:1V upstream slope and 2.0H:1V downstream slope.

The Stage 1 embankment will provide three years of tailings storage. A geosynthetic lining system will be installed on the upstream face of the embankment to minimize seepage from the TSF. Embankment fill for construction will be sourced from local borrow areas within the TSF basin. Processing will be required to produce bedding, transition and drainage materials for the embankment construction and seepage collection system.

The embankment will be raised using downstream construction methods. The Stage 2 embankment (Crest El. 3,402 m) will be constructed in operating years 1 and 2 and the Stage 3 embankment (Crest El. 3,423 m) will be constructed in operating years 4 and 5. The Stage 2 and 3 embankments will be constructed with the same crest and slope geometry as the Stage 1 embankment. The geosynthetic lining system will be extended up the upstream face of the dam with each embankment raise.

The final TSF embankment will be 274 m in height constructed to crest El. 3,524 m with a 20 m wide crest and 2.5H:1V upstream and downstream slopes. It is envisioned that the embankment will be raised in approximately five Stages between Stage 3 and the final embankment arrangement. The TSF will be constructed in approximately six stages using the downstream construction method. A typical downstream constructed TSF embankment section is illustrated in section on Figure 18-7.



Source: Knight Piésold, 2025

Figure 18-7: Typical TSF Embankment Section

18.4.3 Tailings and Water Management

Thickened tailings slurry (65% solids by mass) will be pumped from the Plant Site to the TSF via a 750 mm diameter DR9 HDPE pipeline. Two pump booster stations along the 8.0-km-long pipeline will be required to deliver the tailings to the TSF.

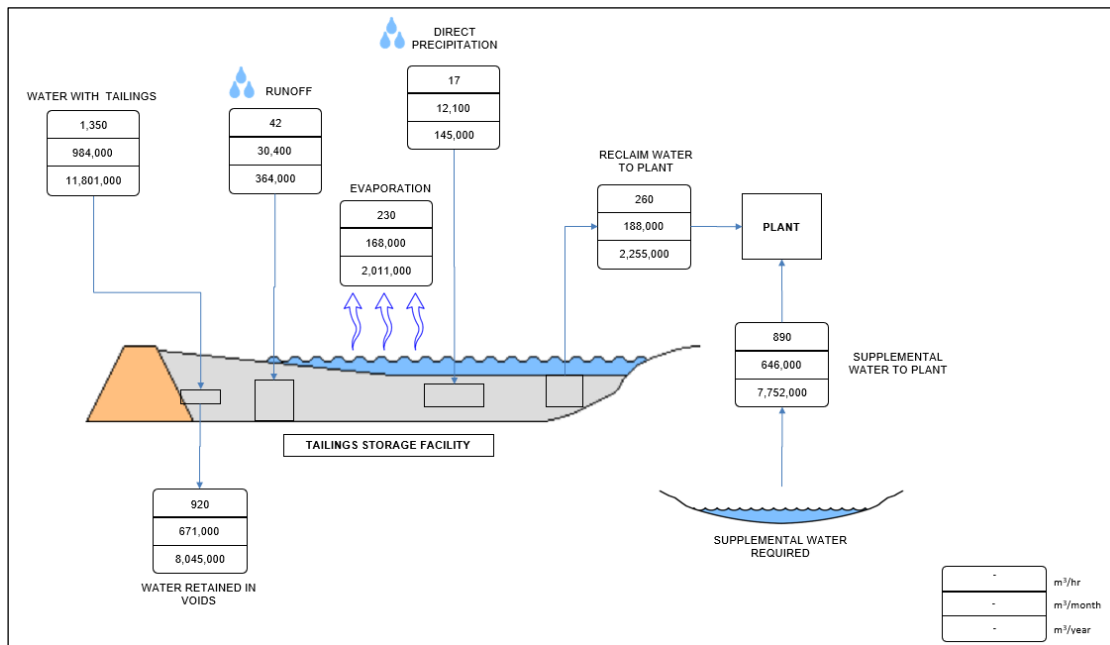
The tailings slurry will be discharged from multiple discharge locations along the TSF embankment crest and around the perimeter of the TSF to facilitate sub-aerial tailings deposition. The tailings deposition strategy will allow for even filling of the basin to maintain the supernatant water pond well away from the embankment.

Seepage control measures for the TSF will include the following:

- **Geosynthetic Lining System:** The lining system will be installed on the upstream face of the embankment to minimize seepage from the TSF. The geosynthetic lining system will include

a sand and gravel bedding layer, non-woven geotextile cushion layer and HDPE geomembrane.

- **Seepage Collection System:** Wells will be installed downstream of the embankment to collect potential seepage from the TSF. The collected seepage will be pumped back into the impoundment.
- **Water Reclaim Infrastructure:** This infrastructure will include a floating pump barge installed within the TSF basin to reclaim water from the basin and pump it to the Plant Site for re-use in the process. It is expected that the pump barge will need to be relocated periodically to maintain efficient operations. The reclaim water will be conveyed via a 300 mm diameter DR9 HDPE pipeline. Three booster stations along the 8 km pipeline will be required to pump water to the Plant Site. The TSF water management flowsheet is illustrated on Figure 18-8.



Source: Knight Piésold, 2025

Figure 18-8: TSF Water Management Flow Sheet

The conceptual level TSF arrangement includes a minimum 2 m of freeboard and will provide capacity to temporarily store the Inflow Design Flood (IDF) event. Collected stormwater will be reclaimed for use as process water. The final embankment arrangement will include an emergency overflow spillway to convey run-off during the IDF event towards the end of operations. The spillway will be excavated into competent material along the West abutment and lined with geotextile and riprap for erosion protection.

18.4.4 Instrumentation

Instrumentation will include the following:

- Vibrating wire piezometers installed in the embankment foundation to monitor pore pressures.
- Slope inclinometers and vibrating wire piezometers install in the embankment fill and foundation to monitor for potential displacement and pore pressures.

- Survey monuments installed on the embankment crest to monitor for potential displacement.

18.4.5 Reclamation and Closure

The reclamation and closure concept for the TSF focuses on physical stability, geochemical stability, and erosion prevention due to runoff. The following key measures will be completed:

- **TSF Embankment:** The TSF will be constructed with a final downstream slope of 2.5H:1V during operations and this slope will be maintained at closure (i.e., re-grading of the final downstream slope is not anticipated to be required at closure). It is expected that the final outer downstream slope will consist of relatively coarse rockfill that will provide a robust cover and resist potential erosion from wind and runoff.
- **TSF Basin:** A 0.5 m thick lift of random fill will be placed to cap tailings surface to minimize dusting and potential erosion from runoff. Drainage channels will be installed across the capped tailings surface to convey surface water runoff to the closure spillway located on the west embankment abutment.
- **Appurtenances:** The tailings delivery and water reclaim pipelines will be removed and the pipeline corridor will be re-graded and scarified. The seepage collection system will be decommissioned following confirmation of suitable water quality for discharge to the environment.
- **Water Management:** Drainage channels installed across the surface of the capped tailings surface will be lined with non-woven geotextile and riprap. The drainage channels will convey surface water runoff to the closure spillway that will be excavated incompetent material lined with coarse riprap.
- **Monitoring:** Active environmental and monitoring of the closure measures will be completed during the first five years of closure with annual inspections by the Engineer of Record. Post-closure environmental and geotechnical monitoring will be completed for a subsequent 5-year period and include two inspections by the Engineer of Record.

18.5 Detailed Infrastructure Overview

The Project site infrastructure will include:

- Mine facilities, including mining administrative offices, a mine fleet truck shop and wash bays, and a mine workshop.
- Common facilities, including a security/medical office. Overall site administration building, potable water and fire water distribution systems, compressed air, main electrical substation and distribution facilities, diesel and natural gas reception and fueling stations, communications area, and sanitation systems.
- A near pit primary crushing facility (in-pit crushing semi-mobile station) with associated electrical infrastructure.
- Process facilities housed in the process plant, including grinding and classification, flotation, regrinding, concentrate handling, thickening, dewatering and filtration, reagent mixing and distribution, assay laboratory, process plant workshop and warehouse.
- Other infrastructure includes on-site permanent camp, TSF and WRSFs.

- The overall site layout was developed using the following criteria and factors:
 - The facilities described above must be located on the Altar Property to the greatest extent possible.
 - The primary crushing facility contemplates one crushing station. A single 0.9 km conveyor to feed the crushed material to the mill feed stockpile. Also, the primary crushing facility is now located closer to the pit and is situated immediately south of the Pit boundary with ramp access from all the mining phases.
 - The crushing stations contemplated for primary crushing facility are now in-pit crushing, semi-mobile stations, which come equipped with a feed hopper, a gyratory crusher, a discharge hopper, truck ramps, semi-mobile support structure for the gyratory crusher and direct drive, a bridge crane, rock breaker, and discharge conveyor.
 - The location of the WRSFs must be close to the Altar pit to reduce haul distance as much as possible.
 - The TSF should be located at a site that takes advantage of sloped/canyon natural terrain to adequately drain entrained water and reduce earthworks, concrete, and structural development if possible. The location of the TSF is west from the pit and concentrator located in a different canyon.
 - The process plant access road will be a derivation from an existing access road to the Project site.
 - The arrangement of the administration buildings, mine workshops, process plant, and additional offices should be optimized for foot and vehicle traffic.

Figure 18-9 shows the Altar Site Layout.

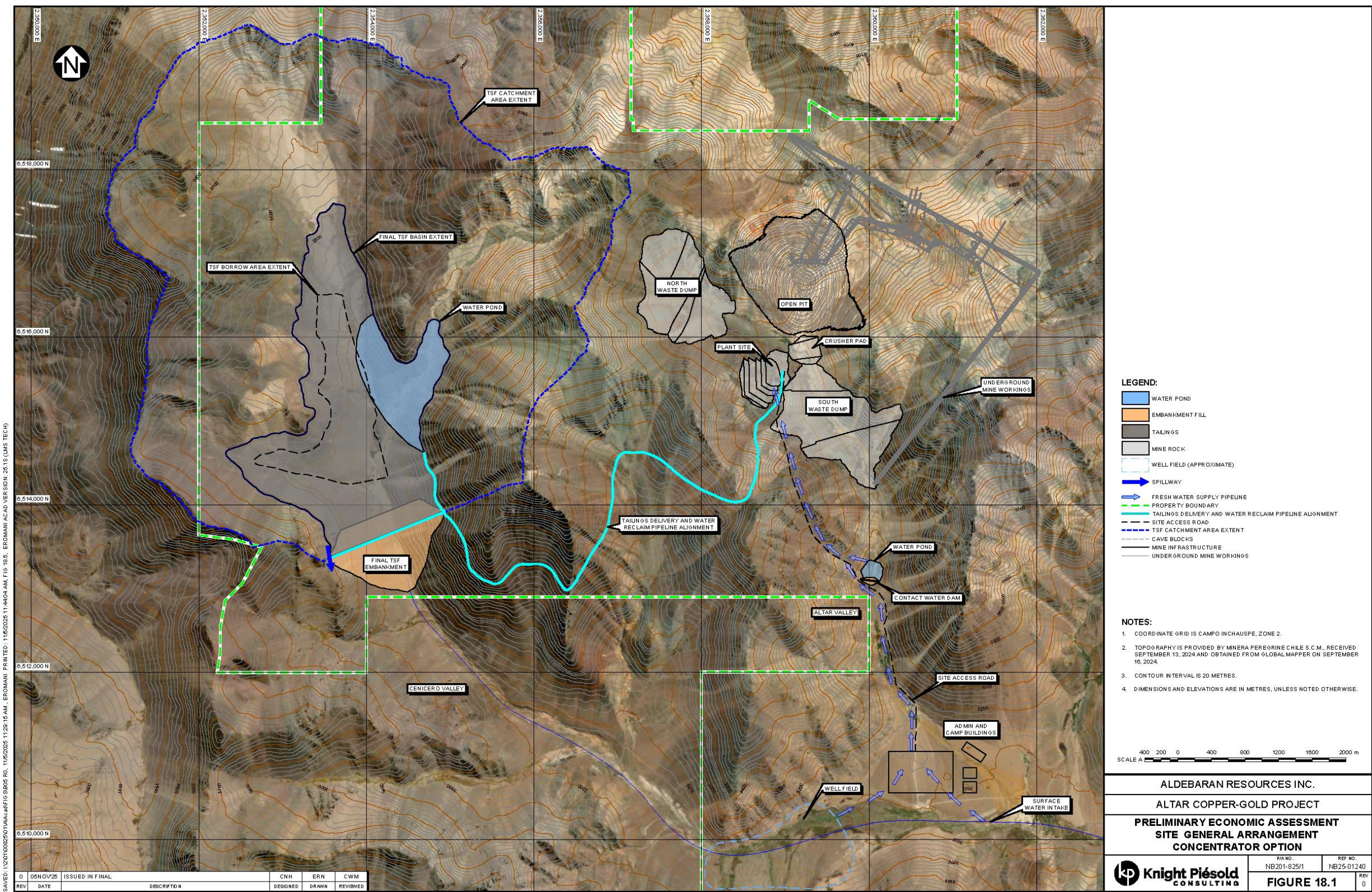


Figure 18-9: Altar On-Site Infrastructure Layout

18.5.1 Site Access

A new road is envisioned as a derivation of the current access road (used by Glencore) that passes through the camp area and follows the Altar valley to provide access to the plant site. No changes to the new road are currently contemplated once it is constructed.

18.5.2 Water Supply

The estimated water supply for the Project is approximately 1,010 m³/hr (8.8 M m³/yr). Based on available baseline studies, preliminary sources have been identified.

- A multi-source supply strategy will be required to provide water for the Project including collection of site contact water and surface water runoff, water from the La Pantanosa River, groundwater extraction, and off-site supply. Infrastructure for water supply will include the following:
 - A reclaim water pipeline to transfer from the TSF to the Plant Site
 - A water transfer pipeline to transfer water from the Contact Water Dam located within the Altar Valley to the Plant Site
 - A well field located within the La Pantanosa River Valley near the camp site and a water intake structure located directly downstream of the camp. A water supply pipeline would transfer water from to the Plant Site
 - An offsite water supply will be required this envision to the North of the open pit, along the Piuquenes River or further downstream in the La Pantanosa River Valley. Additional hydrogeologic investigations will be required in subsequent phases to assess technical feasibility and to estimate sustainable yield and water quality in the aquifers.
 -

18.5.3 High Voltage Power Supply

The power transmission line contemplated as part of the off-site infrastructure is a 220 kV line that is designed to supply power for the Project. The associated capital and operating expenses are included in the power rate unit cost. Any upkeep of the Project power line will be a direct responsibility of the third-party.

The estimated maximum demand, according to the information provided, is 175 MW. The short-circuit power at the Medium Voltage Busbar of the ALTAR Substation (ET ALTAR) is considered to be 1000 MVA.

Alternative I-A outlines the necessary works to supply power to the project, based on the current state of the Provincial and Regional Transmission System of the SADI (Argentine Interconnection System). The proposed infrastructure includes the following components:

- Expansion of the Calingasta Substation (ET Calingasta): Upgrade of the existing 500 kV/ 220 kV substation to accommodate the increased power demand.
- Construction of a 220 kV Double Circuit Transmission Line (DT): A new 85 km transmission line connecting ET Calingasta to El Molle.
- Construction of a Double Circuit per Phase, Single Circuit Line (ST): An 80 km transmission line connecting El Molle to the new ALTAR Substation (ET ALTAR).
- Construction of the New 220 kV ALTAR Substation (ET ALTAR): A dedicated substation located at the mining site to distribute power to the project facilities.

Each of these components, which collectively form the power supply system for the new 220 kV ALTAR Substation, are described in detail below.

Construction of the Double Circuit (DT) 220 kV Calingasta - El Molle Transmission Line

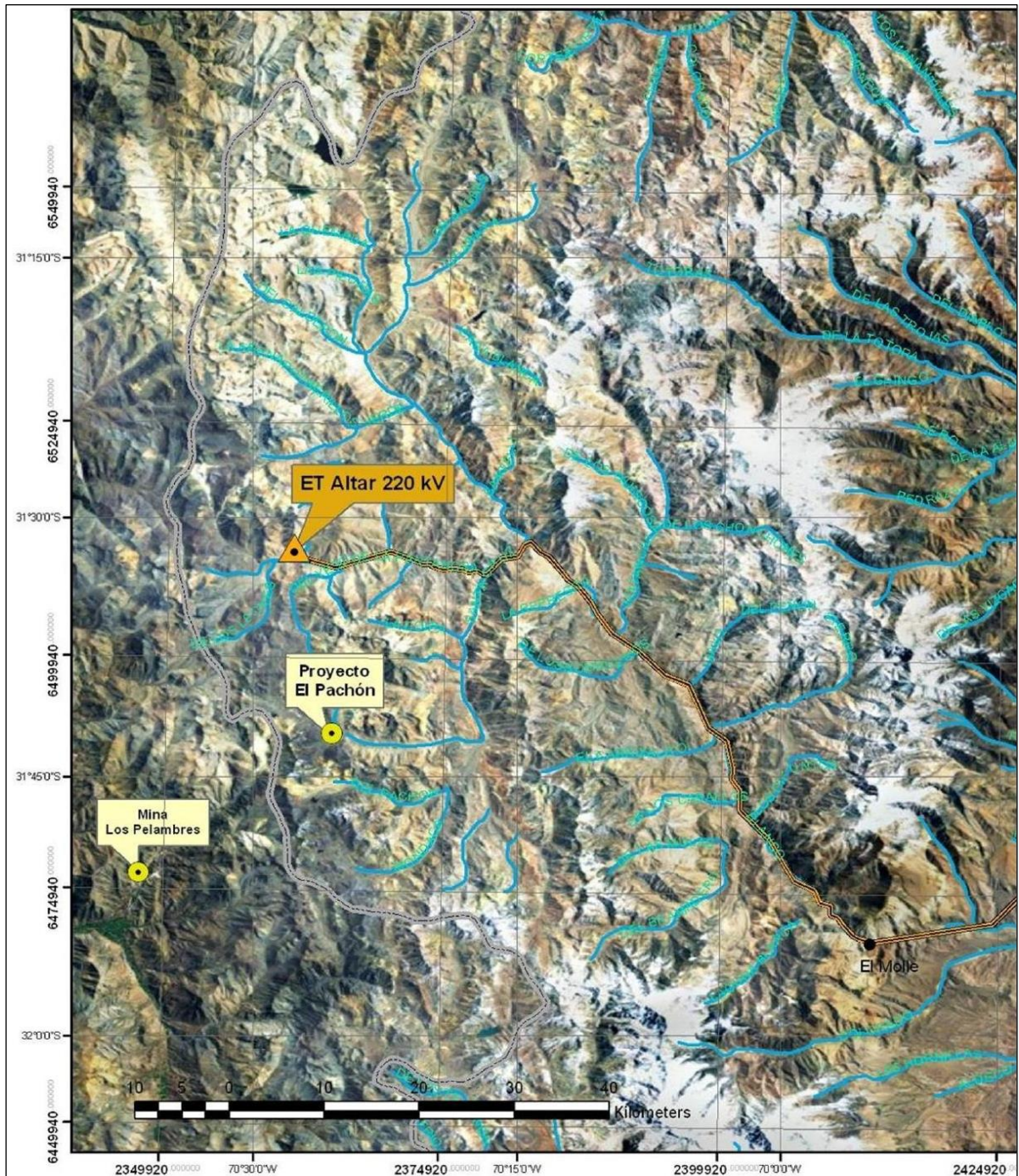
The proposed transmission line is a Double Circuit 220 kV line equipped with AlAc 435/55 mm² conductors, OPGW (Optical Ground Wire) guard wire, and a chain of 16 U 120 BS insulators. The line originates from the newly constructed Calingasta 500/220 kV Substation and heads southwest, carefully avoiding steep descending slopes to ensure stability and ease of construction.

From there, the line ascends along the eastern slope of the Ansilta mountain range, following a gradual incline until it reaches the northern bank of the Blanco River. At this point, the route turns westward, paralleling the course of the Blanco River until it arrives at the settlement of El Molle, located at approximately 2,400 masl. El Molle serves as the terminal point for this transmission line in its Double Circuit configuration.

The total estimated length of the transmission line is approximately 85 km, with a maximum elevation of 2,600 masl. The route is classified as having a moderate difficulty level overall, though certain sections present severe difficulty conditions due to terrain challenges.

This infrastructure is a critical component of the power supply system for the ALTAR Project, ensuring reliable energy delivery to support mining operations.

Figure 18-10 shows the detailed route of the 220 kV Transmission Line designed to supply power to the ALTAR Substation (Alternative I-A).



Source: Knight Piésold, 2025

Figure 18-10: Route of the 220-kV Transmission Line to supply the ALTAR Substation (Alternative I-A)

Construction of a Double Circuit per Phase. Single Circuit (ST) 220 kV El Molle - ALTAR Substation Transmission Line

From El Molle, the transmission line route traverse's high mountain terrain. Due to the challenging environmental conditions in this region, the configuration transitions from a Double Circuit to a Single

Circuit design, with double conductors per phase. The line is constructed using AIAC 435/55 mm² conductors, OPGW (Optical Ground Wire) guard wire, and a chain of 18 U 120 BS insulators to ensure reliability and durability under harsh conditions.

The Single Circuit transmission line initially follows the banks of the Blanco River, tracing the route toward the project site. After covering approximately 55 km, the line turns southwest, entering the valley formed by the Santa Cruz River. It continues along this valley for about 6 km until it reaches the tributary known as Río de la Pantanosa. At this point, the route turns westward and follows the Río de la Pantanosa upstream for approximately 18 km, ultimately reaching the location of the new 220 kV ALTAR Substation.

The total estimated length of this transmission line is 80 km, with the highest elevation along the route reaching approximately 3,200 masl. The difficulty level of this section is classified as severe, primarily due to the high-altitude terrain and the associated logistical and environmental challenges.

Transformer Stations - Expansion of the Calingasta Substation 500 kV/220 kV

The expansion of the Calingasta Substation (500/220/33 kV) is a critical component of the power supply system for the project. The substation currently consists of a single 500 kV circuit breaker configured as a line/transformer bay. As part of the expansion, the 220 kV level will be upgraded to a double busbar configuration with a breaker-and-a-half scheme to enhance reliability and operational flexibility.

At the 220 kV voltage level, the expanded substation will include the following key components:

- Two Outgoing Line Bays: These bays will connect to the new ALTAR Substation, forming the transmission link between the Calingasta and ALTAR substations.
- One Transformer Bay: This bay will house the transformer that steps down the voltage from 500 kV to 220 kV and 33 kV.

The transformer bay will include a three-phase transformer with the following specifications:

- Voltage Levels: 500/220/33 kV
- Capacity: 300/300/100 MVA

The 33 kV output from the new transformer will be connected to the existing busbar of the Calingasta Substation, ensuring seamless integration with the current infrastructure.

Transformer Stations - Construction of the New ALTAR Substation 220 kV

The new ALTAR Substation (220/33/13.2 kV) is designed with a double busbar configuration and a breaker-and-a-half scheme to ensure high reliability and operational flexibility. The substation will include the following key components:

- Two Line Bays: These bays will connect the ALTAR Substation to the Calingasta Substation, forming a critical link in the power transmission system.
- Two Transformer Bays: Each bay will house a bank of single-phase transformers.

To enhance reliability, one spare transformer phase will be available to serve as a backup for both transformer banks. This redundancy ensures uninterrupted operation in the event of a transformer failure.

33 kV Outputs and Switchgear

The 33 kV outputs from the single-phase transformer banks will connect to the 33 kV switchgear busbar. This switchgear room will include:

- Feeder outputs for power distribution.
- Auxiliary services to support substation operations.
- Synchronous compensation equipment to meet the required short-circuit power (Scc) levels and ensure system stability.

18.5.4 High Voltage Power Supply Capital Investment Estimate Methodology

To accurately estimate the costs associated with the execution of the project, a comprehensive cost update analysis was conducted based on recent and concrete precedents. The methodology involved reviewing comparable works that have already been tendered and constructed, with adjustments applied to account for the evolution of key economic and inflationary factors.

Methodology for Cost Updates

Transmission Line Costs

For the 220 kV transmission line, the cost of the Cruz de Piedra high-voltage line, tendered in November 2022 and commissioned in 2024, was used as the reference point. This value was adjusted to reflect the evolution of the main cost drivers impacted by inflation, including:

- Exchange Rate (USD): Adjustments were made to account for fluctuations in the exchange rate.
- Labor Costs: Updated to reflect changes in wages and associated expenses.
- Fuel Costs: Adjusted to account for variations in fuel prices.
- Material Costs: Updated to reflect changes in the cost of construction materials.

The resulting updated cost per km was adopted for the double-circuit (double bundle) section, as its construction characteristics are equivalent to those of the projected line. For the single-circuit sections, the same adjustment index used for the double-circuit was applied to ensure consistency.

Transformer Substation Costs

For the transformer substations, the costs of four recently tendered and executed projects were analyzed:

- New Rodeo Substation and Expansion of the Calingasta Substation: Tendered in 2018 and commissioned in 2021.
- New Chaco Substation: Tendered in 2021.
- Expansion of the Cruz de Piedra Substation: Tendered alongside the 220 kV transmission line.

Unlike the approach used for transmission lines, the costs of transformer substations were updated by individually adjusting each of the main cost components:

- Exchange Rate: Adjusted to reflect currency fluctuations.
- Labor Costs: Updated to account for wage increases and associated expenses.
- Fuel Costs: Adjusted for changes in fuel prices.

- **Material Costs:** Updated to reflect variations in the cost of construction materials.

An update index was calculated for each project based on the original tender date and adjusted to 2025 values. Additionally, an annual update index was determined for each case. The average of the resulting indices was used to update the estimated costs for the two transformer substations to be built as part of this project.

Table 18-3 shows the Investment Cost Summary

Table 18-3: Investment Cost Summary

Electrical Works	Quantity	Unit	Budget [USD]	%
LINES				
DT LAT 220 kV Calingasta – El Molle	85	km	USD 38,204,315	23 %
2xST LAT 220 kV El Molle – Altar	80	km	USD 51,127,145	30 %
Subtotal			USD 89,331,460	
EETT				
ET Calingasta 500/220 kV	1	gl	USD 24,783,713	15 %
ET Altar 220 kV	1	gl	USD 54,848,748	32 %
Subtotal			USD 79,632,460	
Total			USD 168,963,921	

Source: Knight Piésold, 2025

Table 18-4 shows the transportation cost summary.

Table 18-4: Transportation Cost Summary

Parameter	Value
Investment Costs in the Transmission System for Exclusive Use of the Altar Project	USD 168,963,921
Operation and Maintenance (Annual)	USD 4,471,253
Participation in Expansion Works	USD 13,110,155
Transportation Charges for the Rest of the System	USD 545,106
Annual Total [USD]	USD 18,126,514
Average Annual Energy [MWh]	1,116,900
Unit cost of transportation [USD/MWh]	16.23

Source: Knight Piésold, 2025

The energy cost was sourced from the CAMMESA monthly report for March 2025, which establishes an average value of US\$60.70/MWh. When transportation costs are included, the total energy cost amounts to US\$76.93/MWh. This total value will be used as the basis for the project's OPEX (Operating Expenditure) calculations.

Table 18-5 shows the monthly average price over the last three years and rolling annual average [US\$/MWh].

Table 18-5: Monthly Average Price over the Last Three Years and Rolling Annual Average [US\$/MWh]

Items	25-Mar	24-Mar	23-Mar
Energy Components	12,897	14,927	9,373
Power Components			
+ Reserve	7,939	9,731	5,630
Excess Demand Charge			
+ Brazil Account	12,889	14,483	10,767
+ MEM Supply Contracts			
Transitory Dispatch Surcharge	31,058	25,066	18,475
MEM Joint Purchase	5,985	6,219	5,388
Average Monomial Price	70,769	70,426	49,632
Transportation charges	3,733	4,506	1,619
Average Monomial Price + Transp.	74,502	74,932	51,252
Seasonal Monomial Price	53,339	66,427	32,796
Seasonal Monomial Price + charges	53,712	64,828	32,721

Source: CAMMESA – March 2025

In summary, the CAPEX estimate amounts to US\$168,963,921, which encompasses the construction of the previously detailed transmission lines, the new ALTAR transformer substation (TS), and the expansion of the Calingasta TS. For OPEX, the applicable value is US\$76.93/MWh, which includes both the cost of energy and transmission.

18.6 Logistics

The copper concentrate will be transported by road using covered trucks to either a Chilean or Argentine port, where it will be shipped by sea to clients. The choice of port will depend on a detailed analysis of logistical, economic, and regulatory factors, as well as the condition of the road infrastructure. This transportation method ensures flexibility, scalability, and compliance with environmental standards, supporting the efficient delivery of the concentrate to its final destination.

18.6.1 Transportation Methodology

The transportation of copper concentrate will be carried out using covered trucks to ensure the safe and efficient movement of the material. The trucks will travel along existing road networks, which will be upgraded or maintained as necessary to support the increased traffic. This method of transportation is widely used in the mining industry and offers the following advantages:

- **Flexibility in Routing:**
 - Truck transportation allows for flexibility in selecting the most efficient routes to the port, taking into account road conditions, weather, and other logistical considerations. This adaptability ensures that the concentrate can be delivered reliably to the port.
- **Minimized Material Loss and Environmental Impact:**
 - The trucks will be equipped with covers or tarpaulins to prevent spillage and minimize dust emissions during transit. This ensures compliance with environmental regulations and reduces the risk of material loss.
- **Scalability:**
 - Truck transportation can be easily scaled up or down based on production levels, providing operational flexibility to meet varying demand.

- **Direct Delivery to Ports:**

- Trucks can deliver the concentrate directly to the port storage facilities, eliminating the need for intermediate handling or transfer points. This reduces transit times and operational complexity.

Port Options

- **Port in Chile:**

- Transporting the concentrate to a Chilean port offers the advantage of proximity to the Pacific Ocean, which provides direct access to key markets in Asia and other regions. Chilean ports are well-equipped to handle mining exports and have established infrastructure for bulk material handling. However, this option may involve additional cross-border logistics, including customs clearance and potential tariffs.

- **Port in Argentina:**

- Using an Argentine port provides the advantage of remaining within the country's borders, potentially simplifying regulatory and customs processes. Argentine ports offer access to the Atlantic Ocean, which can facilitate shipments to European and North American markets. However, the road infrastructure leading to Argentine ports will need to be evaluated to ensure it can support the consistent movement of heavy trucks.

Road Infrastructure Considerations

The success of the transportation plan depends heavily on the condition and capacity of the road network connecting the Project site to the selected port. Key considerations include:

- **Road Upgrades and Maintenance:**

- Certain sections of the road network may require upgrades to accommodate the increased traffic and the weight of the trucks carrying the concentrate. Regular maintenance will also be essential to ensure safe and efficient transportation.

- **Traffic Management:**

- The increased volume of truck traffic may require coordination with local authorities to manage congestion and minimize disruptions to other road users.

- **Environmental and Social Impacts:**

- Measures will be implemented to mitigate the environmental and social impacts of increased truck traffic, such as controlling dust emissions, reducing noise, and ensuring road safety for local communities.

18.7 On-Site Infrastructure

18.7.1 Site Preparation and Buildings

The vegetation will be cleared, and the topsoil will be removed before construction. Drains, safety bunds and backfilling with granular material and aggregates for road construction are all elements of the initial site development.

Site civil work includes design for the following infrastructure:

- Plant access road.
- Roads for light vehicles and heavy equipment.
- Platforms for all the facilities.

- TSF area.
- WRSF areas.
- Water management facilities, ditches, and drainage channels.

18.7.2 On-Site Roads

The Project site has unpaved roads connecting the access road to the gatehouse. In addition to the existing roads on site, new roads will be constructed linking the guard house, ancillary facilities, the process plant, the explosive storage buildings, the pits, the primary crusher, the WRSF, the hydrocyclones station and the TSF. All on-site roads are designed for two-way traffic allowing enough width for the largest equipment expected in the road. All roads have safety berms and a maximum grade of 10%.

18.7.3 Fuel

The diesel storage facility and fuel dock consist of five bulk storage tanks. Each tank will have a capacity of 100,000 L, for a total storage capacity of 500,000 L. Provisions will also be made to install an LNG off-loading and haul truck fueling station to support lower diesel fuel consumption and cleaner emissions while mining.

18.8 On-Site Camp (Construction and Operations)

The selection of ARK as the man camp provider ensures that the project will have a reliable and high-quality accommodation solution for its 2,500 construction workers. The pre-built modular design, fast installation, and comprehensive facilities make ARK's solution an ideal choice for meeting the project's needs. The camp will be ready for occupancy in a timely manner, supporting the smooth execution of the construction phase.

18.8.1 Key Features of the ARK Man Camp Solution

- **Pre-Built Modular Design:**
 - The man camps provided by ARK are prefabricated modular units, which significantly reduce construction time on-site. These units are manufactured off-site and delivered ready for rapid assembly, ensuring that the camp can be operational in a short timeframe.
- **Fast Installation and Deployment:**
 - The modular design allows for quick installation, enabling the camp to be ready for occupancy within weeks of delivery. This is critical for maintaining the project schedule and ensuring that workers have access to accommodations as construction ramps up.
- **Comprehensive Facilities:**
 - The ARK man camp is designed to provide a comfortable and functional living environment for workers. The camp includes:
 - Sleeping Quarters: Fully furnished rooms with beds, storage, and climate control.
 - Dining Facilities: A central kitchen and dining hall capable of serving meals to the entire workforce.
 - Recreational Areas: Spaces for relaxation and leisure activities, such as gyms, lounges, and outdoor areas.
 - Sanitation Facilities: Adequate bathrooms, showers, and laundry facilities to meet the needs of the workforce.

- Medical Services: A dedicated clinic or first-aid station to address health and safety concerns.
- Administrative Offices: On-site offices for camp management and coordination.
- **Scalability and Flexibility:**
 - The modular design allows for scalability, meaning additional units can be added if the workforce size increases. This flexibility ensures that the camp can adapt to changing project requirements.
- **Compliance with Health, Safety, and Environmental Standards:**
 - ARK's man camps are designed to comply with international health, safety, and environmental regulations. This includes proper waste management systems, energy-efficient designs, and measures to minimize the camp's environmental footprint.

18.8.2 Selection Process and Rationale

During the selection process, SRK provided detailed drawings and specifications to all potential contractors to ensure that the proposals aligned with the project's requirements. ARK stood out among the competitors due to their ability to deliver a high-quality solution within the required timeframe and budget. Their experience in providing modular camps for large-scale construction projects worldwide further reinforced their suitability for this project.

18.8.3 Benefits of the ARK Man Camp Solution

- **Time Efficiency:** The pre-built nature of the camp minimizes on-site construction time, allowing workers to begin their tasks sooner.
- **Cost-Effectiveness:** Modular construction reduces labor and material costs compared to traditional on-site construction methods.
- **Worker Comfort and Productivity:** Providing a well-equipped and comfortable living environment helps improve worker morale and productivity.
- **Reduced Environmental Impact:** The modular design and efficient resource use align with the project's sustainability goals.

18.8.4 Ark Campsite Size and Dimensions

Ark has provided the campsite drawings in the following section as a reference for the reader.

Figure 18-11 shows the 2,500 man-camp dimension table.

PROJECT NAME: ALTAR MINING PROJECT CONTRACTOR: SRK CONSULTING SUB CONTRACTOR: ARK PREFAB INTERNATIONAL. ARK REF: ARK/DRA/AI-554								
2500 MAN CAMP								
DRAWING REGISTER								
S. No	BUILDING	DRAWING NUMBER	UNIT	QTY	TOTAL PERSONS	ARK DRAWINGS		RE-MARKS
						PER BUILD M2	TOTAL M2	
1	SENIOR STAFF ACCOMMODATION	AI-554-1000-001	Nos	9.00	252.00	712.16	6,409.40	
2	JUNIOR STAFF ACCOMMODATION	AI-554-1000-002	Nos	9.00	504.00	712.16	6,409.40	
3	WORKERS ACCOMMODATION	AI-554-1000-003	Nos	20.00	1,760.00	1,068.82	21,376.31	
4	SENIOR & JUNIOR KITCHEN & MESS HALL	AI-554-1000-004	Nos	1.00		1,010.27	1,010.27	
5	WORKERS KITCHEN & MESS HALL	AI-554-1000-005	Nos	2.00		1,010.27	2,020.55	
6	SENIOR & JUNIOR RECREATION CENTER	AI-554-1000-006	Nos	1.00		534.61	534.61	
7	WORKERS RECREATION CENTER	AI-554-1000-007	Nos	1.00		623.80	623.80	
8	MOSQUE	AI-554-1000-008	Nos	1.00		506.11	506.11	
9	COMMISSARY & BARBER SHOP	AI-554-1000-009	Nos	1.00		267.17	267.17	
10	RELIGIOUS PLACE	AI-554-1000-010	Nos	1.00		222.62	222.62	
11	CAMP OFFICE	AI-554-1000-011	Nos	1.00		118.64	118.64	
12	LAUNDRY	AI-554-1000-012	Nos	1.00		237.72	237.72	
13	CAMP MAINTANANCE WORKSHOP	AI-554-1000-013	Nos	1.00		178.06	178.06	
14	MEDICAL CENTER	AI-554-1000-014	Nos	1.00		299.57	299.57	
15	GUARD HOUSE	AI-554-1000-015	Nos	1.00		14.74	14.74	
16	TOILET BLOCK	AI-554-1000-016	Nos	1.00		18.17	18.17	
	TOTAL M2						40,247.13	-

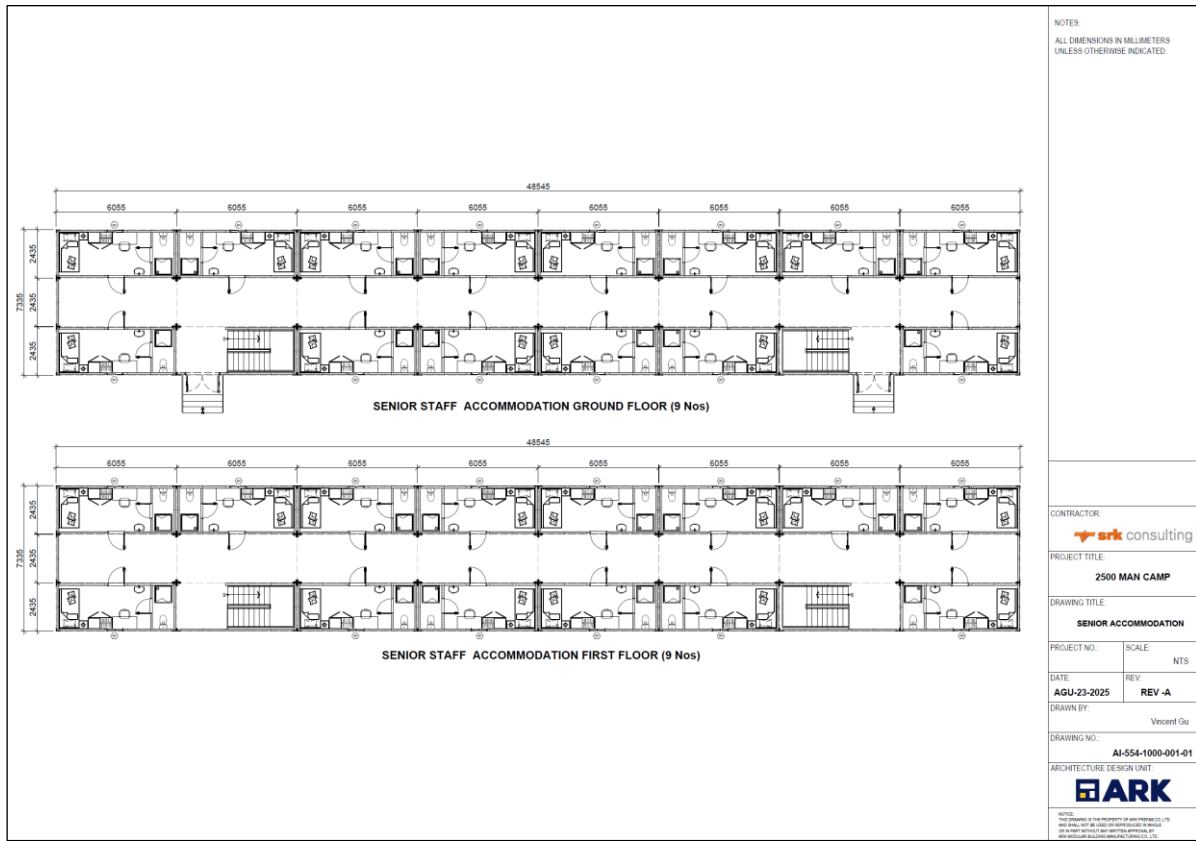
Source: ARK, 2025.

Figure 18-11: 2,500 Man-Camp Dimension Table

18.8.5 Ark Campsite Drawings

Ark has provided the campsite drawings and included here for the readers reference. Below are multiple campsite drawings.

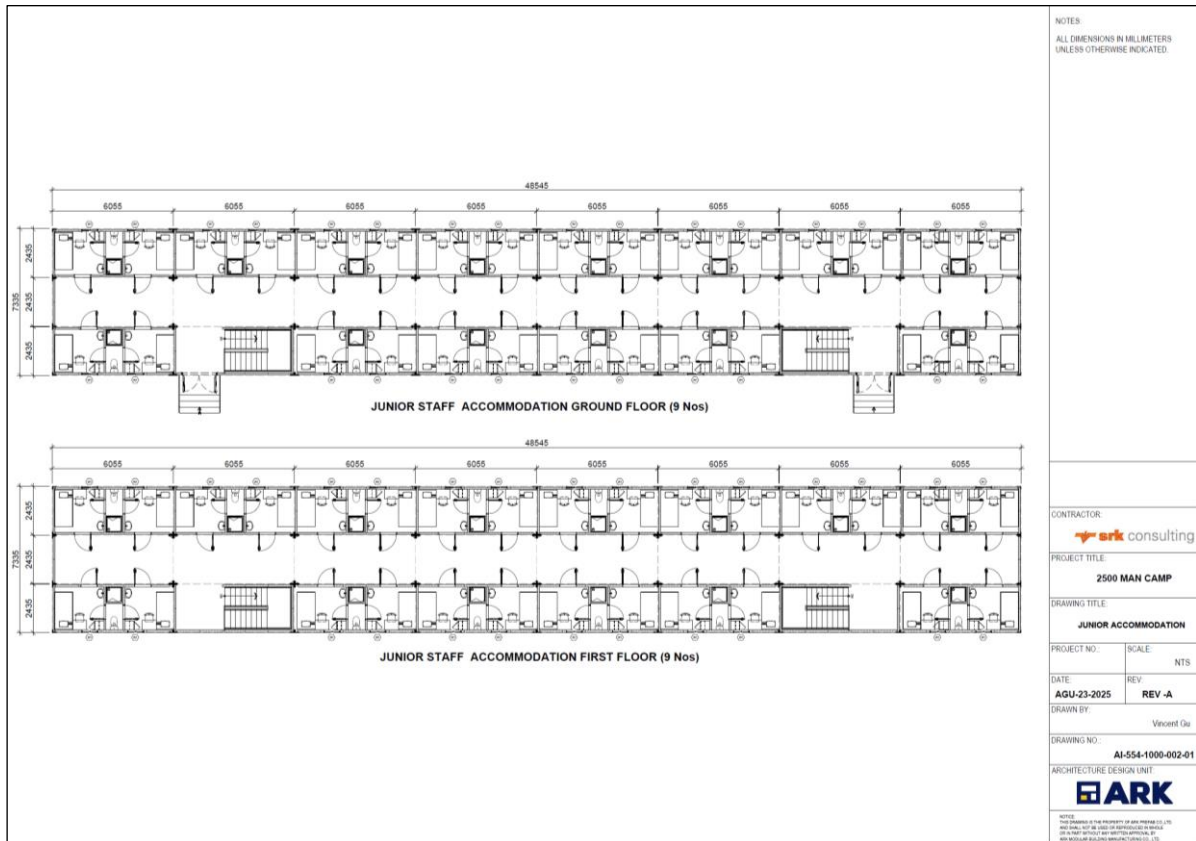
Figure 18-12 shows the Senior Accommodation drawing.



Source: ARK, 2025.

Figure 18-12: Senior Accommodation Drawing

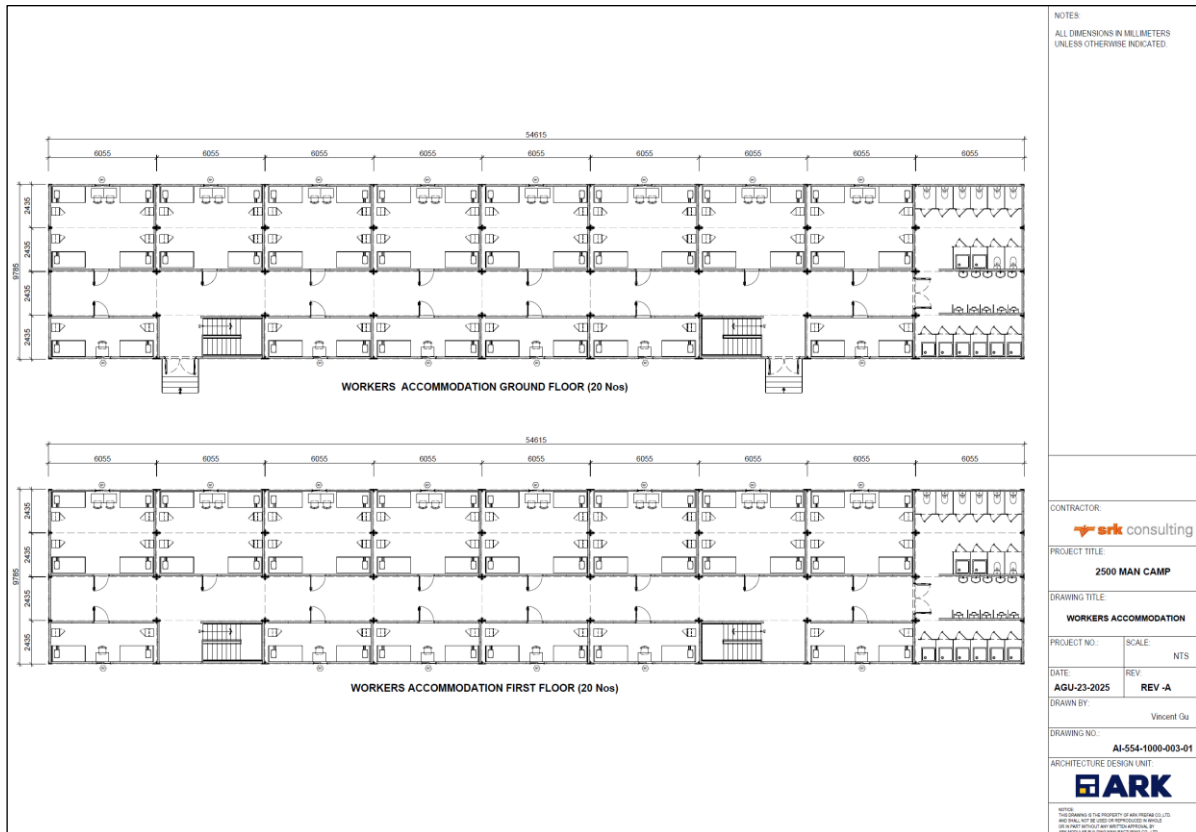
Figure 18-13 shows the Junior Accommodation drawing.



Source: ARK, 2025.

Figure 18-13: Junior Accommodation Drawing

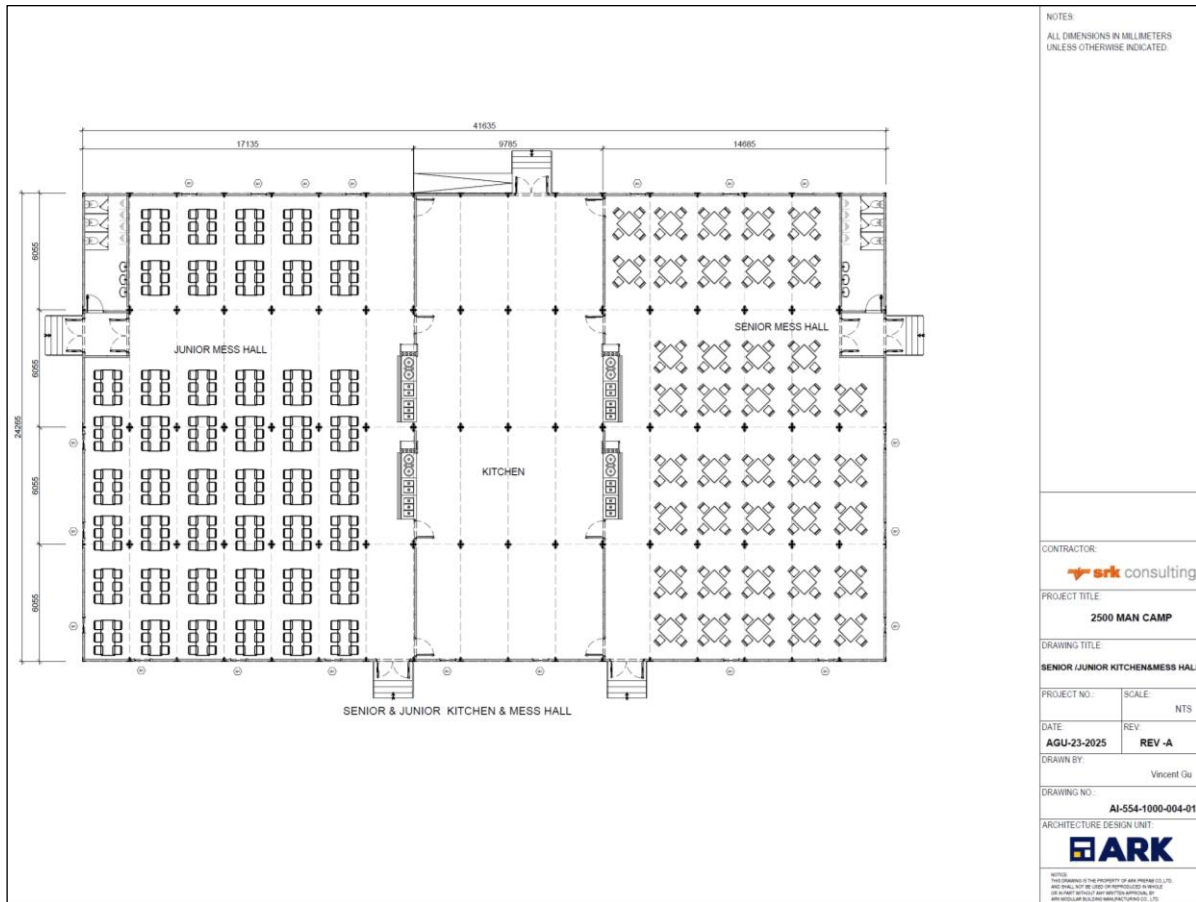
Figure 18-14 shows the Workers Accommodation drawing.



Source: ARK, 2025.

Figure 18-14: Workers Accommodation Drawing

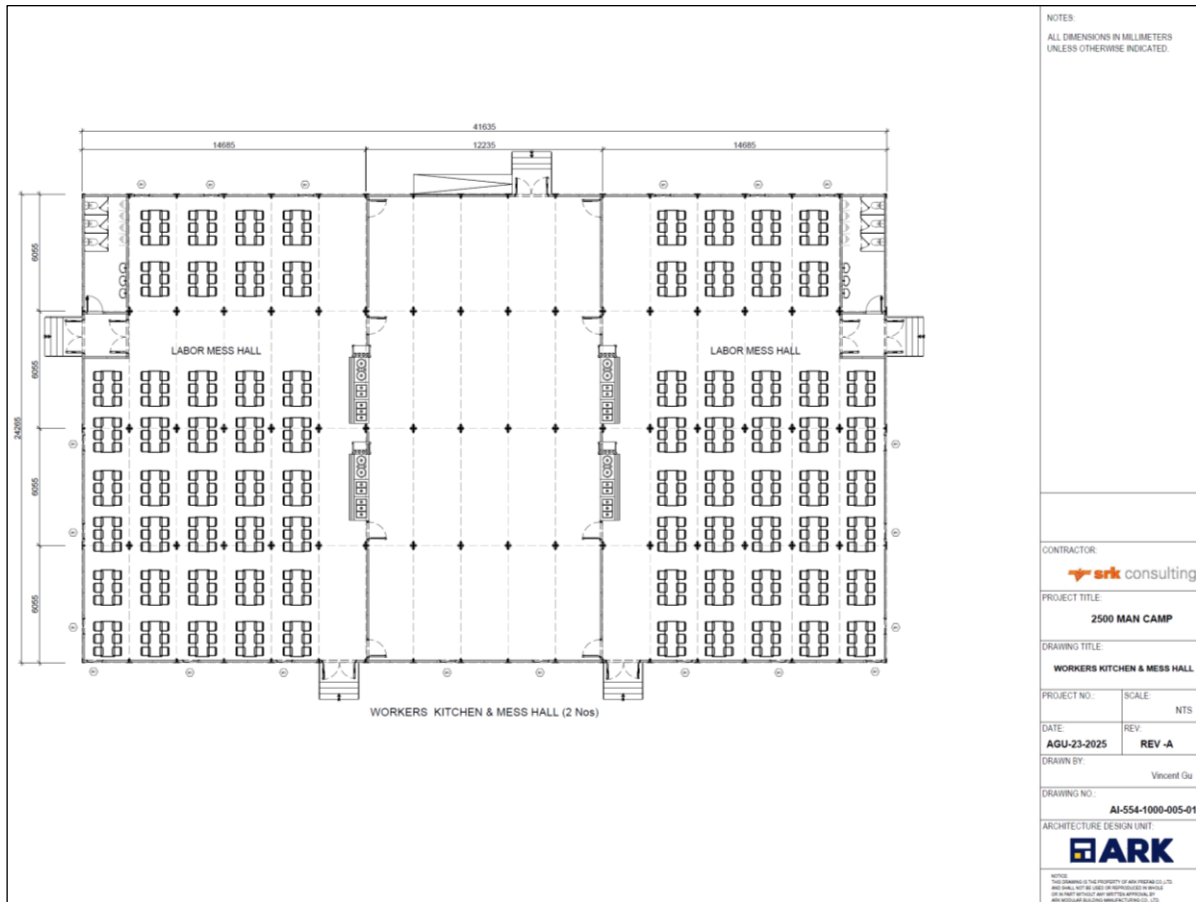
Figure 18-15 shows the Senior/Junior Kitchen/Mess Hall drawing.



Source: ARK, 2025.

Figure 18-15: Senior/Junior Kitchen/Mess Hall Drawing

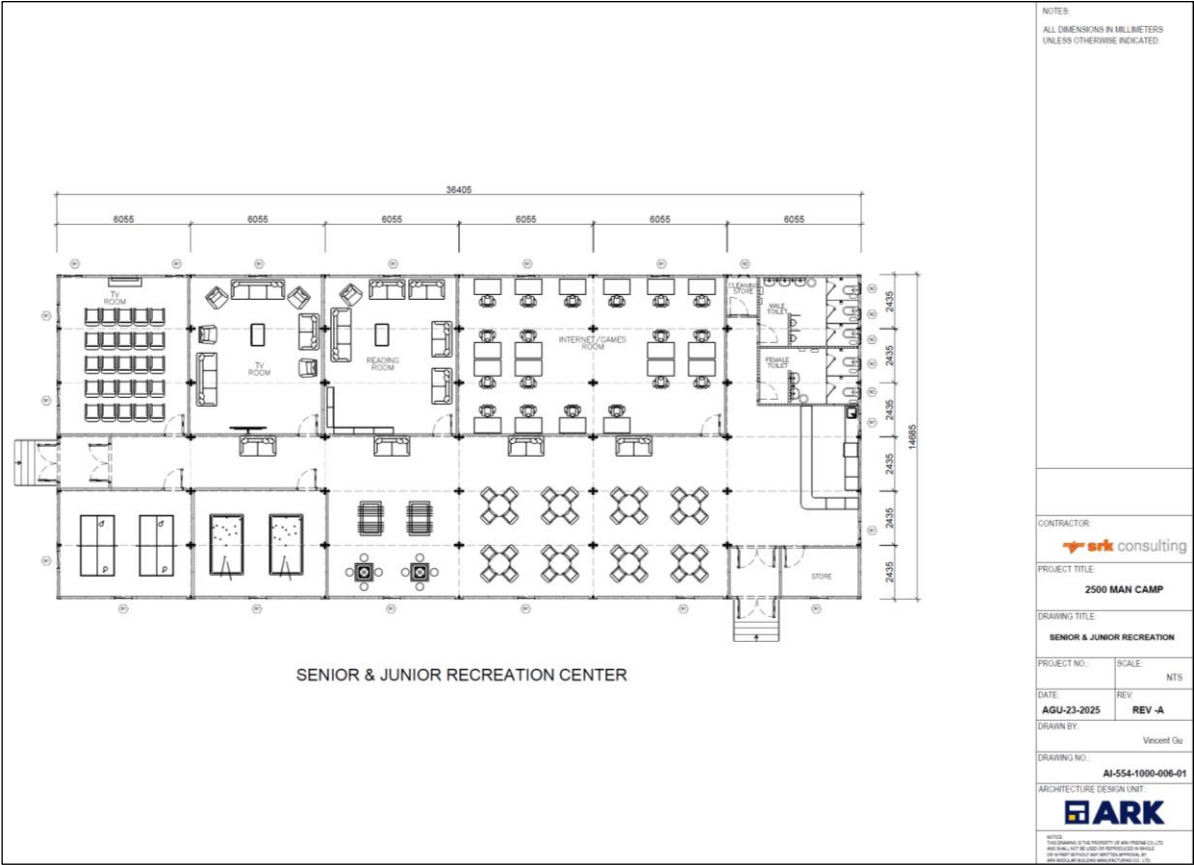
Figure 18-16 shows Workers Kitchen/Mess Hall drawing.



