San Antonio Gold Project
Baja California Sur, Mexico
NI 43-101 Technical Report

Submitted to:
Argonaut Gold Inc.

Effective Date: 20 June 2011

From:

Edward Orbock III, M.AusIMM
Scott Long M.AusIMM.
Dr Lynton Gormely, P.Eng.

Project No. 165042

CERTIFICATE OF QUALIFIED PERSON

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I, Edward J.C. Orbock III, MAusIMM, am employed as a Principal Geologist with AMEC E&C Services Inc.

This certificate applies to the technical report entitled Argonaut Gold Inc. San Antonio Project, Baja California Sur, Mexico, NI 43-101 Technical Report, and dated 20 June 2011 (the "Technical Report").

I am a Corporate Member of the Australasian Institute of Mining and Metallurgy (M.AusIMM, # 223090).

I graduated from the University of Nevada with a Master of Science in Economic Geology degree in 1992. I have practiced my profession from 1981 through 2001 and continuously since 2005 and have been involved in mining operations in Nevada and California, and in preparation of scoping, pre-feasibility, and feasibility level studies for projects in USA, Canada, and Peru.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the San Antonio Project from March 30–31 2010.

I am responsible for Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, and 23 of the Technical Report.

I am independent of Argonaut Gold Inc. as independence is described by Section 1.4 of NI 43-101.

I have been involved with the San Antonio Project since March 2010. I have previously co-authored a technical report on the Project entitled:

Hanson, K., Orbock, E.J.C., Long, S., and Gormely, L, 2010: Pediment Gold Corporation San Antonio Project, Baja California Sur, Mexico NI 43-101 Technical Report on Preliminary Assessment: technical report prepared by AMEC E&C Services Inc. on behalf of Pediment Gold Corp., effective date 2 August 2010

I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

As of the date of this certificate, 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.

“signed”

Edward J. C. Orbock III, MAusIMM
Date: 22 June 2011

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I, Lynton Gormely, Ph.D., P.Eng., am employed as a Principal Process Engineer with AMEC Americas Ltd.

This certificate applies to the technical report entitled Argonaut Gold Inc. San Antonio Project, Baja California Sur, Mexico, NI 43-101 Technical Report, and dated 20 June 2011 (the "Technical Report").

I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, registration number 10005. I graduated from the University of British Columbia with a Bachelor of Applied Science degree in 1968, and from the University of British Columbia with a Ph.D. in Chemical Engineering in 1973.

I have practiced my profession for 38 years. I have been directly involved in design and operation of projects that incorporated heap leaching; CIP/CIL circuits; and treatment of acid mine drainage in Canada, the United States, and South America (including Peru, Chile, and Mexico).

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101).

I have not visited the San Antonio Project.

I am responsible for Section 16 and those portions of the Recommendations, Summary and Conclusions that are based on that section of the Technical Report.

I am independent of Argonaut Gold Inc. as independence is described by Section 1.4 of NI 43–101.

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As of the date of this certificate, 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.

“Signed and sealed”

Lynton Gormely, Ph.D., P.Eng. Dated: 22 June 2011

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I, Scott Long, M.AusIMM, am employed as the Chief Geochemist with AMEC E&C Services Inc.

This certificate applies to the technical report entitled Argonaut Gold Inc. San Antonio Project, Baja California Sur, Mexico, NI 43-101 Technical Report, and dated 20 June 2011 (the "Technical Report").

I am a Corporate Member of the Australasian Institute of Mining and Metallurgy (# 209544). I graduated from the University of Washington in 1974 with a Bachelor of Science degree, and in 1986, with a Master of Science degree from the New Mexico Institute of Mining and Technology.

I have practiced my profession for over 30 years. I have been directly involved in geochemistry and quality assurance and quality control of assay programs for skarn-hosted and gold deposits, including Antamina and Tintaya (Peru), Phoenix (Nevada), Grasberg (Indonesia), Cerro Casale (Chile), and Olympic Dam (Australia).

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I have not visited the San Antonio Project.

I am responsible for Sections 12, 13, and 14 and those portions of the Summary, Conclusions and Recommendations that pertain to those sections of the Technical Report.

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As of the date of this certificate, 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.

“Signed”

Scott Long, M.AusIMM

Dated: 22 June 2011

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IMPORTANT NOTICE

This report was prepared as a National Instrument 43-101 Technical Report for Argonaut Gold Inc. (Argonaut) by AMEC E&C Services Inc. (AMEC). The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in AMEC's services, based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by Argonaut subject to the terms and conditions of its contract with AMEC. This contract permits Argonaut to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to National Instrument 43-101, *Standards of Disclosure for Mineral Projects.* Except for the purposes legislated under provincial securities law, any other uses of this report by any third party is at that party's sole risk.

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1.0 SUMMARY

Argonaut Gold Inc. (Argonaut) requested AMEC E&C Services Inc. (AMEC) to prepare an updated Mineral Resource estimate for the wholly-owned San Antonio Gold Project (the Project) in Baja California Sur, Mexico. Argonaut will be using the report in support of a press release dated 9 May 2011, entitled "Argonaut Gold Updates Resource for San Antonio". The Report discloses an updated Mineral Resource estimate for the Project.

Argonaut uses a wholly-owned Mexican subsidiary, Compañia Minera Pitalla S.A. de C.V. (Pitalla), for its holdings in the San Antonio Project. In this Report, the name Argonaut is used interchangeably for the parent and subsidiary companies. Argonaut acquired the Project in early 2011 through merger with Pediment Gold Corp. (Pediment Gold).

1.1 Key Outcomes

- Updated Measured and Indicated Mineral Resource estimate of 51.12 Mt grading 0.92 g/t Au of combined oxide, mixed and sulphide mineralization
- Updated Inferred Mineral Resource estimate of 2.76 Mt grading 0.62 g/t Au of combined oxide, mixed and sulphide mineralization

1.2 Location, Climate, Access, and Infrastructure

The Project is within the San Antonio–Triunfo mining district located about 40 km southeast by paved Highway No.1 of La Paz, the principal sea port and the capital city of the state of Baja California Sur, Mexico. The closest towns are San Antonio, 8 km west of the Project, Triunfo, 10 km northwest of the Project, and Los Planes, 15 km east of the Project. Travel time from San Antonio is about 10 minutes.

The climate is normally arid and hot. Rainfall is primarily associated with the hurricane