Source: ARK, 2025.

Figure 18-16: Workers Kitchen/Mess Hall Drawing

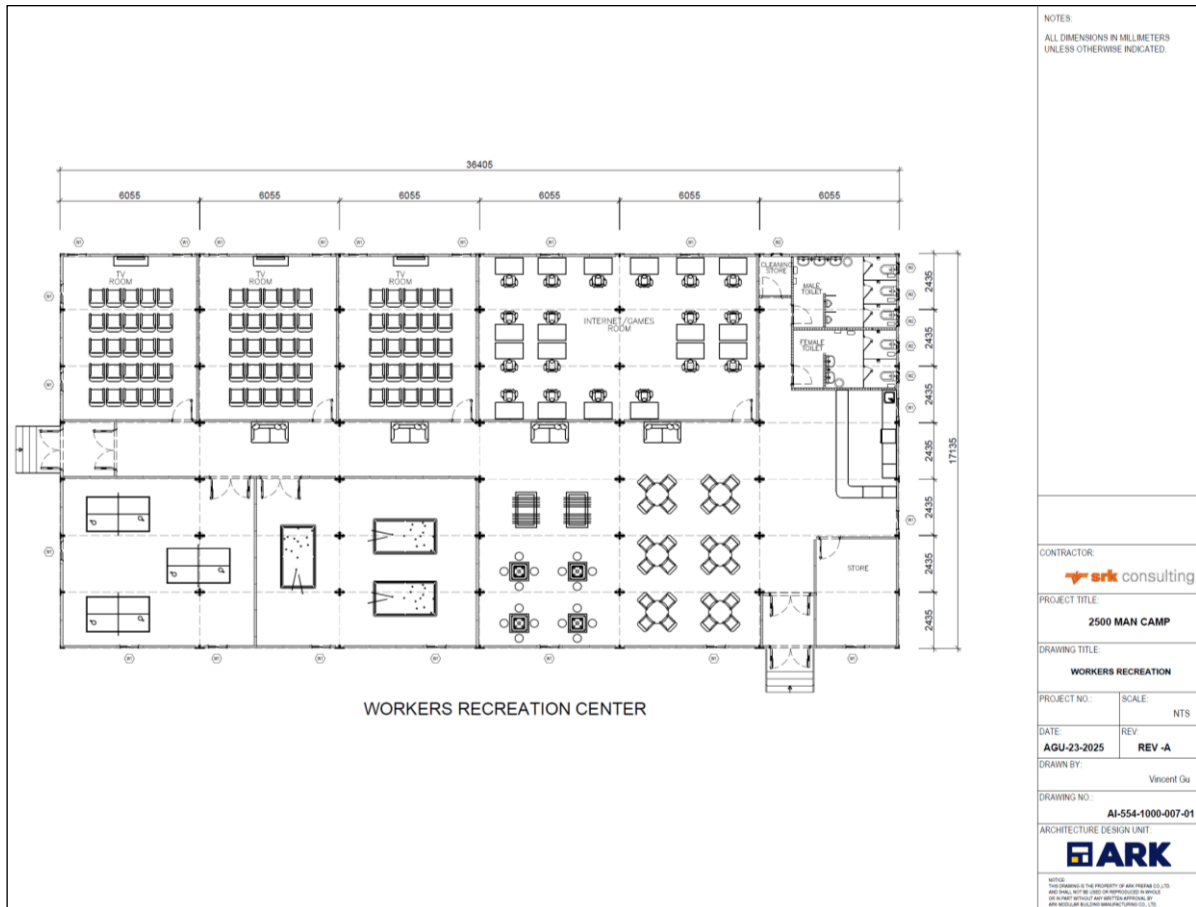
Figure 18-17 shows the Senior and Junior Recreation Area Drawing.



Source: ARK, 2025.

Figure 18-17: Senior and Junior Recreation Area Drawing

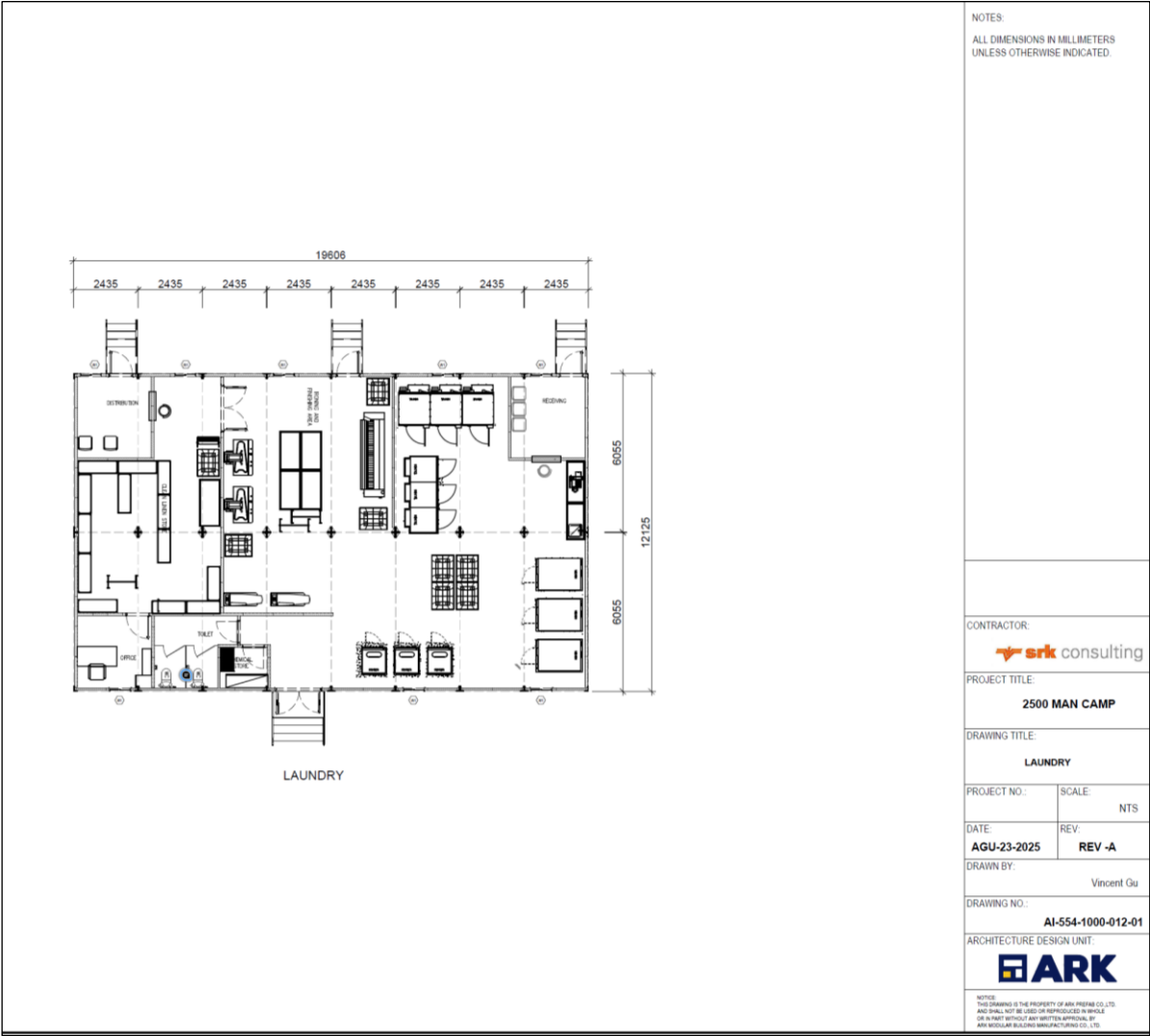
Figure 18-18 shows the Workers Recreation Area Drawing.



Source: ARK, 2025.

Figure 18-18: Workers Recreation Area Drawing

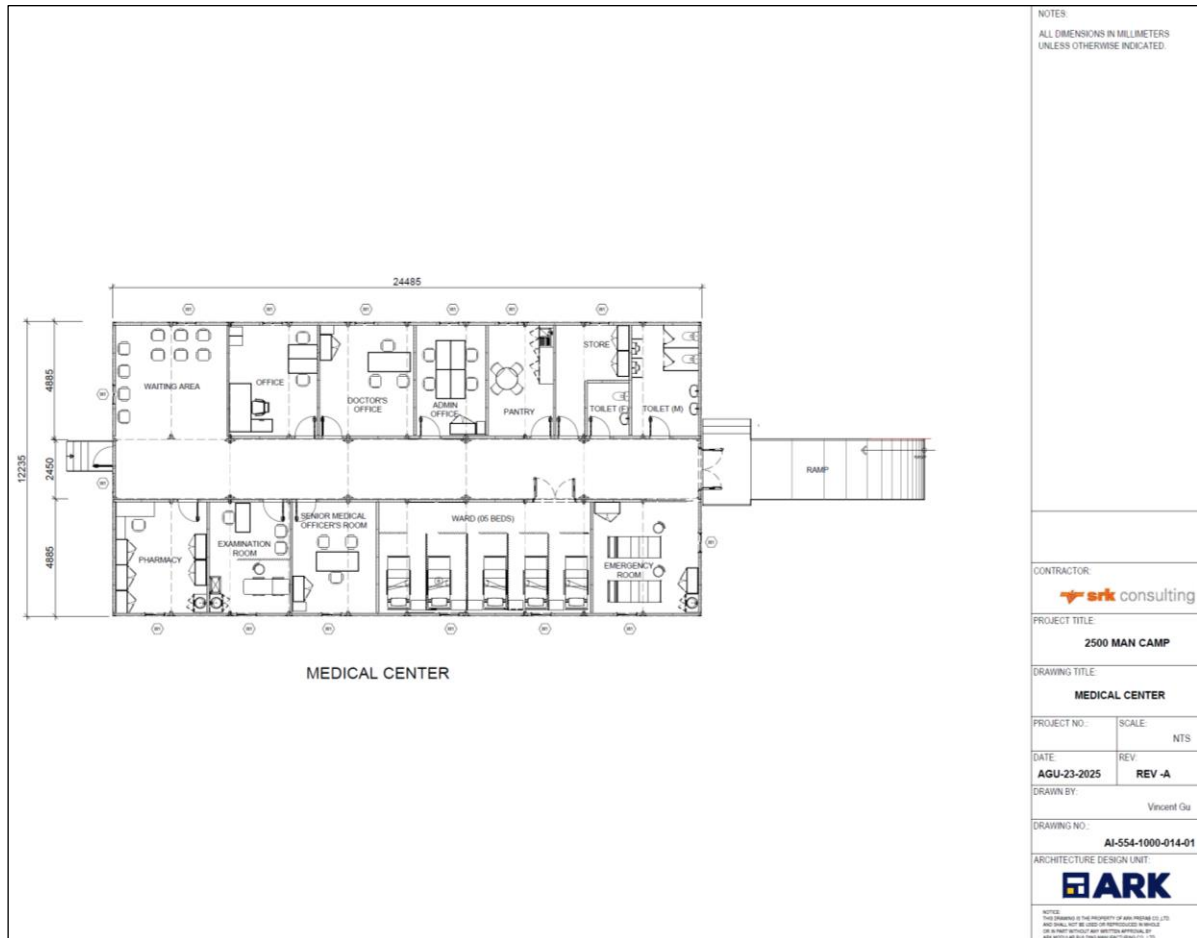
Figure 18-19 shows the Laundry Area Drawing.



Source: ARK, 2025.

Figure 18-19: Laundry Area Drawing

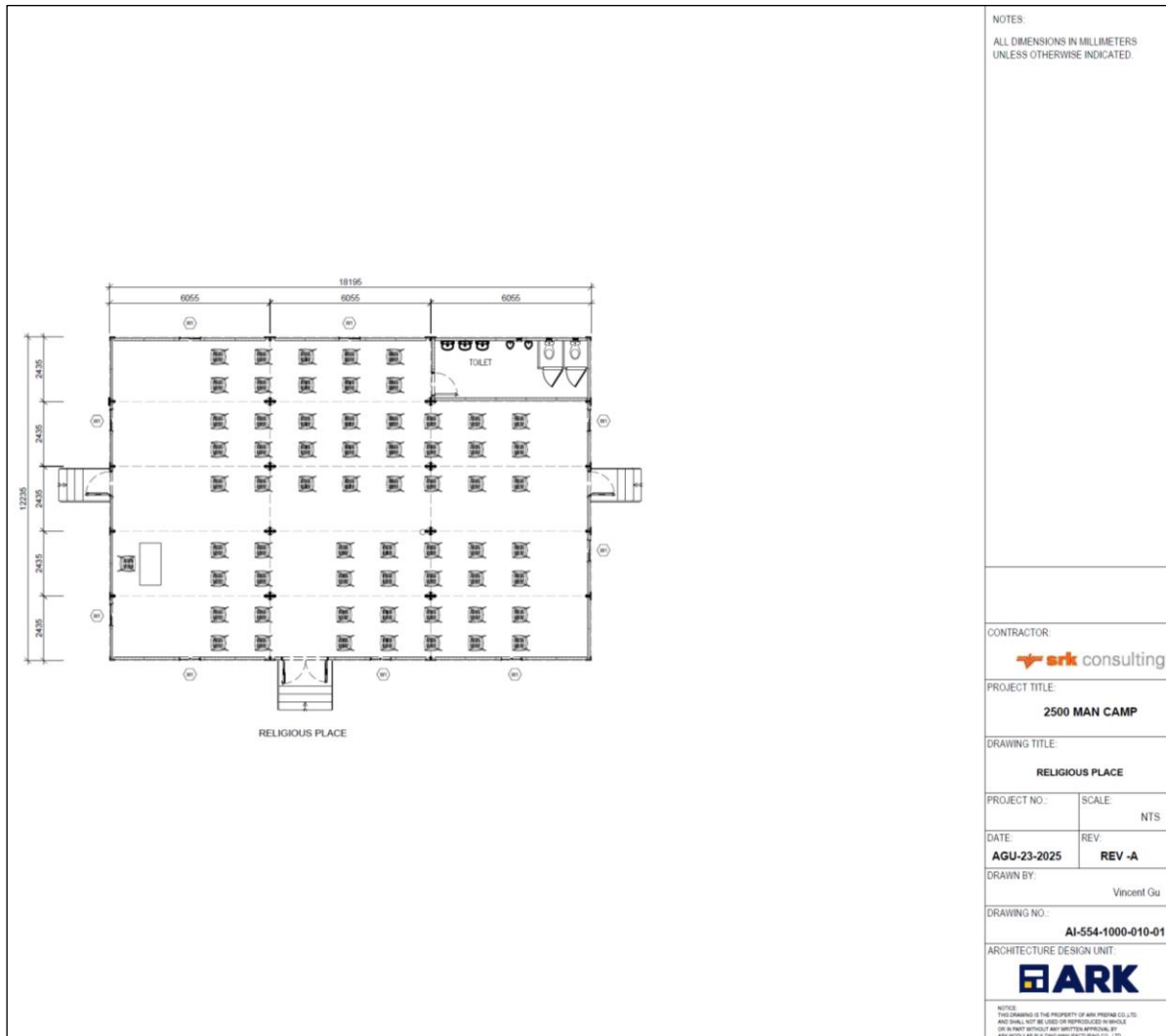
Figure 18-20 shows the Medical Centre Area Drawing.



Source: ARK, 2025.

Figure 18-20: Medical Centre Area Drawing

Figure 18-21 shows the Religious Area Drawing.



Source: ARK, 2025.

Figure 18-21: Religious Area Drawing

18.9 Mining Infrastructure

18.9.1 Mine Truck Shop/Wash

The mine truck shop/wash is a pre-engineered building with a concrete floor, overhead crane, and overhead doors with fire protection and alarm systems. For Phase I of the Project there will be a total of 12 maintenance bays; Six maintenance bays will be assigned to preventive maintenance, 2 will be for corrective maintenance, and the last two bays will be for multipurpose. Additionally, a single welding bay and truck wash will be located at the front of the truck workshop building.

18.9.2 Mine Office

The mine office is a pre-engineered building for open pit operations and will be located at the south of the pits and process plant, with direct interconnection to the existing access road. The building is

contemplated to service both phases of the Project and it will be equipped with fire protection and an alarm system.

18.9.3 Additional Mine Infrastructure

Other mine infrastructure includes a mine maintenance workshop, a mine warehouse, and a mine change house; all of which are pre-engineered buildings. These buildings will be located close to the mine office, including also direct interconnection to the existing access road. These buildings are also equipped with fire protection and an alarm system.

18.10 Process Plant Infrastructure

18.10.1 Process Plant Warehouse

The process plant warehouse is a pre-engineered building with concrete floor and overhead doors. This building will be used for general storage, as well as to store equipment spares for the process plant as necessary. Fire protection and an alarm system will be also integrated in this building.

18.10.2 Process Plant Maintenance Workshop

The process plant workshop is a pre-engineered building with concrete floor and overhead doors. This building will be used for maintenance works and store light vehicles assigned to the plant, as well as to repair and maintain process equipment as necessary. Fire protection and an alarm system will be also integrated in this building.

18.10.3 Process Plant Control Room

The process plant control room is a modular building, which is attached to the process plant and contains dual operator stations. This building is also equipped with fire protection and an alarm system and will be designed for both project's phases.

18.10.4 Assay Laboratory

The assay laboratory is a single-story modular building sized to accommodate both phases of the Project. It will be comprised of a storage area, office, and laboratory. The laboratory will have separate facilities including a scale room, AA room, wet laboratory, and metallurgical laboratories which will be provided by a subcontractor. This building will be equipped with fire protection and an alarm system, and it requires bottled nitrogen and hoods with ventilation.

18.10.5 Material Handling and Process Plant Facilities

Mineralized material from the pits will be hauled to a newly located primary crushing facility where it will be crushed to a P80 of 143 mm and then conveyed to the mill feed stockpile via a single 0.9 km conveyor situated near the crusher.

The revised primary crushing station is a pre-engineered structure (in-pit, semi-mobile station) equipped with a feed hopper, a discharge hopper, gyratory crusher, truck ramps, a bridge crane, rock breaker, discharge conveyor along with a structural steel support structure for the gyratory crusher, drives, maintenance platforms and stairwells.

The crushed mineralized material will be reclaimed/collected through two apron feeders, and then transferred to a collector belt conveyor that will convey it to the secondary crushing circuit, where it will be crushed to a P80 of 42 mm. Crushed material will be conveyed through a closed circuit, whose interconnection point with the rest of process plant infrastructure is via a secondary screening circuit where it will be classified by two secondary screens. Crushed material particles under 60 mm will be collected by a belt conveyor that will take the material to the tertiary crushing stage through the HPGR circuit, while crushed material particles above 60 mm will be returned back to the secondary crushing closed circuit. The secondary crushing, secondary screening are to be set on concrete pads with structural steel components limited to providing support and maintenance access to the equipment.

18.10.6 Power and Electrical

The 220 kV power transmission line will be interconnected to a new 220 kV/34.5 kV main electrical substation located at the Project site. This new main electrical substation will distribute power to the different areas of the Project including the process plant, administrative offices, and mining areas. New distribution lines will be constructed to provide stepped-down power to the site administration and process facilities. The new main electrical substation will be expanded for Phase II in accordance with the energy demand from the new equipment and facilities.

18.10.7 Truck Scales

The Project has inlet and outlet site truck scales, both of 60 t capacity. These scales are located adjacent to the main access road by the guard house.

18.10.8 Security and Medical Facilities

The security and medical facilities are located within a pre-engineered building. The security facilities include rooms for personnel screening during shift rotations. The medical facilities consist of first aid emergency response rooms for on-site treatment and headquarters for the mine rescue team. These facilities are equipped with fire protection and an alarm system.

18.10.9 Administrative Office Building

The administrative offices are housed in a pre-engineered, multiple-level building comprised of a change room, lunchroom, offices, meeting rooms, washrooms, desks, fire protection, and an alarm system. The offices will have space for relevant employees and will be designed for both project phases.

18.10.10 Operations and Engineering Offices Building

The operations and engineering offices are housed in a pre-engineered, multiple-level building comprised of a change room, lunch facility, offices, meeting rooms, washrooms, desks, fire protection, and an alarm system. The offices will have space for relevant employees and will be designed for both project phases.

18.10.11 Permanent Camp Accommodations

Permanent accommodations on site will be in a camp as designed per ARK Engineering. The camp will be a modular building with multiple levels and will include a kitchen and dining area, as well as a recreation room. There will be a boot and jacket room for the personnel entering and leaving the

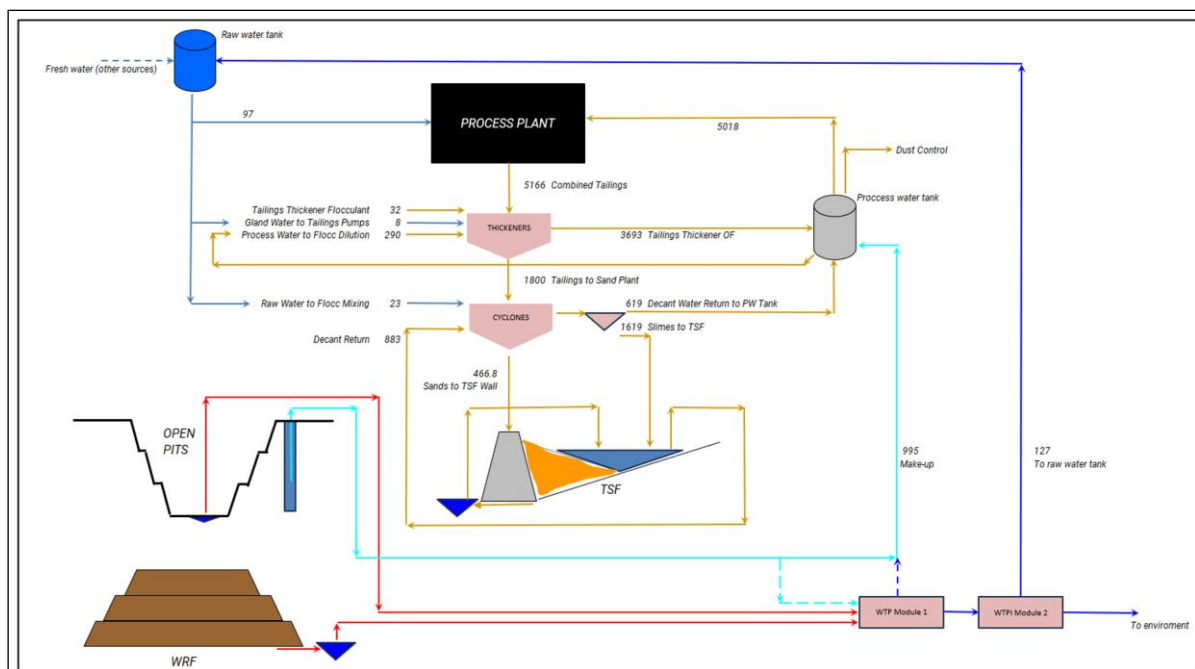
accommodations. The camp will be built exclusively for accommodation of operational workers, including office personnel. These facilities are equipped with fire protection and an alarm system.

18.10.12 Dining Room

The dining room is a pre-engineered building comprised of an industrial kitchen, bathrooms, a change facility, and dining area with tables and chairs. This building will have fire protection and an alarm system.

18.11 Pit Dewatering Considerations

A hypothetical simplified diagram of a water flow scheme developed from the preliminary water balance is presented in Figure 18-22. Figure 18-22 shows a scenario whereby contact water (shown in red) at the pits and WRSFs is treated prior to returning to the process water tank or as surplus water being released to back into the environment. Given the lack of hydrogeological data for the site, the estimates for in-flux flows into the pit(s) are rough and based on assumptions and data taken from other studies. They need to be verified as these are large volumes of water potentially requiring treatment prior to reuse or discharge to the environment.



Source: SRK, 2025

Figure 18-22: Hypothetical Water Flow Scheme for Pits, TSF, and Plant

For planning purposes, the QP is recommending the following approach to mitigating water from seeping into the pit: Groundwater will be extracted from vertical wells installed external to the pit to create a cone of depression in the water table minimizing water infiltration into the pit. The groundwater pumping system will consist of strategically installing a series of bored vertical wells outside and inside the crest of the pit extending to a significant depth below the base of the pit into the water table. Advantages of installing these deep (300 m) vertical groundwater wells between the pit and the river are as follows:

- Intercepted groundwater pumped from these wells will serve as makeup water for the plant.
- Wells could be designed to intercept lateral groundwater flow into the pit.
- Pumping depth can be adjusted over time.
- Groundwater levels can be lowered in advance of mining, improving operational conditions.
- Intercepted groundwater may not require treatment prior to discharge back into the reservoir/river.

19 Market Studies and Contracts

No market studies or product valuations were completed as part of the 2025 PEA. Market price assumptions were based on a review of public information, industry consensus, standard practices, and specific information from comparable operations in the region.

Copper concentrates are widely traded and can be marketed domestically or internationally with significant optionality regarding the ultimate customer base. It is assumed that the concentrate produced is of sufficient quality to be marketable to smelters globally.

Aldebaran were provided with indicative smelter terms, assumptions for treatment charges (TC), refining charges (RC) and payability terms were estimated based on a review of information from comparable recent studies. The assumed payability terms for the metals contained in concentrate are described below.

19.1 Commodity Price Projections

The base case prepared for the Altar Project assumes the production of a copper concentrate containing payable quantities of copper, gold and silver. This study was prepared with the assumption that the production plan will generate a concentrate with a grade of 26% copper and variable grades of gold and silver.

The concentrate price is calculated on a period-by-period basis. The calculation starts by initially assuming prices related to a copper cathode product, a 99.9% pure gold product and a 99.9% pure silver product, and assuming the smelter terms associated with the production of these products by a third-party smelter. The assumed prices for copper, gold and silver products are presented in Table 19-1.

Table 19-1: Assumed Metal Prices

Description	Unit	Value
Cu Price	USD/lb	4.35
Au Price	USD/oz	2,500
Ag Price	USD/oz	27.00

Source: SRK, 2025

The metal prices presented in the table above were compiled by SRK from various market analysts during Q2 2025.

Aldebaran retained CRU to conduct a study that estimates the smelter terms related to the downstream processing of the copper concentrate produced by the prepared production plan. The CRU study also considers that the copper concentrate will be produced with significant content of arsenic, a deleterious element. CRU's study is dated of June 11, 2025, and is titled 'High-arsenic copper concentrates study'. Additionally, SRK estimated an average concentrate moisture and Aldebaran has indicated a concentrate freight cost to transport the concentrate from the mine site to a port in the coast of Chile. The smelter terms estimated by the CRU and the estimated freight costs are presented in Table 19-2.

Table 19-2: Altar Copper Concentrate Smelter Terms

Description	Unit	Value
Metal Payability		
Minimum Cu Deduction	%	1.00
Cu Payability	%	97.00
Minimum Au Deduction	g/t	1.00
Au Payability	%	95.00
Minimum Ag Deduction	g/t	30.00
Ag Payability	%	80.00
TC/RC		
Treatment Charges (TC)	USD/dmt	70.00
CU Refining Charges (RC)	USD/lb Cu Payable	0.07
Au Refining Charges (RC)	USD/oz Au Payable	6.00
Ag Refining Charges (RC)	USD/oz Ag Payable	0.50
Concentrate Freight		
Concentrate Moisture Content	%	10.00
Freight Charges (FC)	USD/wmt	125.00

Source: CRU, SRK, Aldebaran, 2025

CRU's study also included an estimate of penalties associated with the arsenic content of the copper concentrate; the details of these penalties are presented in Table 19-3.

Table 19-3: Altar Copper Concentrate Arsenic Penalties

Description	Unit	Value
As Grade <= 0%	USD/dmt	-
As Grade > 0 <= 0.1%	USD/dmt	-
As Grade > 0.1 <= 0.2%	USD/dmt	-
As Grade > 0.2 <= 0.3%	USD/dmt	-
As Grade > 0.3 <= 0.4%	USD/dmt	-
As Grade > 0.4 <= 0.5%	USD/dmt	-
As Grade > 0.5 <= 0.6%	USD/dmt	12.00
As Grade > 0.6 <= 0.7%	USD/dmt	16.00
As Grade > 0.7 <= 0.8%	USD/dmt	20.00
As Grade > 0.8 <= 0.9%	USD/dmt	24.00
As Grade > 0.9 <= 1%	USD/dmt	28.00
As Grade > 1 <= 1.1%	USD/dmt	38.20
As Grade > 1.1 <= 1.2%	USD/dmt	41.60
As Grade > 1.2 <= 1.3%	USD/dmt	45.00
As Grade > 1.3 <= 1.4%	USD/dmt	48.40
As Grade > 1.4 <= 1.5%	USD/dmt	51.80
As Grade > 1.5 <= 1.6%	USD/dmt	56.72
As Grade > 1.6 <= 1.7%	USD/dmt	58.36
As Grade > 1.7 <= 1.8%	USD/dmt	60.00
As Grade > 1.8 <= 1.9%	USD/dmt	61.64
As Grade > 1.9 <= 2%	USD/dmt	63.28
As Grade > 2 <= 2.1%	USD/dmt	133.63
As Grade > 2.1 <= 2.2%	USD/dmt	135.75
As Grade > 2.2 <= 2.3%	USD/dmt	137.88

Source: CRU, 2025

19.2 Contracts

Currently, there are no contracts for transportation or offtake of the concentrates in place, but when they are negotiated, they are expected to be within industry norms. Similarly, there are no contracts currently in place for the supply of reagents, utilities, or other bulk commodities required to construct and operate the Project.

20 Environmental Studies, Permitting and Social or Community Impact

This section provides a description of the environmental, permitting and social or community factors related to the Project.

20.1 Baseline Environmental Studies

Environmental baseline environmental studies were first conducted in the Project area in 2008, focusing on critical environmental components that are part of the physical and biological surroundings. Table 20-1 summarizes the baseline analysis/monitoring period for each environmental component assessed.

This section summarizes the results of environmental studies completed to date and evaluates them against the current environmental regulatory framework to identify outstanding compliance requirements. It also analyzes the environmental aspects and potential impacts identified in these studies that could affect the Project's viability, development, and operations. There are no protected natural areas within the project footprint and area of direct influence.

The environmental studies developed by Aldebaran are aligned with the requirements of national environmental legislation, in accordance with the terms of reference issued by Law No. 24585.

Table 20-1: Scope and Dates of Environmental Baseline Studies

Component	Analysis Period	Scope	References
Geological studies	2011, 2020-2021	Overview - Structural data collected in the field such as points and polylines.	PETRA GAIA Consulting, 2021
Geomorphological studies	2012-2013, 2021-2023	Regional description in La Pantanosa River basin.	Mountain Pass, 2013
Cryology	2010, 2010-2021, 2025	Soil temperature monitoring through probes and pits with thermistors. Monitoring of the movement of rock glaciers (deformation) using LIDAR, DInSAR and detailed topographic surveys. Geo-hydrochemical characterizations of the area of the Altar River and neighboring tributaries. Topographic monitoring of Altar and QDM cryogenic features.	Mountain Pass, 2025
Geochemistry	2011	Characterization of the sterile rock material, including static testing, acid-base accounting, and solid-phase metal analysis.	Lorax Environmental Services Ltd., 2011
Seismicity	2011, 2025	Overview. Location, identification and characterization of active fault structures. Seismic hazard analysis that may affect the infrastructure works of the future mine.	Weidmann, 2011 Ingeniería Seísmica y Geotécnica S.R.L., 2025
Meteorology	2011-2025	Analysis of meteorological variables. 2 weather stations.	Institute of Hydraulic Research (IDIH), 2025a
Air Quality	2021-2025	Baseline air quality measurements.	INDUSER Laboratory, 2025a
Noise, vibration and traffic	2010-2011, 2021-2024,	Environmental noise study Vibration study Vehicular traffic study	INDUSER Laboratory, 2025b Associated consulting methods, 2010 and 2011

Component	Analysis Period	Scope	References
	2025 (noise)		
Hydrology	2010-2025	Characterization of surface water hydrology.	IDIH, 2025b
	2010-2025	Characterization of surface water quality.	IDIH, 2025b
Hydrogeology	2008, 2022-2023, 2025	Characterization of groundwater bodies in the area of influence of the project. Pump test monitor wells in Mineral Resource areas.	Mountain Pass, 2022b IDIH, 2022 Hidroar, 2025
Soils (edaphology)	2011	Overview. Characterization and identification of soil units	Ginestar, 2011
Flora	2008-2025	Phytosociological characterization of vegetation (Habitat types: fertile plain and steppe)	Gonnet, 2011a Villavicencio and Acosta, 2023a GT Ingeniería S.A., 2025a
Fauna	2008-2011, 2016-2017, 2020-2025	Identification and categorization of species (Habitat types: fertile plain and steppe) Conservation status Migration status	Gonnet, 2011b Villavicencio and Acosta, 2023b GT Ingeniería S.A., 2025b
Limnology	2008-2013, 2020-2025	Environmental characterization of aquatic biota. Plankton, Periphyton and Benthos. Temperature (°C), Dissolved Oxygen (mg/l), pH, Electrical conductivity (µS/cm). Channel and stream width (m) and type of substrate were also evaluated.	Peralta, 2013 Villavicencio and Acosta, 2023c GT Ingeniería S.A., 2025c
Landscape	2011	Landscape observation points	Tortosa, 2011
Palaeontology	2025	Paleontological survey carried out on the areas of mining belonging and road easement of the Altar Project - Cenicero River.	Mestre, 2025
Archaeology	2008, 2012, 2017 and 2025	Archaeological survey. Sectors A° Altar and Pantanosa River (upper channel)	Vector Argentina S.A., 2008 Durán, 2012 Michieli, 2017 Gómez and Michieli, 2025

20.1.1 Climate and Meteorology

Climatic data has been collected at two meteorological stations since 2011: Altar and Campamento, both located within the direct influence area of the Project. The Altar station is at 4,010 masl, while the Campamento station is located near the Cenicero River valley, at 3,091 masl. Both stations record monthly information for wind direction and speed, temperature, precipitation, relative humidity, atmospheric pressure, solar radiation, and evaporation.

A regional climate model has been developed for the Project. The model includes regional data from 1981 to 2010, and the results include variations in temperature and precipitation over the recording period.

In relation to latitude and altitude, the climate is categorized as high mountain arid, characterized by an average monthly temperature that depends on altitude. However, above 3,000 masl, it usually does not exceed 0°C. The thermal amplitude is very large (both daily and annually), and precipitation is represented by snowfall.

The following is a summary of the data included in the report titled 'Analysis and Treatment of Meteorological Information (Camp and Altar Stations),' prepared by the Institute of Hydraulic Research (IDIH) in May 2025.

Campamento Meteorological Station

Between 2021 and 2025, the minimum and maximum average daily temperatures recorded were -27.1°C and 26.9°C, respectively. Barometric pressure during this same period ranged from 690.8 to 711.4 hPa, with an average of 704.1 hPa. The average daily relative humidity is 30.9%.

Winds predominantly originate from the northwest, with average speeds of 3.2 m/s at a height of 3 m and 3.7 m/s at 10 m, maintaining consistent atmospheric circulation. Wind gusts exceeding 20 m/s and average speeds over 8 m/s have been observed in winter.

At elevations above 3,000 m asl, precipitation primarily occurs as snow, sleet, or hail from humid westerly winds. Summer precipitation is sparse and mainly solid, with drizzle being uncommon at these altitudes. The Campamento Station does not have the equipment to record snowfall data.

Altar Meteorological Station

The Altar Station, which is 918.7 m higher than the Campamento Station, recorded average daily temperatures ranging from -16.9°C and 13.0°C, with an average temperature of -0.4°C. The highest recorded temperature was 21.3°C, while the absolute minimum was -21.2°C. Recorded barometric pressure values ranged from a maximum of 635.5 hPa and a minimum of 633.6 hPa, with a daily average of 628.1 hPa. These readings are consistent with a high-altitude location, where elevation leads to lower atmospheric pressure. The average daily relative humidity is 30.9%, with significant variations. Winds in the region are steady and predominantly from the northwest, with average speeds of 7.1 m/s at 3 m in height and 7.9 m/s at 10 m. During winter, average speeds exceed 8 m/s at both heights.

Similar to the Campamento Station, the Altar Station presents low liquid precipitation values, largely due to an altitude of 4,010 masl, where most precipitation occurs in the form of snow, frost, or hail.

Overall, sufficient data has been collected to characterize the climate in the Project area. Meteorological data collection is ongoing, with periodic maintenance conducted on the meteorological stations, including calibration of the sensors.

20.1.2 Air Quality, Noise, Vibrations, and Traffic

Air Quality

Air quality measurements were conducted in February 2021, February 2022, April 2023, May 2024, and May 2025 at Central Altar, QDM, and Campamento with the following parameters analyzed:

- Carbon Monoxide (CO) $\mu\text{g}/\text{m}^3$
- Sulfur Dioxide (SO₂) $\mu\text{g}/\text{m}^3$
- Nitrogen Dioxide (NO₂) $\mu\text{g}/\text{m}^3$
- Lead (Pb) $\mu\text{g}/\text{m}^3$
- Particulate Matter PM₁₀ $\mu\text{g}/\text{m}^3$
- Ozone (Oxidant Substances Expressed as Ozone) $\mu\text{g}/\text{m}^3$
- Hydrogen Sulphide (H₂S)

During the survey conducted in May 2024, the measured parameters were expanded to include PM10, PM2.5, Total Suspended Particulates (TSP - 24 hr), lead in TSP, arsenic in TSP, mercury in TSP, cadmium in TSP, silica, organic material (OM), CO₂, NO₂, SO₂, ozone, and H₂S. The additional parameters were included to enhance the study's depth and relevance.

The Project's direct area of influence is characterized as a "clean air" zone, with low levels of suspended particles and absence of pollutant gases. The results of air quality analyses conducted at the QDM, Altar, and Campamento sites indicate that the evaluated parameters comply with the values established in the current legislation (Law No. 24.585). No sources of anthropogenic dust or gas emissions were identified; the only emissions present originate from wind erosion of the terrain, resulting in a minimal content of fine particles.

In 2025, Induser Laboratory installed four continuous air quality monitoring stations, which record environmental conditions (temperature, wind, humidity, and pressure) and particulate matter PM10. The PM10 results obtained in 2025 were below the reference guide levels in accordance with Decree 24.585 Annex IV, Table 8.

Noise

In the years 2010, 2011, and the period from 2021 to 2024, environmental noise monitoring campaigns were conducted in various study areas, including Vega del Yeso, Laguna de los Chilenos, Vega Alfarcillo, Calingasta – Hospital Federico Cantoni, Barreal – Posada San Eduardo, and Barreal – Hospital. During these monitoring campaigns, the Equivalent Continuous Sound Level (Leq) was measured, and a detailed analysis was conducted at different points according to the IRAM 4062/2016 standard – Community Noise.

During the 2023 and 2024 monitoring, environmental acoustic impact was also measured at QDM, Central Altar, and Campamento. The recorded values comply with the limits specified in the IRAM 4062 standard, which provide guidelines on baseline or reference Leq levels according to the time of day and location. Since the IRAM 4062 standard does not provide specific reference levels for development like the Project, the area has been classified as "suburban with low traffic" based on the estimated characteristics of the Project.

At the monitoring sites, the only recorded noise originates from natural elements, such as wind and grazing animals nearby, with sound levels maintained below 40 dBA.

During the 2025 daytime environmental noise survey, measurements were taken at several points to assess background noise characteristics. Recorded noise levels ranged from 35.2 dB to 45.3 dB. These values reflect some presence of noise in the environment, influenced by wind speeds that exceeded 3 m/s at some points.

Analysis indicated that all evaluated locations presented noise with low-frequency components. Although no tonal character was detected in the noise, an impulsive character was identified at all measured points.

Vibration

Vibration level measurements were recorded over two days in 2010 (August 27-28, 2010) at representative locations within the study area and were found to be below the limits of discomfort for people in residential settings (Metodos Consultores Asociados, 2010). This data may no longer be representative of current conditions.

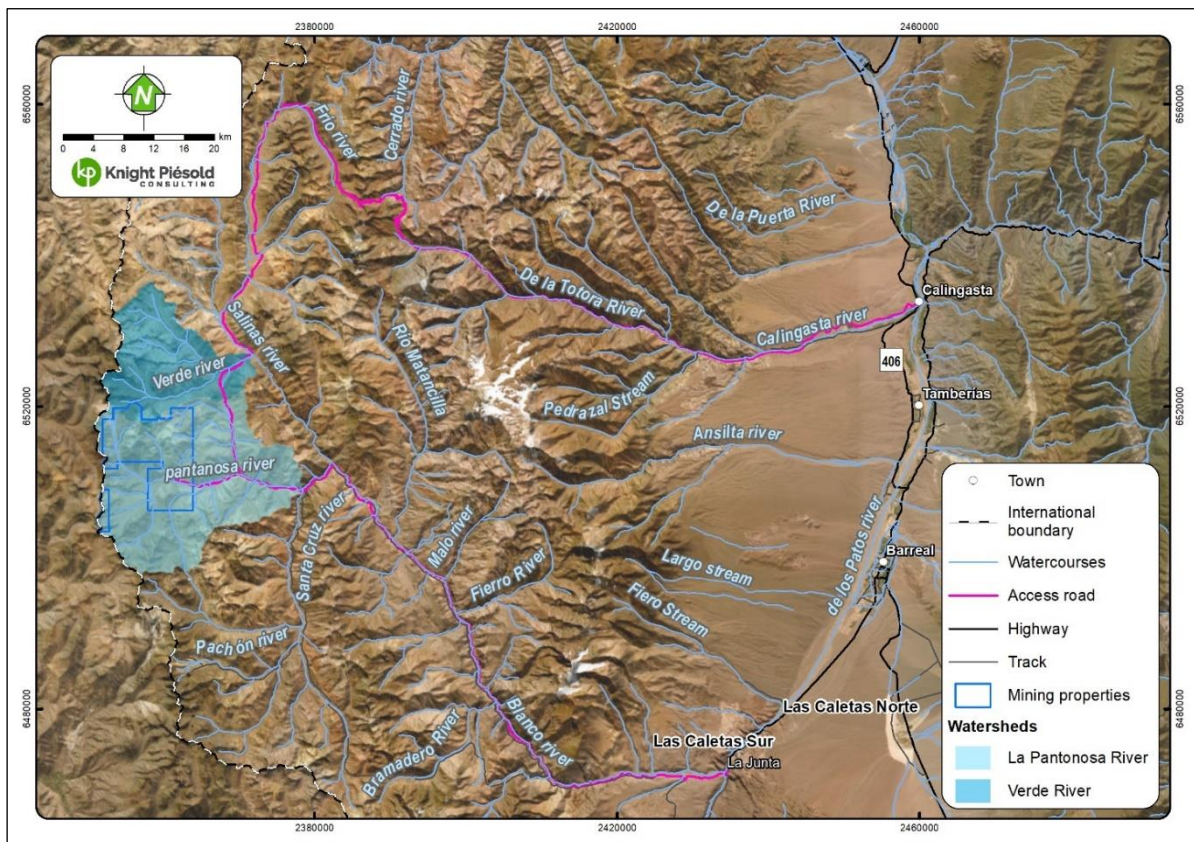
Traffic

Metodos Consultores Asociados conducted a vehicle traffic census in the towns of Villa Calingasta and Barreal in the years 2010 and 2011. Vehicle traffic in both directions was recorded for 48 hours, with vehicles counted according to the following categories: Cars; Pick-ups; Simple trucks with 2 axles; Simple trucks with more than 2 axles; Truck with trailer; Semi-trailer truck; Buses, Taxis, Passenger vans; and Motorcycles. This data may no longer be representative of current conditions.

20.1.3 Surface Water

The Project is in the western portion of the San Juan River watershed, which is part of the Bermejo-Desaguadero system. The watershed covers an area of 26,000 km², bounded to the north by the Jáchal River watershed divide, corresponding to the Agua Negra mountain range; to the east by the Tigre and Tontal mountain ranges; to the south by the Mendoza River basin reaching the foothills of Aconcagua; and to the west by the watershed divide represented by the line connecting the high peaks of the Andes mountain range

The Pantanosa River flows west to east and is fed from the north by the Altar Creek, Alfarcillo Creek, and Colorado River, while, from the south, it receives contributions from the Casa de Piedra River, Arroyo de los Leones, and Río del Yeso, respectively. Flows in these channels are permanent and are being monitored for hydrological and hydrochemical characterization.



Source: Knight Piésold, 2025.

Figure 20-1: Project Area Watersheds

Streamflow Measurements

Hydrological data has been collected in the Project area since 2010. Annual campaigns for surface flow measurement have been conducted at specific control stations located on the Altar River, Cenicero River, La Pantanosa River, Casa de Piedra River, Alfarcillo River, Piuquenes River, Colorado River, Colorado Creek, Las Mellizas Creek, Verde River, Salinas River, Blanco River, Santa Cruz River, Calingasta River, Castaño River, Los Patos River, San Juan River, Los Leones River, and Yeso Creek.

The flow measurements were conducted using the area-velocity method, according to the requirements outlined in the International Standard "UNE-EN ISO 748:2009. Hydrometry". The average velocity is measured with a Flo-Mate Model 2000 electromagnetic inductive velocimeter.

A Parshall Flume hydrometric station with a data logger has been installed along the La Pantanosa River, with approximately one year of flow records currently available. A water monitoring weir and a large culvert were installed on the river crossing at the "Arroyo Altar", as part of a major multiple-year program for the improvement of access road infrastructure, which including widening of roads, culvert installation and diverting some road segments for environmental purposes.

Starting in 2025, the network of flow measurements will be expanded in the Verde River basin, and continuous monitoring at the existing point (La Pantanosa River) will continue, with the monitoring frequency increased to a semi-annual. The proximity of mining projects to the Altar-Río Cenicero Project, located to the north, requires flow monitoring in the contributing basins to obtain baseline data.

Surface Water Quality

Surface water quality monitoring for physicochemical parameters has been undertaken at monitoring sites in the Upper and Lower Basin since 2013.

Upper Basin sites include the Arroyo Colorado River, Alfarcillo River, Altar River, Cenicero River, Casa de Piedra River, Las Mellizas Creek, Los Leones, La Pantanosa, Piquenes, Quebrada de la Mina, Quebrada Prohibida, Colorado, Salinas, Santa Cruz, Verde, and Yeso. Lower Basin sites include the San Juan River, Castaño River, Calingasta River, Los Patos, and Blanco River.

To evaluate surface water quality in the Project's area of influence, chemical parameters were analyzed according to the guidelines established in the Water Quality Guide Level Tables of Law No. 24.585 (Tables 1 to 6). Laboratory analysis revealed detectable concentrations of aluminum, arsenic, and mercury in most samples, with levels exceeding the reference values established in Table 1, "Water sources for human consumption" of Annex IV of Law 24.585.

In all monitored sections, in situ measurements of physicochemical parameters characterizing water quality were determined, including pH, conductivity, oxygen concentration, and temperature. Observed electrical conductivity values range from 980 mS/cm at the Quebrada de la Mina monitoring point to 50 mS/cm in the Colorado River. As for pH, values ranged from 9.63 in La Pantanosa to 3.25 in the Altar River, indicating alkaline and acidic conditions, respectively. Dissolved oxygen concentrations fluctuated between 9.78 mg/L in the La Pantanosa River and 6.98 mg/L in the Altar River. Water temperatures ranged from 19.5°C to 3.4°C.

Starting in 2025, the water quality monitoring network will expand, and the frequency of data collection will increase with quarterly campaigns.

Surface water measurements have not been correlated with groundwater levels. Planned spot isotopic analyses for 2026 aim to determine the origin and age of the waters with the future goal of developing quantitative numerical models. This will help in assessing the relative importance of annual precipitation versus water from glacial ablation and in determining the origin of the waters in the Altar watershed. These studies could potentially be expanded in the future to include a sustainability analysis of the mining project area. Cryology is discussed in Section 20.1.8.

20.1.4 Hydrogeology

The hydrostratigraphy of the project area comprises the following two major units:

- Pre-Quaternary igneous rocks with secondary porosity and permeability due to fracturing and weathering.
- Unconsolidated quaternary sediments.

Results obtained from geophysical testing and hydrogeological drilling have identified that an aquifer with sufficient capacity to provide some of the water required for mine operations may be present in the area 2 km upstream and 2 km downstream of the Altar camp (following the La Pantanosa River valley). The area is bounded to the north by the mouths of the Altar and Alfarillo Creeks and to the south by the Casa de Piedra and Los Leones Rivers.

Geophysical data and field observations suggest that the aquifer size reduces downstream of the confluence of Altar Creek with the La Pantanosa River due to a reduction in the thickness of sedimentary deposits and the lateral development of the La Pantanosa River valley.

Preliminary estimates suggest that the volume of porous material with the potential aquifer is on the order of 960 hm³ with a total water volume of approximately 38 hm³ (Teotop, 2011a and 2011b). Note this estimate uses a conservative aquifer specific yield value, a non-conservative aquifer yield, and does not consider the number of wells required to produce sufficient water quantities for the mine.

Piezometric Levels

Thirty monitoring wells have been installed, some of which are equipped with pressure transducers to allow continuous monitoring of groundwater levels.

In 2017, the installation of pressure transducers began in several monitoring wells near the Project area, including the Project exploration areas (Mountain Pass Consulting, 2017). Subsequently, in 2019, four groundwater monitoring wells were installed in the Altar Creek valley (Mountain Pass Consulting, 2020). In 2021, the first hydrogeological model was developed, identifying the need to install deeper monitoring wells with broader coverage within the Altar valley (Mountain Pass Consulting, 2022a). In March 2022, a drilling program was initiated for five reverse air wells located along the ravine in the Central Altar sector, to evaluate the hydrogeological characteristics of the Central Altar area (Mountain Pass Consulting, 2022b).

Sporadic piezometric level measurements were collected in 2010 to 2012, 2015, 2023, 2024, and 2025. Between March and April 2025, pumping tests were conducted on wells installed in 2022 (Hidroar, 2025).

The level measurement campaigns included in situ determination of physicochemical parameters characterizing water quality, such as pH, conductivity, oxygen concentration, and temperature, as well as water level in the well and wellhead height.

Considerable fluctuations in water levels are observed within the wells, ranging from -0.87 m to -64.13 mbgs. Most sites display a pH ranging from slightly acidic to alkali, with values from 9.80 to 6.52. Water temperatures also show significant variations, ranging from 3.2°C to 16.4°C.

2011 Pump Tests

Between February and March 2011, four monitoring wells were drilled in the La Pantanosa Valley, near the Altar camp (Teotop, 2011a). Adjacent to each monitoring well, smaller-diameter observation wells were drilled to conduct individual pumping tests at each of the four wells. Groundwater levels in the observation and pumping wells were measured manually using water-level meters. However, the reports provide drawdown data only for the observation wells.

The tests were carried out in April 2011 and comprised of a step-drawdown test with three steps (total duration 3 hours) and a 24-hour constant-rate test. Steady state piezometric levels were not achieved in any of the tests. Table 20-2 summarizes the interpreted results of the tests.

Table 20-2: Summary of 2011 Step-Down Tests

Well	Diameter (inches)	Depth (m)	Duration (h)	Pumping Flow (m ³ /h)	T - Transmissivity (m ² /d)	K - Hydraulic Conductivity (m/d)	Sy - Specific Yield
MW-AF001	6	165	24	41.9	24.75	1.58	0.00325
MW-AL001	6	132	24	16	42.76	0.36	0.00364
MW-LP001	6	217	24	19	365.4	2.26	0.0672
MW-LP002	6	80	24	1.1	64.1	1.6	0.0095

Source: Teotop, 2011c.

2025 Pumping Tests

In May 2025, pumping tests were performed to evaluate the hydrogeological conditions within the Altar Creek Valley (Hidroar, 2025). The Water levels were measured in observation and pumping wells manually with water level meters and automatically with pressure transducers installed in select wells.

The interpreted hydraulic parameters for the study area indicate transmissivities ranging from 1 to 130 m²/day, indicating significant variability in the stratigraphic units. The storage coefficient values indicate characteristics of semi-confined and confined aquifer layers were noted.

Table 20-3 presents a summary of the constant-rate tests conducted on the four wells studied.

Table 20-3: Summary of 2025 Constant Rate Pumping Tests

Well	Diameter	Depth (m)	Duration (h)	Average Pumping Flow (m ³ /h)	Static Depth (mbw)	Dynamic Level (mbw)	Depression (m)	Specific Yield (m ³ /h.m)
MW-AL-004	PVC 6"	300	72	3.1	194.76	226.81	32.05	2.32
MW-AL-005	Ac. inox 6"	300	72	5.6	107.68	117.76	10.09	13.33
MW-AL-006	PVC 6"	252	72	12	44.94	66.99	22.05	13.06
MW-AL-007	PVC 6"	79	72	18	0.00	17.39	17.39	24.84

Source: Hidroar, 2025.

Recommendations for additional study to determine the availability of water supply are provided in Chapter 26.

Groundwater Quality

Quantitative and qualitative laboratory analysis results on groundwater quality are available for the periods 2013 to 2015 and 2022 to 2024 in the upper basin including Altar (12 wells) and La Pantanosa (3 wells). Laboratory analysis results indicate quantifiable concentrations of aluminum, arsenic, and mercury were recorded, with values exceeding the reference guide levels of Table 1, "Water sources for human consumption" in Annex IV of Law 24.585.

In 2025, chemical characterization and quality analysis of eight water samples obtained during pumping tests were conducted (2 per well: one at the midpoint and another at the end of each test). Analysis of the physicochemical parameters indicates that water samples from all wells exhibit characteristics of freshwater, with in situ electrical conductivities below 1,000 $\mu\text{S}/\text{cm}$. Conversely, pH varies depending on the well analyzed, with samples ranging from acidic, slightly acidic, neutral, to slightly alkaline.

The major constituents indicate that the well water is classified as calcium sulfate, and in all cases, chlorides are present in low proportions or below the detection limit. Measured concentrations (total fraction) were compared with the water quality guide levels established by National Law No. 24.585. The results suggest that the sampled water may be restricted for certain uses due to constituents present in concentrations exceeding the permitted levels. It is noteworthy that only samples from well MW-AL-007 were suitable for human consumption and irrigation.

The water quality baseline will continue with the monitoring of physicochemical parameters to provide robustness to the environmental baseline.

20.1.5 Soil

In 2011, soil characterization was conducted, evaluating aspects such as stoniness and rockiness, runoff, slope, permeability, flooding risk, erosion, presence of salts or alkalis, moisture distribution, drainage, and current land use. Additionally, an analysis of physical parameters (color and texture) was carried out, chemical parameters (pH, in accordance with Law 24.585, Annex IV - Table 7 Soils) were determined, and a Taxonomic Classification of the soils in the Project's area of influence was performed. The study sites are in the areas of La Pantanosa River, Piuquenes River, Verde Arroyo Verde River, Colorado River, and Altar River.

The results indicate that the soils in the study area belong to the Entisols order – orthents – in hillside and fluvial plain areas, and aquents in the meadow sector. The study area is predominantly characterized by rocky outcrops, which constitute the unit lacking soils (non-soils).

The limitations of the soils in the area are primarily related to severe climate, slope, drainage, erosion, stoniness/rockiness. These limitations prevent their use for commercial crop production for agricultural and forestry purposes and restrict their use to recreation and wildlife for watershed protection and/or mineral resource utilization (Class VIII).

Although the described Entisols have severe limitations for agricultural use, it is necessary to highlight the importance of high-altitude wetlands (meadows) which constitute complex and valuable ecosystems from an environmental perspective.

Soil Quality

For the determination of chemical parameters, an acid digestion technique and inductively coupled plasma (ICP) analysis were used to determine 39 elements: Al, Sb, As, Ba, Bi, Cd, Ca, Cr, Co, Cu, Ga, Sn, Se, F, Fe, Hg, Mo, Ni, Pb, Ag, K, Sc, Na, P, Ta, Tc, Ti, La, Li, Mg, Mn, Th, U, V, W, Y, Zn, Zr.

The values obtained were compared with the industrial use levels of Law No. 24.585, allowing the following analysis:

- La Pantanosa River: Sampled soils indicate values above the permitted levels for arsenic and copper.
- Piuquenes River: Sampled soils have elevated arsenic levels.
- Colorado River: Sampled soils do not present concentrations above current threshold values.
- Arroyo Verde: Exhibits elevated arsenic values.
- Altar River: Sampled soils indicate elevated values of arsenic, copper, and selenium.

20.1.6 Geology and Seismicity

Geology

Structural data was collected in the field during 2020 and 2021 at Quebrada de la Mina, La Esquina Altar Norte, Altar Center, and Altar East.

In the Project's area of influence, the main lithostratigraphic units are represented by the Choiyoi Group, of Permian-Triassic age, which constitutes the basement of the region and is composed of a sequence of volcanic rocks intruded by plutons, dikes, and stocks.

Unconformably overlying the Choiyoi Group are Jurassic-aged clastic sedimentary rocks, consisting of red layers of sandstones and claystones. It is important to note that these sediments do not outcrop in the exploration area, where rhyolitic and andesitic ignimbrites of Miocene age have been recognized, overlying the Choiyoi Group.

In the region, Cretaceous volcanism is unconformably over the Choiyoi Group. The andesitic volcanic rocks correlate with the Abanico and Juncal Formations (which outcrop in Chile) and are locally known as the Pachón Formation.

The Project hosts a copper porphyry system accompanied by a high-sulphidation epithermal system. The mineralization, of Miocene age (10 – 12 Ma), is associated with intrusive bodies and is spatially related to sericitic and potassic alteration.

Seismicity

In 2011, a seismic activity study was conducted, focusing on the characterization of seismogenic sources within a 200 km radius around the Altar project. This study included the analysis of seismic hazards that could impact future mining infrastructure. The geological and structural characteristics, as well as the geotectonic and seismotectonic settings, were evaluated.

The project area lies above the horizontally subducted Nazca plate. This plate exhibits high seismicity at depths of approximately 100 km.

In 2025, the seismic hazard at the Altar project site was assessed using attenuation laws developed in the projects of the PEER (Pacific Earthquake Engineering Research Center), NGA-Sub, and NGA-

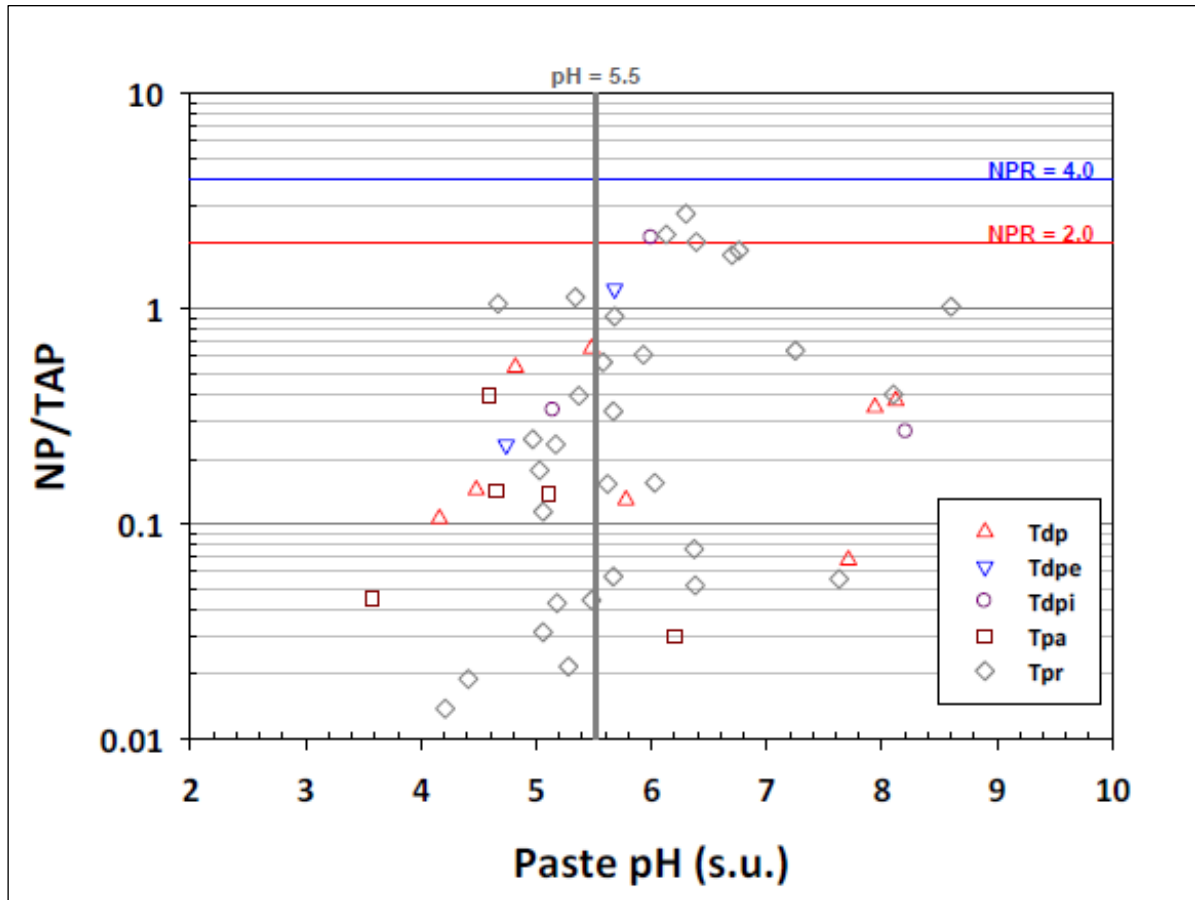
West2, considering the updated seismic catalog to date. Seismic hazard curves were determined for peak ground acceleration and pseudoacceleration with 5% damping for vibration periods of 0.2, 0.5, and 1 second, revealing that the probabilistic hazard at the site is controlled by subducted plate earthquakes.

Uniform hazard spectra for pseudo acceleration were calculated for return periods of 2,475, 5,000, and 10,000 years, and historical seismic movements were selected, recorded in events and conditions similar to the verification scenarios, for the Operation and Closure Safety Earthquake (OCSE) and post-closure Safety Earthquake (SE) of critical structures.

20.1.7 Geochemistry

A Phase I Metal Leaching/Acid Rock Drainage (ML/ARD) geochemical characterization program was completed in 2011 to evaluate the acid generating and metal leaching potential of Project waste rock. This program included static laboratory testing of an initial 50 waste rock samples. As shown on Figure 20-2, the neutralization potential ratio (NPR) of the majority of samples tested were <2.0, indicating that most of the waste rock is potentially acid-generating (PAG).

Based on the expected sulphide deportment to the Cu–Au concentrate, the process tailings are anticipated to be non-acid-generating (NAG). Flotation is expected to remove the majority of sulphide minerals, leaving low residual sulphide sulphur in the tailings. This assumption will be confirmed by additional testing.



Source: Lorax, 2011

Figure 20-2: Neutralization Potential Ratio of 2011 Waste Rock Samples

Based on the Phase I results, a Phase II geochemical characterization program was initiated in 2025 to provide more comprehensive data. The Phase II program includes targeted sampling of major lithologic units to develop statistically representative datasets of both waste rock and ore. Samples from Phase II will undergo static and kinetic testing to assess the reaction rates and the magnitude of acid generating potential (AP), neutralization potential (NP), and ML over time. New testing already underway includes 87 static tests, with humidity cell kinetic tests to follow.

Kinetic testing of tailings will be completed as part of a future level of study. Geochemical characterization to evaluate the ML/ARD potential of the Project is necessary to identify and manage potential environmental impacts.

20.1.8 Geomorphology and Cryology

Geomorphology

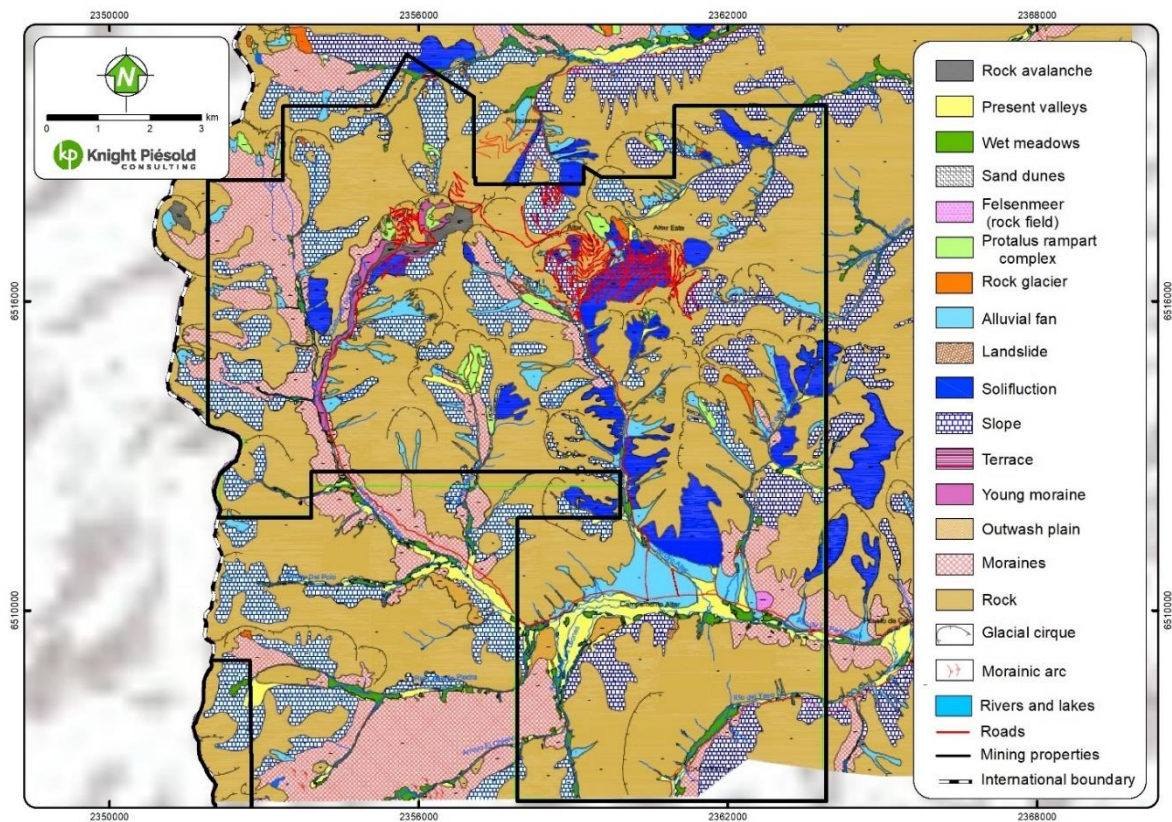
A geomorphological map was developed in July 2013 for the Project area, covering a mapped area of approximately 200 km². The geomorphological interpretation has been extended to include the exploration area (Figure 20-3).

The main geomorphological features are as follows:

- Currently, there are no glaciers and/or ice masses exposed to the surface, so glacial activity is negligible. In the past, glacial activity was significant as a shaping agent, evidenced by erosive forms such as U-shaped glacial valleys, hanging valleys on the main collectors, cirques, arêtes, horns, or pyramidal peaks. Accumulation forms include terminal, lateral, and medial moraines.
- The observed periglacial forms originate from solifluction phenomena covering the slopes due to debris generated by frost action. There are also potential zones with permafrost due to the area's altitude, which need to be studied in-depth to verify the existence or absence of permafrost.
- Significant landslides and mass movement phenomena, representing gravitational activity.
- Talus cones, clast mounds on slopes, rock glaciers, fluvio-glacial terraces are characteristic features of the headwaters of the Pantanosa River.
- Current fluvial activity is of moderate importance because the area is at the headwaters of the Pantanosa River and Piuquenes River, and all the small tributaries that form these watersheds. All tributaries of the Pantanosa River are permanent and rework glacial, periglacial, mass movement, landslide deposits, and alluvial cones. Although erosive action is small, it erodes and deepens the outwash plain.
- The drainage network is developed at altitude, making subsurface runoff common, forming an integrated network downstream. The courses of the main rivers are braided in some sections due to the bedload they carry.

Topographically, the area is characterized by mountain ranges with elevations ranging from 3,000 to 5,000 m asl, intersected by deep valleys controlled by fault structures.

The relief of the Altar project area is characterized by primarily southward-trending mountain ranges that are cut by narrow valleys draining their waters west to east.



Source: Knight Piésold, 2025.

Figure 20-3: Geomorphological Map

Cryology

Current glacier protection laws are designed to protect potential water sources. The National Law protects permanently frozen soils (permafrost) and glacial and periglacial landforms containing ice, particularly covered and uncovered glaciers and rock glaciers. The Provincial Law does not protect permafrost and only protects uncovered and active rock glaciers. Glacier activity (deformation/movement) is determined by morphology and detailed topographic monitoring. Both laws require the preparation of inventories of cryogenic landforms. Both laws used a geomorphologic classification based on identification of glacier types (covered, uncovered, rock glaciers) and a dynamic classification based on glacier movement (active, inactive). Both laws require glacier inventories consisting of three phases: The first phase is a desktop exercise of geomorphological classification of cryogenic landforms. The second phase is a field verification phase, and the third phase is a determination of the hydrologic value of the inventoried (protected) landforms.

The First Phase (1 of 3) of the glacial inventories (both the provincial and national inventories) identified the presence of 8 landforms of interest in the Valley of Altar (Figure 20-4). All eight landforms were classified as rock glaciers during the preparation of the inventories. Field work (Phase II) and hydrologic studies (Phase III) were not conducted the preparation of the inventories. The second phase of the provincial inventory was reportedly completed although the extent of the field verification activities remains unclear.

The first phase (1 of 3) of the glacier inventories identified eight landforms in the Project area, based solely on morphological characteristics and without field verification. Analysis of the landforms based on morphology by Mountain Pass (2025) concluded that landforms 3, 7, and 8 do not meet the geomorphological criteria listed by the government as sine qua non (indispensable) characteristics needed to classify a rock glacier. The glacial and periglacial landforms within the Project area and the proposed reclassifications are presented in Table 20-4.

Table 20-4: Inventoried Cryogenic Landforms Within the Altar Project Footprint

Landform No.	Geomorphology Inventory Classification	Proposed Geomorphology Class	Ice Presence	Movement
1	Rock glacier	Rock glacier	Yes	Yes
2	Rock glacier	Rock glacier	Yes	Yes
3	Rock glacier	Solifluxion lobe	Yes	No
4	Rock glacier	Rock glacier	Yes	Yes
5	Rock glacier	Rock glacier	Yes	No
6	Rock glacier	Protalus rampart	No	No
7	Rock glacier	Protalus rampart	Yes	No
8	Rock glacier	Landslide	No	No

Source: Mountain Pass, 2025.

The second step (2 of 3) was to verify the presence of ice through geophysical surveys and excavations. This work was completed in March 2025, and the results are reflected in the “ice presence” column of Table 20-4.

The third step (3 of 3) is to estimate the potential ice to water volume equivalent for each of the inventoried landforms. The emphasis is on the demonstration of negligible hydrologic value, i.e., insignificant contribution to the water balance. This is the most complex step as it requires geophysical and ice and water isotope data. The work completed to date allows for the determination of ice presence, extent (area) and type of ice.

The last missing pieces of information needed to quantify ice volumes are depth determinations, and isotopic analysis of ice and water in monitoring wells. Depth of ice will be investigated using 3D geophysical surveys and drilling on landforms 2, 3, 4, and 5. Ice volume – water equivalent will be derived from the geophysics and drilling data. Isotopic analysis will be used to see if the ice isotopic signature can be identified in the wells to first confirm contribution, and second to estimate percentages of contribution to the water balance in the Altar basin.

As part of a de-risking analysis, once all information is collected, including the permafrost distribution map, Mountain Pass will quantify the total area (in hectares) impacted by the development and construction of the project. The most recent work indicates that none of the landforms in the Altar project area present massive, evenly distributed ice masses, and that ice is present discontinuously.

Future activities to support a more detailed analysis involve the following:

- 3D geophysics and sonic drilling conducted on landforms 4, 5 and 7
- Isotopic sampling
- Hydrological characterization (i.e., determining the contribution of permafrost to the water balance)
- Development of a preliminary permafrost distribution map

This work will be completed in the first half of 2026.

As determined from previous studies, most of the project area (>75%) is below the continuous permafrost line (established at approximately 3800 masl on the southern slope). That significantly facilitates obtaining the environmental permits for the project as the periglacial environment is minimally impacted.

With these analyses completed, Aldebaran can request permit approval by submitting a formal request for elimination of landforms 2, 4, 5, 6, and 7 from the provincial inventory based on absence of ice and/or geomorphological discrepancies. The same request can be submitted to the National authorities.

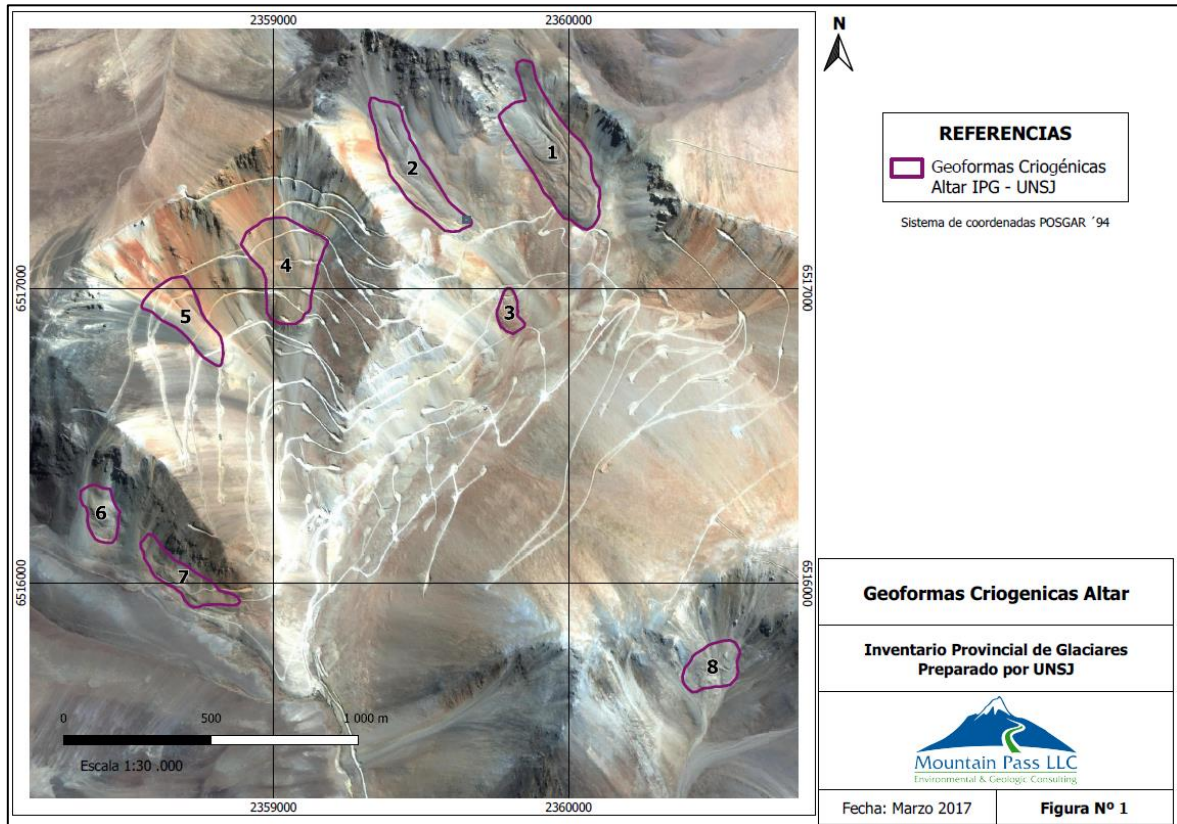
The results of the hydrologic analysis will be used to support the request to advance the project based on the demonstration of negligible contribution of water to the hydrologic regime by the selected landforms in Altar Central (landforms 2, 4, 5, 6 and 7).

The presence of these glaciers poses a risk to project permitting, as they are listed in the national and provincial glacier inventory. It is therefore crucial to demonstrate that these glaciers do not represent a strategic water reserve and to obtain acceptance of this determination from the relevant authorities.

The overarching purpose of the glacier protection laws is to protect sources of water. To that end the permitting strategy is focused on the determination of ice presence, or lack thereof, in cryogenic landforms. Mountain Pass believes that, based on the information at hand, the permitting of the project should follow a two-pronged strategy:

- 1) Declassification of some of the landforms based on morphology and ice content; and
- 2) demonstration of negligible hydrologic value, i.e., the lack of significant contribution of the cryogenic landforms in the Altar basin to the water balance.

The rationale behind this proposed strategy responds to the fact that some of the landforms in the Altar valley are indeed rock glaciers so it will likely be futile to ask for geomorphologic declassification or reclassification.



Source: Mountain Pass, 2025

Figure 20-4: Cryogenic Landforms with Altar Project Area (Mountain Pass, 2025)

The results were validated through excavations, providing confidence in the estimated area with ice presence. It was confirmed that permafrost is discontinuous and that ice is scarce, specifically where there are no significant thicknesses of unconsolidated deposits. This information will be used to inform future studies on the ice volume in these landforms.

Monitoring also revealed that geophysical displacements have been constant over time, including some displacements that have been monitored for 15 years.

Soil temperature sensors were installed at 40 locations to update the model and map permafrost distribution. The data collected from these sensors over two consecutive years will serve to further inform the cryogenic model (Mountain Pass, 2025).

The rock glacier at the head of the Altar Valley is the most prominent cryogenic landform, with the longest topographic study spanning 15 years. The measured displacements show a total average horizontal movement of 1.10 m, with an estimated annual displacement of up to 10 cm. The average annual displacement over 15 years is 2.80 m, with an annual estimate of up to 25 cm. Additionally, this landform experiences a constant height reduction of approximately 6 cm per year.

In the proposed area of the open pit, active cryoforms were identified. The cryogenic landforms in this area have been classified as rock glaciers by the ING. Studies completed to date indicate that ice presence is discrete and discontinuous in the cryogenic landforms and does not exceed 25% by volume in the most conservative scenarios (Mountain Pass, 2025).

20.1.9 Flora, Fauna and Limnology

Biodiversity studies have been conducted since 2008 to characterize the flora, fauna, and limnology of the study area.

According to Roig's classification (1982), the exploration area is located within the "High Andean" Biogeographic Province.

Flora

In 2008, a phytosociological baseline study was conducted to characterize the vegetation in several key sites, such as the Superior Altar Creek meadow, Mina Tributary meadow, Inferior Altar Creek meadow, and Moraine vegetation. Areas of dispersed vegetation were identified in the high zone of the Project.

Between 2009 and 2011, surveys of terrestrial flora were conducted in different sections of the La Pantanosa River and its tributaries. Meadow and steppe habitats were analyzed, determining plant cover, species richness, and the proportion of barren soil.

Additional monitoring was conducted in the meadows of Quebrada de la Mina, Altar, La Pantanosa, and Alfarcillo during various periods between 2016 and 2025. The Shannon Diversity Index, Simpson Index, and conservation status were evaluated following the PlanEAR guidelines, Res 0599-SEAyDS-2015.

In 2025, during the January and March campaigns, the study area was extended to the south and west of the Project's mining properties, covering the Rio Colorado, Las Mellizas Creek, Casa de Piedra River, Polo River, Ramos Creek, Los Leones Creek, El Yeso River, and Alfarcillos Creek areas. In the area, three major layers or environments can be differentiated: slopes, steppes, and meadows.

The vegetation study conducted to date has identified a total of 131 plant species in the sampled high Andean environmental units. During this season, 11 species were recorded for the first time in the project area, including: *Latacea andina*, *Chaetanthera limbata*, *Perezia atacamensis*, *Werneria pinnatifida*, *Calceolaria filicaulis* ssp. *Luxurians*, *Stellaria debilis*, *Adesmiahorrida*, *Astragalus cuyanus*, *Calandrinia compacta*, *Galium telanthos* and *Viola ovalleana*. Of the recorded species, 58 (44.27%) are considered endemic.

Due to the existing lack of knowledge about the high Andean flora, the surveyed species are not categorized under Resolution No. 0599-SEAyDS-2015 (Categorization of Endemic Plants of the Province of San Juan). At the global level, according to the IUCN, only six species (*Azorella compacta*, *Colobanthus quitensis*, *Phleum alpinum*, *Poa annua*, *Stuckenia filiformis*, *Ranunculus cymbalaria*) have been categorized, all as least concern (LC). Based on this, potential impacts should be assessed and specific environmental management strategies should be developed to mitigate any adverse effects on these species and their habitats.

In the newly surveyed sites, a generally high percentage of plant cover was observed, exceeding 97% in most cases, and even reaching values greater than 100%, indicating a dense and continuous vegetation cover. The sedge species *Carex gayana* was dominant at almost all sites, with coverage values ranging from 19% to 33.5%, particularly notable in Rio Colorado, Casa de Piedra River, Polo Creek, Ramos Creek, and Los Leones Creek. In some sites, such as El Yeso River, the species *Juncus balticus* was dominant with a coverage of 32.5%, surpassing *Carex gayana*. Species richness was generally high, ranging from 19 to 31 species per site, and in cases such as Las Mellizas Creek, a

balanced community was observed, with no strongly dominant species. Overall, the data reflect well-developed and diverse vegetation, with little presence of bare soil.

Fauna

In 2008, a baseline fauna study was conducted in various environments, including meadows/wetlands, moraines, slopes and rocky areas, steppes, and the La Pantanosa River. Diversity indices such as Shannon-Wiener, equitability, Jaccard, and Morisita-Horn were calculated.

In December 2010, ichthyological monitoring was carried out in rivers such as Salinas, Verde, Piuquenes, and La Pantanosa. During the summers of 2009 and 2010, and the fall of 2011, terrestrial vertebrates were investigated in various areas, considering meadow and steppe habitats. Endemic species, migratory species, and species of priority conservation interest were identified.

Between 2016 and 2024, fauna monitoring was carried out in the Altar and Mina ravines, and the La Pantanosa River, up to its confluence with the Yeso River in the Calingasta Department. In 2025, the study area was extended to the south and west of the project's mining properties.

The wetlands identified as of particular interest in the study area are sites that host high bird diversity, such as the La Pantanosa sector and Quebrada de la Mina, with species categorized as vulnerable at the national level, such as the Andean goose (*Oressochen melanopterus*), and migratory species (*Muscisaxicola flavinucha* and *Cinclodes oustaleti*). Additionally, the edges of these sites are suitable habitats for the small mammals and lizards, such as *Abrothrix andinus* and populations of *Liolaemus fitzgeraldi*. There are also rocky areas near the water bodies in these sectors (La Pantanosa River and Altar Creek) that serve as nesting areas, refuges for birds and mammals, and feeding zones for birds and mammals.

All mammal species recorded for January and March 2025 are categorized as least concern (LC) at the international level. However, the populations of guanaco (*Lama guanicoe*) from the Puna of San Juan are categorized as endangered (EN) and are listed in Appendix II of CITES. Although it does not pose a risk to the project, specific environmental management measures must be implemented to protect the species *Lama guanicoe* and its habitat.

Limnology

In 2008, the first limnological study was conducted in the study area to evaluate the aquatic biota, focusing on Altar Creek in its various sections, the Pantanosa Creek (upstream and downstream), and the Piuquenes River.

In the spring-summer period of 2010 to 2013, a limnology study was conducted covering the sub-basins of the La Pantanosa River, Altar Creek, Santa Cruz River, and Salinas River.

Between 2020 and 2024, limnological monitoring was carried out in Altar Creek, La Pantanosa River, Alfarcillo Ravine, Cenicero River, and Quebrada de la Mina. The studies included observations on percentage relative frequency, average density, and diversity indices such as Shannon & Weaver, Simpson, Margalef, and equitability. In 2025, the study area was extended to the south and west of the Project's property extents.

Cenicero Creek exhibited the greatest diversity of macroinvertebrates, in contrast to Altar Creek where none were detected. In La Pantanosa River, the highest concentrations were recorded in the mid-zone. The upper course of La Pantanosa River and the headwaters of Alfarcillo Creek presented the greatest zooplankton diversity. The highest abundance was observed in the upper course of Cenicero

River. The distribution of aquatic biodiversity is intimately linked to the specific environmental conditions at each site.

20.1.10 Landscape

In 2011, a landscape study was conducted to assess the landscape in the Altar visual basin (Pit sector), defined as the "La Pantanosa" landscape unit.

The study used the on-site direct observation method, allowing for the analysis of visual quality and fragility. As a result, it was determined that the area presents low visual quality and low visual fragility, meaning that the territory permits the incorporation of activities generated by the Project. The analyzed landscape unit will not undergo a significant alteration in visual absorption value, indicating that the land is suitable for accommodating potential modifications or impacts generated by mining activity, without causing a significant reduction in visual quality. It will be important to control and minimize factors or actions that may disturb the environment, buffering, mitigating, or eliminating any type of human intervention.

20.1.11 Protected Areas

The project is not located within any protected areas or areas of interest for conservation or protection defined according to the criteria of native forest and/or Biosphere reserve recognized by Argentina, the province of San Juan or international treaties.

20.1.12 Archaeology

Archaeological baseline studies began in 2008 in Altar Creek and the upper course of the Pantanosa River sectors. Subsequently, an archaeological survey was conducted by Dr. Victor Duran, based in Mendoza who works at the National University of Cuyo, in 2012 and 2017, where a review of previously conducted archaeological prospecting was completed, and the study area was expanded in 2017 to include part of the access road over the lower part of La Pantanosa River of El Yeso. Additional monitoring and research have been carried out under the supervision of Dr. Catalina T. Michieli from the Province of San Juan.

In 2025, the monitoring of pre-Hispanic and historical-cultural archaeological sites, identified during the 2017 prospecting, was carried out, along with the archaeological prospecting of the expansion of new areas that include the Ramo and Las Mellizas Creeks and the Casa de Piedra River, along with areas of interest in the Colorado and Pantanosa Rivers up to their confluence with the Santa Cruz River.

The prospecting of the higher zones, especially the western area where the project's exploration tasks are carried out, did not reveal any evidence of human settlement from the past, whether temporary or seasonal. The same applies to the area where the camp is located. All pre-Hispanic archaeological evidence found predates the Inca domination of the region.

The survey conducted in 2025 confirmed that many of the points identified in 2017 as archaeological sites (prehistoric or historical-cultural) are in very good condition.

It is important to consider the presence of shelters or installations used by Chilean goat herders or "*crianceros*" in terms of preserving their integrity as complex installations and even occupied currently. This constitutes a unique anthropological phenomenon throughout the Andes Mountains and is

considered today a "cultural landscape" where a traditional way of life persists, forming what is also called intangible heritage.

In sites where non-representative, surface, and/or transport material appears, located around the Pantanosa River (archaeological material belonging to the La Fortuna culture), they should be maintained as they are currently. For the archaeological sites located on the banks of the El Cenicero Creek and Altar Creek, a total surface collection and some exploratory soundings should be planned to verify the archaeological potential of the fertile layer.

At the proposed TSF, a shelter constructed with dry-stone walls forming three rooms was observed to include two small and one larger room, with another attached and open towards the access courtyard. One is used as an outdoor kitchen, another as a room, and the third and largest for cheese production and storage. For this reason, and due to its location in a high area, it is likely to be one used as an intermediate point in the transfers at the beginning and end of the season.

In the proposed South Waste Dump area, located on the right bank of the creek, there is a large room constructed with dry-stone walls. Flat rocks have been used as jambs at the entrances and as foundations for a large part of the walls. The height of these structures varies between 0.60 and 1.10 m, with widths ranging from 0.45 to 0.70 m. No evidence of modern waste has been found at the site, and the interior remains debris-free and clean, suggesting it has not been occupied recently. In the area of the proposed North Waste Dump, cultural sites have also been observed.

Upon any finding from subsequent work, it is recommended to immediately notify the Cultural Secretariat (Ministry of Tourism, Culture, and Sports of the Province of San Juan) as the competent authority under Provincial Law No. 571-F in full compliance with the Law.

In the event of any findings, the Secretariat of Culture (Ministry of Tourism, Culture, and Sports of the Province of San Juan) must be immediately notified as the competent authority pursuant to Provincial Law No. 571-F, in full compliance with National Law No. 25.743 and National Decree No. 1.022/2004.

20.1.13 Paleontology

In 2025, a paleontological survey was conducted in the areas of ownership and road easement of the Altar Project. Stratigraphic and paleontological observations were made on three pre-selected areas based on geological backgrounds, such as the Barreal Geological Sheet, scientific publications, and a map provided by the company. The criteria for selecting these areas were the presence of sedimentary units potentially containing fossil material. These areas correspond to the western foothills of the Project, the banks of the Yeso River, and the banks of the Pantanosa River.

The paleontological survey identified bioclastic accumulations of marine invertebrates in Jurassic-age carbonate rocks outcropping on the banks of the Yeso River, corresponding to the Los Patillos Formation. In the other sedimentary units recognized in the area, the paleontological survey was negative, allowing these units to be ruled out as potential paleontological sites.

The assessment regarding the interest and value of the paleontological materials recognized in the Yeso River area is based on the preservation state of these fossil materials, as well as on the characteristics of the outcrop of the containing rocks. Moreover, equivalent fossil materials, recorded in complete sequences of the Los Patillos Formation, are present in other sectors of the Principal Cordillera where they have already been subject to prior studies. Consequently, the sporadic and discontinuous characteristics of the Los Patillos Formation outcrops on the banks of the Yeso River,

primarily the poor to fair preservation state of the fossil materials, lead to the conclusion that these deposits have little significance as a paleontological site.

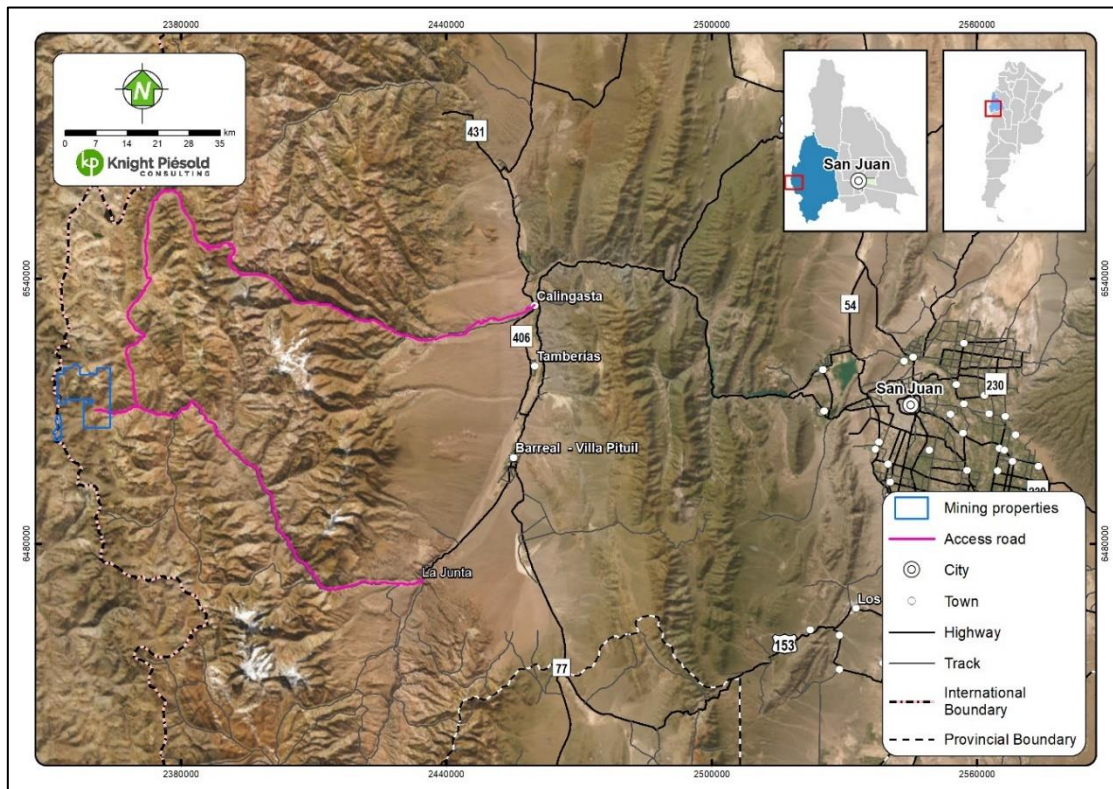
In the western sector of the Project, where the proposed TSF is located, the paleontological survey found no evidence of fossils in the sedimentary rocks. Additionally, the type of rock present in the area does not possess the potential to contain fossil material, allowing this area to be dismissed as a potential paleontological site.

Given the local and regional precedents mentioned, there is a possibility—albeit a relatively low one, considering the results obtained—that fortuitous findings may occur. Such a situation requires an immediate and coordinated response, which will adhere to the guidelines of Law No. 571-F, in full compliance with National Law No. 25.743, National Decree No. 1.022/2004, National Law No. 21.836 (UNESCO), and National Law No. 27.103.

20.2 Social or Community Impact

The study area includes the perimeter covered by the mining concessions, associated with the Cenicero River in Quebrada de la Mina, the La Pantanosa River, the Alfarcillos Creek, and the Altar Creek within the Quebrada Altar.

The nearest populated centers are the towns of Barreal and Villa Calingasta, both within the Calingasta department.



Source: Knight Piésold, 2025.

Figure 20-5: Communities Near to the Project

San Juan Province is a leading mining region with a diversified socioeconomic base where mining, particularly copper and gold, plays a vital and growing economic role. The province is strategically

positioned for mining investment due to geological advantages and an established infrastructure, particularly as part of Argentina's transition toward renewable energy and increasing international demand for copper. Major mines like Veladero and Gualcamayo employ about 1,200 direct workers and generate thousands of indirect jobs. Socioeconomic factors, though only briefly covered in the environmental overview, are critical for this project's success. The upcoming Environmental Impact Assessment (EIA) will address social conditions, potential impacts, mitigation strategies, and offer a Community Relations Master Plan.

The project is set in a predominantly rural region, with farming in the midsection of the area and both agriculture and mining in the lower Rio Illapel valley. The nearest communities (Barreal, Calingasta, and Tamberias) form the core of the Calingasta municipality, known for its mining history and enhanced connectivity to San Juan and Mendoza. As of 2022, the area had around 11,000 residents. Recent educational partnerships have expanded university opportunities. Technical schools train mining technicians, and small hospitals serve Barreal and Calingasta.

Traditionally, farming, tourism, and commerce dominated the local economy. However, major mining projects such as El Pachón (Glencore), Los Azules (McEwen Copper), and Casposo gold mine have increased mining activity in recent years. However, public sentiment in Calingasta towards mining has seen local opposition grounded in environmental and social concerns, with intermittent activism and contested government and corporate mining agendas.

Key socioeconomic issues include:

- Public concern over potential pipeline failures and environmental contamination.
- Local expectations for jobs and economic growth, which may be modest, making compensation and community investments important.
- The need for land acquisition and rights-of-way for project facilities, requiring negotiation with multiple landowners, especially in the Illapel area.

Although San Juan's permitting system does not mandate public hearings, early engagement and transparent communication with local communities are essential. Providing clear information about the project, its impacts, and benefits is key for earning local support. Key mining projects hinge on continued regulatory clarity (e.g., federal environmental laws) and infrastructure investments, particularly in water and energy. Continued growth will depend on balancing inflationary pressures with investment incentives and proactive labor agreements.

In terms of community relations activities, in December 2024 the company inaugurated a project information office in the community of Barreal. This full-time presence in town led to a noticeable improvement in communication and understanding of our project's activities and goals with members of the local community. In addition, the company increased considerably the amount of human and economic resources focused on collaboration with educational and sports public institutions within both Barreal and Calingasta.

The Project has an updated Community Development Program aimed at maintaining continuity in the relationships established with the community, promoting values such as motivation and respect for individuals.

From the interaction with the community, some concerns and worries have been noted among different social actors, primarily caused by a lack of trust or knowledge. Taking these aspects into account, tasks have been established to be undertaken by Aldebaran, as detailed in Table 20-5.

Table 20-5: Community Development Program Update

Diagnosis / Observations of Social Actors	Actions to be taken	Execution Period / Status
Lack of awareness about the Altar project in the communities. Fear of water scarcity.	Talks have been given to the local community in educational establishments where collaboration has occurred, in order to introduce the company, the scope of the project, short- and medium-term activities, estimated investment, and activities of interest to the population.	Executed continuously
High expectation of local employment	Prioritize direct hiring of personnel from Calingasta.	Executed continuously
	Train the hired personnel.	
	Engage contractors with agreements or contracts to participate in hiring local labor and training; involve them especially to be active participants in the community projects developed by Peregrine.	
Education: Limited diversification of educational offerings in the Department upon completing high school, and difficulty for high school graduates to continue their studies or successfully enter the labor market	Implementation of the offering of eight Technical Degrees and three University Diplomas. Agreement between the Provincial and Municipal Government, the Chamber of Mines, sector companies, foundations, and the National University of San Juan (U.N.S.J.) and the U. N. C.	Agreement signed on 08-20-2021. In progress
Youth and Adolescents: Spaces designated for recreation are very limited, as are policies aimed at the development of sports activities. "Leisure" is highlighted as one of the most pressing issues, being associated with rising rates of drug addiction and alcoholism.	Collaboration with the sports institutions in the department.	In progress
	Implement training programs on environmental care, in collaboration with the Secretariat of the Environment, the Ministry of Education, and local schools, encouraging young people's participation in the care and protection of the environment.	Pending execution
Health: There are two hospitals located in the town of Calingasta and in Barreal, and a Health Center in Tamberías. Any illness requiring a certain degree of specialized care is referred to the city. The healthcare system is at times deficient due to a lack of supplies.	Implement health and safety training programs in collaboration with the Municipality, hospitals, schools, contracting company, and key community leaders.	In progress
	Collaborate with healthcare facilities	Collaboration with Barreal Hospital
Raise Awareness of Mining Activity: There is greater acceptance of mining development in the town of Calingasta; in Tamberías, a locality dedicated to agriculture, it is less accepted, and in Barreal, there is the greatest focus of opposition to the extractive industry, especially among the group of tourism service providers.	Establish trust relationships with INTA and the Secretariat of Agriculture, Livestock, and Agroindustry to carry out a joint project.	Pending execution
	Establish programs or projects with tourism service providers to improve the quality of local services. Communicate to the providers what the accommodation needs for the project will be (if any)	Pending execution
Mining companies have prioritized making donations over community development projects or providing information about mining activities.	Plan community programs and projects aimed at strengthening the community. Focus on promoting micro-enterprises and cooperatives, training and knowledge transfer, strengthening civil organizations (especially sports clubs, neighborhood associations, and cultural organizations).	It will be executed continuously.
	Achieve synergies between companies operating in the industry, both operators and contractors.	Formation of a Community Relations group with the various operators in the department.

Source:

20.3 Status and Requirements for Project Permitting

Environmental and natural resource management is shared between the national government and the provinces. The National Government establishes "minimum standards" for environmental protection that apply nationwide. However, provincial governments own natural resources within their territories. The provinces act as the primary enforcement authorities and can (and often do) legislate more stringent environmental standards than the national minimums.

Therefore, mining projects must comply with both national framework laws and the specific, detailed regulations of the province in which the project is located, which in this instance is the San Juan Province.

Applicable National and Provincial legislation is described below, followed by a list of the permits covering current exploration activities, and the approvals and permits required for mine development.

20.3.1 National Regulatory Requirements

Several National laws create the overarching legal framework for the Project, including several articles in the National Constitution, the Mining Code, the General Environmental Law, and the Glacier Protection Law. The key aspects of each of these are described below.

National Constitution (Constitución Nacional)

- **Article 41** is the cornerstone of environmental law in Argentina, establishing the right of all inhabitants to a healthy and balanced environment, the duty to preserve it, and the principle that the national government sets minimum protection standards while the provinces set specific regulations. It also introduces the "polluter pays" principle, stating that environmental damage must be primarily remediated.
- **Article 43** provides for the action of amparo against any act or omission of authorities or individuals that actually and imminently harms, restricts, alters or threatens, with arbitrariness or manifest illegality, rights and guarantees recognized by the Constitution, a treaty or a law. This action may be filed in relation to the rights that protect the environment, as well as the rights of collective incidence in general, by the affected party, the Ombudsman and the associations that tend to these ends, registered in accordance with the law, which will determine the requirements and forms of their organization.
- **Article 124** provides that the provinces have the original ownership of the natural resources existing in their territory.

Mining Code (Código de Minería - Law 1.919, as amended by Law 24.585)

This is the most important piece of legislation for mining. The environmental section was incorporated in 1995 by Law 24.585, which added the "Environmental Protection for Mining Activity" title. Before starting any activity, from exploration to exploitation, a company must submit an Environmental Impact Report (EIR) or *Informe de Impacto Ambiental* (IIA) to the provincial authority. The IIA must describe the project, identify potential environmental and social impacts, and propose mitigation, rehabilitation, and restoration measures.

Following the provincial review process, the provincial authority approves the IIA by issuing an Environmental Impact Declaration or *Declaración de Impacto Ambiental* (DIA). The DIA is the

environmental permit for the project and sets the specific conditions under which the project must operate.

Companies are subsequently required to submit updated IIA reports at least every two years, detailing the results of their environmental monitoring and any changes to their operations or mitigation plans.

Law 24.585 amending the Mining Code requires that the initial IIA must include a detailed plan for mine closure and rehabilitation of the affected area, so that closure is planned from the project's inception.

General Environmental Law (Ley General del Ambiente - LGA, Law 25.675, National Decree No. 2.413/02 and National Decree No. 481/03

This law establishes the fundamental principles of Argentina's environmental policy. While the Mining Code is specific, the LGA provides overarching principles that apply to all activities, including mining. It codifies principles like prevention, precaution, polluter-pays, and sustainability. It also mandates the EIA process for any project "likely to have a significant effect on the environment." It guarantees public access to environmental information and mandates public hearings or consultations as part of the EIA process.

National Decree No. 2.413/02 enforces the environmental insurance requirement of the General Environmental Law. It requires mining companies to secure a financial guarantee (most commonly an insurance policy) to cover the costs of cleaning up major, accidental pollution events.

National Decree No. 481/03 designates the Ministry of Environment and Sustainable Development (SAyDS) as the Enforcement Authority of Law 25,675.

Glacier Protection Law (Ley de Glaciares - Law 26.639), Minimum Budget Regime for the Preservation of Glaciers and the Periglacial Environment and Regulatory Decree 207/11

This law is highly significant for mining projects in the Andes. This law establishes the minimum budgets for the protection of glaciers and the periglacial environment in order to preserve them as strategic reserves of water resources for human consumption; for agriculture and as water suppliers for the recharge of watersheds; for the protection of biodiversity; as a source of scientific information and as a tourist attraction. Glaciers are public goods.

It also establishes that the Ministry of Environment and Sustainable Development of the Nation will be the Enforcement Authority of Law No. 26,639.

It explicitly prohibits new mining exploration and exploitation activities on glaciers and in the "periglacial environment" (areas with frozen ground that support glaciers). It mandated the creation of a National Inventory of Glaciers to identify and protect these sensitive areas. The location of a project relative to areas defined in this inventory is a critical factor for its viability.

Related resolutions include:

- **SAyDS Resolution No. 1.141/15** - This resolution approved the "Administrative Procedure for the Documentary and Information Management of the National Glacier Inventory", which establishes that IANIGLA will prepare the inventory in accordance with the methodology set out in the document called "National Inventory of Glaciers and Periglacial Environment".
- **Resolution E 365/16** - Orders the publication of the National Inventory of Glaciers of the Los Patos River, Castaño River and Blanco River sub-basins of the San Juan River basin, the La

Palca River and Lower Blanco River sub-basins of the Jáchal River basin, all of them corresponding to the province of San Juan, and the North Tunuyán and South Tunuyán sub-basins of the Tunuyán River basin, corresponding to the province of Mendoza.

- **Resolution No. 358/18 of the M^AyDS** – This resolution ordered the publication of the First National Inventory of Glaciers of the Argentine Republic, composed of the "Executive Summary of the results", which is added hereto as ANNEX I, the national and regional maps, which are added hereto as ANNEX II and ANNEX III, the reports corresponding to each of the sixty-nine (69) sub-basins and their corresponding maps; all of them listed in ANNEX IV.
- **Resolution No. 514/22** – This resolution replaced Reports No. IF-2018-22270259-APN-DNGAAYEA#MAD, and IF-2018- 22269152-APN-DNGAAYEA#MAD that were published by M^AyDS Resolution No. 358/18, with Reports No. IF-2022-60814002-APN-CCTMZA#CONICET and IF-2022-60411502-APN-CCTMZA#CONICET respectively.

Resolution No. 161/2021

Resolution No. 161/2021 approved the *Guidelines for Mine Closure with Financial Guarantees in Argentina: Towards Responsible Mine Closure* (Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development [IGF], 2021). The Guidelines are defined to establish clear and homogeneous criteria and recommendations at the national level for planning the mine closure throughout the country. One of the most important remarks of the Guidelines is related to the need to establish financial guarantees in Argentina that shall be available throughout the life cycle of the mining project. The IGF (2021) guidelines are not mandatory and therefore only constitute best practices.

20.3.2 Provincial Regulatory Requirements

The Province of San Juan has a well-developed legal framework applicable to mining. Key legislation includes the following:

- **Constitution of the Province of San Juan** – Article 58 of the Provincial Constitution enshrines, on the one hand, the right of the inhabitants to a healthy and ecologically balanced living environment and, on the other, the duty to conserve it. For its part, it is the obligation of the State to prevent and control pollution and its effects. Likewise, it is obliged to promote the progressive and accelerated improvement of the quality of life of all its inhabitants. The Provincial State has the obligation to prevent and control pollution and its effects, and harmful forms of erosion; to organize the territorial space; create and develop reserves and natural parks; as well as classifying and protecting landscapes, places and animal species and the preservation of cultural values of historical or artistic interest.
- **Law No. 190-L, Water Code - Regulatory Decree 1.479-1998 L.** This code, whose enforcement authority is the Department of Hydraulics, aims to regulate the system of use, conservation and preservation of water resources belonging to the public domain. Decree 1.479-1998 L regulates the provisions of Law 190-L, in relation to the causes of suspension for non-compliance with economic obligations derived from the concession.
- **Provincial Law No. 348-L on the Preservation of Water, Soil and Air Resources and Pollution Control – Provincial Decree No. 638-1989 L.** It seeks the preservation of water, soil and air resources and pollution control in the province of San Juan. Preservation of water resources. It declares mandatory throughout the territory of the province the adoption of the

necessary measures to prevent any alteration of surface and groundwater that makes it harmful to the uses for which it is intended.

- Provincial Law No. 412-L. The Province of San Juan's adherence to the Constitutive Act of the Federal Environment Council (COFEMA).
- **Provincial Law No. 430-L. Municipal Organic Law.** Establishes the legal system of the municipal regime of the province of San Juan. Article 6 establishes that the second and third category municipalities are independent of any other power in the exercise of their functions, enjoying political, administrative and financial autonomy. The purpose of the categorization of the Municipalities is their functional organic differentiation, fully maintaining the legal and institutional identity indicated in the Provincial Constitution and in this Law.
- **Provincial Law No. 504-L. Provincial Regulatory Decree No. 2067-1997 L.** Regulates the Environmental Impact Assessment procedure. Any project of works or activities capable of directly or indirectly modifying the environment must obtain an Environmental Impact Statement (EIS) issued by the environmental authority, currently the SEAyDS, as an enabling condition for any processing.
- **Provincial Law No. 513-L. General Environmental Law.** Guiding principles for the preservation, conservation, defense, and improvement of the provincial environment.
- **Law No. 688-M - Code of Mining Procedures.** This law establishes that the procedure for activities governed by the Mining Code and other laws on the subject shall be governed by the provisions of the Substantive Code and this Code. The Code of Civil, Commercial and Mining Procedure of the Province shall be of supplementary application in all matters not specially regulated herein. It establishes complementary provisions to the National Mining Code and expressly makes applicable the environmental protection standards established in Title XIII, Section Two of the Mining Code.
- **Provincial Law No. 716-M. Mining Royalties of the Province of San Juan.**
- Provincial Law No. 927-L. General Environmental Law. The Province of San Juan's adherence to National Law No. 25.675.
- Law No. 970-M. Special Fund for Mining Development.
- **Provincial Law No. 67-Q. Sanitary Code.** The province has an obligation to ensure health throughout its territory, to ensure their inhabitants an adequate level for the maintenance of health.
- **Provincial Law No. 1.076-L, Provincial Law for the Protection of Glaciers, Regulatory Decree 899-2010 L and Decree 1.246 -2012 L.** This law aims to protect the glaciers covered and discovered and within the periglacial environment in the territory of the province of San Juan, in order to preserve their functions as strategic reserves of water resources and suppliers of water recharge of watersheds. Defines uncovered, covered, and active debris glaciers. It creates the Provincial Inventory of Glaciers, and provides for its completion within a year, and establishes the obligation to update it every 5 years.
 - It prohibits any activity that involves the destruction or transfer of the glaciers included in the Provincial Inventory of Glaciers or interferes with their advance, affecting the functions that are intended to be preserved by this law, and establishes that all activities that are planned on the glaciers included in the Provincial Inventory are subject to authorization and execution of the Environmental Impact Assessment procedure, establishing the minimum requirements that must be included. Creates the Provincial Coordination Council for the Protection of Glaciers.

- Decree 899-2010 L establishes provisions within the framework of Law 1,076-L, regarding the Provincial Coordination Council for the Protection of Glaciers.
- Decree 1,246-2012 L complements the provisions of Decree 899 L, providing for the performance of environmental audits on mining projects and other activities that are being carried out in the areas of the Andes Mountains, in accordance with Law 1,076-L. In addition, it institutes the Provincial Coordination Council for the Protection of Glaciers as the Competent Authority of Law No. 26,639 in the Jurisdiction of San Juan and constitutes the Special Environmental Audit Unit (U.E.A.A.) as an audit team and technical manager.
- **Provincial Decree No. 1,108-MPYD/04. Provincial Mining Advisory Council.** Created to seek qualified opinions on the execution of the Province's mining policy.
- **Law No. 2470-L Extended by Law 2714-L declares a State of Water Emergency.** A State of Water Emergency is declared throughout the territory of the Province of San Juan, which will be in force until December 31, 2025. The sustainable use of water resources in all its sources is promoted. The Department of Hydraulics, in the exercise of the powers and attributions granted to it by Law No. 13-A, provides the necessary measures to distribute water efficiently in accordance with the hydrological planning it carries out, according to the available supply, the demand of the different authorized private uses and the forecast of recharge of the underground aquifer.
- Provincial Law No. 2642-A. Organization of the mining authority.
- **Provincial Decree No. 007-24-M.** Approves the regulations and minimum standards that complement and regulate the provisions of National Law No. 24.585.

20.3.3 Technical Criteria or Standards

On December 18, 2024, Provincial Decree No. 007-24-M was published, which aims to complement and regulate the precepts contained in the Mining Environmental Protection Law contained in the Mining Code. This regulation repeals Provincial Decrees No. 1426-1996 M, No. 1815-2004-M, No. 1033-2006 M and No. 1679 -2006 M. The content of this regulation is as follows:

- Basic Regulations: consisting of 118 articles.
- Annex I: Water, Soil and Air Quality Guide Levels:
 - Table 1 – Source of water for human drinking
 - Table 2 – For protection of aquatic life in surface freshwater
 - Table 3 – For protection of aquatic life in surface salt waters
 - Table 4 – For the protection of aquatic life in brackish waters
 - Table 5 – For irrigation
 - Table 6 – For cattle drinking
 - Table 7 – Soil Quality Guide Levels
 - Table 8 – Air Quality Guide Levels
- Annex II: Environmental Affidavit Update: Stages of Prospecting, Exploration, Exploitation of Small Mining Enterprises
- Annex III: Glossary

Provincial Decree No. 007-24-M establishes the procedure for assessing the environmental impact of Prospecting, Exploration and Mining Exploitation Projects. This regulation has established modifications in relation to the process of careful participation-public consultation, the integration of the technical evaluation commission, and precision of legal deadlines during the evaluation procedure,

as well as in the way of updating environmental impact reports. For Exploitation projects, it is necessary to determine the category of project whether they are small, medium or large mining undertakings according to the technical-economic feasibility report to be presented.

20.3.4 Current Status of Exploration Permits

Current exploration activities are authorized by various permits, as summarized in Table 20-6. Several additional permit applications were pending at the time of writing, as summarized in Table 20-7.

Table 20-6: Current Exploration Permits

Permit	File Number	Department	Resolution	Submitted	Expiration	Notes
DIA Altar	425-132-C-2003	Ministry of Mining	276-MM-24	27/9/2024	25/4/2026	Under evaluation 8th Act
DIA Río Cenicero	1100-0504-M-2011	Ministry of Mining	243-MM-25	24/10/2023	30/4/2027	In effect
Sample Transport Permits		Ministry of Mining				Current
Drilling permit for 2024-2025 field season (25000 m)	506-000054-2021	Department of Hydraulics	1700-DH-2024299-DH-2024722-DH-2024		31/5/2025	
Temporary permit for water collection for domestic use in camps and for drilling	506-002997-2023	Department of Hydraulics	1928-DH-24 (Resolutions remain for 2 subsequent extensions)	3/9/2024	31/5/2025	
Hazardous waste Generator	1300-552-2011	SEAyDS	1300 G-081		2/11/2025	Environmental Certificate (CA)
CAD	506-0765-2011	SEAyDS	1703-DH-2024		31/10/2026	Discharge Authorization Certificate (CAD)
Collection	1300-110-16	SEAyDS	R056		31/3/2025	In force at the time of monitoring
Archeology	1203-000018M-2011	Ministry of Culture, under the Ministry of Tourism, Culture and Sport	0032-DH-2025		5/3/2025	In force at the time of monitoring.
Paleontology	1200-000084-2025	Ministry of Culture, under the Ministry of Tourism, Culture and Sport	0034-DH-2025		4/3/2025	In force at the time of monitoring.
Dining room permit	800-02041/2023	Ministry of Health- Department of Health Medicine - Bromatology division	2970-MSP-2021		17/04/2026	Third party service
ENACOM VHF	CNC-4607-2011	CNC				In effect
ENACOM BLU	CNC-11328-2007	CNC				In effect

Source: Aldebaran Resources, 2025

Table 20-7: Pending Permits

Permission	Distribution	Remarks
Camp Habilitation	Calingasta Municipality (feasibility of land use issued by the Planning Directorate and approval of the firefighting system by the Fire Department)	A camp for both projects, with capacity for 100 people
Certificate of non-underground (or aerial) installations Certificate 703438/0	Secretary of Energy	Not applicable by new Resolution 277-2025
First Aid Facilities	Ministry of Health- Department of Health Medicine	

Source: Aldebaran Resources, 2025

20.3.5 Permitting Required for Mine Development

The Environmental Law for Mining Business, Law No 24.585, incorporated into the Mining Code is the most important piece of legislation for mining. The environmental section was incorporated in 1995 by Law 24.585, which added the "Environmental Protection for Mining Activity" title.

Before starting any activity, from exploration to exploitation, a company must submit an Environmental Impact Report (EIR) or *Informe de Impacto Ambiental* (IIA) to the provincial authority. The IIA must describe the project, identify potential environmental and social impacts, and propose mitigation, rehabilitation, and restoration measures.

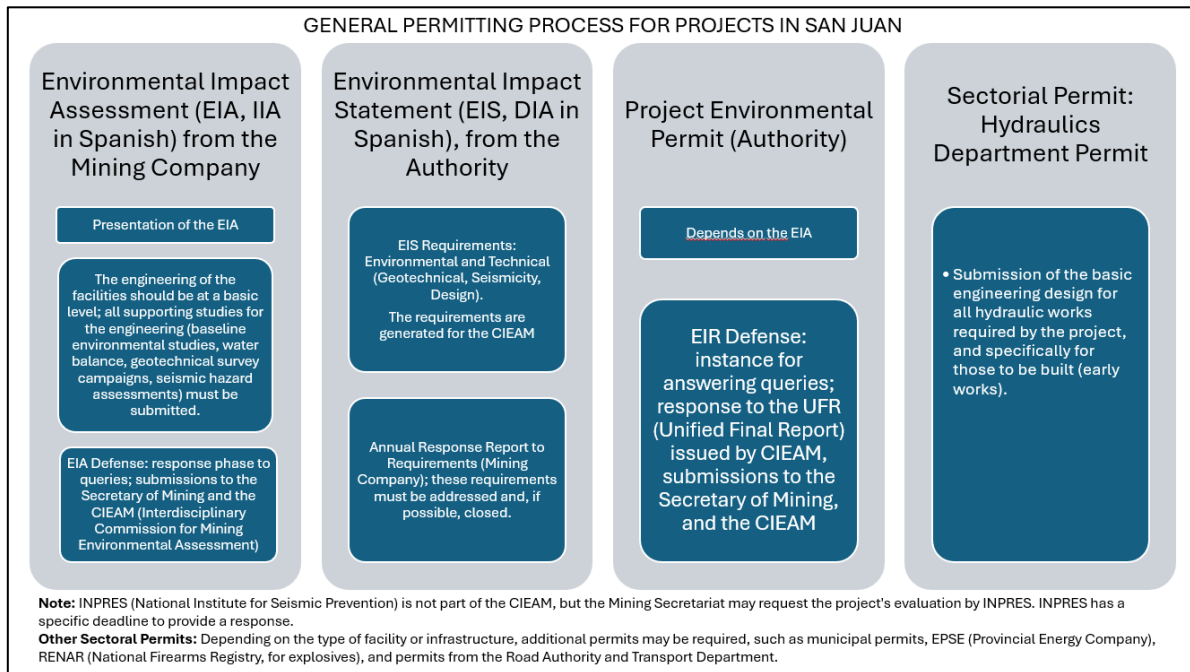
Following the provincial review process, the provincial authority approves the IIA by issuing an Environmental Impact Declaration or *Declaración de Impacto Ambiental* (DIA). The DIA is the environmental permit for the project and sets the specific conditions under which the project must operate.

Companies are subsequently required to submit updated IIA reports at least every two years, detailing the results of their environmental monitoring and any changes to their operations or mitigation plans.

Law 24.585 amending the Mining Code requires that the initial IIA must include a detailed plan for mine closure and rehabilitation of the affected area, so that closure is planned from the project's inception.

Considering the fact that the Altar Property is owned, and the Río Cenicero concessions are under an option agreement, Minera Peregrine Argentina must treat the two properties separately in terms of environmental permitting. Minera Peregrine Argentina has been granted with the respective DIA for exploration for the Altar and Río Cenicero properties.

In addition to obtaining a DIA, several major permits will be required for mine development, as summarized in Figure 20-6.



Source: Knight Piésold, 2025.

Figure 20-6: General Permitting Process for Projects in San Juan Province

Copper mining projects in San Juan Province, typically require comprehensive Environmental Management Plans (EMPs) as part of their environmental permitting process. The requisite Environmental Impact Assessment (EIA) will include the development of detailed EMPs that address hydrological, hydrogeological, flora and fauna, and other environmental factors. The EIA will also have to demonstrate that proper stability analysis has been performed for the open pit, waste dumps, and the TSF.

The design of the TSF must be approved not only by the Department of Hydraulics, but also by the Direction of Energy Resources of the Province of San Juan, the National Institute for Seismic Prevention (INPRES), and the National Institute of Water and Environment (INA).

These EMPs are designed to monitor and mitigate the environmental impact of the mining operations, including water use, waste management, and biodiversity conservation. The EMPs are part of a rigorous review and evaluation process by provincial authorities to ensure the project complies with regulations and sustainable practices.

20.4 Mine Closure and Reclamation

As noted in Section 20.3.1, the Mining Code (Law 1.919, as amended by Law 24.585) is the most important piece of legislation for mining, requiring the submission of an Environmental Impact Report (EIR) or *Informe de Impacto Ambiental* (IIA) to the provincial authority for approval prior to construction, with updated IIAs submitted every two years. The IIA must describe the project, identify potential environmental and social impacts, and propose mitigation, rehabilitation, and restoration measures. The initial IIA must include a detailed plan for mine closure and rehabilitation of the affected area, so that closure is planned from the project's inception.

Also noted in Section 20.3.1, Resolution No. 161/2021 approved the *Guidelines for Mine Closure with Financial Guarantees in Argentina: Towards Responsible Mine Closure* (IGF, 2021). However, adherence to the guidelines is voluntary best practice. Article 2 of the resolution states, "The Provinces, the Autonomous City of Buenos Aires, and the provincial Municipalities are invited to adopt, within their respective jurisdictions, the Guidelines approved by Article 1 of this measure." However, the Province of San Juan has not adhered to Resolution 161/2021. However, the Province of San Juan has been working on drafting a Mine Closure Law for several years, and it is possible that this Law will be approved in the near future.

Closure measures have been developed as part of the current study. Proposed closure measures for the TSF are described in Section 18.4.5. For mine closure, SRK has assumed industry standard practices for waste rock disposal areas, building demolition, pipeline decommissioning and general surface rehabilitation.

20.4.1 Closure Costs

Design details are currently insufficient to accurately estimate future closure costs. Preliminary estimates by Knight Piésold Ltd. for closure of the TSF, are in the order of US\$82 million. The TSF closure includes the placement of a 0.5 m thick closure cap over the entire surface, and the installation of closure water management channels over the surface of the TSF and a closure spillway.

Assuming industry practice for closure of the remaining surface facilities (e.g., waste rock disposal areas, building demolition, pipeline decommissioning and limited removal, general surface rehabilitation, etc.), a reasonable total for complete closure of the Altar Project would be on the order of US\$282 M (including mine and TSF facilities). This estimate is within keeping and benchmarking against the Los Azules Copper Project (a nearby and reasonable analog) of US\$180 M reported in their 2023 PEA.

21 Capital and Operating Costs

The capital cost estimate prepared for the PEA includes an installation cost associated with the site infrastructure, open pit mine and concentrator plant, a growth capital associated with the installation of the block caving underground mining operation, and the sustaining capital associated with the production plan. The LoM summary of capital is presented in Table 21-1.

Table 21-1: Altar PEA Capital Cost Summary

Description	Unit	Value
Initial Open Pit Capex	M USD	350
Initial Processing Capex	M USD	579
Initial Infrastructure Capex	M USD	665
Total Initial Capex	M USD	1,593
Growth UG Capex	M USD	227
Total Initial + Growth Capex	M USD	1,821
Sustaining Capital	M USD	3,830
Total LoM Capital	M USD	5,651

Source: SRK, 2025

SRK estimated operating costs for the open pit mining operation, block caving mining operation, the concentrator processing operation and G&A. A summary of the estimated operating costs is presented in Table 21-2.

Table 21-2: Altar PEA Operating Cost Summary

Description	Unit	Value
Open Pit Mining Cost	M USD	1,324
Cost / t mined	USD/t	2.35
Block Cave Mining Cost	M USD	6,510
Cost / t mined	USD/t	8.42
Processing Cost	M USD	6,866
Processing Cost/Ore	USD/t	6.93
Processing Cost/Lb Cu Payable	USD/lb Cu Payable	0.76
G&A Cost	M USD	1,365
G&A Cost/Ore	USD/t	1.38
Total Opex	M USD	16,065
Opex per lb Cu Eq.	USD/lb	1.69

Source: SRK, 2025

Note: All operating costs include capitalized operating costs prior to production such as pre-stripping.

21.1 Mine Capex

21.1.1 Open Pit Mine Capex

The capital cost of mining the Altar Project considers that the mine will be owner-operated and is based on the requirements of the mining plan. The mining capital costs were estimated from first principles by SRK Consulting (U.S.) Inc.

The overall LoM mining capital cost estimate, including initial and sustaining equipment costs and pre-production mining, is US\$468.1M. The LoM mining equipment capital cost is estimated at US\$200.3M, including 15% contingency. Of this amount, US\$94.1M (47%) corresponds to the initial mining equipment capital cost and US\$106.2M (53%) corresponds to the sustaining capital, which includes

principal payments for leased equipment, the costs of purchasing additional equipment units, renewing equipment, and performing major equipment maintenance to sustain mining operations, see Table 21-3. Additionally, the initial mining capital cost estimate includes pre-production mining costs in Year -1 and the first six months of Year 1 of US\$255.8M (including 5% contingency).

Table 21-3 summarizes the estimated capital cost over the LoM. The cost of pre-production mining, which represents 73% of the initial (i.e., Year -1 and Year 1) capital costs, involves the works related to the removal of the waste material required to access the mineralized material. The acquisition cost of major operating equipment such as drills, excavators, front-end loaders, and trucks was estimated at US\$94.1M and represents 27% of the initial capital. The acquisition of ancillary equipment to support the drilling, loading, and hauling equipment represents 9% of the initial capital. The acquisition of pit service and support equipment represents 6% of the initial capital. Equipment and technology support, along with initial maintenance tools and spare parts represent 10% of the initial capital cost.

Table 21-3 shows the summary of mining capital costs.

Table 21-3: Summary of Open Pit Mine Capital Costs

Description	Unit	LoM	Initial	Sustaining
Drilling	USD	29,499,000	10,489,000	19,010,000
Blasting	USD	-	-	-
Loading	USD	65,793,000	17,457,000	48,336,000
Hauling	USD	93,648,000	52,629,000	41,019,000
Roads & Dumps	USD	24,565,000	14,663,000	9,902,000
Pre-Strip Opex	USD	254,598,000	254,598,000	-
Total	USD	468,103,000	349,836,000	118,267,000

Source: SRK, 2025

The contingencies applied by SRK are 15% for capitalized equipment purchases and rebuilds, and 5% for capitalized pre-production mining costs (i.e., pre-stripping costs that are capitalized for Year -1). The purpose of the contingency provisions is to allow for uncertain cost elements which are predicted to occur but are not included in the cost estimate. These cost elements include uncertainties concerning completeness and accuracy of the production schedule, accuracy of labor and material rates, accuracy of labor productivity expectations, and accuracy of equipment pricing.

Items not included in the mining capital estimate:

- Foreign currency exchange rate fluctuations
- Interest payments associated with equipment leases
- General sales and withholding taxes
- Working capital

Risks due to political upheaval, government policy changes, labor disputes, permitting delays, and access denial related to weather are also excluded.

21.1.2 Underground Mine Capex

SRK estimated the underground mine capital costs associated with the mine plan prepared for the block caving operation. The cost estimate was prepared as a first principles model that estimates the requirement of mining equipment fleet and associated labor requirements, support services and owner costs. The capital cost estimate includes 25% of contingencies over the estimated costs. The mining capital also includes the development requirements to access the mining areas.

The capital cost was broken into growth capital, related to four years of installation requirements to acquire equipment and develop access to the initial mining areas, and a sustaining capital, related to the maintenance and replacement of equipment and continuous development of new mining areas.

Table 21-4 presents the summary of the estimated underground mining capital costs.

Table 21-4: Summary of Underground Mine Capital Costs

Description	Unit	LoM	Growth	Sustaining
Capital Development Cost	USD	312,451,356	76,250,135	236,201,222
Equipment Purchase	USD	542,608,307	58,264,892	484,343,415
Rebuilds	USD	301,299,373	9,722,615	291,576,758
Services	USD	150,145,019	50,010,329	100,134,690
Owner Cost	USD	125,160,205	33,222,783	91,937,422
Total	USD	1,431,664,260	227,470,754	1,204,193,506

Source: SRK, 2025

21.2 Process Capex

As summarized in Table 21-5, process plant capex is estimated at US\$521.9M at a +/- 50% level of accuracy. The estimate is based on in-house proprietary cost models that have been adjusted to fit the specific process parameters for the project.

Table 21-5: Summary of Process Plant Capex

Cost Area	(US\$)
Equipment purchase	109,790,000
Equipment installation	130,215,930
Site facilities	58,000,000
Design engineering	68,805,000
Construction management	50,042,000
Working capital	18,062,000
Total without contingency	434,914,930
Contingency (20%)	86,982,986
Total with contingency	521,897,916

Source: SRK, 2025

21.2.1 Process Equipment

Process Equipment Capex is based on a preliminary equipment list developed for the project. As shown in Figure 21-1 equipment supply is estimated at US\$109.8M and equipment installation is estimated at US\$130.2M.

Equipment	Size	Units	Quantity	Purchase Price (US\$)	Installation Cost (US\$)
Gyratory Crusher	60 x 110	inches	2	20,260,200	24,930,383
Crushed Ore Stockpile	60,000	Tonnes	1	11,429,494	13,050,721
SAG Mill Reclaim Conveyor			1	1,420,800	2,189,453
SAG Mill & Motor	12.1 x 7.9	meter	1	23,102,300	22,653,450
Pebble Screen			4	2,624,300	2,584,936
Pebble Return Conveyor	76,621	L/min	1	99,200	124,893
Ball Mill & Motor	7.9 x 12.3	meter	1	12,854,000	13,282,200
Cyclone Feed Sump & Pump	57,463	L/min	1	99,200	124,893
Cyclones	76.2	Centimeters	36	1,887,480	2,891,619
Sump & Pump	76,622	L/min	1	99,200	124,893
Regrind Mill (Tower Mill)	183 x 13.5	cm radius x m high	5	19,000,000	19,500,000
Concentrate Thickener	20	meter diameter	1	437,400	861,252
Sump & Pump	15	L/min	1	17,500	22,033
Flotation Cells	2,355	m ³	47	12,026,370	20,649,277
Sump & Pump	15	L/min	1	17,500	22,033
Sump & Pump	3	L/min	1	17,500	22,033
Concentrate Filter Press	37	m ²	2	2,154,100	2,304,193
Cyclones	10.2	cm	6	20,760	31,804
Conveyor	36	cm	1	39,400	60,715
Sump & Pump	76,606	L/min	1	99,200	124,893
Conveyor	36	cm	1	39,400	60,715
Tailing Thickener	49	meter diameter	1	1,945,500	4,474,650
Sump & Pump	76,606	L/min	1	99,200	124,893
Total				109,790,004	130,215,932

Source: SRK, 2025

Figure 21-1: Summary of Process Equipment Supply and Installation

21.2.2 Site Facilities

Site facilities include the capex for on-site power transmission and for on-site buildings and structures. Process plant site facilities are estimated at US\$58.0M and include US\$15.0M for power transmission and US\$43M for buildings and structures.

21.2.3 Design Engineering

Process engineering is estimated at US\$68.8M, which is factored at 23% of installed equipment and site facilities capex.

21.2.4 Construction Management

Construction management is estimated at US\$50.0M and, which is factored at 16.8% of installed equipment and site facilities capex.

21.2.5 Working Capital

Working capital is estimated at US\$18.1M, which is factored at 6% of installed equipment and site facilities capex

21.2.6 Contingency

Contingency is estimated at US\$87.0M, representing 20% of the process plant capex.

21.3 Process Sustaining Capex

Process sustaining capex is estimated at US\$3.3 million/year and is based on 3% of process equipment capex.

21.4 Infrastructure Capital

Table 21-6 presents the life of mine infrastructure capital costs. SRK and KP estimated parts of the infrastructure capital costs, and the following assumptions were used:

- Budgetary estimate by SRK
 - Site road construction
 - Truck shop and other building
 - Owner's cost other
 - Owner's cost G&A and Camp Operation
 - Closure costs
- Conceptual engineering design and estimate by KP:
 - Offsite powerlines and transformers
 - Drilling and water wells
 - Tailings dam
 - Contact water dam
 - Infrastructure, camp and other sustaining.
- Quoted cost by SRK
 - On-site construction camp (also used as permanent camp)

Table 21-6: Summary of Infrastructure Capital Costs

Description	Unit	LoM	Initial	Sustaining
Offsite Powerlines and Transformers	USD	168,900,000	168,900,000	-
Site Road Construction	USD	20,000,000	20,000,000	-
Drilling and Water Wells	USD	20,000,000	20,000,000	-
Truck Shop and Other Buildings	USD	40,000,000	40,000,000	-
Owner's Cost Other	USD	20,000,000	20,000,000	-
On-site Construction Camp (Includes 30% Contingency)	USD	36,846,418	36,846,418	-
Owner's Cost - G&A + Camp Operation	USD	70,000,000	70,000,000	-
Tailings Dam (Includes 30% Contingency)	USD	2,050,707,100	198,287,700	1,852,419,400
Contact Water Dam	USD	15,900,000	15,900,000	-
Infrastructure, Camp and Other Sustaining	USD	225,000,000	-	225,000,000
Contingency for Some Items (20%)	USD	75,149,284	75,149,284	-
Closure	USD	282,100,000	-	282,100,000
Total	USD	3,024,602,802	665,083,402	2,359,519,400

Source: SRK, 2025

21.5 Contingency Summary

Table 21-7 below summarizes Capital costs and contingencies applied.

Table 21-7: Summary of Capital Costs and Contingencies

Description	Unit	LoM	
Open Pit			
Drilling	USD	25,650,435	N/A
Loading	USD	57,211,304	N/A
Hauling	USD	81,433,043	N/A
Roads & Dumps	USD	21,360,000	N/A
Subtotal Open Pit Mine	USD	185,654,783	N/A
Underground			
Capital Development Cost	USD	249,961,085	N/A
Equipment Purchase	USD	434,086,646	N/A
Rebuilds	USD	241,039,498	N/A
Services	USD	120,116,015	N/A
Owner Cost	USD	100,128,164	N/A
Subtotal Underground Mine	USD	1,145,331,408	N/A
Mineral Processing			
Equipment Purchase	USD	109,790,000	N/A
Equipment Installation	USD	130,215,930	N/A
Site Facilities	USD	58,000,000	N/A
Design Engineering	USD	68,805,000	N/A
Construction Management	USD	50,042,000	N/A
Working Capital	USD	18,062,000	N/A
Subtotal Mineral Processing	USD	434,914,930	N/A
Infrastructure			
Offsite Powerlines and Transformers	USD	168,900,000	N/A
Site Road Construction	USD	20,000,000	N/A
Drilling and Water Wells	USD	20,000,000	N/A
Truck Shop and Other Buildings	USD	40,000,000	N/A
Owner's Cost Other	USD	20,000,000	N/A
On-site Camp	USD	28,343,398	N/A
Owner's Cost	USD	70,000,000	N/A
Tailings Dam	USD	1,577,467,000	N/A
Contact Water Dam	USD	15,900,000	N/A
Subtotal Infrastructure	USD	1,960,610,398	N/A
Contingencies			
Open-Pit Mine Contingency	USD	27,848,217	15.0%
Underground Mine Contingency	USD	286,332,852	25.0%
Mineral Processing Contingency	USD	86,982,986	20.0%
Infrastructure Contingency	USD	556,892,403	28.4%
Subtotal Contingencies	USD	958,056,458	25.7%
Other Capital Estimates			
Mineral Processing Sustaining	USD	315,000,000	N/A
Infrastructure Sustaining	USD	225,000,000	N/A
Total	USD	4,684,567,977	N/A

Source: SRK, 2025

21.6 Mine Opex

21.6.1 Open Pit Mining Costs

The mine operating costs were estimated from first principles by SRK based on the requirements of the mine plan.

The estimate is based on the operating hours of the equipment and includes ownership cost and operational cost such equipment repairs, drilling consumables, fuel consumption, manpower, explosives consumption, contractor blasting services, tire consumption etc. The assumed diesel fuel price is US\$1.033/liter, and the assumed liquefied natural gas (LNG) cost is US\$0.238/liter. Both the diesel and LNG prices included estimated charges for delivery to site. SRK assumed only Diesel trucks, however SRK also quoted LNG as a comparison cost.

The cost of equipment operators and the mechanical maintenance workforce was included as part of the operating costs of the equipment. The costs were distributed among the direct mining functions such as drilling, loading, hauling, etc.

The support cost includes miscellaneous tools to support mining activities such as software, maintenance equipment, personnel transport equipment, communication systems, and dispatch systems.

Mining administrative and technical expenses encompass administrative and technical personnel from the mining area, the mining geology area, and the mechanical maintenance area.

It is estimated that the total mine operating cost (including 5% contingency) from the first year of pre-production to the end of the open pit production (i.e., Year -3 through Year 7) will be US\$1,324M to extract 223 Mt of mineralized material and move 563 Mt of total material mined. The total unit mining cost of the Project is US\$2.35 per ex-pit tonne mined including pre-production mining.

The total operating cost for all activities is US\$4.80/t processed material during the operations period.

Table 21-8 shows the summary of total LoM operating costs and costs per tonne mined per activity. Haulage costs represent 41% of mine costs, followed by loading and blasting costs, which together represent 77% of costs.

Table 21-8: Summary of Mining Operating Cost Open Pit Only

Description	Unit	LoM	Pre-Production	Production
Drilling	M USD	110	24	86
Blasting	M USD	289	64	225
Loading	M USD	216	43	173
Hauling	M USD	541	87	454
Roads & Dumps	M USD	114	22	92
Labor (from labor sheet) Incls. G&A	M USD	70	14	56
Total	M USD	1,324	255	1,069

Source: SRK, 2025

Note: Totals may not sum due to rounding.

21.6.2 Underground Block Caving Mining Costs

SRK estimated the required mining equipment fleet, required production operating hours, and manpower to arrive at an estimate of the mining costs that the mining operations would incur. The

mining costs were developed from first principles and compared to recent actual costs. The mining operating costs are presented in the following categories:

- Drilling
- Blasting
- Mucking
- Hauling/Conveying
- Support equipment operations
- Miscellaneous operations (various support operations, etc.)
- Mine engineering (mine technical personnel and technical consulting)
- Mine administration and supervision (mine and maintenance supervision, etc.)
- Freight (for equipment supplies and parts, excluding freight for fuel)

Table 21-9 presents a summary of the LoM unit mining operating costs.

Table 21-9: Mining Operating Costs

Category	US\$/t mined
Operating development	1.56
Production (drilling, blasting, mucking and hauling)	3.18
Other mining costs (services, maintenance, rehabilitation, and definition drilling)	0.79
Operation and maintenance hourly	1.21
Contingency @ 25%	1.69
Total	8.42

Source: SRK, 2025

21.7 Process Opex

As summarized in Table 21-10, process operating costs are estimated at US\$6.93/t of processed material and includes estimates for reagents & wear materials, labor, electrical power, and an allowance for miscellaneous operating costs.

Table 21-10: Summary of Concentrator Operating Cost

Cost Area	60,000 tpd	
	US\$/t	Percent
Equipment operation	1.07	15.4
Power ¹	2.31	33.3
Reagents and wear materials	2.15	31.0
Hourly labor	0.85	12.3
Salaried staff	0.11	1.6
Miscellaneous	0.44	6.3
Total	6.93	100.0

Source: SRK, 2025

¹Power based on a unit power demand of 30 kWh/t and a unit cost of US\$0.077/kWh

21.7.1 Reagents and Wear

Reagent and wear material costs are estimated at US\$2.15/t of processed material as shown in Table 21-11. Reagent usage is based on metallurgical test work and unit costs for flotation collector, frother, lime and flocculant used in the process. Wear material costs are based on typical consumption rates for grinding media and mill liners.

Table 21-11: Reagent and Wear Materials Cost

Item	kg/t	US\$/kg	US\$/t
Wear liners	0.065	4.43	0.29
Grinding media	0.522	2.14	1.12
Flotation collector	0.02	4.45	0.09
Frother	0.03	4.01	0.12
Lime	1.20	0.40	0.48
Flocculant	0.014	4.06	0.06
Total			2.15

Source: SRK, 2025

21.7.2 Labor

Hourly labor costs are estimated at US\$0.85/t of processed material and are based on the manpower schedule shown in Table 21-12. The hourly base pay rates are based on pay rates experienced in Argentina on similar projects, which have been escalated by a factor of 1.7 to account for overhead and burden costs. The manpower schedule assumes four crews operating working two 12-hour shifts per day, seven days per week and includes a total of 104 operations hourly employees and 116 maintenance employees. Salaried staff labor costs are estimated at US\$0.11/t of processed material and are based on a total of 16 salaried employees and typical base wage rates for each position. The base salary for each position has been escalated by a factor of 1.3 to account for overhead and burden costs.

Table 21-12: Concentrator Manpower Schedule

Position	Employees per Crew	Crews	Employees	Base Rate (US\$/hr)	Overhead	Base + Overhead (US\$/hr)	Hours/ year	Employee (US\$/year)	Total (US\$/year)	US\$/t
Operations Hourly										
Control Room Operator	4	4	16	24.08	1.7	40.94	2184	89,404	1,430,468	0.07
Crusher Operator	2	4	8	24.08	1.7	40.94	2184	89,404	715,234	0.03
Grinding Circuit Operator	2	4	8	24.08	1.7	40.94	2184	89,404	715,234	0.03
Flotation Circuit Operator	2	4	8	24.08	1.7	40.94	2184	89,404	715,234	0.03
Thickening, Filtration & Loadout	2	4	8	24.08	1.7	40.94	2184	89,404	715,234	0.03
Tailings Operator	4	4	16	20.57	1.7	34.97	2184	76,372	1,221,957	0.06
Reagent Mixer	2	4	8	19.17	1.7	32.59	2080	67,785	542,281	0.02
Assayer	6	4	24	20.57	1.7	34.97	2080	72,736	1,745,652	0.08
Sampler	2	4	8	19.17	1.7	32.59	2080	67,785	542,281	0.02
Operations Total	26		104						8,343,574	0.38
Maintenance Hourly										
Maintenance Planner	1	4	4	20.57	1.7	34.97	2184	76,372	305,489	0.01
Mechanic	8	4	32	24.08	1.7	40.94	2184	89,404	2,860,935	0.13
Electrician	8	4	32	28.00	1.7	47.60	2184	103,958	3,326,669	0.15
Instrumentation Technician	4	4	16	28.00	1.7	47.60	2184	103,958	1,663,334	0.08
Laborer	8	4	32	17.50	1.7	29.75	2184	64,974	2,079,168	0.09
Maintenance Total	29		116						10,235,596	0.47
Process Plant Hourly Total			220						18,579,169	0.85
Salaried Staff										
Plant Manager			1	154,621	1.3			201,007	201,007	0.01
Plant Superintendent			1	138,155	1.3			179,602	179,602	0.01
Senior Metallurgist			1	128,675	1.3			167,278	167,278	0.01
Metallurgist			2	81,128	1.3			105,466	210,933	0.01
Chief Chemist			2	122,150	1.3			158,795	317,590	0.01
General Foreman			1	128,675	1.3			167,278	167,278	0.01
Process Shift Foreman			4	122,150	1.3			158,795	635,180	0.03
Maintenance Shift Foreman			4	122,150	1.3			158,795	635,180	0.03
Salaried Staff Total			16						2,313,039	0.11
Tonnes/year	21,900,000									

Source: SRK, 2025

21.7.3 Electrical Power

Electrical power is estimated at US\$2.31/t of processed material and is based on a unit power rate of US\$0.077/kWh and a unit power consumption of 30 kWh/t, which is typical for flotation concentrators processing a moderately hard material at a fairly coarse grind (P80 180 µm) and producing a single flotation concentrate.

21.7.4 Equipment Maintenance and Repair

Equipment maintenance and repair costs are estimated at US\$1.07/t of processed material and are based on an annual allowance of 10% of installed equipment capex.

21.8 Process Benchmarks

The capital and operating cost estimates for the Altar copper flotation concentrator have been benchmarked against several current copper flotation concentrator projects. As shown in Table 21-13, the capex for the 60,000 tpd Altar concentrator, which is estimated at US\$521.9M, compares well with other similar projects. The capex for Capstone's 65,000 tpd Santo Domingo copper flotation concentrator is estimated at US\$630M and capex for the 74,000 tpd Caravel Copper project is estimated at US\$585M. The operating costs for the Yellowhead Copper Project (US\$5.75/t), the Reko Diq Copper Project (US\$5.59/t) and the Cascabel Copper Project (US\$7.40/t) average US\$6.22/t of processed material, which is in-line with the Altar concentrator operating cost estimate of US\$6.93/t.

Table 21-13: Benchmarking the Altar 60,000 tpd Concentrator with Other Similar Projects

Company	Project	Process Type	tpd	Capex (MUS\$)	Opex (US\$/t)	Source
Taeko Yellowhead	Yellowhead Copper Project	Cu Flotation Concentrator	90,000	623	5.75	43-101 PFS
Barrick	Reko Diq	Cu Flotation Concentrator	123,000	1,065	5.59	43-101 FS
Capstone	Santo Domingo	Cu Flotation Concentrator	65,000	630	4.46	43-101 FS
SolGold	Cascabel	Cu Flotation Concentrator	32,900	262	7.40	43-101 PFS
Caravel Minerals	Caravel Copper Project	Cu Flotation Concentrator	73,970	585	na	43-101 PFS
Aldebaran	Altar	Cu Flotation Concentrator	60,000	522	6.93	43-101 PEA

Source: SRK, 2025

21.9 G&A Operating Costs

SRK prepared a first principles model to estimate the production plan's G&A costs. This model estimates the amount of labor in each period of operations and their associated burdened salaries and associated indirect costs. G&A costs were considered 100% fixed and are estimated at US\$30.3M per year.

22 Economic Analysis

SRK prepared a cashflow model to evaluate the base case scenario of the Altar Project PEA, the studied scenario includes the installation and operation of the following:

- Site infrastructure to support mining, processing and waste and tailings management operations.
- An open pit mine with a maximum capacity of 232,000 t per day.
- An underground mine with various block caving areas with a maximum combined capacity of 52,000 t per day.
- A processing facility to beneficiate the mineralized material from the open pit and the block caves at a feed rate of 60,000 t per day.

The cash flow valuation was prepared on a real basis, and the model was prepared on an annual basis from the resources mined effective date to their exhaustion. This section presents the main assumptions used in the cashflow model and the resulting indicative economics. All results are presented in 2025 U.S. dollars (US\$), unless otherwise stated.

All results are presented in this section on a 100% basis. Technical and cost information is presented on a 100% basis to assist the reader in developing a clear view of the fundamentals of the operation.

The PEA is preliminary in nature, that it includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the PEA will be realized. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

The economic model is based on mine plans that were prepared as outlined in previous sections. Inferred resources account for approximately 20% of the tonnage contained within the mine plan. As the stage of study for the Altar project is a PEA, no reserves are estimated for use in this analysis. The economic evaluation was completed using resource material that includes material in the Inferred category.

As with the capital and operating cost forecasts, the economic analysis is inherently a forward-looking exercise. These estimates rely upon a range of assumptions and forecasts that are subject to change depending upon macroeconomic conditions, operating strategy and new data collected through future operations and study.

22.1 Basic Model Parameters

Key criteria used in the analysis are presented throughout this section. Table 22-1 summarizes model time parameters.

Table 22-1: Model Time Parameters

Description	Value
TEM Time Zero Start Date	Year -3
Open Pit Start Date	Year 1
Open Pit Life (Years)	7
Block Caving Start Date	Year 5
Block Caving Life (Years)	41
Processing Start Date	Year 1
Processing Life (Years)	45
Discount Rate	8.00%

22.1.1 Exchange Rates

All revenues and costs estimated for the cash flow considered 2025 US Dollars and no considerations of other exchange rates were assumed in the cash flow model.

22.1.2 Pricing

The assumed prices for the pure copper, gold and silver products are presented in Table 22-2.

Table 22-2: Assumed Metal Prices

Description	Unit	Value
Cu Price	USD/lb	4.35
Au Price	USD/oz	2,500
Ag Price	USD/oz	27.00

Source: SRK, 2025

The metal prices above were combined with a set of smelter terms to estimate the revenue of the copper concentrate estimate by the production plan. The estimated smelter terms and freight costs are presented in Table 22-3.

Table 22-3: Altar Copper Concentrate Smelter Terms

Description	Unit	Value
Metal Payability		
Minimum Cu Deduction	%	1.00
Cu Payability	%	97.00
Minimum Au Deduction	g/t	1.00
Au Payability	%	95.00
Minimum Ag Deduction	g/t	30.00
Ag Payability	%	80.00
TC/RC		
Treatment Charges (TC)	USD/dmt	70.00
CU Refining Charges (RC)	USD/lb Cu Payable	0.07
Au Refining Charges (RC)	USD/oz Au Payable	6.00
Ag Refining Charges (RC)	USD/oz Ag Payable	0.50
Concentrate Freight		
Concentrate Moisture Content	%	9.00
Freight Charges (FC)	USD/wmt	125.00

Source: CRU, SRK, Aldebaran, 2025

This study also included an estimate of penalties associated with the arsenic content of the copper concentrate; the details of these penalties are presented in Table 22-4.

Table 22-4: Altar Copper Concentrate Arsenic Penalties

Description	Unit	Value
As Grade $\leq 0\%$	USD/dmt	-
As Grade $> 0 \leq 0.1\%$	USD/dmt	-
As Grade $> 0.1 \leq 0.2\%$	USD/dmt	-
As Grade $> 0.2 \leq 0.3\%$	USD/dmt	-
As Grade $> 0.3 \leq 0.4\%$	USD/dmt	-
As Grade $> 0.4 \leq 0.5\%$	USD/dmt	-
As Grade $> 0.5 \leq 0.6\%$	USD/dmt	12.00
As Grade $> 0.6 \leq 0.7\%$	USD/dmt	16.00
As Grade $> 0.7 \leq 0.8\%$	USD/dmt	20.00
As Grade $> 0.8 \leq 0.9\%$	USD/dmt	24.00
As Grade $> 0.9 \leq 1\%$	USD/dmt	28.00
As Grade $> 1 \leq 1.1\%$	USD/dmt	38.20
As Grade $> 1.1 \leq 1.2\%$	USD/dmt	41.60
As Grade $> 1.2 \leq 1.3\%$	USD/dmt	45.00
As Grade $> 1.3 \leq 1.4\%$	USD/dmt	48.40
As Grade $> 1.4 \leq 1.5\%$	USD/dmt	51.80
As Grade $> 1.5 \leq 1.6\%$	USD/dmt	56.72
As Grade $> 1.6 \leq 1.7\%$	USD/dmt	58.36
As Grade $> 1.7 \leq 1.8\%$	USD/dmt	60.00
As Grade $> 1.8 \leq 1.9\%$	USD/dmt	61.64
As Grade $> 1.9 \leq 2\%$	USD/dmt	63.28
As Grade $> 2 \leq 2.1\%$	USD/dmt	133.63
As Grade $> 2.1 \leq 2.2\%$	USD/dmt	135.75
As Grade $> 2.2 \leq 2.3\%$	USD/dmt	137.88

Source: CRU, Aldebaran 2025

22.1.3 Taxes and Royalties

As modeled, the operation is subject to a 25% income tax. All expended capital is subject to depreciation over an 8-year period. Depreciation occurs via a straight-line method. No existing depreciation pools are accounted for in the model.

As the operation is located within the San Juan Province, Argentina, the operation is subject to a governmental royalty (San Juan Mine Mouth Tax) of 3.0% over the net smelter return net of the processing costs. The operation is also subject to an NSR royalty of 1.0% over the net smelter return.

22.1.4 Working Capital

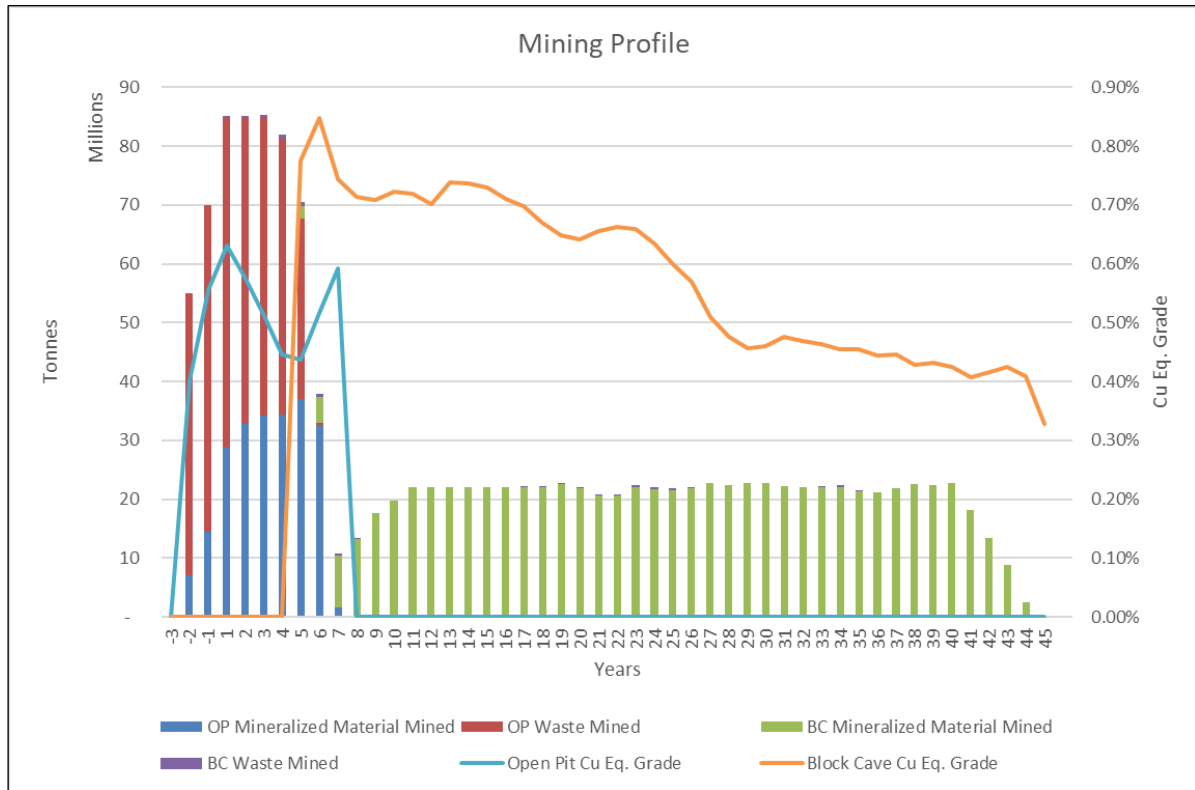
The assumptions used for working capital in this analysis are as follows:

- Accounts Receivable (A/R): 30-day delay
- Accounts Payable (A/P): 30-day delay
- Zero opening balance for A/R and A/P

22.2 Technical Factors

22.2.1 Mining Profile

The modeled mining profile was developed by SRK for the PEA's production plan. The details of mining profile are presented previously in this report. No modifications were made to the profile for use in the economic model. The modeled profile is presented in Figure 22-1



Source: SRK, 2025

Figure 22-1: Altar PEA Mining Profile

A summary of the modeled open pit LoM mining profile is presented in Table 22-5 and a summary of the modeled block caving mining profile is presented in Table 22-6.

Table 22-5: Altar PEA Open Pit Mining Summary

Description	Unit	Value
Total Mineralized material Mined	Mtonnes	222.6
Total Waste Mined	Mtonnes	340.9
Total Material Mined	Mtonnes	563.5
LoM Strip Ratio	Num#	1.53x
Average Total Material Mining Rate	tonnes/day	220,445
Average Mineralized Material Mining Rate	tonnes/day	87,087
Cu Grade	%	0.44%
Au Grade	g/t	0.07
Ag Grade	g/t	1.18
As Grade	g/t	277.95
Contained Cu	M lbs	2,183
Contained Au	oz	503,473
Contained Ag	oz	8,441,453
Contained As	tonnes	61,869

Source: SRK, 2025

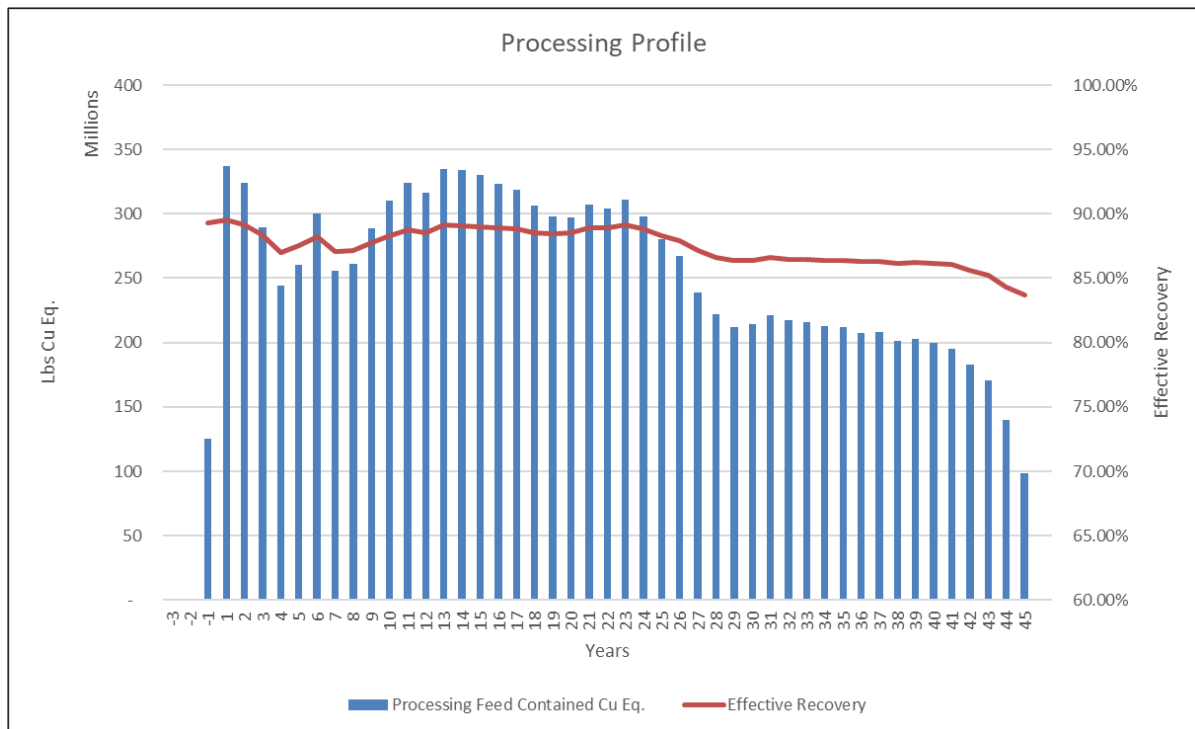
Table 22-6: Altar PEA Block Caving Mining Summary

Description	Unit	Value
Total Mineralized material Mined	Mtonnes	768.2
Total Waste Mined	Mtonnes	5.4
Total Material Mined	Mtonnes	773.6
Development	Num#	0.00 x
Average Total Material Mining Rate	tpd	51,663
Average Mineralized Material Mining Rate	tpd	51,663
Cu Grade	%	0.50%
Au Grade	g/t	0.07
Ag Grade	g/t	1.61
As Grade	g/t	115.96
Contained Cu	M lbs	8,551
Contained Au	oz	1,677,086
Contained Ag	oz	39,876,190
Contained As	tonnes	89,086

Source: SRK, 2025

22.2.2 Processing Profile

The processing profile (Figure 22-2) was developed by SRK, based on assumptions prepared by SRK, metallurgical test data, and other assumptions provided by Aldebaran. The processing feed tonnes and grade are a result from the application of stockpile logic to the mining profile to optimize cashflows. The processing profile summary is presented in Table 22-7.



Source: SRK, 2025

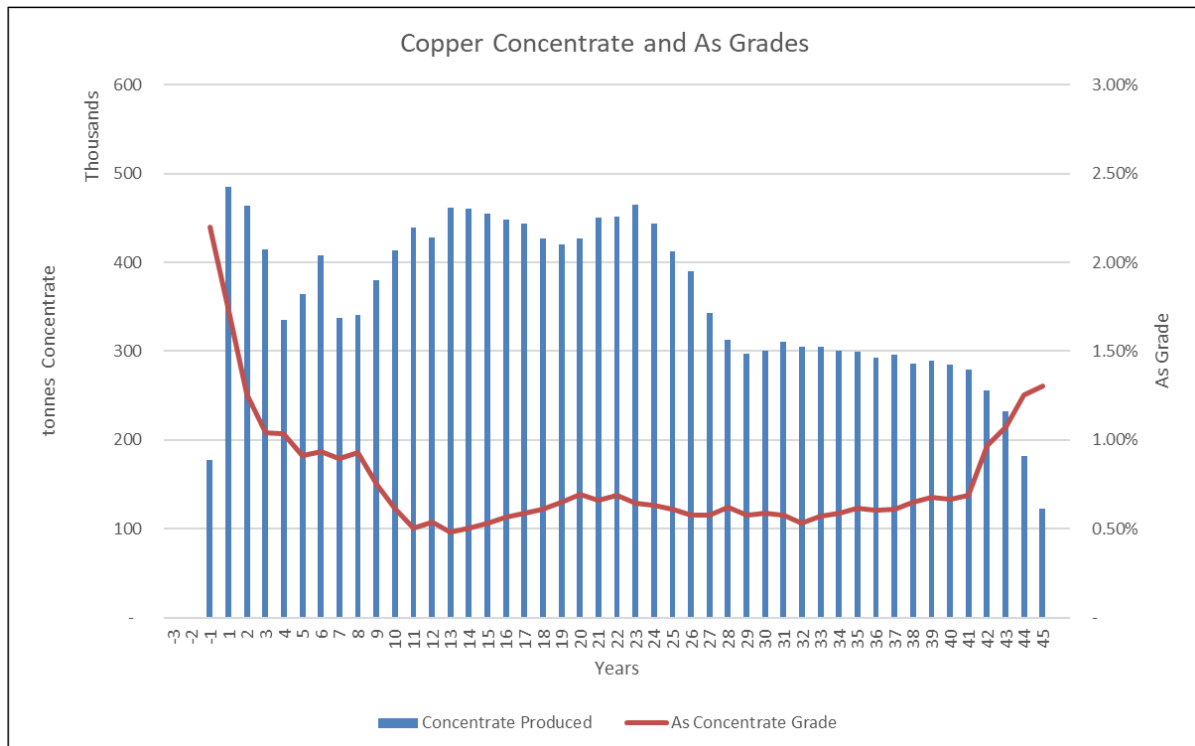
Figure 22-2: Altar PEA Processing Profile

Table 22-7: Altar PEA Processing Summary

Description	Unit	Value
Processing Capacity	tpd	60,000
Processing Capacity	mtpa	21.90
Total Material Processed	Mtonnes	991
Total Contained Cu	M lbs	10,734
Total Contained Au	oz	2,180,559
Total Contained Ag	oz	48,317,643
LoM Cu Grade	%	0.49%
LoM Au Grade	g/t	0.07
LoM Ag Grade	g/t	1.52
LoM Cu Eq. Grade	%	0.54%
Average Cu Recovery	ktonnes	87.76%
Average Au Recovery	ktonnes	57.00%
Average Ag Recovery	koz	50.00%
Recovered Cu	M lb	9,420
Recovered Au	oz	1,242,919
Recovered Ag	oz	24,158,822

Source: SRK, 2025

The production profile was developed by SRK and results from the processing profile and estimate of metallurgical recoveries derived from the metallurgical testing provided by Aldebaran. The modeled profile is presented in Figure 22-3 and includes the estimated arsenic grade.

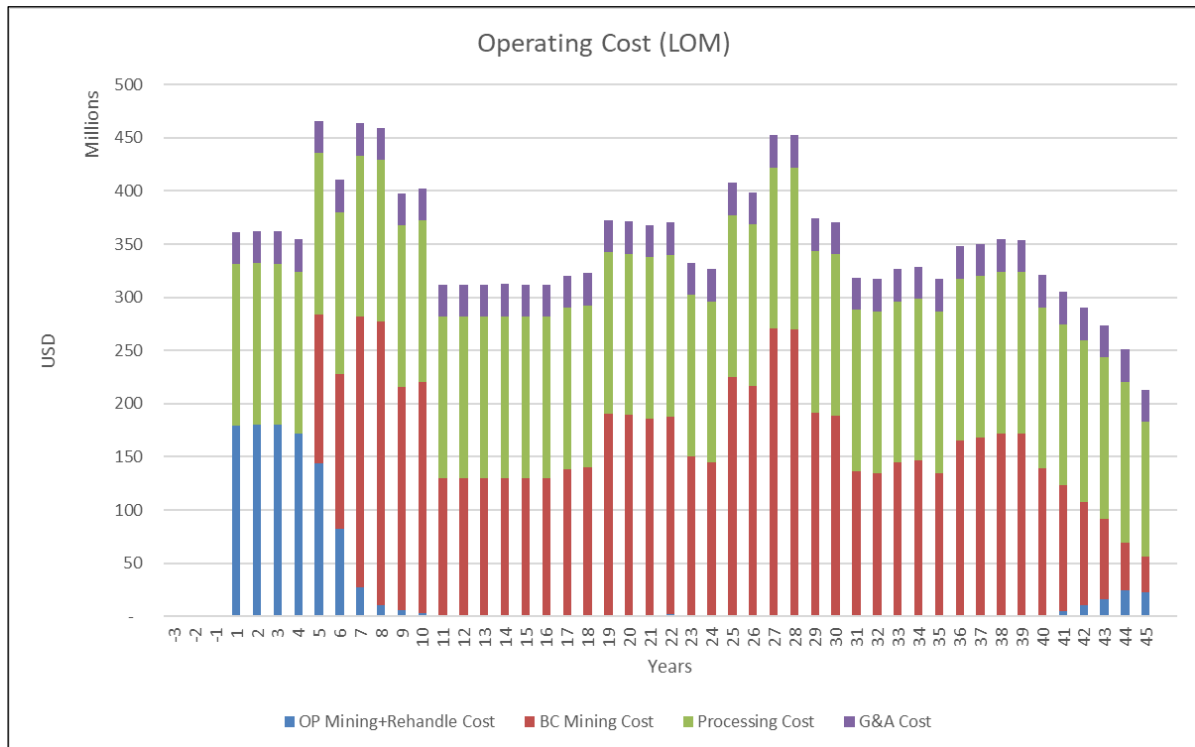


Source: SRK, 2025

Figure 22-3: Altar PEA Production Profile

22.2.3 Operating Costs

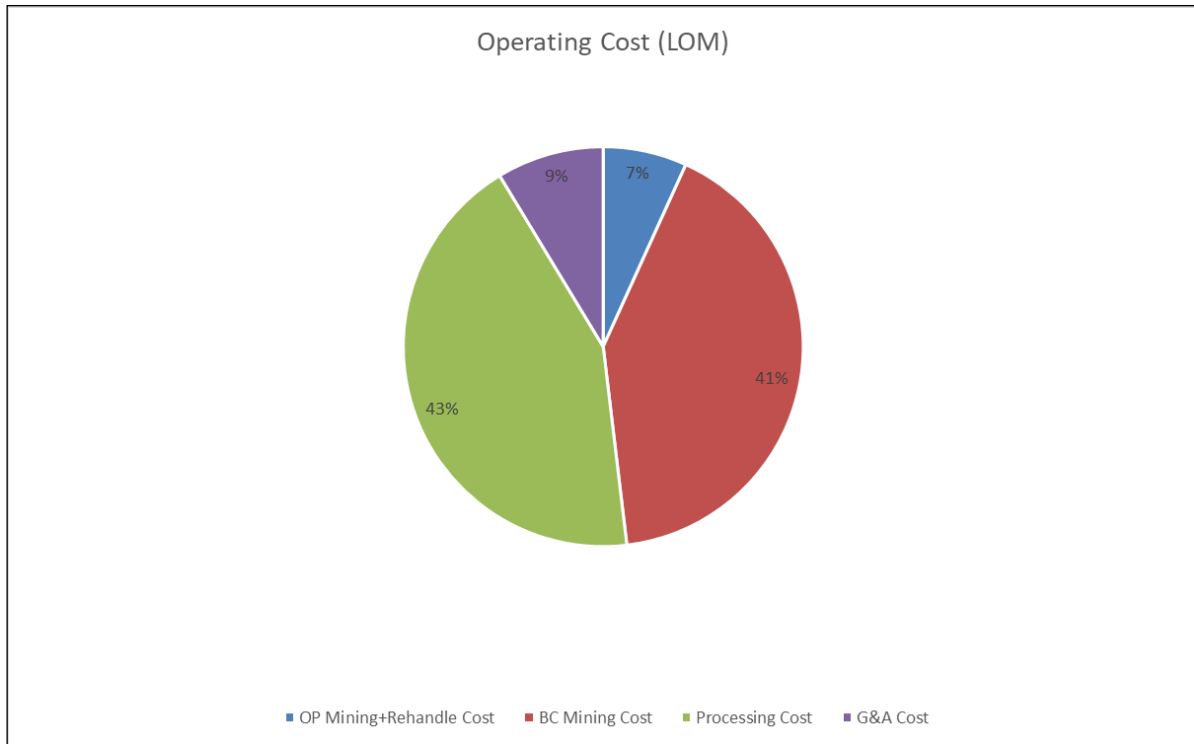
On-Site Operating costs are modeled in US dollars and categorized as open pit mining, underground mining, re-handling, processing, and G&A costs. Contingencies were added to the operating costs within the model, and this detail is presented in Section 21. A summary of the operating costs over the life of the operation is presented in Figure 22-4.



Source: SRK, 2025

Figure 22-4: Altar PEA Operating Costs Profile

The life-of-mine contributions of the different on-site operating cost segments over the life of the operation are presented in Figure 22-5.



Source: SRK, 2025

Figure 22-5: Altar PEA LoM Operating Costs Breakdown

The open pit and underground mining cost estimates were developed externally to the model and were imported into the model as variable costs driven by total mined material. Processing costs were incorporated into the model as variable costs driven by the plant feed. G&A costs were incorporated into the model as annual fixed costs.

All costs were imported to the model in US dollars. The resulting operating cost summary is presented Table 22-8. The life of mine C1 Cost is estimated to be US\$2.02 per lb Cu payable.

Table 22-8: Altar PEA Operating Cost Summary

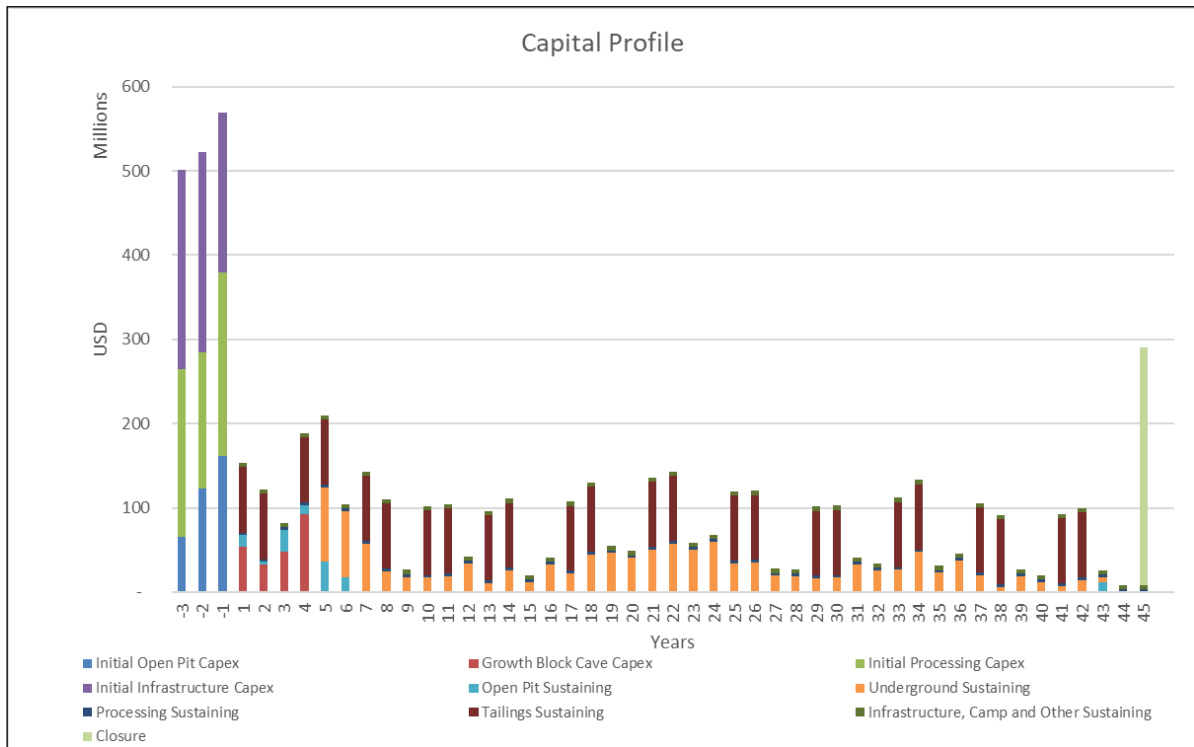
Description	Unit	Value
Open Pit Mining Cost	M USD	1,324
Cost / t mined	USD/t	2.35
Block Cave Mining Cost	M USD	6,510
Cost / t mined	USD/t	8.42
Processing Cost	M USD	6,866
Processing Cost/Ore	USD/t	6.93
Processing Cost/Lb Cu Payable	USD/lb Cu Payable	0.76
G&A Cost	M USD	1,365
G&A Cost/Ore	USD/t	1.38
Total Opex	M USD	16,065
Opex per lb Cu Eq.	USD/lb	1.69

Source: SRK, 2025

Note: All operating costs include capitalized operating costs prior to production such as pre-striping.

22.2.4 Capital Costs

The capital cost estimate prepared for the PEA includes an installation cost associated with the site infrastructure, open pit mine and concentrator plant, a growth capital associated with the installation of the block caving underground mining operation, and the sustaining capital associated with the production plan. The modeled capital profile is presented in Figure 22-6.



Source: SRK, 2025

Figure 22-6: Altar PEA Capital Costs Profile

All capital costs are based 2025 US dollar estimates. The LoM summary of capital is presented in Table 22-9.

Table 22-9: Altar PEA Capital Cost Summary

Description	Unit	Value
Initial Open Pit Capex	M USD	350
Initial Processing Capex	M USD	579
Initial Infrastructure Capex	M USD	665
Total Initial Capex	M USD	1,593
Growth UG Capex	M USD	227
Total Initial + Growth Capex	M USD	1,821
Sustaining Capital	M USD	3,830
Total LoM Capital	M USD	5,651

Source: SRK, 2025

22.3 Cashflow Forecasts and Annual Production Forecasts

The PEA is preliminary in nature, that it includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the PEA will be realized. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

The economic model is based on mine plans that were prepared as outlined in previous sections. Inferred resources account for approximately 20% of the tonnage contained within the mine plan. As the stage of study for the Altar project is a PEA, no reserves are estimated for use in this analysis. The economic evaluation was completed using resource material that includes material in the Inferred category.

This economic analysis is supported by an annual after-tax cashflow. The results of the analysis are presented in Table 22-11.

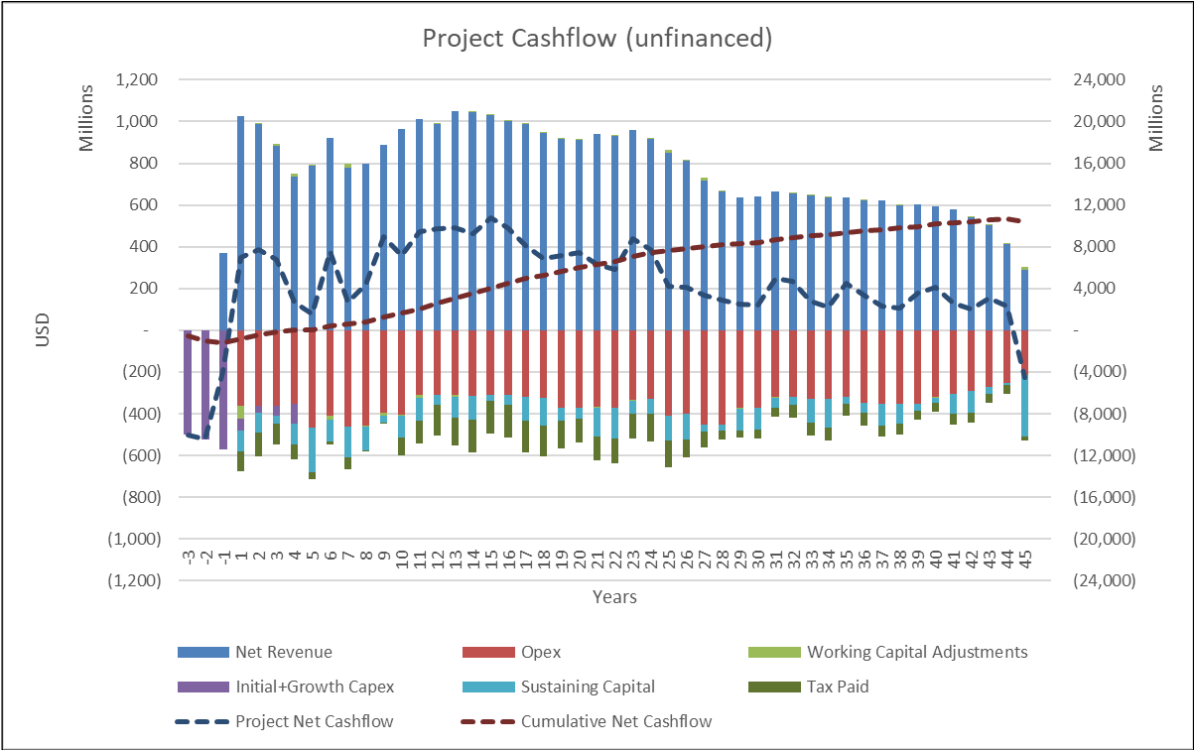
Table 22-10: Altar PEA Economic Results

Description	Unit	Value
Net Revenue	M USD	35,725
Total Opex	M USD	(15,754)
Operating Margin	M USD	19,972
Operating Margin Ratio	%	55.9%
Initial+ Growth Capex	USD	(1,821)
Sustaining Capital	USD	(3,830)
Tax Paid	USD	(3,689)
Free Cashflow	USD	10,632
<u>Before Tax</u>		
Free Cash Flow	M USD	14,320
NPV @ 8%	M USD	2,852
NPV @ 10%	M USD	2,002
NPV @ 12%	M USD	1,409
IRR	%	24.5%
<u>After Tax</u>		
Free Cash Flow	M USD	10,632
NPV @ 8%	M USD	2,009
NPV @ 10%	M USD	1,358
NPV @ 12%	M USD	904
IRR	%	20.5%
Payback	Year	4.0

Source: SRK, 2025

The results indicate that, at an average concentrate price of US\$4.35/lb-Cu, the operation returns an after-tax NPV at 8% of US\$2,009 million.

A summary of the economic results and back-up chart information for charts within this section are presented on an annual basis in Figure 22-7, Table 22-2, and Table 22-12.



Source: SRK, 2025

Figure 22-7: Altar PEA Annual Cashflow Summary

Table 22-11: Altar PEA Annual Production Summary

Period	OP Waste (Mt)	Open Pit RoM (Mt)	UG Waste (Mt)	UG RoM (Mt)	Process Feed (Mt)	Copper Concentrate (Mt)	Free Cashflow (MUS\$)
-3	-	-	-	-	-	-	(501.8)
-2	47.9	7.1	-	-	-	-	(522.7)
-1	55.6	14.4	-	-	8.2	-	(198.1)
1	56.3	28.7	0.2	-	21.9	-	355.1
2	52.2	32.8	0.2	-	22.0	-	390.5
3	50.8	34.2	0.3	-	21.9	-	345.4
4	46.9	34.3	0.8	-	21.9	-	136.5
5	30.7	36.9	0.6	2.2	21.9	-	108.1
6	0.3	32.6	0.5	4.4	22.0	-	388.4
7	-	1.6	0.3	8.8	21.9	-	140.2
8	-	-	0.0	13.2	21.9	-	222.4
9	-	-	-	17.6	21.9	-	449.5
10	-	-	-	19.8	22.0	-	363.3
11	-	-	-	22.0	21.9	-	475.6
12	-	-	-	22.0	21.9	-	489.3
13	-	-	-	22.0	21.9	-	496.6
14	-	-	-	22.0	22.0	-	466.3
15	-	-	-	22.0	21.9	-	541.1
16	-	-	-	22.0	21.9	-	495.1
17	-	-	0.0	22.0	21.9	-	407.5
18	-	-	0.2	22.0	22.0	-	348.3
19	-	-	0.2	22.5	21.9	-	360.6
20	-	-	0.2	21.9	21.9	-	376.8
21	-	-	0.2	20.7	21.9	-	319.0
22	-	-	0.2	20.6	22.0	-	298.9
23	-	-	0.4	22.0	21.9	-	445.7
24	-	-	0.3	21.6	21.9	-	392.2
25	-	-	0.2	21.6	21.9	-	214.8
26	-	-	0.0	21.8	22.0	-	207.3
27	-	-	-	22.7	21.9	-	172.9
28	-	-	-	22.4	21.9	-	149.1
29	-	-	-	22.8	21.9	-	126.6
30	-	-	-	22.7	22.0	-	124.8
31	-	-	-	22.2	21.9	-	252.3
32	-	-	-	22.0	21.9	-	238.9
33	-	-	0.1	22.0	21.9	-	145.2
34	-	-	0.3	22.0	22.0	-	115.5
35	-	-	0.1	21.2	21.9	-	226.9
36	-	-	-	21.2	21.9	-	169.4
37	-	-	-	21.8	21.9	-	117.2
38	-	-	-	22.5	22.0	-	107.1
39	-	-	-	22.3	21.9	-	179.7
40	-	-	-	22.7	21.9	-	207.1
41	-	-	-	18.1	21.9	-	132.1
42	-	-	-	13.5	22.0	-	102.6
43	-	-	-	8.7	21.9	-	158.6
44	-	-	-	2.4	21.9	-	117.1
45	-	-	-	0.2	18.3	-	(223.6)
Total	340.9	222.6	5.4	768.2	990.8	-	10,631.6

Source: SRK, 2025

Table 22-12: Altar PEA Annual Cashflow Summary

Model Year	Num#		(3)	(2)	(1)	1	2	3	4	5	6	7	8	9	10	11	12	13
Project Returns (Unfinanced)																		
Net Revenue	USD	35,725,325,401	-	-	370,885,198	1,026,168,721	987,600,742	882,041,264	738,392,654	788,098,519	923,936,366	779,869,521	797,508,266	890,317,933	962,640,232	1,013,774,128	986,608,929	1,048,128,131
OP Mining Cost ¹	USD	1,068,916,698	-	-	-	179,181,587	180,095,548	179,933,674	172,234,738	143,478,157	82,655,122	27,396,264	10,874,999	5,374,999	2,700,003	-	-	-
BC Mining Cost ¹	USD	6,509,944,358	-	-	-	-	-	-	-	111,731,835	129,601,673	246,620,642	266,454,303	210,234,435	217,385,661	130,105,761	130,105,746	130,105,750
Processing Cost ¹	USD	6,809,458,404	-	-	-	151,767,000	152,182,800	151,767,000	151,767,000	151,767,000	152,182,800	151,767,000	151,767,000	151,767,000	152,182,800	151,767,000	151,767,000	151,767,000
G&A Cost ¹	USD	1,365,198,313	-	-	-	-	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740
Working Capital Adjustments	USD	-	-	-	-	(63,483,032)	3,828,165	9,411,789	12,598,065	2,224,120	(15,504,586)	18,069,713	(1,283,298)	(13,474,521)	(6,033,868)	(12,259,246)	2,455,744	(5,659,327)
Initial+Growth Capex	USD	(1,820,954,321)	(501,797,278)	(522,660,982)	(569,025,307)	(53,882,848)	(32,504,383)	(48,379,008)	(92,704,515)	-	-	-	-	-	-	-	-	-
Sustaining Capital	USD	(3,830,479,906)	-	-	-	(99,740,200)	(89,357,200)	(33,971,000)	(95,864,450)	(209,834,103)	(104,410,605)	(142,745,237)	(110,147,160)	(26,261,172)	(102,327,977)	(104,536,450)	(42,406,613)	(95,938,227)
Tax Paid	USD	(3,688,748,018)	-	-	-	(92,721,299)	(116,424,237)	(101,649,082)	(71,595,456)	(35,034,600)	(20,824,473)	(58,860,968)	(4,245,347)	(3,366,146)	(88,352,793)	(109,190,418)	(145,183,243)	(137,698,621)
Net Cashflow	USD	10,631,625,383	(501,797,278)	(522,660,982)	(198,140,109)	355,055,014	390,526,999	345,415,549	136,486,819	108,139,204	388,419,367	140,211,381	222,398,418	449,501,920	363,319,390	475,577,513	489,264,331	496,621,466
Cumulative Cashflow	USD		(501,797,278)	(1,024,458,260)	(1,222,598,370)	(867,543,355)	(477,016,357)	(131,600,807)	4,886,011	113,025,215	501,444,582	641,655,964	864,054,381	1,313,556,302	1,676,875,692	2,152,453,205	2,641,717,536	3,138,339,002
Mine Plan																		
Open Pit Ore Mined	tonnes	222,593,112	-	7,051,433	14,420,045	28,721,028	32,791,790	34,163,483	34,293,570	36,943,374	32,602,632	1,605,757	-	-	-	-	-	-
Open Pit Waste Mined	tonnes	340,864,150	-	47,948,567	55,579,955	56,278,972	52,208,210	50,836,517	46,949,231	30,735,002	327,696	-	-	-	-	-	-	-
Open Pit ROM Cu Grade	%	0.44%	-	0.32%	0.47%	0.55%	0.50%	0.45%	0.38%	0.39%	0.44%	0.52%	-	-	-	-	-	-
Open Pit ROM Au Grade	g/t	0.07	-	0.08	0.09	0.08	0.08	0.06	0.07	0.05	0.08	0.08	-	-	-	-	-	-
Open Pit ROM Ag Grade	g/t	1.18	-	1.53	1.55	1.57	1.34	1.27	0.86	1.06	0.82	0.73	-	-	-	-	-	-
Block Cave Ore Mined	tonnes	768,225,219	-	-	-	-	-	-	-	2,200,001	4,400,000	8,800,001	13,200,001	17,600,001	19,799,998	22,000,002	21,999,998	21,999,999
Block Cave Waste Mined	tonnes	5,383,633	-	-	-	202,333	201,780	313,199	778,247	563,622	540,520	276,055	2,303	-	-	-	-	-
Block Cave ROM Cu Grade	%	0.50%	-	-	-	-	-	-	-	0.58%	0.61%	0.56%	0.56%	0.56%	0.58%	0.59%	0.57%	0.61%
Block Cave ROM Au Grade	g/t	0.07	-	-	-	-	-	-	-	0.22	0.26	0.19	0.17	0.16	0.15	0.14	0.13	0.13
Block Cave ROM Ag Grade	g/t	1.61	-	-	-	-	-	-	-	1.80	1.95	1.86	1.87	1.80	1.82	1.76	1.66	1.80
Ore Processed	tonnes	990,818,330	-	-	8,212,500	21,900,000	21,960,000	21,900,000	21,900,000	21,900,000	21,960,000	21,900,000	21,900,000	21,900,000	21,960,000	21,900,000	21,900,000	21,900,000
Processing Feed Cu Grade	%	0.49%	-	-	0.63%	0.64%	0.62%	0.56%	0.46%	0.49%	0.55%	0.46%	0.46%	0.51%	0.55%	0.59%	0.57%	0.61%
Processing Feed Au Grade	g/t	0.07	-	-	0.10	0.09	0.08	0.07	0.08	0.07	0.12	0.12	0.12	0.14	0.14	0.14	0.13	0.13
Processing Feed Ag Grade	g/t	1.52	-	-	1.93	1.75	1.54	1.41	0.87	1.24	1.16	1.26	1.55	1.65	1.75	1.76	1.66	1.80
Processing Profile																		
Recovered Cu	lb	9,420,318,711	-	-	101,581,119	278,336,843	266,039,338	237,470,737	192,037,143	208,614,655	233,910,397	193,270,695	195,482,649	217,689,428	236,796,392	251,589,454	245,255,372	264,374,555
Recovered Au	oz	1,242,919	-	-	15,147	34,295	33,525	26,989	32,776	28,424	49,749	46,532	49,716	55,544	57,663	55,888	53,951	51,854
Recovered Ag	oz	24,158,822	-	-	254,446	616,755	543,146	495,994	306,122	435,693	410,334	444,581	544,702	582,255	616,776	620,393	585,560	633,331
Cu Recovery	%	87.76%	-	-	89.30%	89.51%	89.14%	88.34%	87.01%	87.50%	88.22%	87.04%	87.11%	87.76%	88.30%	88.75%	88.56%	89.11%
Au Recovery	%	57.00%	-	-	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%
Ag Recovery	%	50.00%	-	-	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
Payable Cu	lb	9,057,998,761	-	-	97,674,153	267,631,580	255,807,056	228,337,247	184,651,099	200,591,014	224,913,844	185,837,207	187,964,086	209,316,758	227,688,839	241,912,936	235,822,473	254,206,303
Payable Au	oz	720,856	-	-	9,450	18,684	18,603	13,669	22,005	16,723	36,629	35,692	38,751	43,334	44,381	41,777	40,195	37,025
Payable Ag	oz	8,324,323	-	-	83,516	148,399	95,483	96,403	-	84,659	16,734	119,365	215,764	215,951	218,320	197,045	172,870	188,470
Revenue																		
Cu Price	USD/lb	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35
Au Price	USD/oz	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00
Ag Price	USD/oz	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00
Payable Cu Revenue	USD	39,402,294,610	-	-	424,882,564	1,164,197,371	1,112,760,692	993,267,025	803,232,280	872,570,911	978,375,220	808,391,850	817,643,774	910,527,897	990,446,448	1,052,321,272	1,025,827,756	1,105,797,417
Payable Au Revenue	USD	1,802,140,150	-	-	23,624,540	46,709,038	46,507,420	34,173,393	55,011,658	41,807,267	91,572,520	89,229,240	96,878,582	108,335,330	110,952,908	104,441,336	100,487,898	92,562,706
Payable Ag Revenue	USD	224,756,712	-	-	2,254,923	4,006,778	2,578,053	2,602,893	-	2,285,782	451,820	3,222,865	5,825,635	5,830,664	5,894,639	5,320,212	4,667,499	5,088,686
Less: TC, RC , and Penalties	USD	(2,080,879,473)	-	-	(43,398,089)	(81,249,965)	(71,440,696)	(56,714,110)	(45,890,125)	(48,395,023)	(54,331,376)	(44,977,147)	(45,555,327)	(47,681,095)	(50,188,864)	(48,007,485)	(46,786,052)	(50,396,556)
Less: San Juan Mine Mouth Tax	USD	(972,006,768)	-	-	(8,062,078)	(29,456,887)	(28,146,680)	(24,646,866)	(19,817,604)	(21,495,058)	(25,916,562)	(21,122,994)	(21,690,770)	(24,757,374)	(27,147,670)	(28,869,250)	(27,972,903)	(30,038,558)
Less: Freight	USD	(2,257,496,710)	-	-	(24,343,024)	(66,700,982)	(63,753,993)	(56,907,778)	(46,020,016)	(49,992,671)	(56,054,574)	(46,315,626)	(46,845,701)	(52,167,361)	(56,746,177)	(60,291,205)	(58,773,298)	(63,355,042)
Less: Royalties	USD	(393,483,120)	-	-	(4,073,639)	(11,336,632)	(10,904,055)	(9,733,292)	(8,123,538)	(8,682,689)	(10,160,682)	(8,558,668)	(8,747,927)	(9,770,128)	(10,571,051)	(11,140,753)	(10,841,971)	(11,530,523)
Net Revenue	USD	35,725,325,401	-	-	370,885,198	1,026,168,721	987,600,742	882,041,264	738,392,654	788,098,519	923,936,366	779,869,521	797,508,266	890,317,933	962,640,232	1,013,774,128	986,608,929	1,048,128,131
Capital Profile																		
Initial Open Pit Capex	USD	349,836,000	65,420,000	122,573,000	161,843,000	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Processing Capex	USD	578,564,166	198,912,451	161,492,732	218,158,982	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Infrastructure Capex	USD	665,083,402	237,464,827	238,595,250	189,023,325	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth Block Cave Capex	USD	227,470,754	-	-	-	53,882,848	32,504,383	48,379,008	92,704,515	-	-	-	-	-	-	-	-	-
Total Sustaining Capex	USD	3,830,479,906	-	-	-	99,740,200	89,357,200	33,971,000	95,864,450	209,834,103	104,410,605	142,745,237	110,147,160	26,261,172	102,327,977	104,536,450	42,406,613	95,938,227
Total Capex	USD	5,651,434,227	501,797,278	522,660,982	569,025,307	153,623,048	121,861,583	82,350,008	188,568,965	209,834,103	104,410,605	142,745,237	110,147,160	26,261,172	102,327,977	104,536,450	42,406,613	95,938,227
Cumulative Capex	USD		501,797,278	1,024,458,260	1,593,483,568	1,747,106,615	1,868,968,198	1,951,318,206	2,139,887,171	2,349,721,275	2,454,131,880	2,596,877,118	2,707,024,278	2,733,285,450	2,835,613,427	2,940,149,877	2,982,556,490	3,078,494,717

Model Year	Num#		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Project Returns (Unfinanced)																			
Net Revenue	USD	35,725,325,401	1,047,154,448	1,033,272,929	1,003,281,950	986,611,043	946,042,480	916,140,343	910,911,428	941,298,330	933,410,791	961,642,180	917,834,355	853,089,095	811,511,758	719,756,835	666,698,829	636,755,218	642,666,433
OP Mining Cost ¹	USD	1,068,916,698	-	-	-	-	-	-	5,378	1,550,828	1,749,518	-	357,913	397,763	232,046	-	-	-	-
BC Mining Cost ¹	USD	6,509,944,358	130,105,720	130,105,738	130,105,746	138,124,649	139,241,340	188,911,322	187,652,731	183,072,093	184,014,119	147,960,693	141,869,646	222,938,959	215,951,296	270,394,219	270,177,547	191,891,401	188,321,312
Processing Cost ¹	USD	6,809,458,404	152,182,800	151,767,000	151,767,000	151,767,000	152,182,800	151,767,000	151,767,000	151,767,000	152,182,800	151,767,000	151,767,000	151,767,000	152,182,800	151,767,000	151,767,000	151,767,000	152,182,800
G&A Cost ¹	USD	1,365,198,313	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740
Working Capital Adjustments	USD	-	311,725	1,031,770	2,651,983	2,135,361	3,967,184	6,512,769	266,783	(3,128,021)	945,737	(5,865,715)	3,528,200	12,573,612	3,388,221	12,715,544	4,880,406	(3,691,511)	(717,888)
Initial+Growth Capex	USD	(1,820,954,321)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sustaining Capital	USD	(3,830,479,906)	(110,890,676)	(20,092,412)	(41,381,036)	(107,343,987)	(130,318,839)	(54,472,209)	(48,766,055)	(135,973,027)	(142,603,164)	(59,042,157)	(68,208,438)	(119,557,978)	(120,269,641)	(27,616,097)	(26,795,921)	(101,395,565)	(102,520,303)
Tax Paid	USD	(3,688,748,018)	(157,645,994)	(160,857,877)	(157,288,940)	(153,624,095)	(149,600,583)	(136,541,482)	(115,877,688)	(116,448,270)	(124,605,060)	(120,992,958)	(136,614,476)	(125,878,624)	(88,576,662)	(79,485,036)	(43,411,573)	(31,040,493)	(43,812,693)
Net Cashflow	USD	10,631,625,383	466,303,243	541,143,931	495,053,471	407,548,933	348,328,362	360,623,358	376,771,619	319,021,351	298,864,127	445,675,917	392,207,342	214,784,643	207,349,794	172,872,288	149,089,453	126,631,507	124,773,696
Cumulative Cashflow	USD		3,604,642,245	4,145,786,176	4,640,839,646	5,048,388,579	5,396,716,941	5,757,340,299	6,134,111,919	6,453,133,270	6,751,997,396	7,197,673,313	7,589,880,655	7,804,665,299	8,012,015,092	8,184,887,381	8,333,976,833	8,460,608,340	8,585,382,036
Mine Plan																			
Open Pit Ore Mined	tonnes	222,593,112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Pit Waste Mined	tonnes	340,864,150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Pit ROM Cu Grade	%	0.44%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Pit ROM Au Grade	g/t	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Pit ROM Ag Grade	g/t	1.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Block Cave Ore Mined	tonnes	768,225,219	21,999,991	21,999,996	21,999,998	21,999,999	22,000,001	22,530,574	21,895,698	20,659,338	20,560,386	22,048,194	21,613,670	21,581,790	21,774,363	22,657,815	22,441,618	22,818,494	22,710,008
Block Cave Waste Mined	tonnes	5,383,633	-	-	-	23,207	180,011	227,457	197,306	158,025	249,294	403,313	340,474	203,255	16,643	-	-	-	-
Block Cave ROM Cu Grade	%	0.50%	0.61%	0.61%	0.60%	0.59%	0.57%	0.56%	0.57%	0.60%	0.62%	0.62%	0.59%	0.56%	0.53%	0.47%	0.43%	0.41%	0.41%
Block Cave ROM Au Grade	g/t	0.07	0.13	0.13	0.11	0.11	0.10	0.08	0.06	0.04	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04
Block Cave ROM Ag Grade	g/t	1.61	1.83	1.89	1.88	1.85	1.80	1.84	1.87	1.97	1.92	1.82	1.71	1.47	1.29	1.17	1.20	1.22	1.39
Ore Processed	tonnes	990,818,330	21,960,000	21,900,000	21,900,000	21,900,000	21,960,000	21,900,000	21,900,000	21,900,000	21,960,000	21,900,000	21,900,000	21,900,000	21,960,000	21,900,000	21,900,000	21,900,000	21,960,000
Processing Feed Cu Grade	%	0.49%	0.61%	0.61%	0.60%	0.59%	0.57%	0.56%	0.57%	0.60%	0.60%	0.62%	0.59%	0.55%	0.53%	0.47%	0.43%	0.41%	0.41%
Processing Feed Au Grade	g/t	0.07	0.13	0.13	0.11	0.11	0.10	0.08	0.06	0.04	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04
Processing Feed Ag Grade	g/t	1.52	1.83	1.89	1.88	1.85	1.80	1.84	1.87	1.96	1.87	1.82	1.70	1.47	1.28	1.17	1.20	1.22	1.39
Processing Profile																			
Recovered Cu	lb	9,420,318,711	264,148,831	260,882,583	256,775,719	254,388,988	244,390,329	241,119,390	244,915,918	258,413,618	258,786,431	266,449,608	254,325,809	236,592,095	223,458,369	196,596,822	179,266,186	170,527,121	171,951,781
Recovered Au	oz	1,242,919	51,634	50,294	45,807	42,347	39,755	32,461	24,775	18,040	13,692	11,810	11,902	13,271	15,201	15,438	17,738	17,553	17,363
Recovered Ag	oz	24,158,822	645,549	665,183	663,041	652,062	635,799	647,550	659,511	689,153	660,677	639,122	599,859	516,141	453,293	411,230	423,128	430,368	489,847
Cu Recovery	%	87.76%	89.08%	89.01%	88.90%	88.83%	88.52%	88.45%	88.55%	88.94%	88.93%	89.17%	88.82%	88.31%	87.91%	87.14%	86.62%	86.36%	86.39%
Au Recovery	%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%
Ag Recovery	%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
Payable Cu	lb	9,057,998,761	253,989,261	250,848,637	246,899,730	244,604,796	234,990,701	231,845,567	235,496,075	248,474,632	248,833,107	256,201,546	244,544,047	227,492,399	214,863,817	189,035,406	172,371,332	163,968,386	165,338,251
Payable Au	oz	720,856	36,818	35,661	31,404	28,078	26,047	18,937	11,038	3,546	-	-	-	1	2,667	4,411	7,683	7,988	7,718
Payable Ag	oz	8,324,323	201,067	226,197	230,966	224,003	224,565	241,820	247,393	254,322	225,219	190,769	171,906	118,029	77,280	80,417	121,478	143,423	200,505
Revenue																			
Cu Price	USD/lb	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35
Au Price	USD/oz	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00
Ag Price	USD/oz	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00
Payable Cu Revenue	USD	39,402,294,610	1,104,853,285	1,091,191,573	1,074,013,825	1,064,030,864	1,022,209,548	1,008,528,217	1,024,407,924	1,080,864,651	1,082,424,016	1,114,476,726	1,063,766,604	989,591,937	934,657,602	822,304,017	749,815,295	713,262,479	719,221,392
Payable Au Revenue	USD	1,802,140,150	92,045,418	89,153,261	78,510,960	70,195,086	65,118,119	47,342,484	27,593,775	8,864,502	-	-	-	2,095	6,668,165	11,027,982	19,207,562	19,969,510	19,296,166
Payable Ag Revenue	USD	224,756,712	5,428,811	6,107,320	6,236,082	6,048,077	6,063,258	6,529,140	6,679,604	6,866,690	6,080,911	5,150,751	4,641,461	3,186,787	2,086,571	2,171,272	3,279,895	3,872,419	5,413,627
Less: TC, RC , and Penalties	USD	(2,080,879,473)	(50,358,855)	(49,745,757)	(54,320,256)	(53,794,734)	(51,679,473)	(52,639,968)	(53,420,503)	(56,312,638)	(56,357,840)	(56,146,768)	(53,586,926)	(49,829,460)	(47,062,222)	(41,423,554)	(37,817,974)	(35,992,392)	(36,319,013)
Less: San Juan Mine Mouth Tax	USD	(972,006,768)	(29,993,576)	(29,548,182)	(28,580,208)	(28,041,369)	(26,685,860)	(25,739,786)	(25,604,814)	(26,655,486)	(26,398,929)	(27,351,411)	(25,891,624)	(23,735,531)	(22,325,019)	(19,269,382)	(17,481,533)	(16,480,350)	(16,662,881)
Less: Freight	USD	(2,257,496,710)	(63,300,949)	(62,518,222)	(61,534,048)	(60,962,089)	(58,565,998)	(57,782,146)	(58,691,950)	(61,926,556)	(62,015,897)	(63,852,310)	(60,946,948)	(56,697,219)	(53,549,837)	(47,112,703)	(42,959,568)	(40,865,328)	(41,206,735)
Less: Royalties	USD	(393,483,120)	(11,519,687)	(11,367,064)	(11,044,406)	(10,864,793)	(10,417,115)	(10,097,599)	(10,052,608)	(10,402,832)	(10,321,471)	(10,634,807)	(10,148,211)	(9,429,514)	(8,963,501)	(7,940,797)	(7,344,848)	(7,011,120)	(7,076,122)
Net Revenue	USD	35,725,325,401	1,047,154,448	1,033,272,929	1,003,281,950	986,611,043	946,042,480	916,140,343	910,911,428	941,298,330	933,410,791	961,642,180	917,834,355	853,089,095	811,511,758	719,756,835	666,698,829	636,755,218	642,666,433
Capital Profile																			
Initial Open Pit Capex	USD	349,836,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Processing Capex	USD	578,564,166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Infrastructure Capex	USD	665,083,402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth Block Cave Capex	USD	227,470,754	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Sustaining Capex	USD	3,830,479,906	110,890,676	20,092,412	41,381,036	107,343,987	130,318,839	54,472,209	48,766,055	135,973,027	142,603,164	59,042,157	68,208,438	119,557,978	120,269,641	27,616,097	26,795,921	101,395,565	102,520,303
Total Capex	USD	5,651,434,227	110,890,676	20,092,412	41,381,036	107,343,987	130,318,839	54,472,209	48,766,055	135,973,027	142,603,164	59,042,157	68,208,438	119,557,978	120,269,641	27,616,097	26,795,921	101,395,565	102,520,303
Cumulative Capex	USD		3,189,385,392	3,209,477,804	3,250,858,840	3													

Model Year	Num#		31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Project Returns (Unfinanced)																	
Net Revenue	USD	35,725,325,401	665,111,388	656,675,125	647,021,470	636,436,141	635,288,842	620,477,787	622,879,062	599,848,816	603,457,725	593,850,240	579,704,755	540,490,281	501,135,392	411,025,653	287,873,676
OP Mining Cost ¹	USD	1,068,916,698	-	-	-	-	813,863	904,241	129,354	-	-	-	4,732,192	10,615,027	16,456,107	24,331,153	22,716,225
BC Mining Cost ¹	USD	6,509,944,358	136,476,586	134,988,343	143,560,876	144,165,020	133,747,684	164,728,383	168,214,086	172,070,180	171,826,575	138,763,461	118,366,345	96,960,670	75,196,861	44,673,355	33,021,597
Processing Cost ¹	USD	6,809,458,404	151,767,000	151,767,000	151,767,000	152,182,800	151,767,000	151,767,000	151,767,000	152,182,800	151,767,000	151,767,000	151,767,000	152,182,800	151,767,000	151,767,000	127,136,604
G&A Cost ¹	USD	1,365,198,313	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740	30,337,740
Working Capital Adjustments	USD	-	(6,418,655)	667,897	1,532,730	1,128,492	(805,298)	3,905,047	(23,689)	2,507,556	(472,743)	(1,849,438)	(4,025)	2,462,841	2,221,571	6,455,066	16,296,774
Initial+Growth Capex	USD	(1,820,954,321)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sustaining Capital	USD	(3,830,479,906)	(40,642,149)	(34,288,687)	(111,803,414)	(132,921,496)	(31,124,173)	(45,670,673)	(105,164,023)	(91,289,033)	(26,906,165)	(20,144,526)	(92,216,611)	(99,312,887)	(25,422,995)	(8,385,176)	(290,400,000)
Tax Paid	USD	(3,688,748,018)	(47,159,615)	(67,088,575)	(65,926,570)	(62,430,015)	(59,771,027)	(61,593,650)	(50,013,490)	(49,346,268)	(42,435,308)	(43,853,363)	(50,146,520)	(50,968,385)	(45,553,614)	(40,849,793)	(24,162,635)
Net Cashflow	USD	10,631,625,383	252,309,644	238,872,677	145,158,599	115,527,562	226,922,057	169,381,147	117,229,679	107,130,350	179,712,194	207,134,711	132,134,323	102,575,612	158,622,645	117,136,501	(223,604,352)
Cumulative Cashflow	USD		8,837,691,680	9,076,564,357	9,221,722,956	9,337,250,517	9,564,172,574	9,733,553,721	9,850,783,400	9,957,913,750	10,137,625,943	10,344,760,654	10,476,894,977	10,579,470,589	10,738,093,234	10,855,229,735	10,631,625,383
Mine Plan																	
Open Pit Ore Mined	tonnes	222,593,112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Pit Waste Mined	tonnes	340,864,150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Pit ROM Cu Grade	%	0.44%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Pit ROM Au Grade	g/t	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Pit ROM Ag Grade	g/t	1.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Block Cave Ore Mined	tonnes	768,225,219	22,246,566	22,000,002	21,999,999	21,999,997	21,248,910	21,176,608	21,796,517	22,527,118	22,303,749	22,708,556	18,114,247	13,467,979	8,735,114	2,435,077	172,850
Block Cave Waste Mined	tonnes	5,383,633	-	-	130,568	316,483	59,537	-	-	-	-	-	-	-	-	-	-
Block Cave ROM Cu Grade	%	0.50%	0.43%	0.42%	0.42%	0.41%	0.41%	0.40%	0.41%	0.39%	0.40%	0.39%	0.38%	0.39%	0.40%	0.39%	0.31%
Block Cave ROM Au Grade	g/t	0.07	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Block Cave ROM Ag Grade	g/t	1.61	1.60	1.58	1.64	1.65	1.61	1.54	1.59	1.59	1.45	1.35	1.19	0.97	0.94	0.98	0.81
Ore Processed	tonnes	990,818,330	21,900,000	21,900,000	21,900,000	21,960,000	21,900,000	21,900,000	21,900,000	21,960,000	21,900,000	21,900,000	21,900,000	21,960,000	21,900,000	21,900,000	18,345,830
Processing Feed Cu Grade	%	0.49%	0.43%	0.42%	0.42%	0.41%	0.41%	0.40%	0.41%	0.39%	0.40%	0.39%	0.38%	0.35%	0.32%	0.26%	0.21%
Processing Feed Au Grade	g/t	0.07	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.04	0.04	0.05	0.05
Processing Feed Ag Grade	g/t	1.52	1.60	1.58	1.64	1.65	1.60	1.54	1.59	1.59	1.45	1.35	1.22	0.99	0.97	0.93	0.86
Processing Profile																	
Recovered Cu	lb	9,420,318,711	178,040,127	174,728,962	174,649,699	172,055,654	171,805,308	167,750,674	169,744,481	163,630,455	165,565,470	163,346,877	159,817,293	146,286,065	133,393,179	104,066,203	69,999,891
Recovered Au	oz	1,242,919	17,341	17,095	14,433	13,639	13,722	13,522	11,485	10,543	10,282	9,800	9,378	14,223	16,997	21,062	18,260
Recovered Ag	oz	24,158,822	561,808	557,368	577,113	581,572	562,588	540,583	560,462	559,683	511,867	475,142	429,201	349,925	339,818	326,875	253,216
Cu Recovery	%	87.76%	86.59%	86.49%	86.49%	86.39%	86.40%	86.28%	86.34%	86.14%	86.21%	86.14%	86.04%	85.61%	85.23%	84.31%	83.66%
Au Recovery	%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%
Ag Recovery	%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
Payable Cu	lb	9,057,998,761	171,192,429	168,008,617	167,932,403	165,438,129	165,197,412	161,298,725	163,215,847	157,336,976	159,197,567	157,064,304	153,670,474	140,659,678	128,262,672	100,063,657	67,307,588
Payable Au	oz	720,856	7,355	7,295	4,637	3,988	4,085	4,113	1,964	1,365	995	638	414	6,018	9,515	15,225	14,334
Payable Ag	oz	8,324,323	262,221	263,353	283,230	292,055	273,492	258,310	274,833	284,343	233,271	200,279	160,278	103,770	115,358	151,763	135,428
Revenue																	
Cu Price	USD/lb	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35
Au Price	USD/oz	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00
Ag Price	USD/oz	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00
Payable Cu Revenue	USD	39,402,294,610	744,687,068	730,837,483	730,505,951	719,655,861	718,608,740	701,649,455	709,988,936	684,415,845	692,509,416	683,229,724	668,466,561	611,869,598	557,942,624	435,276,907	292,788,006
Payable Au Revenue	USD	1,802,140,150	18,386,552	18,236,952	11,591,388	9,971,122	10,213,485	10,281,994	4,910,195	3,412,468	2,487,813	1,595,839	1,034,617	15,045,100	23,787,507	38,062,384	35,833,814
Payable Ag Revenue	USD	224,756,712	7,079,974	7,110,527	7,647,223	7,885,490	7,384,282	6,974,357	7,420,504	7,677,256	6,298,322	5,407,542	4,327,494	2,801,791	3,114,669	4,097,614	3,656,544
Less: TC, RC , and Penalties	USD	(2,080,879,473)	(37,628,457)	(33,274,153)	(36,909,429)	(36,364,260)	(36,302,896)	(35,442,521)	(35,857,315)	(34,572,305)	(36,106,981)	(35,606,151)	(34,817,675)	(34,944,646)	(34,273,044)	(28,050,243)	(18,909,159)
Less: San Juan Mine Mouth Tax	USD	(972,006,768)	(17,422,744)	(17,134,314)	(16,832,044)	(16,468,962)	(16,444,098)	(15,950,889)	(16,040,860)	(15,262,514)	(15,402,647)	(15,085,799)	(14,617,320)	(13,277,671)	(11,964,143)	(8,928,590)	(5,586,978)
Less: Freight	USD	(2,257,496,710)	(42,665,754)	(41,872,262)	(41,853,268)	(41,231,628)	(41,171,634)	(40,199,977)	(40,677,775)	(39,212,603)	(39,676,312)	(39,144,645)	(38,298,812)	(35,056,172)	(31,966,505)	(24,938,552)	(16,774,860)
Less: Royalties	USD	(393,483,120)	(7,325,251)	(7,229,108)	(7,128,351)	(7,011,482)	(6,999,036)	(6,834,633)	(6,864,623)	(6,609,333)	(6,651,886)	(6,546,270)	(6,390,110)	(5,947,718)	(5,505,718)	(4,493,867)	(3,133,692)
Net Revenue	USD	35,725,325,401	665,111,388	656,675,125	647,021,470	636,436,141	635,288,842	620,477,787	622,879,062	599,848,816	603,457,725	593,850,240	579,704,755	540,490,281	501,135,392	411,025,653	287,873,676
Capital Profile																	
Initial Open Pit Capex	USD	349,836,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Processing Capex	USD	578,564,166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Infrastructure Capex	USD	665,083,402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth Block Cave Capex	USD	227,470,754	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Sustaining Capex	USD	3,830,479,906	40,642,149	34,288,687	111,803,414	132,921,496	31,124,173	45,670,673	105,164,023	91,289,033	26,906,165	20,144,526	92,216,611	99,312,887	25,422,995	8,385,176	290,400,000
Total Capex	USD	5,651,434,227	40,642,149	34,288,687	111,803,414	132,921,496	31,124,173	45,670,673	105,164,023	91,289,033	26,906,165	20,144,526	92,216,611	99,312,887	25,422,995	8,385,176	290,400,000
Cumulative Capex	USD		4,536,384,369	4,570,673,055	4,682,476,470	4,815,397,965	4,846,522,138	4,892,192,811	4,997,356,834	5,088,645,867	5,115,552,032	5,135,696,559	5,227,913,169	5,327,226,056	5,352,649,051	5,361,034,227	5,651,434,227

Source: SRK, 2025

Notes:

1. Operating costs incurred in year 3 are considered pre-production and are included in Initial Capex.

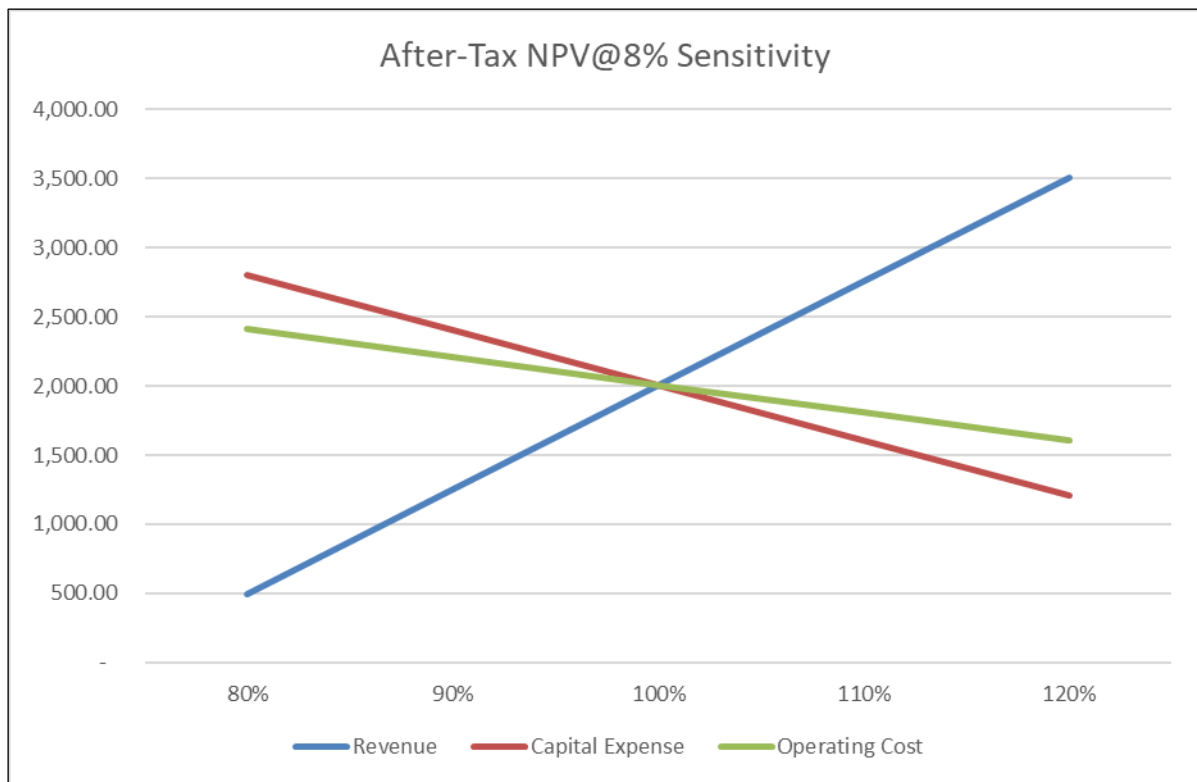
22.4 Sensitivity Analysis

Sensitivity analysis for the key economic parameters is shown in Table 22-13 (Figure 22-8). The Project is nominally most sensitive to market prices (revenues) followed by capital costs.

Table 22-13: Altar PEA Sensitivity Table

NPV @ 8%	80%	90%	100%	110%	120%
Revenue	498	1,257	2,009	2,759	3,509
Capital Expense	2,806	2,407	2,009	1,610	1,211
Operating Cost	2,411	2,210	2,009	1,807	1,605

Source: SRK, 2025



Source: SRK, 2025

Figure 22-8: Altar PEA NPV Sensitivity Graph

23 Adjacent Properties

The Altar Project is located in a known mining, advanced exploration, and exploration projects area. The information reported in this section is available in the public domain from the companies listed below. The descriptions of the adjacent properties are not necessarily indicative of the mineralization of the Altar Project.

The three closest mines and / or advanced projects to the Altar Project are all porphyry copper deposits of Miocene age:

1. The operating open pit Los Pelambres mines (Antofagasta PLC and partners) in Chile,
2. El Pachon project, currently owned by Glencore, in Argentina, and the,
3. Los Azules project, currently at FS stage by the McEwen Copper arm of McEwen Mining, in Argentina.

In addition, the early stage exploration Piuquenes copper -gold porphyry project is located immediately north of the Altar Project and has been the object of exploration drilling as recently as 2025.

Figure 23-1 presents the location of adjacent mines and advanced projects in relation to the Altar Project.

The Los Pelambres mine and the El Pachon Project report reserves and resources under the Australian Joint Ore Reserves Committee (JORC) Code. The Los Azules Project reports the resources under the Canadian Institute of Mining and Metallurgy (CIMM) guidelines.

The producing Los Pelambres mine is hosted in a sequence of andesitic lavas, flow breccias and volcanoclastic sediments that have been intruded by small irregular dioritic to granodioritic intrusions, and by an approximately 5 x 2 km quartz diorite stock. A number of related alteration and mineralization events are associated with emplacement of multiple centre(s) of small (~200 m in diameter), vertically zoned bodies of aplite, pegmatite, and hydrothermal breccia within the quartz diorite. Each centre(s) formed a bornite-rich core, grading out through chalcopyrite to pyrite. Hypogene mineralization commenced prior to the cessation of magmatism, taking the form of quartz stockwork veining, potassic alteration and breccia pipes. Late mineralization occurs as pyrite veining with sericite halos. Mineralization in both types is present in veins, with the only disseminated mineralized material being in the alteration halos of these veins. Supergene enrichment is important in Los Pelambres, with five blanket-like zones stacked vertically.

Los Pelambres commenced operation in 1999. Copper concentrate is transported by pipeline 120 km to the coast, where it is dewatered, dried and stored prior to shipment by sea. At the end of 2024, Antofagasta Minerals reported Proven and Probable reserves as 781.5 million tonnes at 0.58% copper, 0.021% molybdenite, and 0.05 g/t gold. In addition, they reported mineral resources (including ore reserves) of 3.34 billion tonnes at 0.51% copper, 0.017% molybdenite, and 0.05 g/t gold in Measured and Indicated and 2.73 billion tonnes at 0.43% copper, 0.016% molybdenite, and 0.05 g/t gold in Inferred (2024 Antofagasta Minerals Annual Report).

El Pachon is a feasibility stage development project. The deposit is located in Argentina, literally meters from the Chilean border. Press reports have indicated that the environmental permit situation at the property is complicated by the presence of cryogenic features on the concessions.

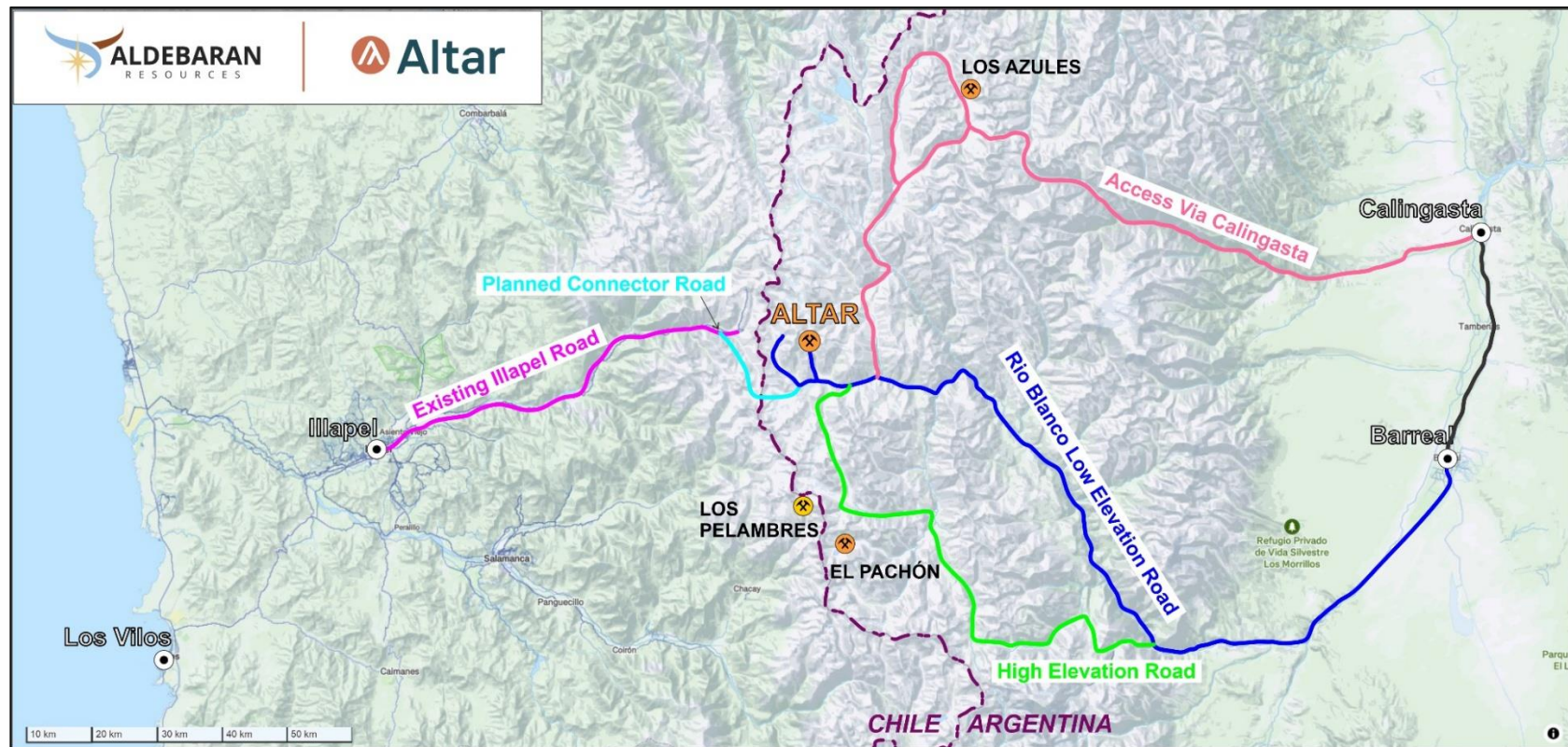
The mineralization at the El Pachon porphyry consists of copper and molybdenum occurring mainly in andesite, diorite, tuff, and a siliceous breccia; the main intrusive phase is a diorite. Some late-stage

intrusions, (Quartz–Biotite–Feldspar Porphyry and Tourmaline Breccias) are less well mineralized and crosscut the mineralized units. Copper is associated with fracture filling, whereas molybdenum is primarily found within quartz veinlets. Approximately 94% of the mineralization lies within the primary zone.

Glencore reported in 2024, Measured and Indicated mineral resources stood at 2.08 billion tonnes averaging 0.50% copper, 0.01% molybdenum and 2.0 g/t silver. Inferred resources were reported at 3.9 billion tonnes at 0.39% copper, 0.01% molybdenum, and 1.5 g/t silver, with no Proven or Probable reserves having been stated (2024 Glencore Annual Report).

The Los Azules Project is a feasibility stage porphyry copper development project located in the cordillera region of San Juan Province, Argentina, near the border with Chile. The mineralization is typical of a porphyry copper system in that the upper part of the system consists of a barren leached cap, which is underlain by a secondary enrichment blanket, and the primary mineralization below the secondary enrichment zone extends to at least 650 m.

In 2025 McEwen Copper press released the results of their Los Azules feasibility study (FS) which includes an updated independent Mineral Resource and a maiden Mineral Reserve estimate, which contains a Mineral Resource of 5.4 B lbs Cu Measured and Indicated (965.5 million tonnes at grade 0.255% Cu) and 20.0 B lbs Cu Inferred (4,239.3 million tonnes at grade 0.214% Cu) (exclusive of Reserves), and a maiden Mineral Reserve of 10.2 B lbs Cu Proven and Probable (1,023.1 million tonnes at grade 0.453% Cu). This study provides an update on the work done for the 2023 Los Azules PEA. Drilling more than 120,000 meters with more than 2.3 M man-hours worked in the last three seasons has upgraded the resource categories to allow us to present a Mineral Reserve in the FS similar to the 1.182 B tonnes of mineable Mineral Resources containing 10.9 B lbs Cu in the 2023 PEA done.



Sources: Aldebaran, 2024; Antofagasta Minerals 2019 Annual Report; Glencore Resource and Reserve Report, December 31, 2020; McEwen Mining, Technical Report, Preliminary Economic Assessment, Update for the Los Azules Project, Argentina, May 31, 2023, for McEwen Mining, website December 2024

Figure 23-1: Location of Adjacent Properties

24 Other Relevant Data and Information

24.1 Additional Processing Routes and Yearly Processing Tonnages

During the course of this study, SRK developed multiple cash flow and production schedules based on varying mining throughputs and processing tonnages. Several options were identified depending on project ownership structure and the economic selling price at the time of project construction.

The following conceptual studies were done independently of the main base case and were not combined or integrated with the economics, mine life and cash flows from mineral reserves of the main study. They are presented here as what-if scenarios for further investigation.

In addition to the base case, SRK generated the following scenarios for evaluation:

24.1.1 Case 1 – SX/EW Plant with Heap Leach Option (using Nuton® Technology)

This scenario evaluates the implementation of a solvent extraction and electrowinning (SX/EW) plant in conjunction with a heap leach operation, utilizing advanced heap leaching technologies such as Nuton® Technology. The mining plan in this case is largely the same as the concentrate base case, with comparable resource extraction strategies and production targets. However, the key distinction lies in the processing and waste management approach, which utilizes a heap leach pad for processing and eliminates the need for a tailings storage facility (TSF).

Heap leaching is a well-established hydrometallurgical process that involves stacking crushed feed onto a lined pad and applying a leaching solution to extract valuable metals. In this case, the use of cutting-edge technologies like Nuton Technology enhances the efficiency of metal recovery from both primary and secondary copper sulphides, potentially improving overall yields and reducing environmental impacts. Nuton Technology is designed to optimize leach performance, particularly for low-grade ores, while minimizing reagent consumption and environmental footprint. In addition to leaching secondary sulphides like chalcocite and covellite, Nuton Technology can also leach primary sulphides like chalcopyrite and bornite. A key component of the Nuton Technology is that it can also leach copper from enargite (an arsenic-bearing copper sulphide) and during the oxidation process, the arsenic precipitates as scorodite in the heap. Scorodite is an arsenic oxide mineral which is inert and not water soluble.

One of the most significant advantages of heap leaching is the reduction in capital expenditures. This reduction is attributed to the simpler infrastructure requirements of heap leaching, as well as avoiding complex engineering and long-term maintenance costs associated with TSFs.

In addition to the capital cost savings, operating costs from heap leaching are projected to be approximately 20% lower than those of the concentrate case. This cost reduction is driven by the lower energy requirements of the SX/EW process compared to traditional concentrate production, as well as the streamlined nature of heap leaching operations. The SX/EW process directly produces high-purity cathode copper, eliminating smelting and refining, which further contributes to cost efficiency and also provides copper in country. A disadvantage to this processing method is that gold and silver are not recovered during heap leaching and therefore no value is realized from these metals.

From an environmental perspective, the heap leach option offers potential benefits, such as a smaller physical footprint and reduced water usage compared to conventional tailings management systems.

However, it is essential to carefully manage potential risks, including the containment of leach solutions and the long-term stability of the heap leach pad.

Overall, this case represents a cost-effective and innovative alternative to traditional concentrate production, leveraging advanced heap leaching technologies to achieve significant capital and operating cost savings while maintaining robust production capabilities. The adoption of this approach could also align with sustainability goals, provided that environmental and regulatory considerations are thoroughly addressed.

24.1.2 Case 2: 60,000 tpd Processed via Concentrator Scenario with Additional Open Pit Material and No Underground Mining

This scenario explores the development of a mining operation producing 60,000 tonnes per day of mineralized material for processing, relying exclusively on open-pit mining methods. Unlike other cases that incorporate underground mining techniques, such as block caving, this scenario assumes that all extractable material will be sourced from open-pit operations.

The initial capital investment required to commence the mine remains consistent with other scenarios, ensuring that the upfront financial commitment does not increase. However, the exclusion of underground mining methods simplifies the operational framework, focusing solely on surface mining activities. This approach leverages the additional open-pit mineralized material, which is expected to sustain production over the life of the mine.

Under optimal conditions, this scenario assumes that the total mineralized material will amount to approximately 1.3 billion tonnes. This resource base is projected to support a mine life of 40 years, providing a steady stream of concentrate production throughout the operation's lifespan. The reliance on open-pit mining methods may also offer operational efficiencies and reduced complexity compared to underground mining, though it is essential to consider potential environmental and regulatory implications associated with surface mining.

24.1.3 Case 3: 60,000 tpd Processed via Concentrator Scenario with Future Expansion to 120,000 tpd or 180,000 tpd Total Processed Material

This scenario evaluates the potential for a phased development approach, starting with an initial production capacity of 60,000 tonnes per day of mineralized material for processing, with the flexibility to expand operations in the future. The expansion options include either adding an additional 60,000 tonnes per day of process production capacity (for a total of 120,000 tonnes per day) or scaling up further to an additional 120,000 tonnes (for a total of 180,000 t per day). This phased approach allows for operational scalability while aligning with market conditions, resource availability, and financial considerations.

In this case, SRK assessed the feasibility of mining over five billion tonnes of mineralized material, leveraging the larger resource base to support both the initial production phase and the subsequent expansions. The mining plan assumes the development of a larger open-pit operation, designed to accommodate the increased material movement and processing requirements associated with higher production capacities.

The initial phase of 60,000 tonnes per day of process material production provides a foundation for the operation, enabling the mine to generate revenue and establish operational efficiencies. This phase is designed to be capital-efficient, focusing on optimizing the initial investment while maintaining

the flexibility to scale up as conditions permit. Once the operation is stabilized and market conditions are favorable, the mine can transition to the expansion phase, either by adding an additional 60,000 tonnes per day process line or by implementing a larger-scale expansion to 120,000 tonnes per day additional capacity.

The economic viability of this scenario is strongly influenced by copper prices. Higher copper prices significantly enhance the profitability of the larger open-pit operation and the increased concentrate production. The ability to process up to 180,000 tonnes per day of mineralized material positions the operation to capitalize on favorable market conditions, maximizing revenue and returns on investment. Additionally, the larger open-pit design allows for economies of scale, reducing unit costs and improving overall operational efficiency.

From a technical perspective, the expansion strategy requires careful planning to ensure that the infrastructure, processing facilities, and logistics can accommodate the increased production volumes. This includes considerations for the design and construction of additional concentrate lines, the expansion of the open pit mine, and the management of waste and tailings. The phased approach also provides an opportunity to incorporate lessons learned from the initial phase into the expansion, optimizing performance and minimizing risks.

Environmental and regulatory considerations are critical in this scenario, particularly given the scale of the operation and the potential impacts of a larger open-pit mine. SRK's evaluation includes strategies to mitigate environmental impacts, such as effective waste management, water conservation, and reclamation planning. These measures are essential to ensure compliance with regulatory requirements and to maintain the social license to operate.

In summary, Case 3 represents a flexible and scalable approach to mine development, starting with a manageable process production capacity of 60,000 tonnes per day and providing the option to expand to either 120,000 or 180,000 tonnes per day total process capacity. This scenario leverages the extensive resource base and the potential for higher copper prices, offering significant economic benefits while requiring careful planning and execution to address technical, environmental, and regulatory challenges.

24.2 Case 1 – SX/EW Plant with Heap Leach Option (using Nuton® Technology):

SRK prepared a cashflow model to evaluate the Case 1 scenario of the Altar Project PEA, the studied scenario includes the installation and operation of the following:

- Site infrastructure to support mining, processing, and waste management operations.
- An open pit mine with a maximum capacity of 220,000 tonnes per day.
- An underground mine with various block caving areas with a maximum combined capacity of 52,000 tonnes per day.
- A heap leach facility to beneficiate the feed from the open pit and the block caves at a feed rate of 60,000 tonnes per day.

The cash flow valuation was prepared on a real basis, and the model was prepared on an annual basis from the resources mined effective date to their exhaustion. This section presents the main assumptions used in the cashflow model and the resulting indicative economics. All results are presented in 2025 U.S. dollars (US\$), unless otherwise stated.

All results presented in this section are on a 100% basis. Technical and cost information is presented on a 100% basis to assist the reader in developing a clear view of the fundamentals of the operation.

As with the capital and operating cost forecasts, the economic analysis is inherently a forward-looking exercise. These estimates rely upon a range of assumptions and forecasts that are subject to change depending upon macroeconomic conditions, operating strategy and new data collected through future operations.

24.2.1 Basic Model Parameters

Key criteria used in the analysis are presented throughout this section. Basic model parameters are summarized in Table 24-1

Table 24-1: Case 1 Model Time Parameters

Description	Value
TEM Time Zero Start Date	Year -3
Open Pit Start Date	Year 1
Open Pit Life (Years)	7
Block Caving Start Date	Year 5
Block Caving Life (Years)	41
Heap Leach Start Date	Year 1
Heap Leach Life (Years)	45
Discount Rate	8.00%

Source: SRK, 2025

24.2.2 External Factors

Exchange Rates

All revenues and costs estimated for the cash flow considered 2025 US Dollars and no considerations of other exchange rates were assumed in the cash flow model.

Pricing

The assumed price for the pure copper is presented in Table 24-2

Table 24-2: Case 1 Assumed Metal Prices

Description	Unit	Value
Cu Price	USD/lb	4.35

Source: SRK, 2025

The metal price above was combined with an estimated freight cost, presented in Table 24-3

Table 24-3: Case 1 Copper Cathode Freight Cost

Description	Unit	Value
Cathode Freight		
Cathode Moisture Content	%	0.00
Freight Charges (FC)	USD/dmt	125.00

Source: SRK, Aldebaran, 2025

Taxes and Royalties

As modeled, the operation is subject to a 25% income tax. All expended capital is subject to depreciation over an 8-year period. Depreciation occurs via a straight-line method. No existing depreciation pools are accounted for in the model.

As the operation is located within the San Juan Province, Argentina, the operation is subject to a governmental royalty (San Juan Mine Mouth Tax) of 3.0% over the net smelter return net of the processing costs. The operation is also subject to an NSR royalty of 1.0% over the net smelter return.

Working Capital

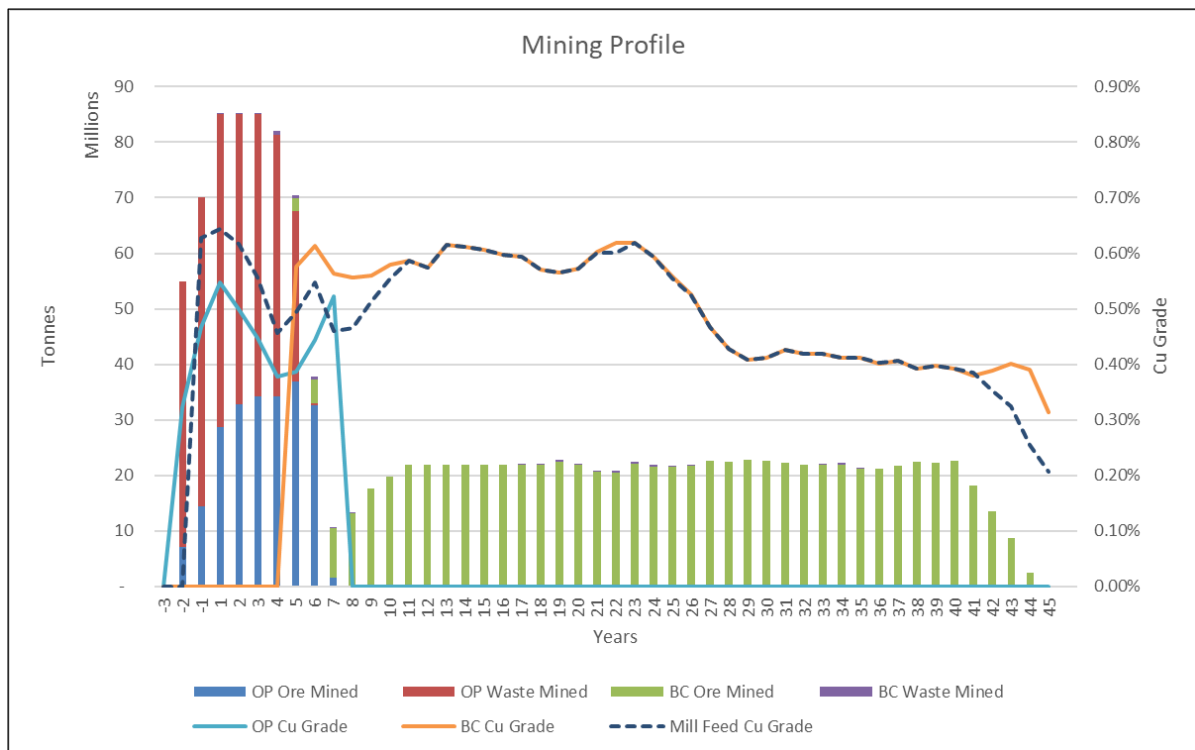
The assumptions used for working capital in this analysis are as follows:

- Accounts Receivable (A/R): 30-day delay
- Accounts Payable (A/P): 30-day delay
- Zero opening balance for A/R and A/P

24.2.3 Technical Factors

Mining Profile

The modeled mining profile was developed by SRK for the Case 1 production plan. The details of mining profile are presented previously in this report. No modifications were made to the profile for use in the economic model. The modeled profile is presented in Figure 24-1.



Source: SRK, 2025

Figure 24-1: Altar Case 1 Mining Profile

A summary of the modeled open pit LoM mining profile is presented in Table 24-5.

Table 24-4 and a summary of the modeled block caving mining profile is presented in Table 24-5.

Table 24-4: Altar Case 1 Open Pit Mining Summary

Description	Unit	Value
Total Mineralized Material Mined	Mtonnes	222.6
Total Waste Mined	Mtonnes	340.9
Total Material Mined	Mtonnes	563.5
LoM Strip Ratio	Num#	1.53x
Average Total Material Mining Rate	tonnes/day	220,445
Average Mineralized Material Mining Rate	tonnes/day	87,087
Cu Grade	%	0.44%
Au Grade	g/t	0.07
Ag Grade	g/t	1.18
As Grade	g/t	277.95
Contained Cu	M lbs	2,183
Contained Au	oz	503,473
Contained Ag	oz	8,441,453
Contained As	tonnes	61,869

Source: SRK, 2025

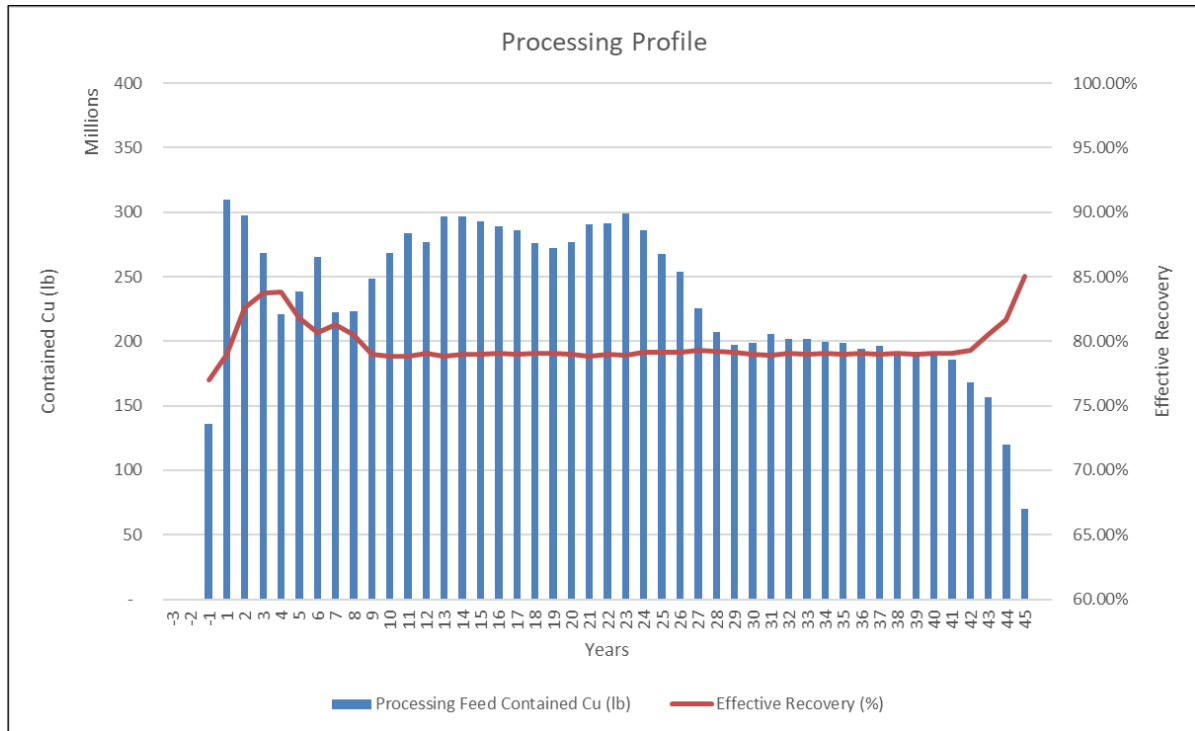
Table 24-5: Altar Case 1 Block Caving Mining Summary

Description	Unit	Value
Total Mineralized Material Mined	Mtonnes	768.2
Total Waste Mined	Mtonnes	5.4
Total Material Mined	Mtonnes	773.6
Development	Num#	0.00x
Average Total Material Mining Rate	tpd	51,663
Average Mineralized Material Mining Rate	tpd	51,663
Cu Grade	%	0.50%
Au Grade	g/t	0.07
Ag Grade	g/t	1.61
As Grade	g/t	115.96
Contained Cu	M lbs	8,551
Contained Au	oz	1,677,086
Contained Ag	oz	39,876,190
Contained As	tonnes	89,086

Source: SRK, 2025

Processing Profile

The processing profile (Figure 24-2) was developed by SRK, based on assumptions prepared by SRK, metallurgical test data, and other assumptions provided by Aldebaran. The processing results from the application of stockpile logic to the mining profile associated with the optimization of the processing feed. The processing profile summary is presented in Table 24-6.



Source: SRK, 2025

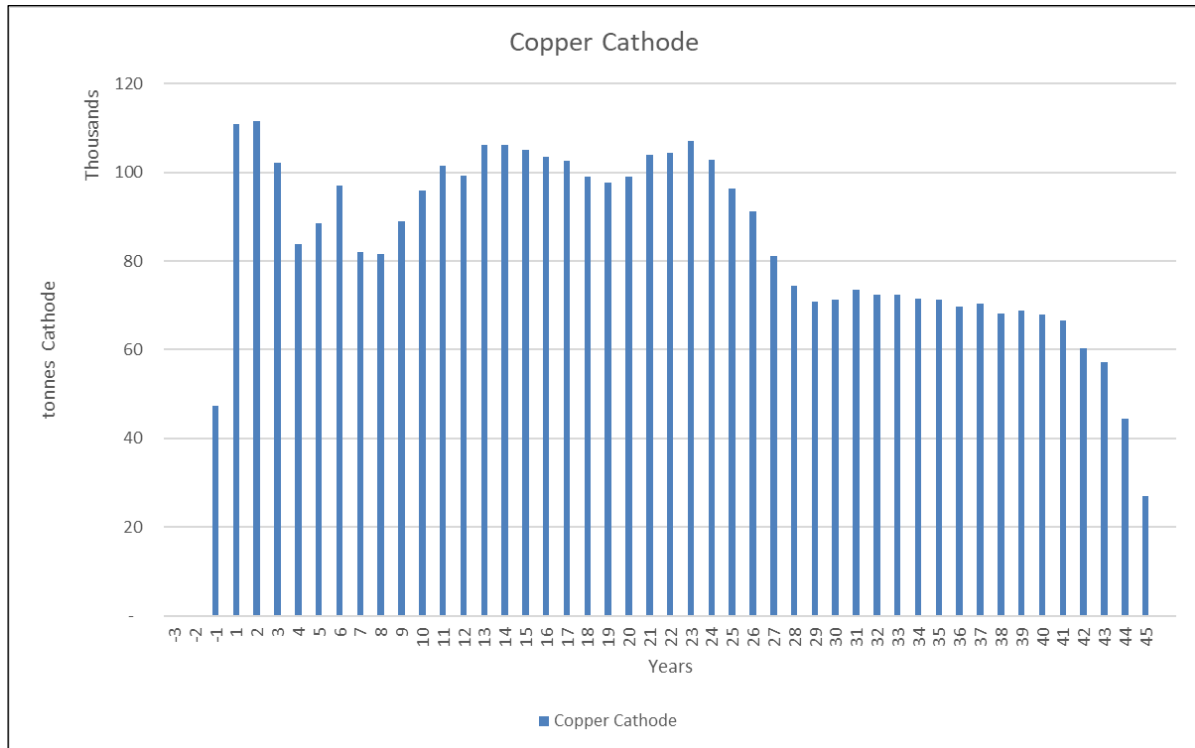
Figure 24-2: Altar Case 1 Processing Profile

Table 24-6: Altar Case 1 Processing Summary

Description	Unit	Value
Processing Capacity	tpd	60,000
Processing Capacity	mtpa	21.90
Total Material Processed	Mtonnes	991
Total Contained Cu	M lbs	10,734
Total Contained Au	oz	2,180,559
Total Contained Ag	oz	48,317,643
LoM Cu Grade	%	0.49%
LoM Au Grade	g/t	0.07
LoM Ag Grade	g/t	1.52
LoM Cu Eq. Grade	%	0.49%
Average Cu Recovery	ktonnes	79.59%
Average Au Recovery	ktonnes	0.00%
Average Ag Recovery	koz	0.00%
Recovered Cu	M lb	8,543
Recovered Au	oz	-
Recovered Ag	oz	-

Source: SRK, 2025

The production profile was developed by SRK and results from the processing profile and estimate of metallurgic recoveries derived from the metallurgical testing provided by Nuton® Technology. No modifications were made to the profile for use in the economic model. The modeled profile is presented in Table 24-3.



Source: SRK, 2025

Figure 24-3: Altar Case 1 Production Profile

24.2.4 Cashflow Forecasts and Annual Production Forecasts

This economic analysis is supported by an annual after-tax cashflow in 2025 US\$. The results of the analysis are presented in Table 24-7. Base Case values were added to the table for comparison.

Table 24-7: Altar Case 1 Economic Results Source: SRK, 2025

Description	Unit	Base Case	Nuton Case Relative to Base Case (+/- %)
After Tax NPV @ 8%	M USD	2,009	-4.3%
Gross Revenue	M USD	44,738	-16.9%
Recovered Cu	M lb	9,420	-9.3%
Recovered Au	M oz	1.24	-100.0%
Recovered Ag	M oz	24.16	-100.0%
Total Initial Capex	M USD	1,593	+21.2%
Total LoM Capital	M USD	5,651	-7.3%
Total Opex	M USD	16,078	-5.6%
C1 Cost	USD/lb Cu Payable	2.02	-9.8%
AISC	USD/lb Cu Payable	2.59	-10.1%

Source: SRK, 2025

24.3 Case 2: 60, 000 tpd Process via Concentrator Scenario with Additional Open Pit Material and No Underground Mining

This scenario assumes that the owner will prioritize extracting all mineralized material using open pit mining, foregoing any underground mining techniques. The decision to rely exclusively on open-pit

mining is based on the potential economic and operational advantages of surface mining for this deposit. The pit optimization results, summarized in Table 24-11 below, demonstrate the feasibility and potential of mining this deposit entirely through open-pit methods.

The base case for the current open-pit operation includes a total of 222 million tonnes (Mt) of mineralized material, which is expected to sustain production for approximately 9 to 10 years. However, this scenario extends beyond the base case by incorporating additional stripping and material movement to access deeper portions of the deposit. This extended approach allows for the extraction of additional resources, maximizing the overall recovery from the deposit.

To evaluate the economic and technical feasibility of this scenario, SRK conducted a detailed pit optimization analysis. The analysis assumed overall pit slope angles, including ramps, of 36 degrees. This slope design balances geotechnical stability with the need to minimize waste stripping and maximize mineralized material recovery. The following key cost assumptions were used in the optimization process:

- **Average Open-Pit Mining Costs:** US\$2.55 per tonne of material moved. This includes the costs associated with drilling, blasting, loading, hauling, and other mining activities.
- **Processing and G&A Costs:** US\$9.00 per tonne of processed material. This accounts for the costs of crushing, grinding, flotation, and other processing steps, as well as general and administrative expenses.
- **Treatment Charges (TC), Refining Charges (RC), and Sustaining Costs:** US\$0.64 per pound of recovered metal. These costs include the fees associated with smelting and refining the concentrate, as well as ongoing capital expenditures required to sustain operations.

The pit optimization results in Table 24-8 highlight the economic potential of this approach, demonstrating that the deposit can be effectively mined using open-pit methods while maintaining favorable cost metrics. The additional stripping required to access deeper material will increase the overall strip ratio compared to the base case, but this is offset by the larger volume of recoverable material and the potential for higher revenue generation.

24.3.1 Key Considerations for the Open-Pit Scenario

1. **Stripping Requirements:** As the operation progresses beyond the initial 9 to 10 years of the base case, additional stripping will be necessary to access deeper mineralization zones. This will require careful planning to manage the increased waste movement and associated costs while maintaining operational efficiency.
2. **Geotechnical Stability:** The assumed overall slope angle of 36 degrees, including ramps, reflects a conservative approach to pit design. Geotechnical studies will be critical to confirm slope stability and optimize the pit design for safety and cost-effectiveness.
3. **Economic Sensitivity:** The profitability of this scenario is sensitive to fluctuations in key variables such as metal prices, mining costs, and processing costs. Higher copper prices, for example, could significantly enhance the economic viability of the extended open-pit operation.
4. **Environmental and Regulatory Compliance:** Expanding the open-pit operation will require additional environmental impact assessments and regulatory approvals. Effective waste management, water conservation, and reclamation planning will be essential to mitigate environmental impacts and maintain the social license to operate.

5. **Operational Scalability:** The transition from the base case to the extended open-pit scenario will require scaling up mining and processing capacities. This includes potential investments in additional equipment, workforce, and infrastructure to handle the increased material movement and processing requirements.

This open-pit mining scenario represents a comprehensive approach to maximizing resource extraction from the deposit. By extending the life of the open-pit operation and incorporating additional stripping, the owner can unlock the full potential of the deposit while maintaining competitive cost metrics. The pit optimization results demonstrate the feasibility of this approach, provided that geotechnical, environmental, and economic considerations are carefully managed. This scenario offers a robust pathway for long-term production and revenue generation, aligning with the owner's preference for surface mining methods.

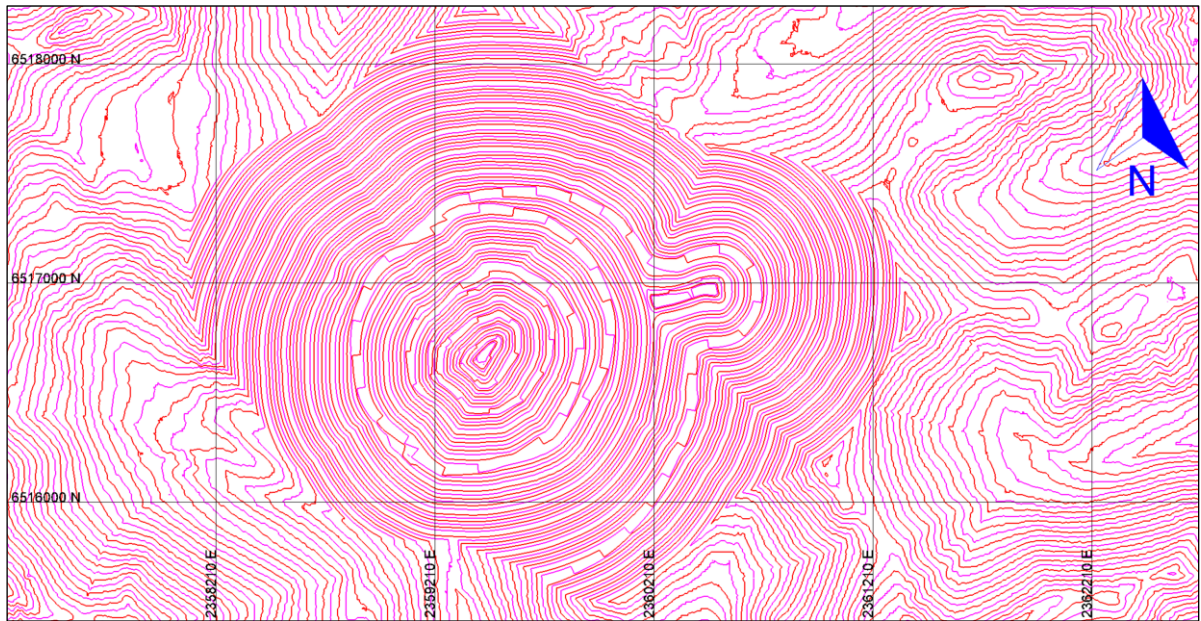
Table 24-8 shows the pit optimization results for this case.

Table 24-8: Pit Optimization Results Using Measured, Indicated and Inferred Resources

Pit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Rev Factor	0.450	0.475	0.500	0.525	0.550	0.575	0.600	0.625	0.650	0.675	0.700	0.725	0.750	0.775	0.800	0.825	0.850	0.875	0.900	0.925	0.950	0.975	1.000
Cu Sell Price US\$/lb	\$1.80	\$1.90	\$2.00	\$2.10	\$2.20	\$2.30	\$2.40	\$2.50	\$2.60	\$2.70	\$2.80	\$2.90	\$3.00	\$3.10	\$3.20	\$3.30	\$3.40	\$3.50	\$3.60	\$3.70	\$3.80	\$3.90	\$4.00
SR	2.24	2.15	2.93	2.39	2.12	2.00	1.91	1.89	1.93	1.92	2.00	2.06	2.13	3.34	3.43	3.55	3.60	3.64	3.67	3.73	3.80	3.87	3.91
Total Tonnes (Mt)	13.8	14.0	156.2	227.4	260.9	322.7	392.7	496.6	603.8	659.7	763.1	836.6	913.4	8,512.7	9,940.2	11,720.2	12,567.4	13,159.8	13,774.4	14,820.7	15,533.6	16,367.8	16,934.8
Processing Tonnes (Mt)	4.3	4.4	39.8	67.2	83.6	107.7	134.9	171.9	206.0	225.8	254.4	273.3	292.2	1,961.2	2,242.9	2,575.6	2,729.7	2,837.4	2,950.2	3,130.5	3,238.7	3,362.8	3,449.2
Waste Tonnes (Mt)	9.5	9.5	116.4	160.3	177.3	215.0	257.8	324.8	397.8	433.9	508.7	563.3	621.2	6,551.5	7,697.3	9,144.6	9,837.7	10,322.4	10,824.1	11,690.2	12,294.9	13,005.0	13,485.6
Mixed Processing Tonnes (Mt)	0.3	0.3	7.1	15.5	20.8	28.4	35.6	40.3	48.8	51.9	56.2	58.5	60.3	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7
Supergene Processing Tonnes (Mt)	3.5	3.5	29.3	41.3	49.5	60.0	71.1	86.3	97.9	105.1	112.0	117.2	121.6	322.8	322.8	322.8	322.8	322.8	322.8	322.8	322.8	322.8	322.8
Hypogene Processing Tonnes (Mt)	0.5	0.6	3.4	10.3	13.2	19.4	28.2	45.3	59.3	68.7	86.1	97.6	110.3	1,553.6	1,835.3	2,168.1	2,322.1	2,429.9	2,542.7	2,722.9	2,831.1	2,955.2	3,041.6
Contained Cu MLbs	63.5	65.1	575.0	870.7	1,020.9	1,246.5	1,489.4	1,812.0	2,108.0	2,265.1	2,504.8	2,663.8	2,816.9	16,155.9	18,615.4	21,553.6	22,900.1	23,813.2	24,737.8	26,243.9	27,182.1	28,245.5	28,961.2
Recovered Cu MLbs	54.1	55.6	488.3	740.4	867.8	1,060.3	1,268.5	1,547.7	1,802.5	1,938.3	2,147.1	2,285.8	2,419.9	14,215.8	16,404.7	19,019.7	20,218.1	21,030.8	21,853.7	23,194.1	24,029.1	24,975.5	25,612.4
Contained Au MToz	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.6	4.5	5.1	5.6	5.8	6.0	6.1	6.3	6.4	6.6	6.7
Recovered Au MToz	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	2.7	3.1	3.4	3.5	3.6	3.7	3.8	3.8	3.9	4.0
Contained Ag MToz	0.2	0.2	2.1	3.3	3.9	4.8	5.8	6.9	8.1	8.6	9.6	10.1	10.7	64.9	75.9	90.0	96.3	100.6	104.9	111.7	117.1	122.4	126.1
Recovered Ag MToz	0.1	0.1	1.0	1.7	2.0	2.4	2.9	3.5	4.0	4.3	4.8	5.1	5.4	32.5	38.0	45.0	48.2	50.3	52.5	55.9	58.5	61.2	63.0
TCU%	0.68	0.67	0.66	0.59	0.55	0.52	0.50	0.48	0.46	0.46	0.45	0.44	0.44	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
AU g/t	0.108	0.106	0.088	0.084	0.082	0.080	0.077	0.073	0.072	0.070	0.069	0.068	0.068	0.072	0.071	0.068	0.066	0.065	0.064	0.062	0.062	0.061	0.060
Ag g/t	1.70	1.68	1.60	1.53	1.45	1.40	1.33	1.25	1.22	1.19	1.17	1.15	1.14	1.03	1.05	1.09	1.10	1.10	1.11	1.11	1.12	1.13	1.14
AS%	711	700	438	362	360	335	313	288	277	271	260	254	247	135	132	129	127	127	126	125	125	124	124
MO PPM	16.4	16.3	18.6	19.0	19.3	19.4	19.5	19.8	20.0	19.9	20.1	20.1	20.1	26.3	27.8	30.3	31.4	32.1	32.7	33.9	35.0	35.9	36.5
S%	3.76	3.79	2.88	2.83	2.95	2.97	3.01	3.04	3.12	3.16	3.19	3.21	3.22	3.44	3.41	3.36	3.34	3.33	3.32	3.31	3.30	3.29	3.28
Revenue @ Rev Factor 1 (USD\$M)	\$238	\$245	\$2,121	\$3,231	\$3,799	\$4,649	\$5,565	\$6,784	\$7,906	\$8,500	\$9,417	\$10,023	\$10,611	\$63,292	\$72,871	\$84,140	\$89,299	\$92,780	\$96,304	\$101,992	\$105,572	\$109,615	\$112,334
Pre-Tax/CAPEX Cash Flow (USD\$M)	\$134	\$138	\$1,108	\$1,653	\$1,916	\$2,289	\$2,671	\$3,147	\$3,558	\$3,762	\$4,054	\$4,235	\$4,393	\$16,578	\$18,656	\$20,721	\$21,569	\$22,038	\$22,432	\$22,923	\$23,143	\$23,298	\$23,329
MCOST US\$ (USD\$M)	\$31	\$31	\$347	\$506	\$581	\$719	\$876	\$1,111	\$1,352	\$1,479	\$1,714	\$1,881	\$2,056	\$19,989	\$23,569	\$28,134	\$30,306	\$31,839	\$33,439	\$36,178	\$38,040	\$40,219	\$41,731
PCOST US\$ (USD\$M)	\$38	\$40	\$358	\$604	\$752	\$970	\$1,214	\$1,547	\$1,854	\$2,032	\$2,289	\$2,460	\$2,630	\$17,651	\$20,186	\$23,181	\$24,567	\$25,537	\$26,552	\$28,174	\$29,148	\$30,265	\$31,043
SELL COST US\$ (USD\$M)	\$34	\$35	\$308	\$468	\$549	\$672	\$804	\$980	\$1,142	\$1,228	\$1,360	\$1,447	\$1,532	\$9,075	\$10,461	\$12,104	\$12,857	\$13,366	\$13,881	\$14,717	\$15,241	\$15,833	\$16,232
MCOST US\$/t Moved	\$2.25	\$2.25	\$2.22	\$2.23	\$2.23	\$2.23	\$2.23	\$2.24	\$2.24	\$2.24	\$2.25	\$2.25	\$2.25	\$2.35	\$2.37	\$2.40	\$2.41	\$2.42	\$2.43	\$2.44	\$2.45	\$2.46	\$2.46
PCOST US\$/t Proc	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00
SELL COST US\$/lb	\$0.63	\$0.63	\$0.63	\$0.63	\$0.63	\$0.63	\$0.63	\$0.63	\$0.63	\$0.63	\$0.63	\$0.63	\$0.63	\$0.64	\$0.64	\$0.64	\$0.64	\$0.64	\$0.64	\$0.63	\$0.63	\$0.63	\$0.63

Source: SRK, 2025

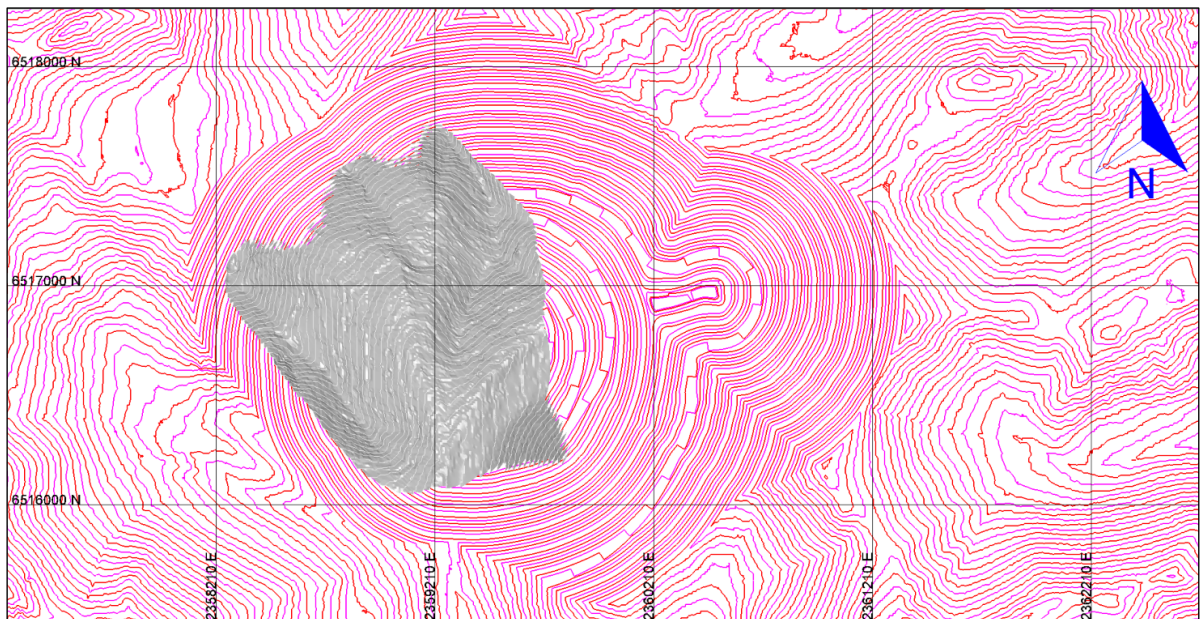
Figure 24-4 shows the final pit design for the large open pit case scenario.



Sources: SRK, 2025

Figure 24-4: Large Open Pit Design Case 2 – Approximately 1.3 Bt of Processing Material

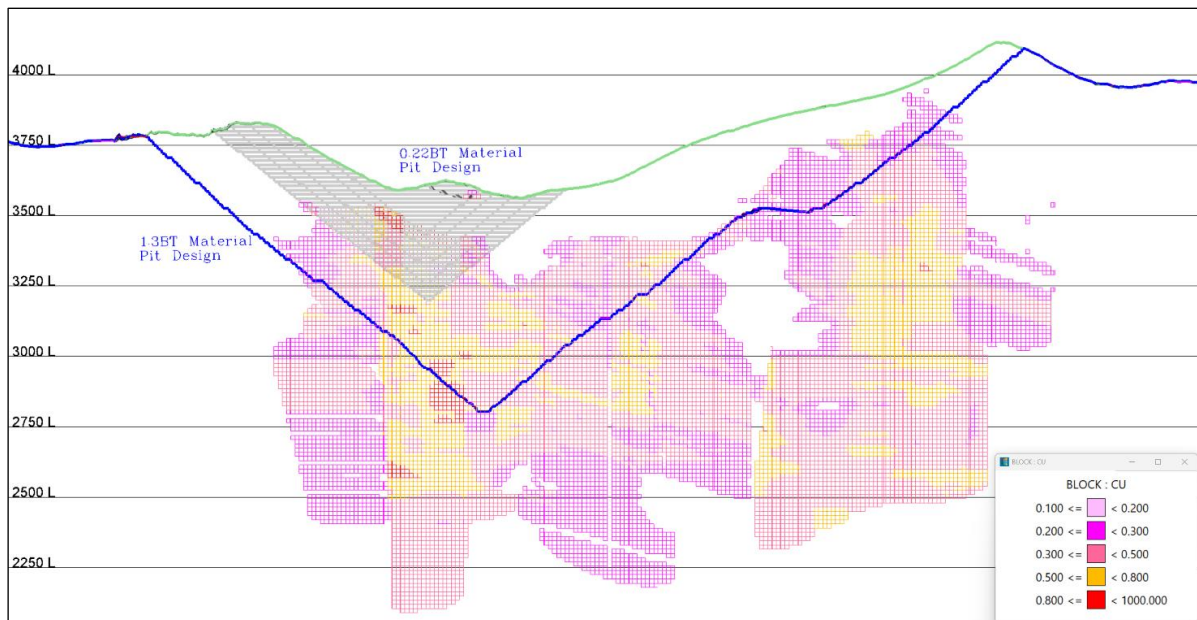
Figure 24-5 shows the final pit design for the large open case scenario compared to the 222 Mt initial base case mining scenario.



Sources: SRK, 2025

Figure 24-5: Large Open Pit Design Case 2 – Approximately 1.3 Bt of Processing Material vs 222 Mt Base Case Open Pit Area

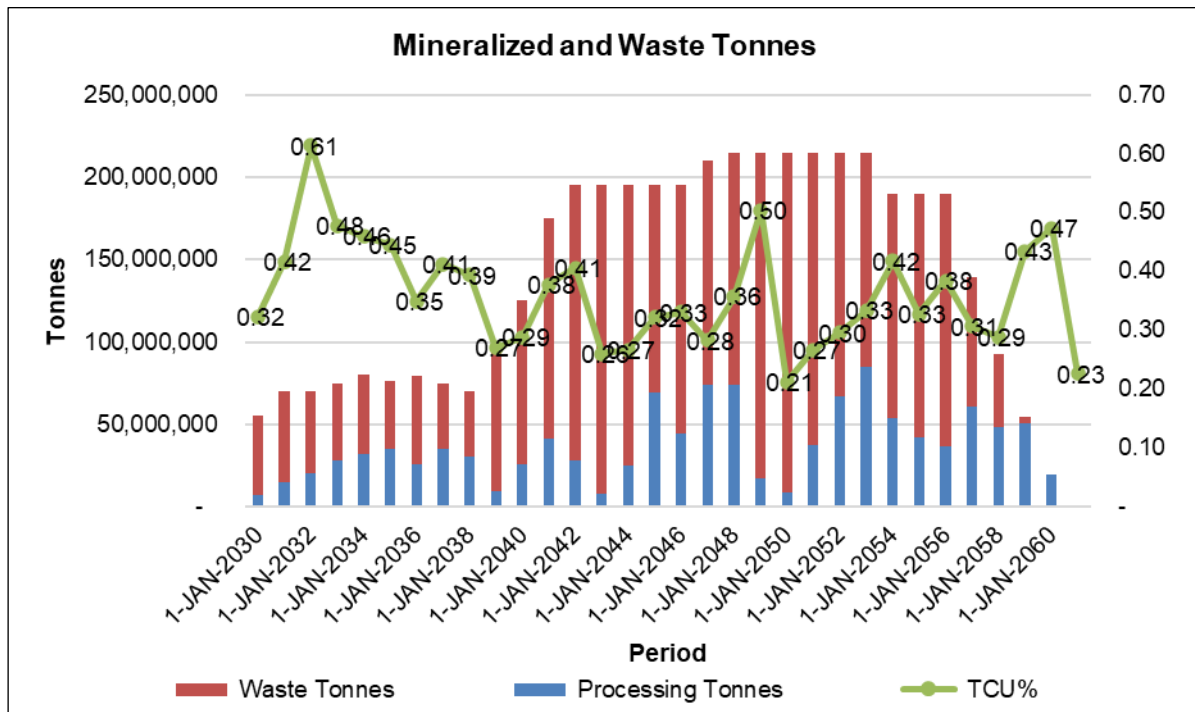
Figure 24-6 shows the final pit design for the large open case scenario compared to the 222 Mt initial base case mining scenario vertical cross section.



Source: SRK, 2025

Figure 24-6: Large Open Pit Design Case 2 – Approximately 1.3 Bt of Processing Material vs 222 Mt Base Case Open Pit Area Vertical Cross Section

Figure 24-7 shows one of the mine plan scenarios based on Case 2.



Source: SRK, 2025

Figure 24-7: Case 2 Mine Plan (Ex-pit Movement)

24.4 Case 3: 60,000 tpd Processed via Concentrator Scenario with Future Expansion to 120,000 tpd or 180,000 tpd Total Processed Material

SRK evaluated another scenario that considers the potential to mine the full extent of the resource, contingent on higher copper prices. This case explores the opportunity to develop a phased mining and processing operation, starting with an initial production capacity of 60,000 tonnes per day of process capacity, followed by an expansion to either 120,000 tonnes or 180,000 tonnes per day of process capacity. The phased approach allows for operational flexibility, enabling the project to scale up as market conditions and resource availability align.

24.4.1 Initial Phase: 60,000 tpd Processed via Concentrator

The operation begins with a manageable production capacity of 60,000 tonnes per day of process capacity. This initial phase is designed to establish the mine's infrastructure, optimize operational efficiencies, and generate early revenue. The smaller-scale start minimizes upfront capital investment while providing the flexibility to expand as the project matures.

24.4.2 Expansion Phase: Scaling to 120,000 tpd or 180,000 tpd Processed via Concentrator

Once the initial phase is operational and market conditions are favorable, the project would transition to an expansion phase. This phase involves increasing production capacity by either:

1. Adding 60,000 tpd of process production capacity (for a total of 120,000 tpd), or

2. Adding 120,000 tpd process production capacity (for a total of 180,000 tpd).

The choice between these two expansion options would depend on factors such as copper price trends, operational performance, and the availability of additional resources. The larger-scale expansion to 180,000 tpd would position the operation as a major producer, capable of capitalizing on economies of scale and maximizing revenue potential.

24.4.3 Resource Potential and Mine Life

SRK's pit optimization analysis indicates that the deposit contains over three billion tonnes of potential resources mined. This extensive resource base is sufficient to support a very large-scale operation with a projected mine life of 60 to 80 years. The long mine life provides a stable foundation for sustained production and revenue generation, making this scenario particularly attractive in the context of higher copper prices.

The pit optimization results assume the following key parameters:

- **Higher Copper Prices:** Elevated copper prices significantly enhance the economic viability of this scenario, justifying the larger-scale operation and the associated capital investments.
- **Mining Costs:** Average open-pit mining costs are estimated at US\$2.55 per tonne of material mined.
- **Processing and G&A Costs:** Processing and general/administrative costs are estimated at US\$9.00 per tonne of processed material.
- **Treatment Charges (TC), Refining Charges (RC), and Sustaining Costs:** These are estimated at US\$0.64 per pound of recovered copper.

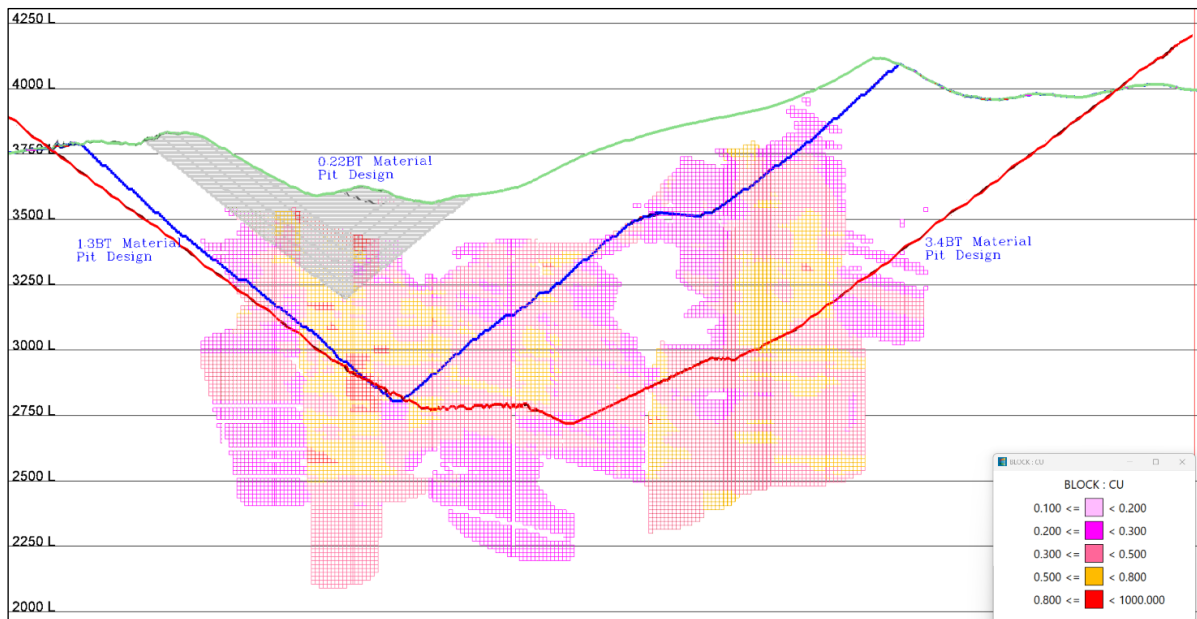
Key considerations for the scenario include:

1. **Economic Sensitivity to Copper Prices:** The feasibility of this scenario is highly dependent on sustained higher copper prices. Elevated prices improve the project's profitability, making it economically viable to mine the full extent of the resource and support the larger-scale operation.
2. **Infrastructure and Capital Requirements:** The expansion phase will require significant investments in additional processing facilities, mining equipment, and infrastructure. Careful planning will be necessary to ensure that the transition from the initial phase to the expanded operation is seamless and cost-effective.
3. **Operational Scalability:** Scaling up production to 120,000 or 180,000 tpd will require increased material movement, processing capacity, and workforce. This includes the design and construction of additional concentrate lines and the expansion of the open-pit mine.
4. **Environmental and Regulatory Compliance:** A larger-scale operation with a mine life of 60 to 80 years will have significant environmental and social impacts. SRK's evaluation includes strategies to mitigate these impacts, such as effective waste management, water conservation, and progressive reclamation planning. Regulatory approvals will also be critical to the success of this scenario.
5. **Geotechnical and Operational Challenges:** Mining over three billion tonnes of material will require robust geotechnical designs to ensure pit stability and safety. The assumed overall slope angles, including ramps, will need to be validated through detailed geotechnical studies.
6. **Market Dynamics and Long-Term Planning:** The long mine life of 60 to 80 years necessitates careful consideration of market dynamics, including potential fluctuations in

copper demand and prices. Long-term planning will be essential to ensure the operation remains competitive and sustainable over its lifespan.

This scenario represents a step change approach to resource extraction, leveraging the extensive resource base and the potential for higher copper prices to justify a large-scale operation. Starting with an initial production capacity of 60,000 tonnes of concentrate per year, the project has the flexibility to expand to either 120,000 tonnes or 180,000 tonnes per year, depending on market conditions and operational performance. With over three billion tonnes of resources mined and a projected mine life of 60 to 80 years, this scenario offers significant economic potential while requiring careful planning and execution to address technical, environmental, and regulatory challenges.

Figure 24-8 shows the final pit design for the super large open pit case scenario compared to the 222 Mt initial base case mining scenario, the 1.3 Bt of minable processing material shown in a vertical cross section.



Source: SRK, 2025

Figure 24-8: Large Open Pit Design Case 3 – Approximately 3.4 Bt of Processing Material vs 1.3 Bt of Processing Material vs 222 Mt Base Case Open Pit Area Vertical Cross Section

24.5 Nuton® Technology Metallurgical Testing

Nuton LLC, a Rio Tinto venture, offers proprietary copper heap leach technology for leaching both secondary and primary sulphide copper minerals. A Preliminary Phase 1 metallurgical program has been undertaken by Nuton to evaluate the Nuton® Technology on test samples from the Altar project. The results from this preliminary test program are presented in this section.

24.5.1 Test Sample Location and Description

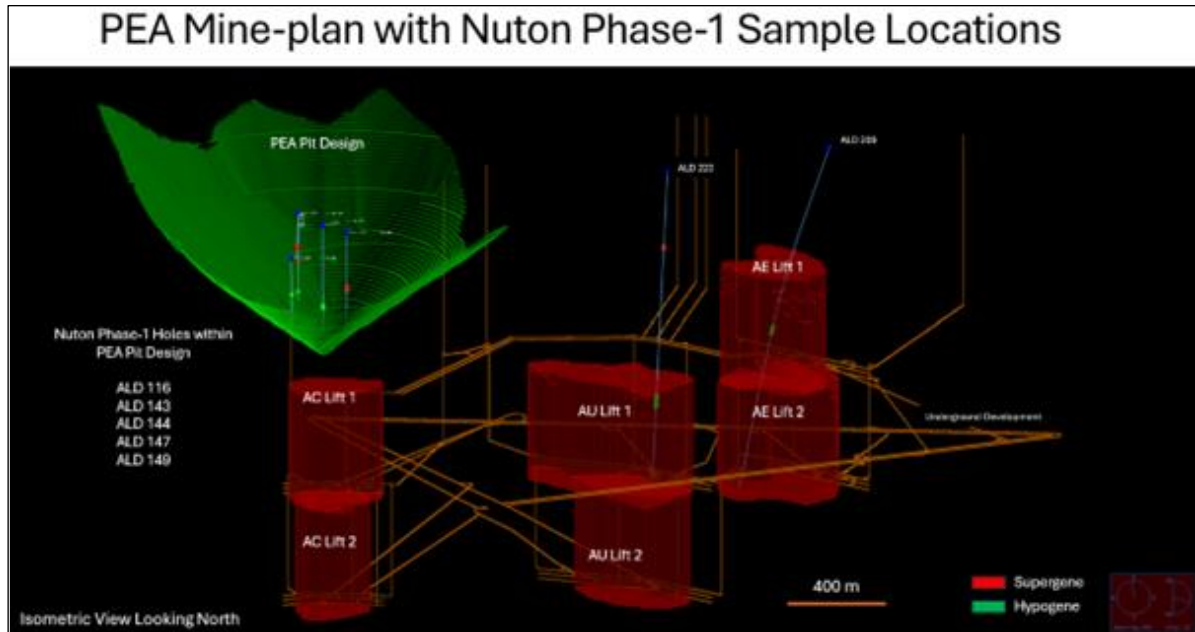
Ten test samples were prepared from drill core to represent both supergene and hypogene mineralization in the Altar pit area. Figure 24-9 shows the drill hole, lithology and intervals selected for

each test sample. Figure 24-10 shows the location of each drill hole. Five of the drill holes were from the Altar Central pit area and two drill holes were from the Altar East pit area. Four of the test samples represented supergene material and six samples represented hypogene ore. Test sample 10 was selected due to its very high enargite (Cu_3AsS_4) content, and the associated arsenic, to evaluate performance during column leaching.

#Sample	Hole ID	Core Size	Core Status	Type	Area	Litho	From (m)	To (m)	Interval (m)	Estimated Mass (kg)
1	ALD 116	HQ	WHOLE	SUPERGENE	ALTAR CENTRAL	RHYOLITE	95,00	125,00	30,00	216
2	ALD 147	PQ	WHOLE	SUPERGENE	ALTAR CENTRAL	RHYOLITE	179,00	194,00	15,00	212
3	ALD 143	PQ	WHOLE	SUPERGENE	ALTAR CENTRAL	DIORITE (DIP5)	208,50	218,50	9,70	137
							233,00	238,50	5,50	78
4	ALD 223	PQ	HALF	SUPERGENE	ALTAR UNITED	DIORITE (DIPAE)	281,00	302,00	21,00	148
5	ALD 223	HQ	HALF	HYPOGENE	ALTAR UNITED	DIORITE (DIPAE)	852,00	906,00	54,00	192
6	ALD 209	HQ	HALF	HYPOGENE	ALTAR EAST	DIORITE (DIPAE)	796,55	840,00	43,45	154
7	ALD 144	PQ	WHOLE	HYPOGENE	ALTAR CENTRAL	DIORITE (DIP5)	314,00	338,00	24,00	338
8	ALD 143	PQ	WHOLE	HYPOGENE	ALTAR CENTRAL	DIORITE (DIP5)	388,50	405,00	16,50	233
9	ALD 147	PQ	WHOLE	HYPOGENE	ALTAR CENTRAL	RHYOLITE	306,50	321,50	15,00	212
10	ALD 149	PQ	WHOLE	HYPOGENE	ALTAR CENTRAL	RHYOLITE	138,50	152,00	13,50	190
TOTAL:									247,65	2108,72

Source: Aldebaran Resources, 2024

Figure 24-9: Drill Holes and Selected Intervals Used for the Phase 1 Nuton Technology Test Samples



Source: Aldebaran Resources, 2025

Figure 24-10: Location of Drill Holes Used for the Nuton Technology Metallurgical Program

24.5.2 Test Sample Head Analyses

Head analyses for each of the test samples are shown in Table 24-9. Copper grades in the supergene test samples ranged from 0.49% – 1.15% Cu and copper grades from the hypogene test samples ranged from 0.28% – 0.79% Cu. Arsenic, which is used as an indicator of the presence of the copper mineral enargite, ranged from 0.01% – 0.07% As in the supergene samples and 0.01% to 0.02% As in the hypogene samples.

Table 24-9: Nuton® Technology Test Composite Head Analyses

Feed Assay (%)	Supergene				Hypogene					
	SR01	SR02	SR03	SR04	HP05	HP06	HP07	HP08	HR09	HR10
Cu	0.66	0.63	1.15	0.49	0.79	0.61	0.75	0.28	0.33	0.36
Fe	1.57	3.79	3.78	3.96	3.50	2.72	3.50	4.76	2.63	3.71
Al	6.50	5.93	6.70	7.80	7.23	6.40	7.23	7.30	5.75	5.53
K	2.89	2.62	2.38	2.43	2.13	1.74	2.13	2.41	2.71	2.47
Mg	0.11	0.15	0.23	0.36	0.40	0.49	0.40	0.43	0.17	0.11
Na	2.08	0.56	1.05	2.14	2.19	2.40	2.19	1.32	1.12	0.12
As	0.07	0.04	0.04	0.01	0.02	0.01	0.02	0.01	0.01	0.09

Source: Nuton, 2024

24.5.3 Mineralogical Analyses

Mineralogical analysis was conducted on each of the test samples. Copper mineral deportment in each of the test samples is shown in Table 24-10. The major copper minerals identified in the test samples included chalcopryite, bornite, copper arsenides (enargite), chalcocite and covellite. Chalcopryite represented 9.3 - 63.9% of the copper mineralization in the supergene test samples and 84.1 - 97.4% of the copper mineralization in the hypogene test samples. The secondary copper minerals chalcocite

and covellite represented 22.4 - 74.1% of the copper mineralization in the supergene samples, whereas these secondary copper minerals represented only 0.3 – 1.6% of the copper mineralization in the hypogene test samples. Copper mineralization in test sample HR10 was represented primarily by enargite (88.3%) and only 4.3% chalcopyrite. During metallurgical testing two of the supergene test samples (SR01 and SR04) were classified as mixed (transition) types due to their intermediate levels of chalcopyrite content that ranged from 48.2 – 63.9%. Based on arsenic assays, enargite tended to be more prevalent in the supergene/mixed test samples and less prevalent in the hypogene test samples. The gangue minerals identified in the Nuton® Technology test samples include quartz, k-feldspar, muscovite and plagioclase as the major non-sulphide gangue minerals and pyrite was identified as the primary sulphide gangue mineral.

Table 24-10: Copper Mineral Department in Altar Test Samples

Cu Minerals (%)	Supergene				Hypogene					
	SR01	SR02	SR03	SR04	HP05	HP06	HP07	HP08	HR09	HR10
Chalcopyrite	48.2	26.9	9.3	63.9	97.4	84.1	88.0	91.9	97.3	4.3
Bornite	6.6	5.4	5.9	6.1	0.1	10.7	0.1	0.6	0.3	1.6
Cu Arsenides	19.6	16.7	8.1	2.0	1.2	2.0	8.0	1.5	1.0	88.3
Chalcocite/Digenite	12.6	42.3	71.8	19.4	0.5	1.6	0.3	0.3	0.2	3.0
Covellite	9.8	5.1	2.3	4.4	0.0	0.0	0.0	0.0	0.1	0.9
Cu Oxides	1.8	1.6	0.7	1.9	0.1	0.2	0.3	0.5	0.1	0.4
Cu Clays	0.9	1.0	0.8	1.1	0.6	1.0	2.8	4.7	0.7	0.7
Other	0.5	1.1	1.1	1.1	0.2	0.4	0.5	0.5	0.4	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Nuton, 2024

24.5.4 Metallurgical Test Work

Column leach tests were conducted at Nuton's lab partner Hazen Research Inc. (Hazen) in Golden, Colorado under the direct supervision of representatives from Nuton. A total of 22 one-meter-high column tests were conducted on the Altar samples to evaluate the leach response to the Nuton® Technology. Each of the test columns was conducted under standardized test conditions that included:

- Crush size: P₈₀ 12.5 mm
- Column height: 1-meter
- Test charge: 20 kg
- Temperature: 60° C
- Solution application rate: 10L/m²/min
- pH: 1.2

During the test program, the impact of proprietary additives and bacterial inoculum was evaluated. The interim results of the test columns, which had run for up to 358 days, are summarized in Table 24-11. Key observations include the following:

- Copper extraction from supergene test samples SR02 and SR03 were reported at 85.1% and 90.6 %, respectively after 315 and 280 days of leaching.
- Copper extraction from mixed test samples SR01 and SR04 were reported at 87.5% and 90.3%, respectively after 337 days of leaching.
- Copper extractions from hypogene test samples HP05 and HP06 were reported at 76.8% and 82.3%, respectively after 323 days of leaching. Copper extraction from hypogene test sample HP07 was reported at 82.2% after 339 days of leaching. Copper extraction from test samples

HP08 and HR09 were reported at 72.5% and 74.4% after 276 and 274 days of leaching, respectively.

- Net acid consumption for supergene test samples ranged from 0.8 - 10.4 kg/t and averaged 5.8 kg/t.
- Net acid consumption for mixed samples ranged from -1.0 – 13.5 kg/t and average 4.8 kg/t
- Net acid consumption for hypogene test samples ranged from 7.3 – 31.5 kg/t and averaged 16.3 kg/t

Table 24-11: Summary of Nuton Column Tests Conducted on Altar Supergene, Hypogene and Enargite Samples

Parameter	Supergene					Mixed				Hypogene							Enargite				
	SR02			SR03		SR 01			SR04	HP05	HP06	HP07			HP08	HR09	HR10				
	ALT 04	ALT 09	ALT 06	ALT 01	ALT 15	ALT 03	ALT 14	ALT 17	ALT 16	ALT 20	ALT 21	ALT 05	ALT 07	ALT13	ALT18	ALT19	ALT 22	ALT 12	ALT 11	ALT 02	ALT 25
Cu%	0.63	0.63	0.63	1.15	1.15	0.66	0.66	0.66	0.49	0.79	0.61	0.75	0.75	0.75	0.28	0.33	0.36	0.36	0.36	0.36	0.36
Copper mineral %																					
Chalcopyrite	27	27	27	9	9	48	48	48	64	97	84	88	88	88	92	97	4.3	4.3	4.3	4.3	4.3
Bornite	5	5	5	6	6	7	7	7	6	<1	11	<1	<1	<1	<1	<1	2	2	2	2	2
Chalcocite/Covellite	47	47	47	74	74	22	22	22	24	<1	2	<1	<1	<1	<1	<1	4	4	4	4	4
Enargite	17	17	17	8	8	20	20	20	2	1	2	8	8	8	2	1	88	88	88	88	88
Temp °C	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	20 to 60
Additive	2	2	none	none	none	2	1 & 2	2	2	1&2+pyrite	2	none	2	1 & 2	1 & 2	2	1	2	none	none	none
Leach Days	339	315	315	203	280	350	337	337	337	323	323	339	350	358	267	274	316	346	339	395	232
Cu Extraction, %	85.4	85.3	85.1	90.9	90.6	90.0	94.3	87.5	90.3	76.8	82.3	82.2	81.7	89.0	72.5	74.4	71.9	52.4	40.8	78.9	40.7
Net Acid Cons (kg/t)	2.4	6.7	0.8	10.4	8.5	-1.0	4.9	1.8	13.5	31.5	19.6	15.8	15.0	16.9	8.2	7.3	-6.0	0.3	-2.3	1.0	2.0

Source: Nuton, 2025

24.5.5 Recovery Analysis

Geomet Leach Profile Estimation

Nuton has estimated ultimate copper extraction and copper recovery after a 450-day leach cycle for each mineralization at the Altar deposit based on analysis of the in-flight test results from the 1-meter column tests. The results of this analysis are summarized in Table 24-12 and estimate copper extraction from hypogene, mixed and supergene material at 86%, 88% and 91%, respectively. Nuton applies a discount factor of 92% to allow for inherent inefficiencies in a commercial heap leach and has, therefore estimated copper recoveries from hypogene, mixed and supergene material at 79%, 81% and 84%, respectively.

Table 24-12: Estimated Copper Extraction and Copper Recovery using Nuton® Technology for Each Material Type in Altar Deposit

Copper (%)	Hypogene	Mixed	Supergene
Extraction	86	88	91
Recovery	79	81	84

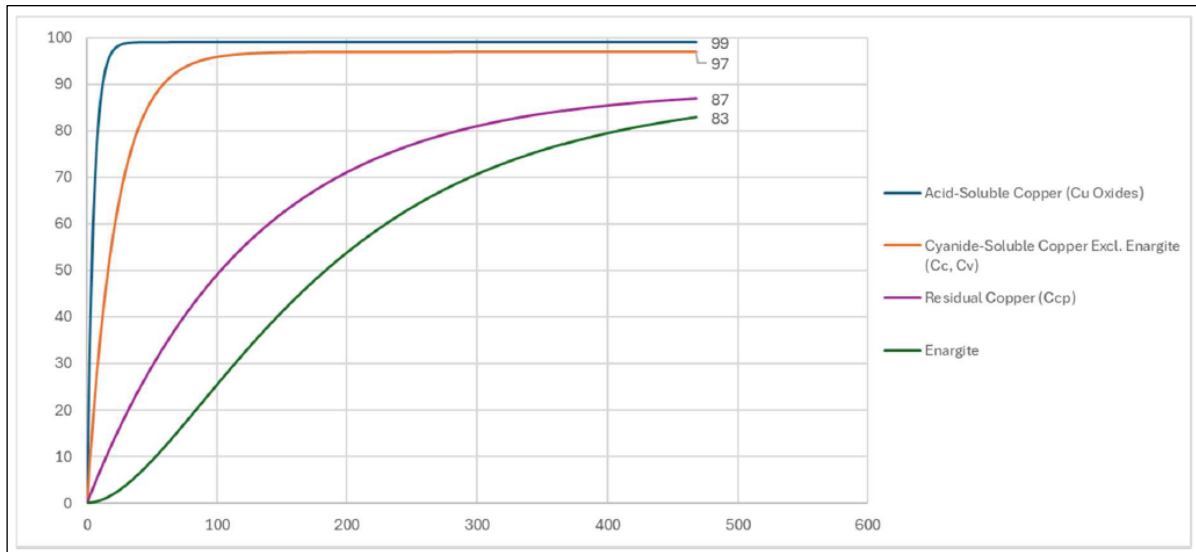
Source: Nuton, 2025

Nuton's copper extraction estimates are based on an analysis of geomet data which groups copper minerals into four categories as shown in Table 24-13. The four identified groups include acid soluble copper (CU-AS) which includes copper oxide minerals, cyanide soluble copper (Cu-CN) which includes predominantly chalcocite, covellite and copper clay minerals, copper in enargite (Cu-En) as determined by arsenic analyses and sulphide copper minerals (Cu-Res) which include predominantly chalcopyrite and lesser amounts of bornite. Nuton estimated the leaching profiles of each of these groups shown in Figure 24-11, assuming no additive addition, based on the in-flight performance of the current columns from the phase 1 test program.

Table 24-13: Copper Mineral Groups in the Altar Deposit

Category	Description
Cu – AS	Acid soluble copper (oxides)
Cu – CN	Cyanide soluble copper excluding enargite, predominantly chalcocite and covellite, with copper clays also included in this group
Cu – En	Copper in enargite
Cu – Res	Residual copper, predominantly in chalcopyrite with small amounts of bornite and other copper

Source: Nuton, 2025



Source: Nuton, 2025

Figure 24-11: Leach Profiles Using Nuton® Technology for Each Copper Mineral Group (X axis = days and Y-axis = Cu Extraction %)

Leach Profiles for Supergene, Mixed and Hypogene Copper Mineralization

Nuton then developed leach profiles for supergene, mixed and hypogene material based on sequential analyses and grouping of the copper minerals into the four mineralization categories. These leach profiles are shown in Figure 24-12, Figure 24-13, and Figure 24-14.

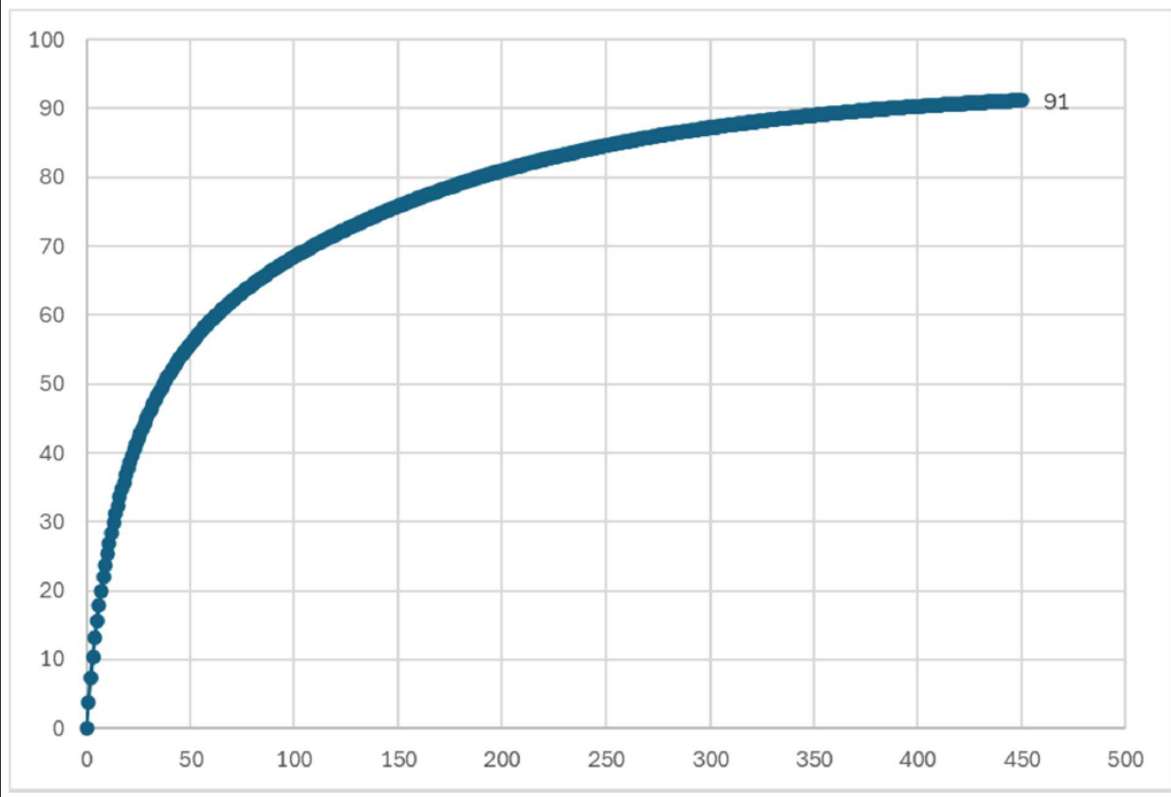
Cu (%)	Seq Cu – AS (%)	Seq Cu – CN (%)	Seq Cu – Res (%)	As (%)
0.495	10.7	60.8	28.5	0.040

Nuton grouping of copper minerals for this zone:

Cu – AS (%)	Cu – CN (%)	Cu – En (%)	Cu – Res (%)
10.7	40.3	20.5	28.5

Nuton estimation of copper extraction for this zone:

Cu Extraction (%)	91	Factor (%)	92	Cu Recovery (%)	84
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Source: Nuton, 2025

Figure 24-12: Supergene Leach Profile (X Axis = Days and Y Axis = Cu Extraction %)

Data from Aldebaran:

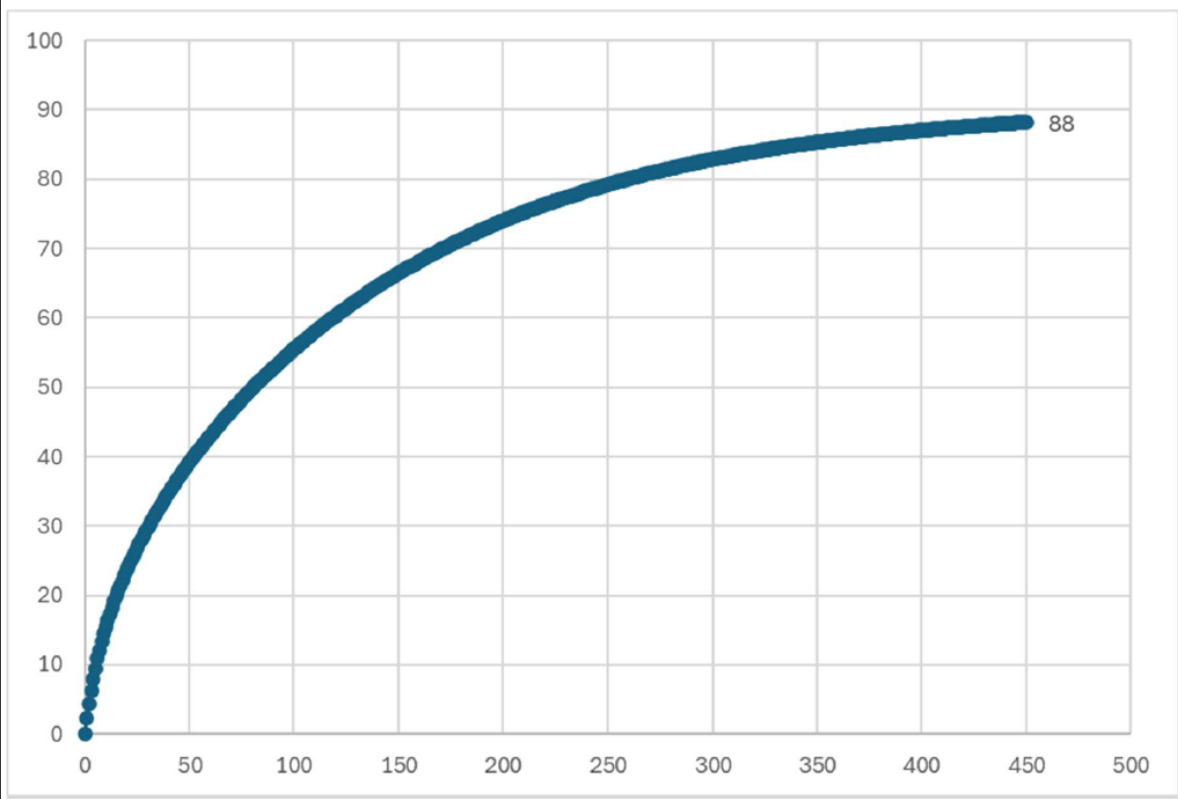
Cu (%)	Seq Cu – AS (%)	Seq Cu – CN (%)	Seq Cu – Res (%)	As (%)
0.356	7.3	28.4	64.3	0.021

Nuton grouping of copper minerals for this zone:

Cu – AS (%)	Cu – CN (%)	Cu – En (%)	Cu – Res (%)
7.3	13.5	14.9	64.3

Nuton estimation of copper extraction for this zone:

Cu Extraction (%)	88	Factor (%)	92	Cu Recovery (%)	81
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Source: Nuton, 2025

Figure 24-13: Mixed Leach Profile (X Axis = Days and Y Axis = Cu Extraction %)

Data from Aldebaran:

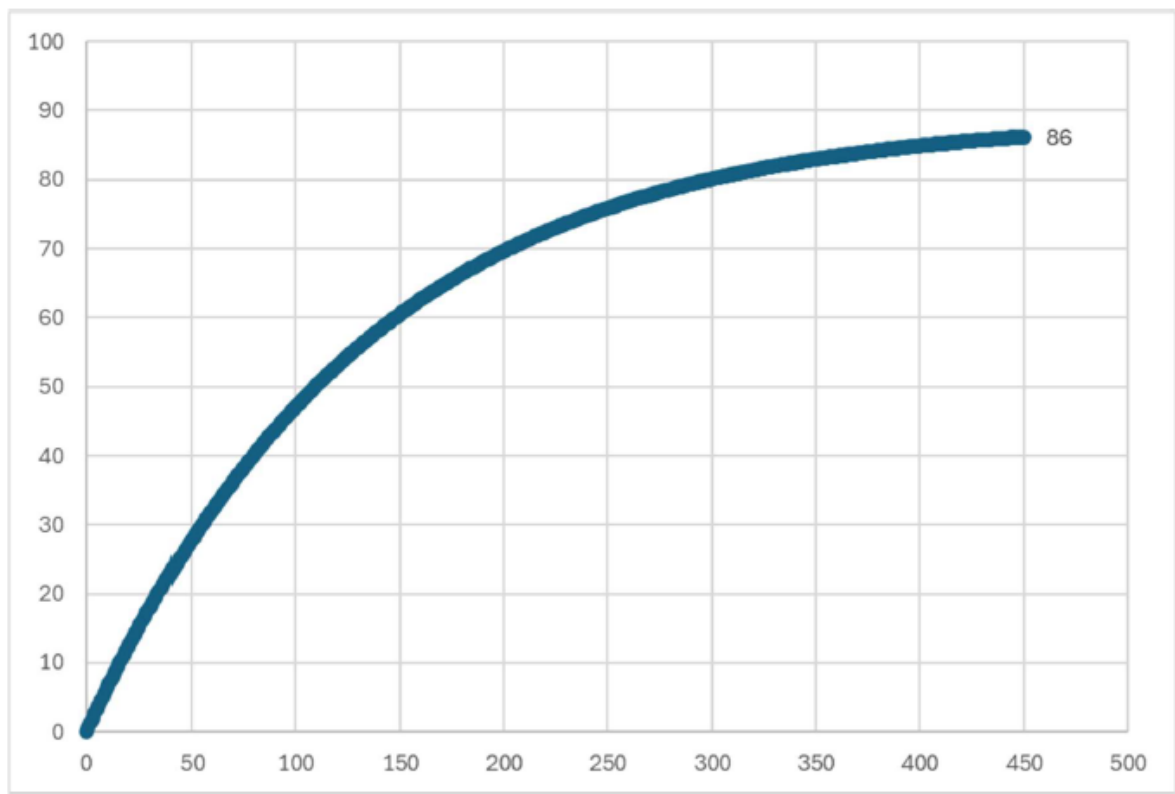
Cu (%)	Seq Cu – AS (%)	Seq Cu – CN (%)	Seq Cu – Res (%)	As (%)
0.409	0	7.9	92.1	0.013

Nuton grouping of copper minerals for this zone:

Cu – AS (%)	Cu – CN (%)	Cu – En (%)	Cu – Res (%)
0	0	7.9	92.1

Nuton estimation of copper extraction for this zone:

Cu Extraction (%)	86	Factor (%)	92	Cu Recovery (%)	79
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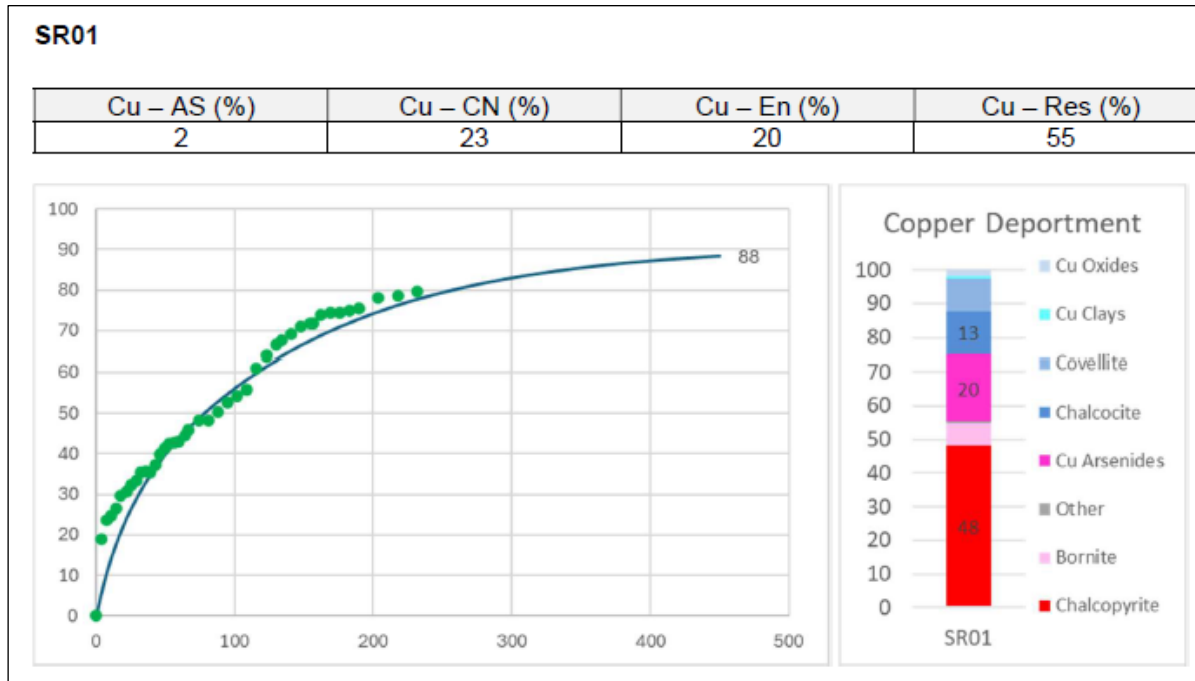


Source: Nuton, 2025

Figure 24-14: Hypogene Leach Profile (X Axis = Days and Y Axis = Cu Extraction %)

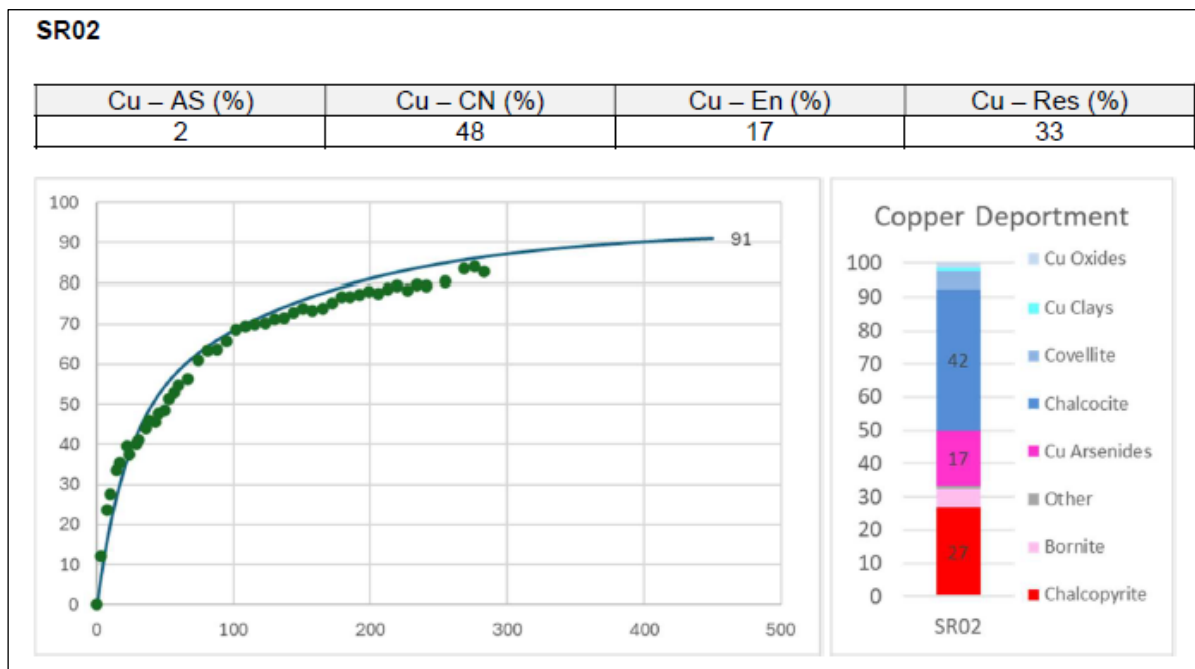
Leach Profile Comparison with In-Flight Column Test Results

Nuton made a comparison of the estimated leach profiles with the actual In-flight column test results. These comparisons for each column are shown in Figure 24-15 to Figure 24-22.



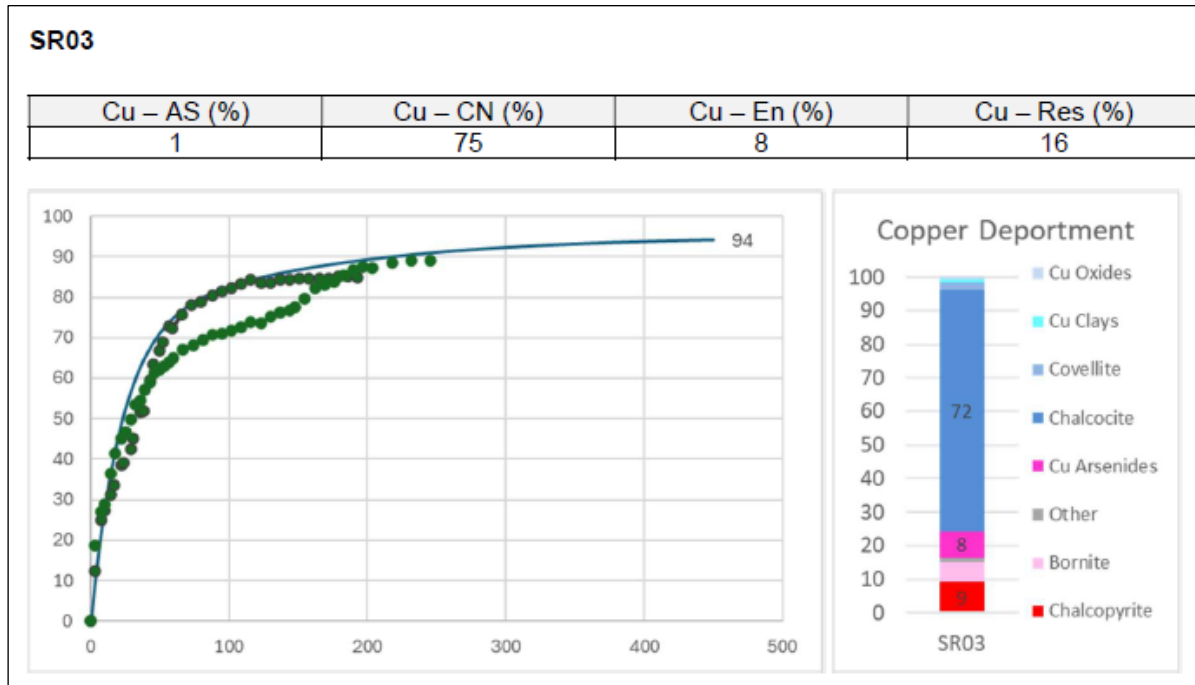
Source: Nuton, 2025

Figure 24-15: Leach Curve and Actual In-Flight Column Test Results for Test Sample SR01 (X Axis = Days and Y Axis = Cu Extraction %)



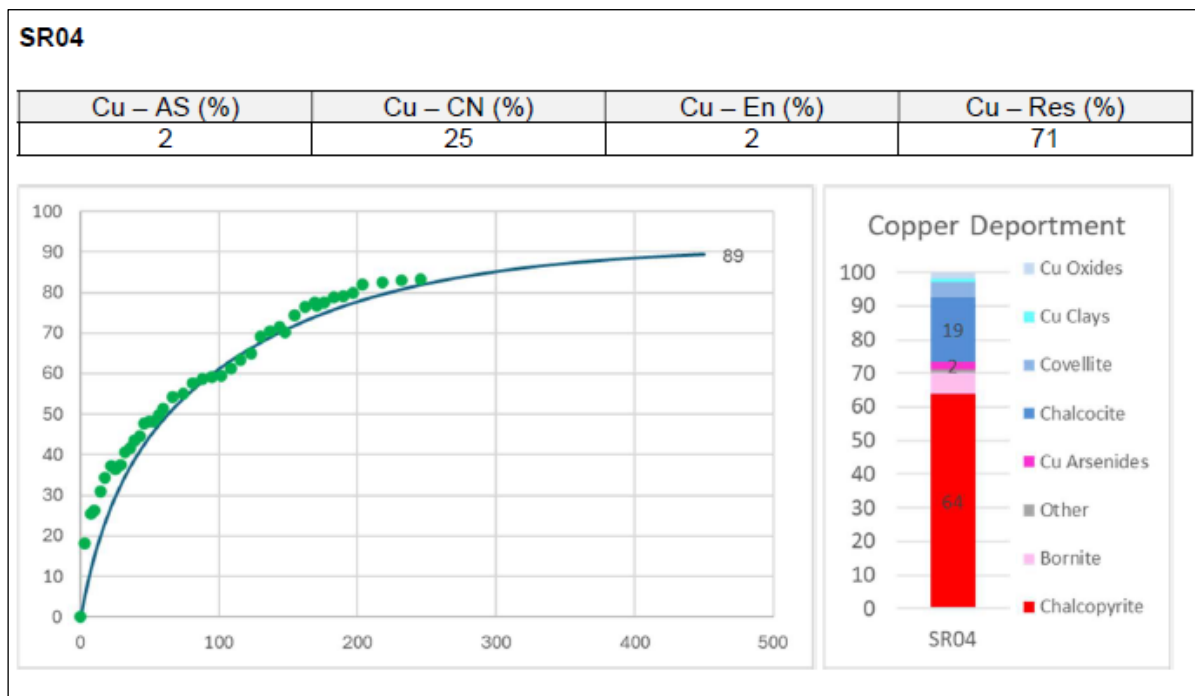
Source: Nuton, 2025

Figure 24-16: Leach Curve and Actual In-Flight Column Test Results for Test Sample SR02 (X Axis = Days and Y Axis = Cu Extraction %)



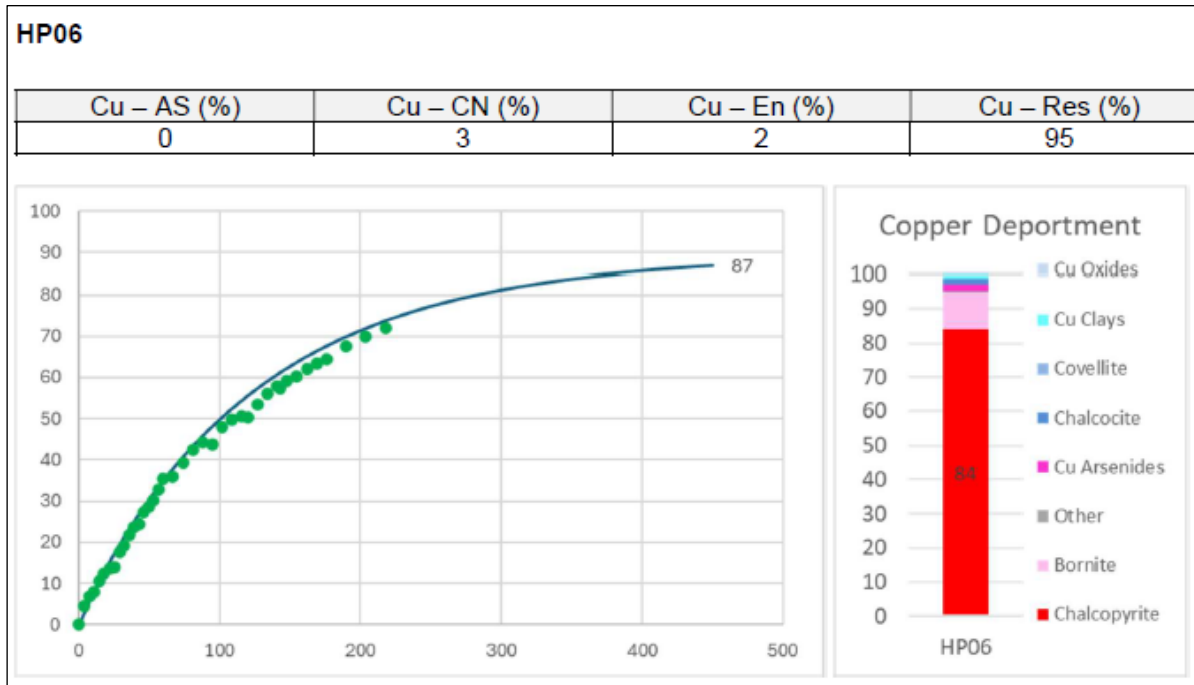
Source: Nuton, 2025

Figure 24-17: Leach Curve and Actual In-Flight Column Test Results for Test Sample SR03 (X Axis = Days and Y Axis = Cu Extraction %)



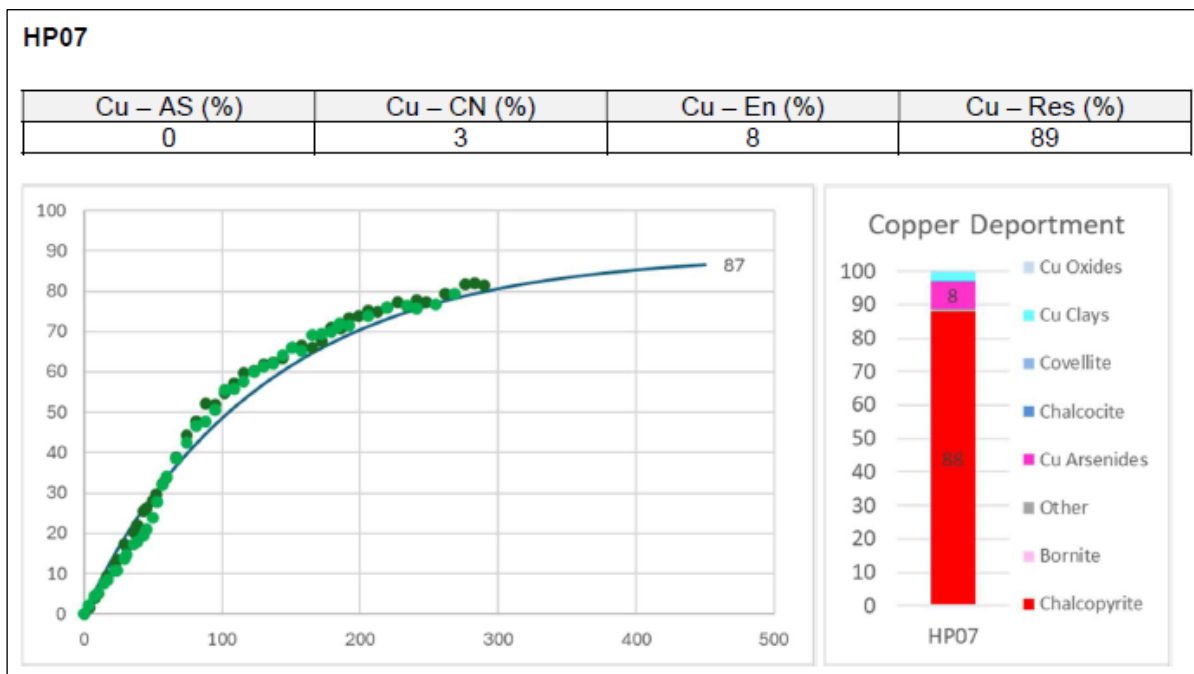
Source: Nuton, 2025

Figure 24-18: Leach Curve and Actual In-Flight Column Test Results for Test Sample SR04 (X Axis = Days and Y Axis = Cu Extraction %)



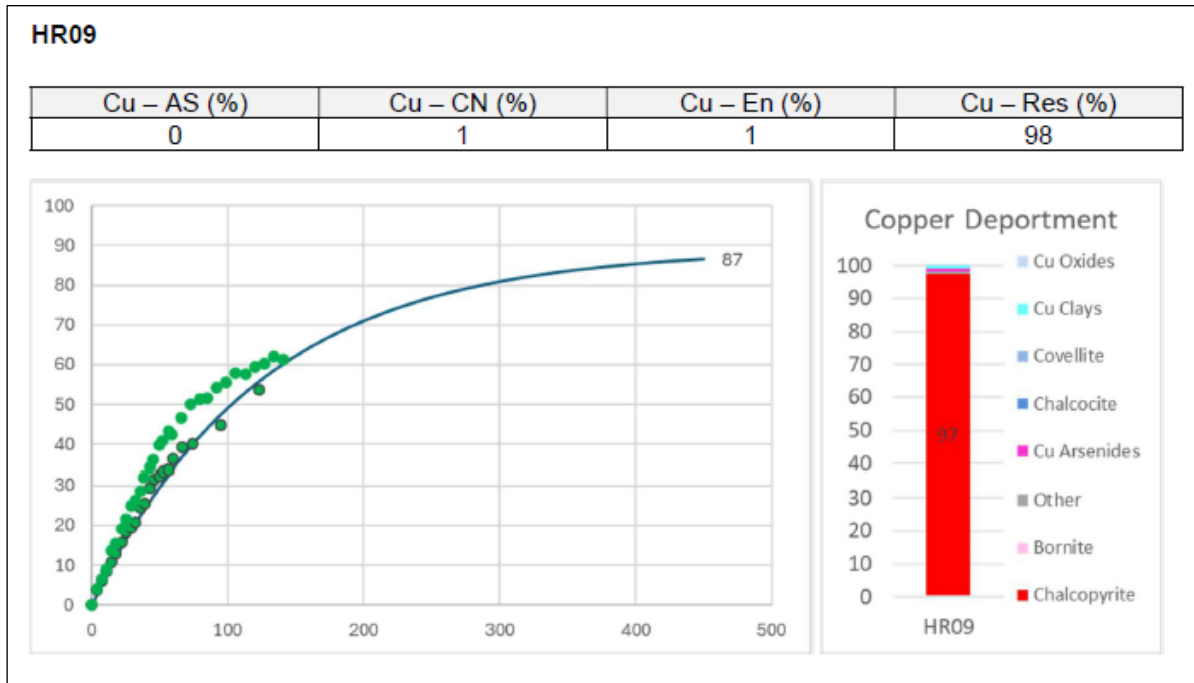
Source: Nuton, 2025

Figure 24-19: Leach Curve and Actual In-Flight Column Test Results for Test Sample HP06 (X Axis = Days and Y Axis = Cu Extraction %)



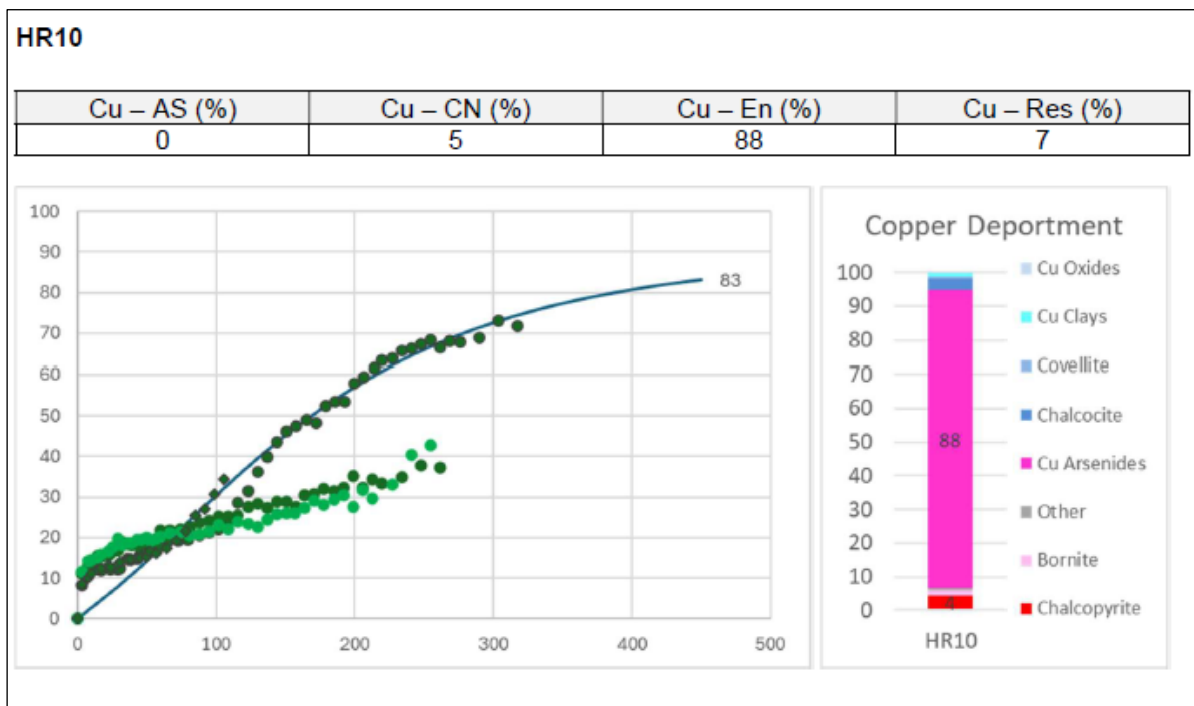
Source: Nuton, 2025

Figure 24-20: Leach Curve and Actual In-Flight Column Test Results for Test Sample HP07 (X Axis = Days and Y Axis = Cu Extraction %)



Source: Nuton, 2025

Figure 24-21: Leach Curve and Actual In-Flight Column Test Results for Test Sample HP09 (X Axis = Days and Y Axis = Cu Extraction %)

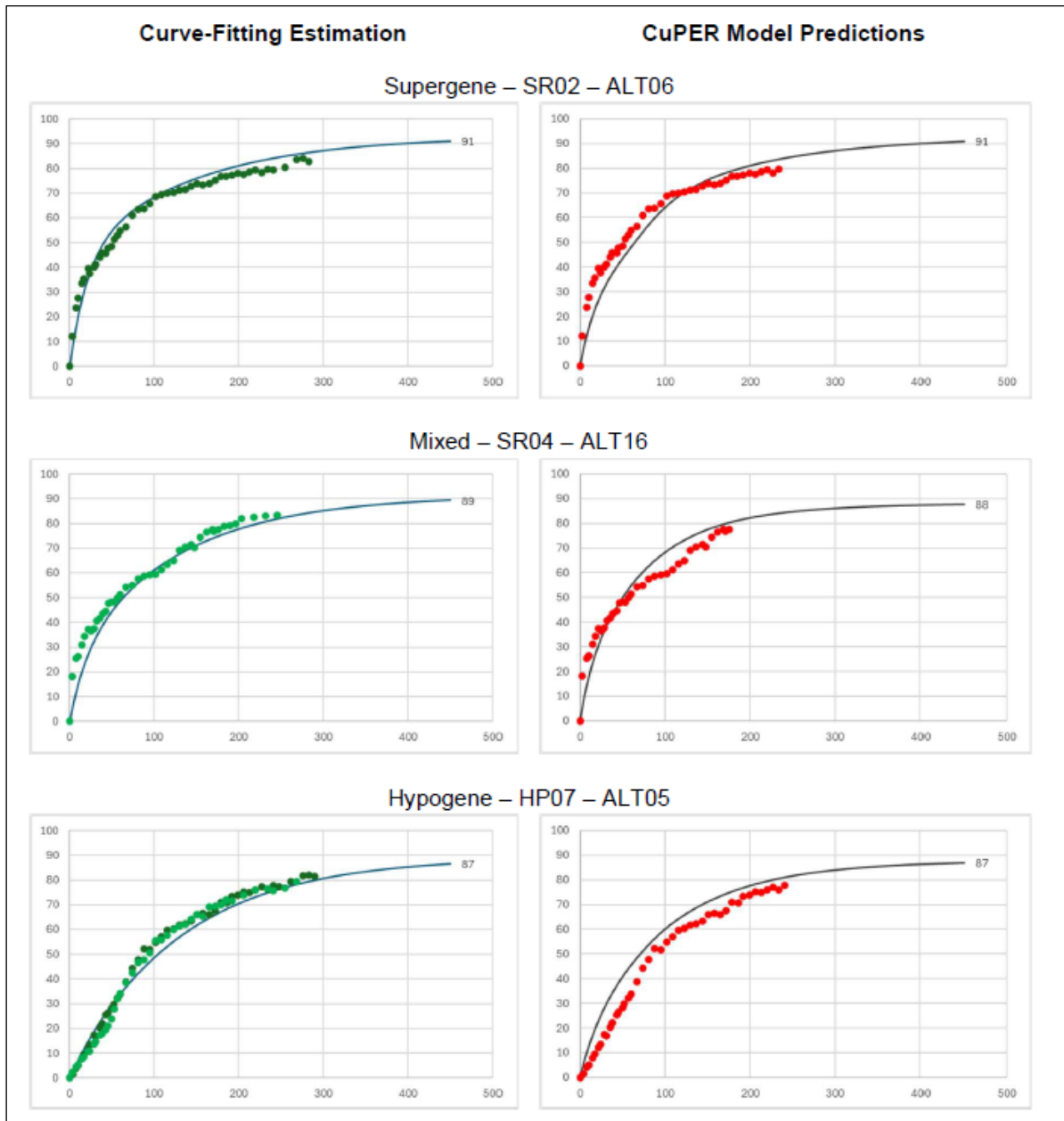


Source: Nuton, 2025

Figure 24-22: Leach Curve and Actual In-Flight Column Test Results for Test Sample HR10 (X Axis = Days and Y Axis = Cu Extraction %)

Nuton CuPER Model Predictions

Nuton compared in-flight column test results with a curve fitting estimate and with their in-house prediction model, which is based on in-house leaching data from many different projects. This comparison was made by selecting one column from each of the supergene, mixed and hypogene samples from the 1-meter column tests. These comparisons are shown in Figure 24-23, where there is good agreement between the curve fitting estimate and Nuton's proprietary CuPER Model.



Source: Nuton, 2025

Figure 24-23: Comparison of In-Flight Column Test Results with Nuton's Curve Fitting Estimate and with Nuton's Cu PER Model (X Axis = Days and Y Axis = Cu Extraction %)

24.5.6 Significant Factors

- Ten test samples were prepared from drill core to represent both supergene and hypogene mineralization, where 8 samples are located in the PEA pit shell and 2 samples are located in Altar East block cave lift 1 and Altar United block cave lift 1.
- The major copper minerals identified in the test samples included chalcopyrite, bornite, copper arsenides (enargite), chalcocite and covellite.
- A total of 22 one-meter-high column tests were conducted on the Altar test samples to evaluate the Nuton® Technology.
- Nuton has estimated ultimate copper extraction and copper recovery after a 450-day leach cycle for each mineralization at the Altar project based on analysis of the in-flight test results from the one-meter column tests. Copper extractions from hypogene, mixed and supergene material are estimated at 86%, 88% and 91%, respectively
- Nuton applies a discount factor of 92% to allow for inherent inefficiencies in a commercial heap leach. Therefore, estimated copper recoveries from hypogene, mixed and supergene material at 79%, 81% and 84%, respectively.
- During the next phase of metallurgical testing, Nuton will evaluate the Nuton Technology in 10-m-high columns, representing the height of a full heap leach lift.
- During the next phase of study, it will be important to evaluate the impact of site-specific parameters such as elevation and weather conditions on the performance of the Nuton Technology. In addition, it will be important to conduct detailed load-permeability testing to evaluate the height to which the agglomerated material can be stacked and maintain the required air and solution permeability.

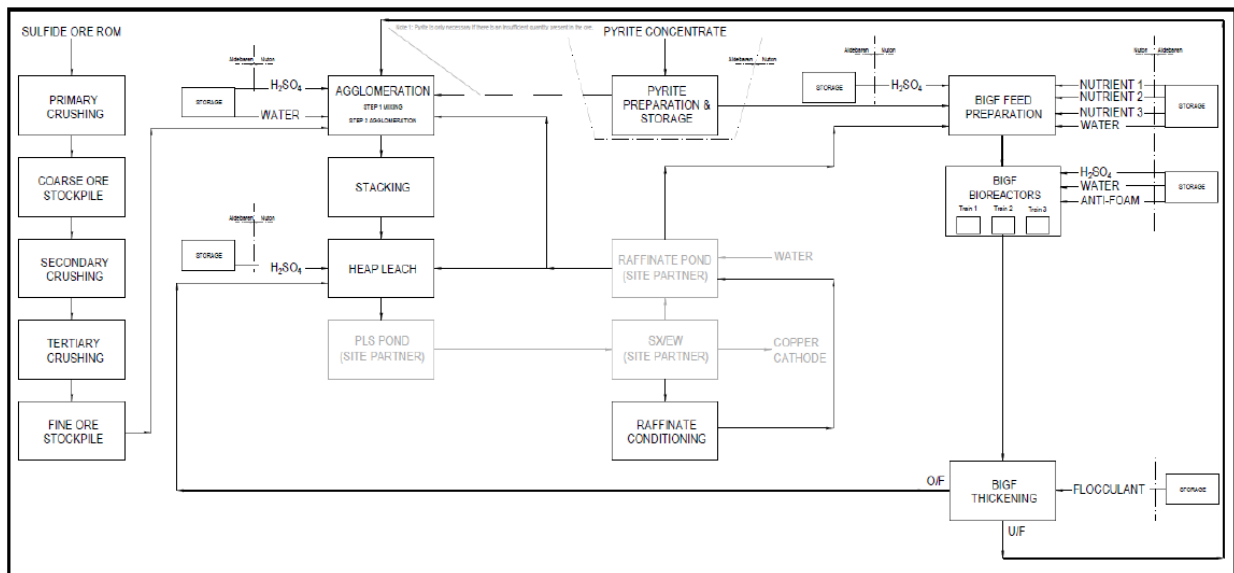
24.6 Process Description

The Nuton® Technology is a bio-leach heap leaching process targeting the leaching of primary and secondary copper sulphide minerals and has been designed to process 60,000 tpd (21.9 Mtpa). Feed will be crushed to (80% passing) P80 12.5 mm and placed on a conventional lined heap leach pad. The major in-scope Nuton Technology process unit operations are shown in Figure 24-24 and major process design criteria are provided in Table 24-14. The major unit operations include:

- Crushing
- Agglomeration
- BIGF (Bacterium Inoculum Growth Facility)
- Stacking
- Heap leaching
- Aeration

Required ancillary operations that are not included in the Nuton Technology package include:

- Mining
- Sulfuric acid handling
- Solvent extraction & Electrowinning



Source: Nuton, 2025

Figure 24-24: Nuton® Technology Flowsheet Showing Process Battery Limits and Unit Operations Provided by Others

Table 24-14: Major Heap Leach Process Design Criteria

Parameter	Units	Supergene	Mixed	Hypogene
Feed Grades				
Cu	%	0.50	0.35	0.50
Au	g/t	0.07	0.07	0.07
Ag	g/t	1.52	1.52	1.52
As	ppm	397	208	127
Copper Mineralogy				
Sequential Copper -Acid Soluble	%	11	7	8
Sequential Copper - Cyanide Soluble	%	61	28	8
Sequential Copper - Residual	%	29	64	92
Copper as Enargite	%	21	15	8
Pyrite Content	%	1.9	1.7	2.5
Operating Basis				
Days per Year	day	365	365	365
Hours per Day	hour	24	24	24
Shift Duration	hour	12	12	12
Shifts per Day		2	2	2
Primary Crushing				
Feed Rate	mt/y	21.9	21.9	21.9
Feed Rate	t/d	60,000	60,000	60,000
Secondary & Tertiary Crushing				
Product Size (P80)	mm	12.5	12.5	12.5
Fines (-150 microns)	%	<10	<10	<10
Agglomeration				
Overall Utilization	%	85	85	85
Ore Feed Moisture	%	2	2	2
Bacteria Inoculum Growth Facility		Proprietary	Proprietary	Proprietary
Conveying & Heap Stacking				
Heap Stacking Height	m	10	10	10
Maximum Heap Height	m	100	100	100
Stacked Bulk Density - dry	t/m ³	1.5	1.5	1.5
Consolidated Bulk Density - dry	t/m ³	1.7	1.7	1.7
Drain Down Moisture Content	%	12	12	12
Heap Leaching				
Solution Application Rate	L/h/m ²	6	6	6
Total Leach Cycle Time	day	182	182	182
Surface Preparation	day	7	7	7
Solution Application	day	160	160	160
Drain Down	day	15	15	15
Target Operating Temperature	C°	60	60	60
Copper Extraction	%	91	88	86
Scale-up Factor	%	92	92	92
Copper Recovery	%	84	81	79
Evaporation Loss From Heap	%	8	8	8
Air Flowrate to Heap	Nm ³ /h/t	0.04	0.04	0.04
Electrowinning				
Copper Production	t/y	91,980	62,087	86,505
Copper Production	t/d	252	170	237
Copper Production	kg/h	10,500	7,088	9,875

Source: Nuton, 2025

24.6.1 Crushing

Run of mine (ROM) tonnes are crushed in a three-stage crushing circuit to P80 12.5 mm. consisting of the following unit operations:

- Primary crusher (gyratory)
- Coarse feed stockpile
- Coarse feed reclaim conveyor
- Secondary screening
- Open circuit secondary cone crushing
- Tertiary screening
- Closed circuit tertiary cone crushing
- Fine feed stockpile

The objective of the crushing circuit is to reduce the particle size distribution of ROM to liberate pyrite and expose copper-bearing minerals while maintaining a large enough particle size for efficient solution and air percolation through the heap. Crushing must provide a size distribution that is amenable to agglomeration where additives can be introduced, and a homogenous particle size can be achieved for stacking. Crushed and screened material meeting Nuton® Technology size specifications is sampled and conveyed to a covered fine feed stockpile. Belt conveyor weightometers continuously measure the weight of the material on the coarse feed stockpile and fine feed reclaim conveyors. A fog dust suppression system controls dust emissions without adding excessive moisture to the fine product. Ventilation fans are required in the coarse and fine feed stockpile tunnels. Tramp metal magnets and metal detectors remove metal objects from the coarse feed stockpile and crusher feed conveyors. If metal is detected, the conveyor will stop, and the metal can be collected into the tramp metal bin for disposal. Closed Circuit Television (CCTV) cameras are included to monitor the ROM dump pocket and crusher feed chutes for potential blockages

24.6.2 Agglomeration

Agglomeration occurs before stacking on the heap. Agglomeration has two main functions in the Nuton® Technology process:

1. Formation of competent agglomerates containing coarse and fine particles
2. Addition of concentrated sulfuric acid, bacteria, and moisture as raffinate.

Following crushing, fine material is conveyed to the agglomerator where additives are introduced to ensure optimal leaching performance. The process additives include:

- Sulfuric acid
- BIGF (bacteria inoculum growth facility) thickener underflow
- Moisture (if required)

24.6.3 Bacteria Inoculum Growth Facility (BIGF)

The BIGF consists of bioreactors and feed tanks that are used for the growth of microorganisms. These microorganisms are then added to the agglomerator and the heap to assist in the leaching of chalcopyrite. Each BIGF module contains three trains, each at a specific temperature, growing mesophilic, thermophilic and extreme thermophilic microorganisms. Each train of bioreactor tanks consists of multiple tanks fed in parallel. The BIGF feed tank receives raffinate, three nutrients, and

pyrite at a specific ratio, which discharges to each bioreactor tank to provide the nutrients for microbial growth. Sulfuric acid, limestone and antifoam may be added to maintain optimal conditions. Discharge from each train of bioreactor tanks is directed to a thickener to separate the solids from the liquid. The liquid fraction is combined with raffinate for heap irrigation. The thickener underflow solids are pumped to the agglomerator.

24.6.4 Stacking

A series of portable conveyors transfer the agglomerator discharge to the heap leach pad. At the leach pad, the agglomerator discharge is stacked in 10-m-high lifts using a radial stacker operated in retreat mode to minimize the potential for compaction of the material on the heap. As the heap leach stacking conveyor retreats, heap leach transfer conveyors are removed, as needed, from the series. Stacked material is allowed to cure before irrigation commences.

24.6.5 Heap Leach Facility

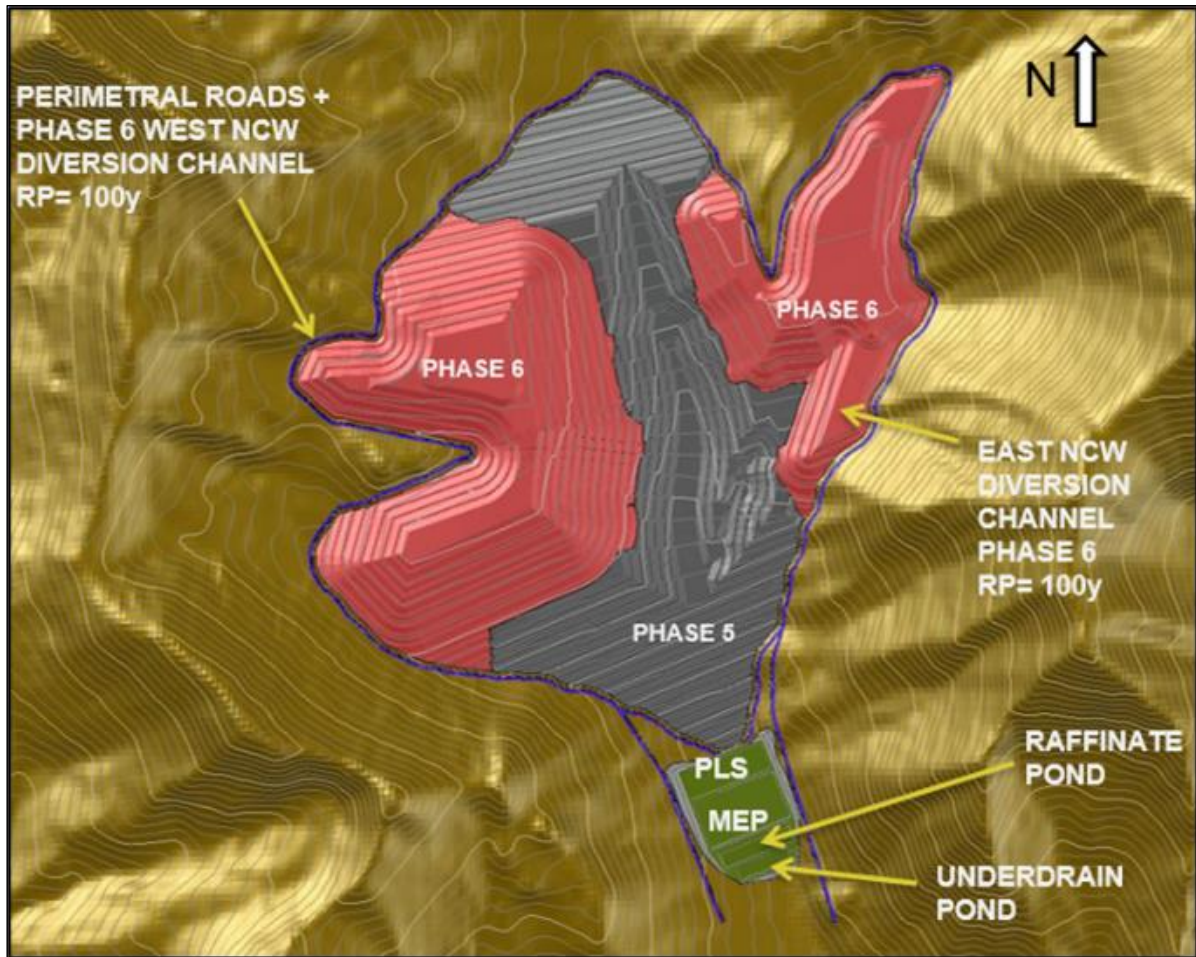
General

The Heap Leach Facility (HLF) has been sized for an ultimate capacity of 991 M tonnes, as shown on Figure 24-25. The facility will consist of a conventional copper leach pad that will be developed in six phases within the Cenicero valley, advancing up-valley, and will reach an ultimate height of 150 m. The site plan with the HLF arrangement is illustrated on Figure 24-26.

The heap leach facility will be designed to provide a stable and reliable foundation for construction of the heap. The heap leach pad area is constructed to support a permanent multi-lift heap and will be constructed with the following layers:

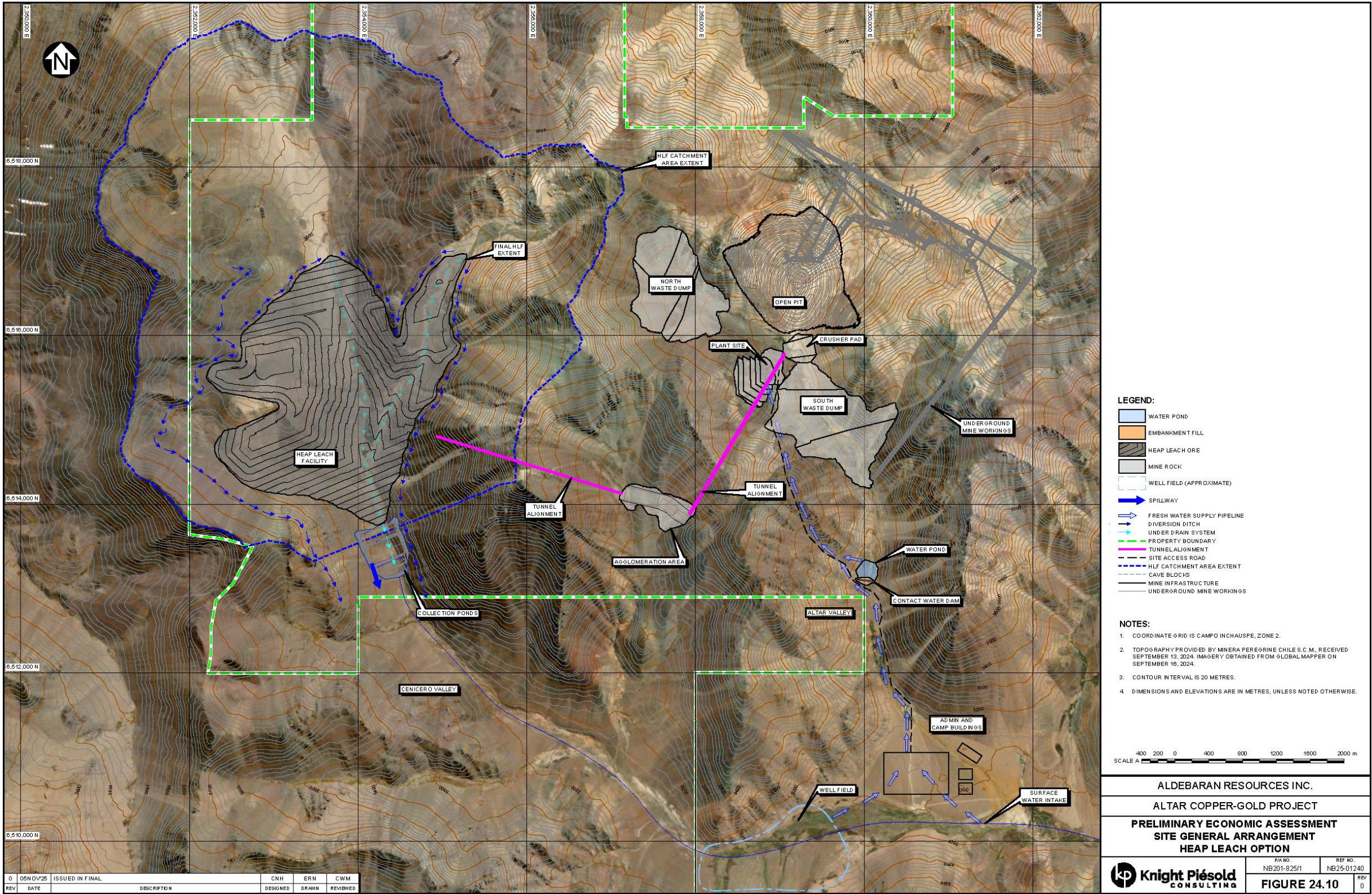
- Base of prepared earthworks for foundation
- Impermeable layer of placed clay
- Geomembrane liner (multiple as required)
- Overliner layer containing the following:
 - Protection and drainage layers of graded inert rock
 - Solution collection piping network.

Material will be stacked onto the prepared liner system according to the stacking plan into modules, cells, and lifts. Multiple vertical lifts of mineralized material make up the entire heap, multiple cells make up a lift, and multiple modules make up a cell. Instrumentation will be installed in both the overliner and the stacked material for monitoring performance and stability. Leach solution (raffinate) is applied at the rate of 6 L/h/m² to dissolve copper-bearing minerals and produce a copper-rich PLS, which is collected by a network of drainage pipes embedded in the overliner layer. PLS from the Nuton heap is directed via collection channels towards a PLS Sump before being pumped to the PLS pond. Air is blown into heap aeration piping, which then travels upwards through the heap to provide oxygen and carbon dioxide to the microorganisms.



Source: Knight Piésold, 2025

Figure 24-25: HLF Phase 6 (Final) Arrangement



Source: Knight Piésold, 2025

Figure 24-26: Site General Arrangement with HLF

Design Criteria

The main design criteria for the HLF are provided in Table 24-15.

Table 24-15: HLF Design Criteria

Item	Description	Unit	Value	Source
1	GENERAL & LOCATION			
1.1	General location	-	Within property boundary	AL
1.2	Location valley	-	Cenicero	AL
1.3	Topographic survey	-	Public domain surveys	AL
1.4	HLP type	-	Valley fill, Copper (Nuton® Technology applied)	AL
2	MINERAL PRODUCTION & CHARACTERISTICS			
2.1	Consolidated Bulk Density, Dry	tonnes/m ³	1.75	AL
2.2	Mine production rate	Mtn/y	21.9	AL
2.3	Total tonnage	Mtn	991.0	AL
2.4	Total volume	Mm ³	566.3	KP
2.5	Phase 1 capacity	Mtn	40.5	KP
2.6	Phase 2 capacity	Mtn	125.5	KP
2.7	Phase 3 capacity	Mtn	237.5	KP
2.8	Phase 4 capacity	Mtn	439.5	KP
2.9	Phase 5 capacity	Mtn	643.5	KP
2.10	Phase 6 capacity	Mtn	991.0	KP
3	STACKING & LEACHING			
3.1	Stacking rate	tonnes/day	110,000	AL
3.2	Total Leaching Cycle	days	160	AL
3.3	Lift release time	Days	182	KP
3.4	Area under active leaching	ha	133	AL
3.5	Irrigation rate	l/h/m ²	6	AL
3.6	Raffinate Solution Flow Rate	m ³ /h	7,014	AL
3.7	Pregnant Leach Solution (PLS) Flow Rate	m ³ /h	6,453	AL
3.8	PLS pond capacity	-	- 24 pumping stop + design storm (1000 y, 24 h)	KP
3.9	ME pond capacity	-	- 72 h draindown + design storm (1000 y, 24 h)	KP
3.10	Raffinate pond capacity	-	- 24 h pumping stop	KP
4	WATER MANAGEMENT			
4.1	Design storm recurrence time (operation)	years	1,000	KP
4.2	Design storm duration	h	24	KP
4.3	Precipitation (1000 y, 24 h)	mm	45.8	KP
5	CIVIL DESIGN			
5.1	PAD minimum slope	%	3	KP
5.2	Individual heap lift height	m	10	AL
5.3	Maximum heap height	m	150	KP
5.4	Lift local slope	H:V	2:1	KP
5.5	Overall stacking slope	H:V	4:1	KP
5.6	PAD lining system (< 50% slopes)	-	Double lining (low permeability soil + LLDPE geomembrane)	KP

Item	Description	Unit	Value	Source
5.7	PAD lining system (> 50% slopes)	-	Double lining (GCL + LLDPE geomembrane)	KP
5.8	Lining system maximum temperature exposure	°C	60	AL
5.9	Underdrain system	-	CPT HDPE perforated pipes + Underdrain Pond	KP
5.10	Collection system	-	CPT HDPE perforated pipes	KP
5.11	Interlift collection system	-	Yes, every 5 lifts	KP
5.12	LCRS	-	CPT HDPE perforated pipes, central zone channel of valley + LCRS pond	KP
5.13	Perimetral roads width	m	8	KP
5.14	Surface water management	-	Perimetral channels for 100-y RT storm event	KP

Source: Knight Piésold, 2025.

General Arrangement

The HLF arrangement will include for management of non-contact water including both surface and subsurface runoff and contact water associated with the irrigation of the heap. Separate water management systems will be included to manage non-contact water and contact water within the HLF as follows:

- Diversion ditches upslope from the HLF to divert non-contact water around the facility
- Underdrain system to collect non-contact groundwater seepage below the HLF and prevent pore pressure generation in the underlying foundation. The system will consist of perforated double-walled corrugated HDPE pipes ranging from 200 mm to 450 mm in diameter installed in trenches with drainage aggregate. The pipes will be graded to drain by gravity to the designated pond at the toe of the HLF.
- The lining system above the underdrainage system, which will consist of a 2 mm thick LLDPE geomembrane installed over a 30 cm thick layer of low permeability soil.
- Leachate recovery and recirculation system to monitor for and collect any leakage that may pass through the lining system. Collected water will be conveyed to the underdrainage pond and pumped back to the HLF for irrigation.
- Solution collection system installed over the lining system, which will consist of a network of 100 mm diameter corrugated double-walled HDPE collection pipes (drainage pipes) and 300 mm and 450 mm diameter collection header pipes to convey the pregnant leach solution by gravity to the Pregnant Solution Pond. Every 5 lifts, an interlift solution collection system has been included in the design, material takeoffs and costing. The pregnant leach solution will then be pumped to the Plant.
- Major events pond will be included to collect runoff from storm events

Instrumentation

A monitoring system has been included to monitor the performance of the HLF. The instrumentation will include the following:

- Vibrating wire piezometers and monitoring wells to measure phreatic levels within and downstream of the HLF
- Inclinometers, accelerometers, and surface movement monuments to monitor for any potential displacements.

- Thermistors to monitor the temperature of the HLF

Reclamation and Closure

The objectives of the HLF closure plan include long-term physical, chemical, and hydrological stability.

Physical stability will be confirmed through stability analyses, considering safety factors and criteria defined for closure. If necessary, slopes will be reprofiled and/or buttressed to meet stability targets. The closure arrangement will include measures to minimize erosion from surface water runoff.

Chemical stability will be confirmed through the management of contact and non-contact water. Potential measures include perimeter channels and management of contact water drainage including temporary storage in ponds, evaporation, and pumping of surface drainage to facilitate evaporation until minimum flows are reached such that evaporation ponds without the need for repumping.

Hydrological stability aims to control erosion and maintain the hydrological functioning of the non-contact water in the basin where the HLF is located. The impact of the design storm on water management will be verified to design hydraulic structures that facilitate the drainage of non-contact water downstream of the pile.

24.6.6 Aeration

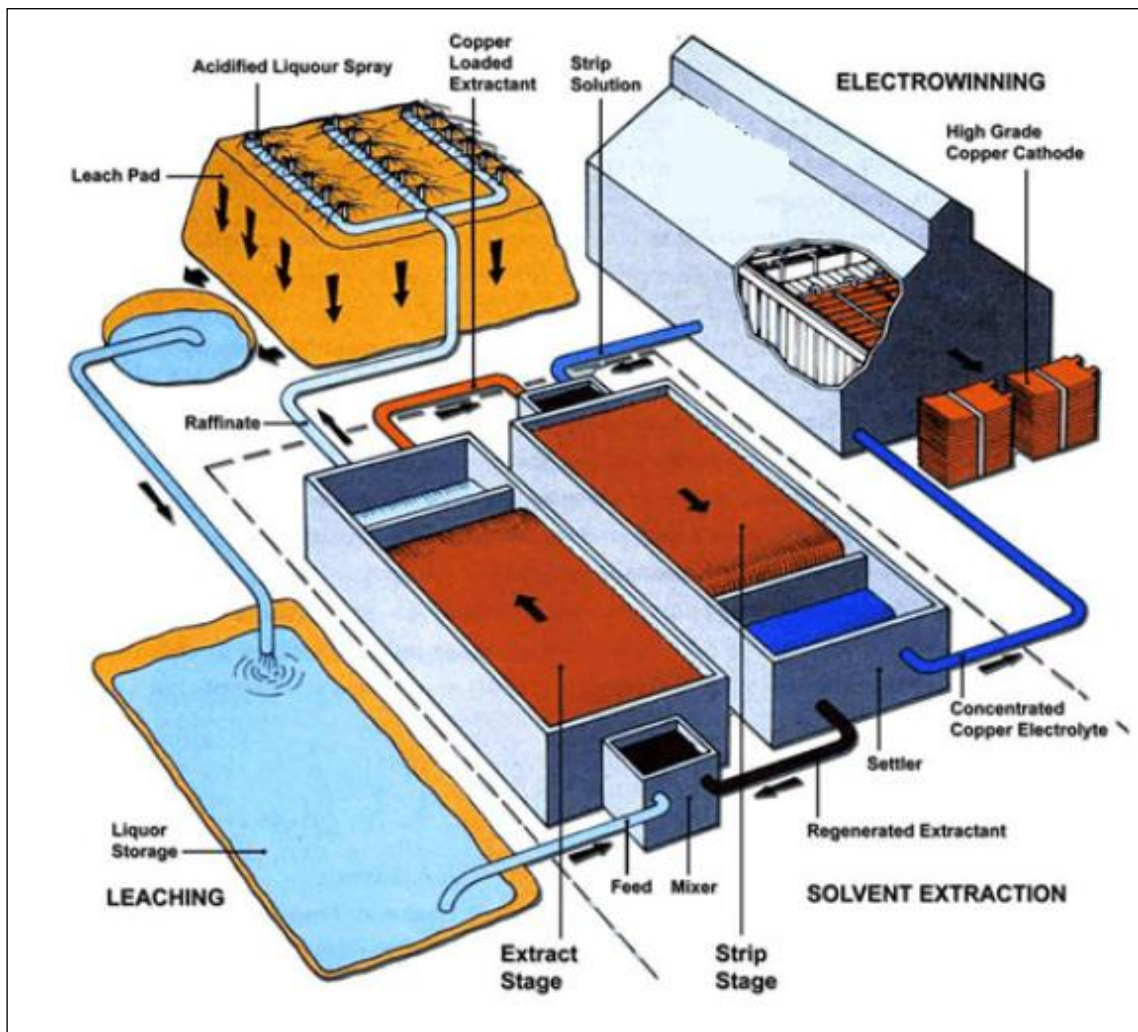
The Nuton® Technology includes the blowers and reticulation required for aeration of the heap as well as considerations to maintain acceptable gas permeability and oxygen utilization. The objective is to provide sufficient air flow to the Nuton Technology heap to enable adequate availability of oxygen and carbon dioxide to the process. Aeration is also required to transmit heat from the bottom (hotter) part of the heap to the top. The flowrate of air will increase as the tonnage of material under leach increases to ensure adequate air availability to all active leach modules. Air is directed from the blowers via a primary distribution header to each aeration sub-header distribution system dedicated to a single leach cell. Air injection commences once stacking of a single cell is concluded.

24.6.7 Solvent Extraction and Electrowinning

Solvent extraction and electrowinning (SX/EW) is ancillary to the Nuton Technology and not considered as part of Nuton's proprietary technology. The copper concentration of pregnant leach solution (PLS) produced by heap leaching is too low and too impure for the direct production of high purity copper cathodes. Industrial electrowinning from these solutions requires copper-rich electrolytes containing 40 – 50 g/L Cu^{++} . These high copper concentrations ensure that the Cu^{++} ions are always available for plating at the cathode surface, resulting in the production of smooth, dense, high purity and readily marketable cathode copper. Solvent extraction is a reversible two-step process by which high concentrations of relatively pure electrolyte for subsequent electrowinning can be produced. Solubilized copper in the pregnant leach solution (PLS) is extracted from the sulfuric acid-bearing aqueous phase to the organic solvent, which consists of kerosene plus an extractant, which has a high affinity for copper. The loaded organic is then advanced to the stripping stage where the copper is transferred back to the aqueous phase by contacting with lean electrolyte from the electrowinning circuit. The process is shown schematically in Figure 24-27 and involves the following steps:

- Contacting pregnant aqueous leach solution containing about 1 – 5 g/L Cu^{++} with a Cu-specific organic liquid extractant, resulting in the extraction of Cu^{++} from aqueous PLS into the organic extractant.

- Separating the Cu-depleted aqueous leach solution in a settler, now referred to as raffinate, from the Cu-loaded organic extractant.
- Recycling of the raffinate back to the heap leach
- Advancing the Cu-loaded organic forward to contact high H_2SO_4 electrowinning electrolyte, which results in stripping of the copper from the loaded organic into the high H_2SO_4 electrolyte
- Separating the stripped organic from the Cu-enriched copper electrolyte in a settler
- Advancing the enriched electrolyte to electrowinning where metallic copper is deposited on copper cathodes.
- Recycling the depleted electrolyte back to solvent extraction where it serves to strip copper from loaded organic.



Source: Internet Images, 2025

Figure 24-27: Schematic Solvent Extraction and Electrowinning Flowsheet

25 Interpretation and Conclusions

The Altar Project is a large cluster of multiple copper-gold porphyry centres stretching over at least a 7 km strike length. The best method of exploitation of the main Altar deposit (i.e., Altar Central, Altar Central, Altar East) has yet to be determined; however, there are opportunities for both large scale surface mining and moderate scale underground bulk mining methods. The mineral resource, as stated in Section 14, was based on large scale hard rock surface mining with an elevated cutoff to reflect the higher-grade potential of the deposit and the costs that will be incurred for development in a remote area.

- The Quebrada de la Mina (QDM) gold and silver deposit is located approximately 3.5 km west of Altar Central-United-East. As is currently understood, QDM has the potential to contribute precious metals credit or possible pyrite concentrate for Nuton Technology leach pad augmentation for the Altar project.
- The Altar property and surrounds have not been completely explored and there is significant potential to add additional mineral resources in the future with more step-out drilling, geological interpretation, drill testing of several known satellite targets, not to mention discovery of new mineralized porphyry centres. The discovery of the Radio Porphyry deposit in 2017 is evidence that there is still potential to discover additional porphyry centres in the district. High quality data sets available on site include ground magnetics, 3D IP and 3D MT geophysics, as well as geological and structural mapping, state of the art, property wide talus fine surface geochemistry sampling, and an extensive repository of historical diamond drill holes to help focus future exploration and drill campaigns.
- The geological and structural work that is incorporated into this mineral resource has provided a more refined estimate of the distribution of arsenic in the deposit which was overstated in previous mineral resource estimates prior to 2024. The improved understanding of the occurrence of arsenic provides additional options for the treatment of arsenic going forward.
- Highly preliminary work has been done to evaluate potential arsenic treatment options which were outlined in Section 13. Additional metallurgical work combined with alternative mine planning options will be required to optimize the handling of arsenic at Altar. The option of heap leaching the secondary sulphides at Altar exists, which would not require arsenic treatment for a period of time. The refined geological interpretation shows that there are portions of the hypogene mineralization that may have sufficiently low arsenic as to not limit the marketing of the concentrates from those ores.
- Test work is currently underway to test the application of Rio Tinto's Nuton® Technology to the supergene and hypogene components of the Altar deposit. The preliminary inflight results of that work have been highlighted in this report (see Chapter 24.5) show very positive indications that the supergene, mixed, and hypogene copper sulphides are amenable to the Nuton Technology which could mean a substantial change in the future approach to the deposit.
- Geotechnical work at Altar is in the early stages. Assumptions regarding slope angles in the pit will likely change as more detailed work is completed in the future.
- Underground mine design is in the early stages but shows promise. Additional geotechnical and design work will be required to better define the underground mine plan and cost.
- Should Aldebaran commission a PFS evaluation of the Altar project, it will provide an initial, more detailed analysis of the various options for the project. A decision has not been taken yet and will require board approval. The metal prices that were used to develop the 2024

mineral resource reflect somewhat conservative copper and gold prices in relation to the current spot markets. The 2024 Altar resource was based on US\$3.75/lb copper, US\$1,800/oz gold, and US\$23.00/oz silver. The 2021 resource at QDM was based on even more conservative prices compared to today's spot prices: using a gold price of US\$1,500/oz and a silver price of US\$20.00/oz. In both cases, using more updated metal prices to reflect current market conditions in the next mineral resource update should have a positive impact on the resource base.

- The capital cost estimates prepared for this study can be considered between a Class 5 and Class 4 (AACE) level of detail, which is considered more than required for a PEA level study. Contingencies vary from 15% to 25% and reflect the level of detail of the prepared estimates.
- The operating cost estimates prepared for this study were mostly prepared under a first principles basis and are more than adequate for a PEA level study. Most of the estimates also include contingencies, which range from 5% to 25%.
- More work should be done to identify the exact port where the concentrate will be transported to and the potential routes and modes of transportation.
- The PEA is preliminary in nature, that it includes Inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral reserves, and there is no certainty that the PEA will be realized. Mineral Resources that are not Mineral reserves do not have demonstrated economic viability.
- The economic model is based on mine plans that were prepared as outlined in previous sections. Inferred resources account for approximately 20% of the tonnage contained within the mine plan, while 80% of the tonnage contained within the mine plan are in the Measured and Indicated categories. As the stage of study for the Altar project is a PEA, no reserves are estimated for use in this analysis. The economic evaluation was completed using resource material that includes material in the Inferred category.
- As with the capital and operating cost forecasts, the economic analysis is inherently a forward-looking exercise. These estimates rely upon a range of assumptions and forecasts that are subject to change depending upon macroeconomic conditions, operating strategy and new data collected through future operations.
- The results of the economic analysis indicate that, at an average copper price of US\$4.35/lb-Cu, the operation returns an after-tax NPV at 8% of US\$2,009 million.
- Estimated internal rate of return is 20.5%, all-in sustaining cash costs are estimated at US\$2.59/lb-Cu and project payback is expected by year 4 of operation.
- Total LoM gross revenue of \$44.7 billion and total LoM free cash flow of \$10.6 billion
- There could be an upside related to the sale of the copper concentrate if more favorable smelter terms can be secured for the sale of gold and silver, as a big portion of the potential revenue of these metals are being offset by the assumed smelter terms.

26 Recommendations

SRK, IMC and KP recommend that a measured approach be taken in the evaluation and development of Altar. Drilling and exploration activities at the project have outlined a large volume of potentially economic mineralization, as well as several satellite exploration targets that require additional work.

The following thoughts are recommended for future consideration.

1. Complete the PFS and continue the activities that are currently underway.
2. Utilize the PEA results to focus future studies and data collection that the project will require as it continues the derisking process as it moves towards the PFS stage.
3. Targeted drilling for: (a) resource confirmation, (b) Nuton Technology and conventional metallurgical testing, and (c) more detailed geotechnical data collection should be planned.
4. Analyze final results from Phase 1 and review the Phase 2 program for Nuton Technology test work, if any, ensuring alignment with the final pit shells and mine plan defined in the PEA - both open pit and underground - to obtain representative results.
5. Although the Altar project already has a significant amount of mineralized material, additional geological work is warranted on the various satellite targets to better define possible future drill targets.

26.1 Mine Hydrogeology

Future study should include the following elements to further characterize groundwater in relation to the open pit and underground:

- Hydrogeological instrumentation program - designed and implemented in coordination with geotechnical programs for the open pit and block cave design. The instrumentation would target key locations and structures to aid in:
 - Identifying pore pressures in the vicinity of pit walls and underground workings
 - Long term monitoring of pore pressure changes during mining.
 - Characterization of geological structures.
- In situ testing of geological materials - conducted to inform the:
 - Design of dewatering/depressurization systems.
 - Hydraulic characterization of rock mass and geological structures
- Groundwater sampling - Sampling of groundwater quality in discrete units, to allow prediction of the likely groundwater quality which will enter the open pit and underground workings.
- Reanalyze the 2025 pumping test data to consider the anisotropy of the system.

26.2 Water Supply

Water supply for the project is predicted to have a large deficit, and thus water supply strategy for the project will likely need to be multi-faceted, including multiple supply sources and various water conservation measures (measures to reduce usage and losses, recycling, etc.). To this end, a water supply study should be implemented to estimate the quantity of water that could be used for mine operations. The work will include long-term pump testing on known aquifers and stream gauging along nearby water courses.

Additional investigation should be conducted in La Pantanosa Valley aquifer. This should include the following:

- Additional geophysics to identify the deepest and most productive zones within the aquifer as well as the aquifer boundaries (lateral and vertical).
- Additional drilling and well installation; test wells should be installed in a manner which would allow them to be used as production wells during operations.
- During drill advancement in situ sampling, geophysics, and air lift testing should be conducted to allow a determination in the field to be made on whether the hole should be completed as a test/production well, a monitoring well, or decommissioned.
- Instrumentation should be installed to allow monitoring of the aquifer response to pumping.
- A surface water monitoring program should be implemented before, during, and after the aquifer testing to identify the magnitude of flux lost from the surface water due to aquifer pumping.
- Testing of test/production wells should include step-drawdown tests and a constant rate test.
- A full well field pumping test using multiple wells where the aquifer is stressed at the required makeup water rate for as long as possible should be conducted. This test would be the most accurate in allowing the long-term viability of the aquifer for water supply to be predicted.

Alternative well field locations should be identified beyond the La Pantanosa Valley aquifer.

During operations, underground inflows should be beneficially reused to reduce stress on aquifers and/or surface water intakes, though these waters shouldn't be factored into water balances, as predicted inflows to the underground mine are difficult to quantify and are prone to seasonal variation.

Consideration should be made of the potential to implement an aquifer storage and recovery system, for example by injecting surface water into the La Pantanosa Valley aquifer during high flow periods.

26.3 Waste Rock

Further geochemical characterization of waste rock to evaluate the ML/ARD potential will be necessary to identify and manage potential environmental impacts during the next stage of study, including waste rock used for construction. Physical testing on select waste rock samples will be carried out to confirm the durability of waste rock used for construction over time. Slope stability recommendations for waste dumps will also be provided during the PFS.

26.4 Tailings Storage Facility

The following recommendations for future study are provided:

1. Geotechnical site investigations remain to be completed with the TSF area to confirm the subsurface conditions. The TSF arrangement and operating strategy will need to be further developed to include site specific information.
2. Geochemical characterization of the tailings will need to be completed during the next stage of study.
3. Further hydrotechnical studies are required during the next level of study including water balance, surface water management, and return water structures to confirm reclaim water availability from the TSF.
4. Closure planning for the TSF is recommended during the next phase of study.

26.5 Estimated Cost for future studies

SRK, KP and IMC's combined estimate of future work required is summarized in Table 26-1 below.

Table 26-1: Estimated Cost for Development of PFS Level Study

Work Program	Cost (US\$M)
Upgrade Inferred - Drilling	11.0
Geotechnical - Drilling	11.0
Monitor/Test Wells - Drilling	1.0
Infrastructure	2.0
Environmental/Social/Permit	2.0
Hydrologic Studies	1.0
Pre-Feasibility-Study	2.0
Total to PFS	30.0

Source: SRK, 2025

26.6 Environment and Permitting

Robust baseline datasets have been developed for most aspects of the environment, and this work should continue in parallel with engineering studies, for the preparation of an IIA.

A key permitting risk is represented by the cryogenic landforms within the Project area and the Glacier protection laws, but there is a plan well underway that should effectively manage that issue.

Stakeholder engagement efforts should ramp up as the Project advances and ahead of submission of an IIA.

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28 Glossary

The Mineral Resources and Mineral Reserves have been classified according to CIM (CIM, 2014). Accordingly, the Resources have been classified as Measured, Indicated or Inferred, the Reserves have been classified as Proven, and Probable based on the Measured and Indicated Resources as defined below.

28.1 Mineral Resources

A **Mineral Resource** is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated, or interpreted from specific geological evidence and knowledge, including sampling.

An **Inferred Mineral Resource** is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An **Indicated Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

A **Measured Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

28.2 Mineral Reserves

A **Mineral Reserve** is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

The reference point at which Mineral Reserves are defined, usually the point where the material is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. The public disclosure of a Mineral Reserve must be demonstrated by a Pre-Feasibility Study or Feasibility Study.

A **Probable Mineral Reserve** is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proven Mineral Reserve.

A **Proven Mineral Reserve** is the economically mineable part of a Measured Mineral Resource. A Proven Mineral Reserve implies a high degree of confidence in the Modifying Factors.

28.3 Definition of Terms

Table 28-1 shows general mining terms may be used in this report.

Table 28-1: Definition of Terms

Term	Definition
Assay	The chemical analysis of mineral samples to determine the metal content.
Capital Expenditure	All other expenditures not classified as operating costs.
Composite	Combining more than one sample result to give an average result over a larger distance.
Concentrate	A metal-rich product resulting from a mineral enrichment process such as gravity concentration or flotation, in which most of the desired mineral has been separated from the waste material in the ore.
Crushing	Initial process of reducing ore particle size to render it more amenable for further processing.
Cut-off Grade (CoG)	The grade of mineralized rock, which determines as to whether or not it is economic to recover its gold content by further concentration.
Dilution	Waste, which is unavoidably mined with ore.
Dip	Angle of inclination of a geological feature/rock from the horizontal.
Fault	The surface of a fracture along which movement has occurred.
Footwall	The underlying side of an orebody or slope.
Gangue	Non-valuable components of the ore.
Grade	The measure of concentration of gold within mineralized rock.
Hangingwall	The overlying side of an orebody or slope.
Haulage	A horizontal underground excavation which is used to transport mined ore.
Hydrocyclone	A process whereby material is graded according to size by exploiting centrifugal forces of particulate materials.
Igneous	Primary crystalline rock formed by the solidification of magma.
Kriging	An interpolation method of assigning values from samples to blocks that minimizes the estimation error.
Level	Horizontal tunnel the primary purpose is the transportation of personnel and materials.
Lithological	Geological description pertaining to different rock types.
LoM Plans	Life-of-Mine plans.
LRP	Long Range Plan.
Material Properties	Mine properties.
Milling	A general term used to describe the process in which the ore is crushed and ground and subjected to physical or chemical treatment to extract the valuable metals to a concentrate or finished product.
Mineral/Mining Lease	A lease area for which mineral rights are held.
Mining Assets	The Material Properties and Significant Exploration Properties.
Ongoing Capital	Capital estimates of a routine nature, which is necessary for sustaining operations.
Ore Reserve	See Mineral Reserve.

Term	Definition
Pillar	Rock left behind to help support the excavations in an underground mine.
RoM	Run-of-Mine.
Sedimentary	Pertaining to rocks formed by the accumulation of sediments, formed by the erosion of other rocks.
Shaft	An opening cut downwards from the surface for transporting personnel, equipment, supplies, ore and waste.
Sill	A thin, tabular, horizontal to sub-horizontal body of igneous rock formed by the injection of magma into planar zones of weakness.
Smelting	A high temperature pyrometallurgical operation conducted in a furnace, in which the valuable metal is collected to a molten matte or doré phase and separated from the gangue components that accumulate in a less dense molten slag phase.
Stope	Underground void created by mining.
Stratigraphy	The study of stratified rocks in terms of time and space.
Strike	Direction of line formed by the intersection of strata surfaces with the horizontal plane, always perpendicular to the dip direction.
Sulphide	A sulfur bearing mineral.
Tailings	Finely ground waste rock from which valuable minerals or metals have been extracted.
Thickening	The process of concentrating solid particles in suspension.
Total Expenditure	All expenditures including those of an operating and capital nature.
Variogram	A statistical representation of the characteristics (usually grade).

Source: SRK, 2025

28.4 Abbreviations

Table 28-2 shows abbreviations that may be used in this report.

Table 28-2: Abbreviations

Abbreviation	Unit or Term
A	ampere
AA	atomic absorption
A/m ²	amperes per square meter
ANFO	ammonium nitrate fuel oil
Ag	silver
Au	gold
AuEq	gold equivalent grade
°C	degrees Centigrade
CCD	counter-current decantation
CIL	carbon-in-leach
CoG	cut-off grade
cm	centimeter
cm ²	square centimeter
cm ³	cubic centimeter
cfm	cubic feet per minute
ConfC	confidence code
CRec	core recovery
CSS	closed-side setting
CTW	calculated true width
°	degree (degrees)
dia.	diameter
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
FA	fire assay
ft	foot (feet)
ft ²	square foot (feet)
ft ³	cubic foot (feet)
g	gram

Abbreviation	Unit or Term
gal	gallon
g/L	gram per liter
g-mol	gram-mole
gpm	gallons per minute
g/t	grams per tonne
ha	hectares
HDPE	Height Density Polyethylene
hp	horsepower
HTW	horizontal true width
ICP	induced couple plasma
ID2	inverse-distance squared
ID3	inverse-distance cubed
IFC	International Finance Corporation
ILS	Intermediate Leach Solution
kA	kiloamperes
kg	kilograms
km	kilometer
km ²	square kilometer
koz	thousand troy ounce
kt	thousand tonnes
kt/d	thousand tonnes per day
kt/y	thousand tonnes per year
kV	kilovolt
kW	kilowatt
kWh	kilowatt-hour
kWh/t	kilowatt-hour per metric tonne
L	liter
L/sec	liters per second
L/sec/m	liters per second per meter
lb	pound
LHD	Long-Haul Dump truck
LLDDP	Linear Low Density Polyethylene Plastic
LOI	Loss On Ignition
LoM	Life-of-Mine
m	meter
m ²	square meter
m ³	cubic meter
masl	meters above sea level
MARN	Ministry of the Environment and Natural Resources
MDA	Mine Development Associates
mg/L	milligrams/liter
mm	millimeter
mm ²	square millimeter
mm ³	cubic millimeter
MME	Mine & Mill Engineering
Moz	million troy ounces
Mt	million tonnes
MTW	measured true width
MW	million watts
m.y.	million years
NGO	non-governmental organization
NI 43-101	Canadian National Instrument 43-101
OSC	Ontario Securities Commission
oz	troy ounce
%	percent
PLC	Programmable Logic Controller
PLS	Pregnant Leach Solution
PMF	probable maximum flood
ppb	parts per billion

Abbreviation	Unit or Term
ppm	parts per million
QA/QC	Quality Assurance/Quality Control
RC	rotary circulation drilling
RoM	Run-of-Mine
RQD	Rock Quality Description
SEC	U.S. Securities & Exchange Commission
sec	second
SG	specific gravity
SPT	standard penetration testing
st	short ton (2,000 pounds)
t	tonne (metric ton) (2,204.6 pounds)
t/h	tonnes per hour
t/d	tonnes per day
t/y	tonnes per year
TSF	tailings storage facility
TSP	total suspended particulates
µm	micron or microns
V	volts
VFD	variable frequency drive
W	watt
XRD	x-ray diffraction
y	year

Source: SRK, 2025

Appendices

Appendix A: Certificates of Qualified Persons

I, John M. Marek P.E. do hereby certify that:

a) I am currently employed as the President and a Senior Mining Engineer by:

Independent Mining Consultants, Inc.
3560 E. Gas Road
Tucson, Arizona, USA 85714

b) This certificate is part of the report titled “NI 43-101 Technical Report Preliminary Economic Assessment, Altar Project, San Juan, Argentina”, with an effective date of September 1, 2025.

c) I graduated with the following degrees from the Colorado School of Mines
Bachelors of Science, Mineral Engineering – Physics 1974
Masters of Science, Mining Engineering 1976

I am a Registered Professional Mining Engineer in the State of Arizona USA
Registration # 12772

I am a Registered Professional Engineer in the State of Colorado USA
Registration # 16191

I am a Professional Engineer, Yukon Territory, and Ontario, Canada

I am a Registered Member of the American Institute of Mining and Metallurgical Engineers, Society of Mining Engineers

I have worked as a mining engineer, geoscientist, and reserve estimation specialist for more than 50 years. I have managed drill programs, overseen sampling programs, and interpreted geologic occurrences in both precious metals and base metals for numerous projects over that time frame. My advanced training at the university included geostatistics and I have built upon that initial training as a resource modeler and reserve estimation specialist in base and precious metals for my entire career. I have acted as the Qualified Person on these topics for numerous Technical Reports.

My work experience includes mine planning, equipment selection, mine cost estimation and mine feasibility studies for base and precious metals projects worldwide for over 49 years.

d) I visited the Altar Property February 1-2, 2013. I visited the sample preparation and assay facilities that are used for the project on February 4, 2013.

e) I am responsible for sections 1.5, 1.13.5, 12 and 14, of the report titled “NI 43-101 Technical Report Preliminary Economic Assessment, Altar Project, San Juan, Argentina”, with an effective date of September 1, 2025.

f) I am independent of Aldebaran Resources, Inc. and their subsidiaries, applying the tests in Section 1.5 of National Instrument 43-101.

g) Independent Mining Consultants, Inc. and John Marek have worked on the Altar project in the past. A mineral resource was published on January 31, 2014 titled “Estimated Mineral Resources, Altar & Quebrada de la Mina Deposits, San Juan Province, Argentina”. A mineral resource update was published in 2018 titled “Technical Report Estimated Mineral Resources, Altar Project, San Juan Province, Argentina, as amended 28 September 2018. A mineral resource update was published in 2021 titled “Technical Report, Estimated Mineral Resources, altar Project, San Juan Provide Argentina with an effective date of 22 March 2021

h) I have read National Instrument 43-101 and Form 43-101F1, and to my knowledge, the Technical Report has been prepared in compliance with that instrument and form.

i) As of the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated: November 19, 2025

“Signed”

“Stamped”

John M. Marek
Registered Member of the American Institute of Mining and Metallurgical Engineers,
Society of Mining Engineers

CERTIFICATE OF QUALIFIED PERSON

I, Jacob W. Richey, P.E. do hereby certify that:

1. I am currently employed as a Senior Mining Engineer by:

Independent Mining Consultants, Inc.
3560 E. Gas Road
Tucson, Arizona, USA 85714

2. I graduated with the following degrees from the Colorado School of Mines.
Bachelors of Science, Mining Engineering – 2009
3. I am a Registered Professional Mining Engineer in the State of Arizona USA.
Registration # 64139
4. I have worked as a mining engineer for more than 15 years. I have been involved with the preparation of mineral resources, mineral reserves, and mine plans for multiple hard rock metal projects over that time.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI43-101.
6. I am responsible for sections 1.5, 1.13.5, 12 and 14, of the report titled “NI 43-101 Technical Report Preliminary Economic Assessment, Altar Project, San Juan, Argentina”, with an effective date of September 1, 2025.
7. I last visited the Altar property on 17-19 April 2024.
8. I have been involved with work on the Altar project since 2024. The nature of my work was preparing a mineral resource titled: “Technical Report Estimated Mineral Resources, Altar Project, San Juan Province, Argentina”, with an effective date of December 31, 2024.
9. As of the date hereof, to the best of my knowledge, information, and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
10. I am independent of the issuer applying the definition in Section 1.5 of NI 43-101.
11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated: 19 November 2025

“Signed”

“Stamped”

Jacob W. Richey
Professional Mining Engineer AZ #64139



CERTIFICATE OF QUALIFIED PERSON

I, Kevin B. Heather, BSc (hons), MSc, PhD, FAusIMM, FSEG, FGSL do hereby certify that:

1. I am Chief Geological Officer of Aldebaran Resources Inc., 200 Burrard Street, Suite 1570, Vancouver, British Columbia V6C 3L6, Canada.
2. This certificate applies to the technical report titled "Preliminary Economic Assessment, Altar Project, San Juan, Argentina" with an Effective Date of September 1, 2025 (the "Technical Report").
3. I graduated with a degree in geological sciences from University of British Columbia, Canada in 1982. In addition, I have obtained a MSc in 1985 from Queen's University at Kingston, Canada, and PhD in 2001 from the University of Keele, England. I am a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM), a Fellow and Honorary Lecturer of the Society of Economic Geologists (FSEG), and a Fellow of the Geological Society of London (FGSL). I have worked as a Geologist for a total of 43 years since my graduation from university, plus an additional 4 years prior to that graduation. My relevant experience includes 30+ years studying and exploring for epithermal and porphyry style mineral deposits along the Andean mountain range of South America. Prior to that I spent 15 years doing regional geological and mineral deposits studies and mapping for the Ontario Geological Survey (OGS) and the Geological Survey of Canada (GSC) and in the Archean Superior Province of Canada.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the Altar Project property on February 4, 2025, for 3 days and April 5, 2025, for 3 days.
6. I am responsible for the geological descriptions and other related information contained in Sections 1.1-1.3, 1.13.1-1.13.3, 4-11, and 23.
7. I am not independent of the issuer applying all of the tests in section 1.5 of NI 43-101. I am not independent because I am insider of the issuer and company QP.
8. I have had extensive prior involvement with the property that is the subject of the Technical Report. The nature of my prior involvement is designing, managing, and reviewing all of the technical work done on the property during the period 2018 to the present, as well as being the Qualified Person (as defined in NI 43-101) for all technical work completed the same period.
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of November, 2025.

"Signed"

"Stamped"

Kevin B. Heather, BSc (hons), MSc, PhD, FAusIMM, FSEG, FGSL

CERTIFICATE OF QUALIFIED PERSON

I, Fernando Rodrigues, BS Mining, MBA, MMSAQP do hereby certify that:

1. I am Practice Leader and Principal Consultant (Mining Engineer) of SRK Consulting (U.S.), Inc., 999 Seventeenth Street, Suite 400, Denver, CO, USA, 80202.
2. This certificate applies to the technical report titled "Preliminary Economic Assessment, Altar Project, San Juan, Argentina" with an Effective Date of September 1, 2025 (the "Technical Report").
3. I graduated with a Bachelors of Science degree in Mining Engineering from South Dakota School of Mines and Technology in 1999. I am a QP member of the MMSA. I have worked as a Mining Engineer for a total of 26 years since my graduation from South Dakota School of Mines and Technology in 1999. My relevant experience includes mine design and implementation, short term mine design, dump design, haulage studies, blast design, ore control, grade estimation, database management.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the Altar Project property on January 28, 2025 for 4 days.
6. I am responsible for mining Sections 1.6-1.7, 1.9, 1.13.6, 1.13.7, 1.13.9, 1.13.11, 2.3, 15, 16.1, 16.4, 16.6, 18.1-18.2, 18.5-18.11, 21.1.1, 21.5, 21.6.1, 24.1-24.4, 26, 26.5, 27, portions of 1.11 and 21.4.
7. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
8. I have not had prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of November, 2025.

"Signed"

"Stamped"

Fernando Rodrigues, BS Mining, MBA, MMSAQP

U.S. Offices:

Anchorage	907.677.3520
Clovis	559.452.0182
Denver	303.985.1333
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CERTIFICATE OF QUALIFIED PERSON

I, Eric Olin, MSc Metallurgy, MBA, SME-RM, do hereby certify that:

1. I am a Principal Process Metallurgist of SRK Consulting (U.S.), Inc., 999 Seventeenth Street, Suite 400, Denver, CO, USA, 80202.
2. This certificate applies to the technical report titled "Preliminary Economic Assessment, Altar Project, San Juan, Argentina" with an Effective Date of September 1, 2025 (the "Technical Report").
3. I graduated with a Master of Science degree in Metallurgical Engineering from the Colorado School of Mines in 1976. I am a Registered Member of The Society for Mining, Metallurgy and Exploration, Inc. I have worked as a Metallurgist for over 40 years since my graduation from the Colorado School of Mines. My relevant experience includes extensive consulting, plant operations, process development, project management and research & development experience with base metals, precious metals, ferrous metals and industrial minerals. I have served as the plant superintendent for several gold and base metal mining operations. Additionally, I have been involved with numerous third-party due diligence audits, and preparation of project conceptual, pre-feasibility and full-feasibility studies.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I did not visit the Altar Project property.
6. I am responsible for metallurgical and process Sections 1.4, 1.8, 1.13.4, 1.13.8, 1.13.11, 13, 17, 24.5-24.6, and a portion of 1.11 of the Technical Report.
7. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
8. I have not had prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of November, 2025.

"Signed"

"Stamped"

Eric Olin, MSc Metallurgy, MBA, SME-RM, MAusIMM

U.S. Offices:

Anchorage	907.677.3520
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South America

CERTIFICATE OF QUALIFIED PERSON

I, Mark Allan Willow, MSc, CEM, SME-RM do hereby certify that:

1. I am Practice Leader/Principal Environmental Scientist of SRK Consulting (U.S.), Inc., 5250 Neil Road, Reno, Nevada 89502.
2. This certificate applies to the technical report titled "Preliminary Economic Assessment, Altar Project, San Juan, Argentina" with an Effective Date of September 1, 2025 (the "Technical Report").
3. I graduated with Bachelor's degree in Fisheries and Wildlife Management from the University of Missouri in 1987 and a Master's degree in Environmental Science and Engineering from the Colorado School of Mines in 1995. I have worked as Biologist/Environmental Scientist for over 30 years since my graduation from university. My relevant experience includes environmental due diligence/competent persons evaluations of developmental phase and operational phase mines through the world, including small gold mining projects in Panama, Senegal, Peru, Ecuador, Philippines, and Colombia; open pit and underground coal mines in Russia; large copper and iron mines and processing facilities in Mexico and Brazil; bauxite operations in Jamaica; and a coal mine/coking operation in the People's Republic of China. My Project Manager experience includes several site characterization and mine closure projects. I work closely with the U.S. Forest Service and U.S. Bureau of Land Management on permitting and mine closure projects to develop uniquely successful and cost-effective closure alternatives for the abandoned mining operations. Finally, I draw upon this diverse background for knowledge and experience as a human health and ecological risk assessor with respect to potential environmental impacts associated with operating and closing mining properties and have experience in the development of Preliminary Remediation Goals and hazard/risk calculations for site remedial action plans under Superfund activities according to current U.S. EPA risk assessment guidance.
4. I am a Certified Environmental Manager (CEM) in the State of Nevada (#1832) in accordance with Nevada Administrative Code 459.970 through 459.9729. Before any person consults for a fee in matters concerning: the management of hazardous waste; the investigation of a release or potential release of a hazardous substance; the sampling of any media to determine the release of a hazardous substance; the response to a release or cleanup of a hazardous substance; or the remediation soil or water contaminated with a hazardous substance, they must be certified by the Nevada Division of Environmental Protection, Bureau of Corrective Action;
5. I am a Registered Member (No. 4104492) of the Society for Mining, Metallurgy & Exploration Inc. (SME).
6. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
7. I have not visited the Altar Project property.
8. I am responsible for environmental, permitting and social Sections 1.10.3, 1.10.4, 1.13.10, 20.2, and 20.4.
9. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
10. I not had prior involvement with the property that is the subject of the Technical Report.
11. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.

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12. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of November, 2025.

"Signed"

"Stamped"

Mark Allan Willow, MSc, CEM, SME-RM

CERTIFICATE OF QUALIFIED PERSON

I, Bruce Andrew Murphy, P. Eng., do hereby certify that:

1. I am Principal Consultant/Practice Leader, Mining Rock Mechanics of SRK Consulting (Canada), 2600 – 320 Granville Street Vancouver, British Columbia, V6C 1S0.
2. This certificate applies to the technical report titled “Preliminary Economic Assessment, Altar Project, San Juan, Argentina” with an Effective Date of September 1, 2025 (the “Technical Report”).
3. I graduated with a degree in MSc Eng. Mining from Witwatersrand in 1996. In addition, I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia, License # 44271. I am also a registered engineer in Ontario, Manitoba, Northwest Territories and Nunavut, and Newfoundland and Labrador. I have worked in my profession for a total of 35 years since my graduation from university. I have 12 years operational experience in Southern Africa and 23 years experience in the consulting field (SRK Consulting) in North America and other areas of the world.
4. I have read the definition of “qualified person” set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
5. I have not visited the Altar Project property.
6. I am responsible for Sections 16.1-16.3.
7. I am independent of the issuer applying all the tests in section 1.5 of NI 43-101.
8. I have not had prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of November 2025

“Signed”

“Stamped”

Bruce Murphy, P. Eng.,

U.S. Offices:

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South America

CERTIFICATE OF QUALIFIED PERSON

I, Matthew Sullivan, BS Economics, BS Metallurgy do hereby certify that:

1. I am Principal Consultant (Mining Economics) of SRK Consulting (U.S.), Inc., 999 Seventeenth Street, Suite 400, Denver, CO, USA, 80202.
2. This certificate applies to the technical report titled "Preliminary Economic Assessment, Altar Project, San Juan, Argentina" with an Effective Date of September 1, 2025 (the "Technical Report").
3. I graduated with a degree in Metallurgical and Materials Engineering from Colorado School of Mines in 2009. In addition, I also obtained a degree in Economics and Business from the Colorado School of Mines in 2009. I am an SME Registered Member. I have worked evaluating mining projects for a total of 15 years since my graduation from university. My relevant experience includes economic evaluation of mining projects supporting mining sector investment and economic analysis supporting mining project studies.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I did not visit the Altar Project property.
6. I am responsible for economics Sections 1.12, 1.13.12, 19, 21.9, 22, and a portion of 1.11.
7. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
8. I have not had prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of November, 2025.

"Signed"

"Stamped"

Matthew Sullivan, BS Economics, BS Metallurgy

U.S. Offices:

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CERTIFICATE OF QUALIFIED PERSON

I, Anton Chan, BEng Mining, MS Earth Science, P.Eng., MMSAQP do hereby certify that:

1. I am Senior Consultant (Mining Engineer) of SRK Consulting (U.S.), Inc., 999 Seventeenth Street, Suite 400, Denver, CO, USA, 80202.
2. This certificate applies to the technical report titled "Preliminary Economic Assessment, Altar Project, San Juan, Argentina" with an Effective Date of September 1, 2025 (the "Technical Report").
3. I graduated with a degree in Bachelor of Engineering from McGill University in 2008. In addition, I have obtained a Masters degree in Earth Science from Delft University of Technology in 2010. I am a Registered member and QP Member of the Mining and Metallurgical Society of America and a Professional Engineer with the Engineers Geoscientists Manitoba. I have worked as a mining engineer for a total of 15 years since my graduation from university. My relevant experience includes open pit and underground design, mine scheduling, pit optimization, and cost modeling.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I did not visit the Altar Project property.
6. I am responsible for mining Sections 1.13.11, 16.5, 21.1.2, 21.6.2, and a portion of 1.11.
7. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
8. I have not had prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of November, 2025.

"Signed"

"Stamped"

Anton Chan, BEng Mining, MS Earth Science, P.Eng., MMSAQP

U.S. Offices:

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South America

CERTIFICATE OF QUALIFIED PERSON

I, Craig N. Hall, BSc Geological Engineering, P.Eng. do hereby certify that:

1. I am a Managing Principal with Knight Piésold Ltd., 200 - 1164 Devonshire Avenue, North Bay, ON, P1B 6X7, Canada.
2. This certificate applies to the technical report titled "Preliminary Economic Assessment, Altar Project, San Juan, Argentina" with an Effective Date of September 1, 2025 (the "Technical Report").
3. I graduated with a degree in Geological Engineering from the University of Waterloo in 2003. I am a Professional Engineer registered with Professional Engineers Ontario (License No. 100075047). I have worked as an Engineer for a total of 22 years since my graduation from university. My relevant experience includes the design and evaluation of tailings, mine waste, and water management facilities and other mining related surface infrastructure for mining operations and engineering and financial evaluations.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I did not visit the Altar Project property.
6. I am responsible for tailings, water management and site infrastructure Sections 1.13.11, 18.3-18.5, and 26.1-26.5, portions of 1.11 and 21.4 of the Technical Report.
7. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
8. I have not had prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of November, 2025.

"Signed"

"Stamped"

Craig N. Hall, BSc Geological Engineering, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

I, Bruno Borntraeger, BAsC, P.Eng. do hereby certify that:

1. I am Specialist Geotechnical Engineer | Associate of Knight Piésold Ltd., Suite 1400, 750 West Pender Street, Vancouver, BC, Canada V6C 2T8.
2. This certificate applies to the technical report titled "Preliminary Economic Assessment, Altar Project, San Juan, Argentina" with an Effective Date of September 1, 2025 (the "Technical Report").
3. I graduated with Bachelor of Applied Science in Geological Engineering from the University of British Columbia in 1990. In addition, I am a Professional Engineer (P. Eng.) (license #20926) in good standing with Engineers and Geoscientists of British Columbia. I have worked as a Geological Engineer for a total of 35 years since my graduation from university. My relevant experience includes 35 years in geotechnical engineering in mine waste management and heap leach facilities design, construction, operations and closure.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I did not visit the Altar Project property.
6. I am responsible geotechnical and civil engineering for Section 24.6.5.
7. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101
8. I have not had prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of November, 2025.

"Signed"

"Stamped"

Bruno Borntraeger, BAsC Geological Engineering, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

I, Richard Cook, BSc Environmental Science, P.Geo. (Ltd.) do hereby certify that:

1. I am a Specialist Environmental Scientist with Knight Piésold Ltd. 200 - 1164 Devonshire Avenue, North Bay, ON, P1B 6X7, Canada.
2. This certificate applies to the technical report titled "Preliminary Economic Assessment, Altar Project, San Juan, Argentina" with an Effective Date of September 1, 2025 (the "Technical Report").
3. I graduated with a degree in Environmental Science from Queen's University in 1996. I am a Professional Geoscientist (Ltd.) with Professional Geoscientists Ontario. I have worked as an Environmental Scientist for a total of 29 years since my graduation from university. My relevant experience includes conducting Environmental and Social Impact Assessments and closure planning for mining and industrial projects..
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I did not visit the Altar Project property.
6. I am responsible for environmental studies and permitting Sections 1.10, 1.10.1-1.10.2, 1.13.10, 20.1, 20.3, and 26.6
7. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
8. I have not had prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101 and Form 43-101F1 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
10. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 21st Day of November, 2025.

"Signed"

"Stamped"

Richard Cook, BSc Environmental Science, P.Geo. (Ltd.)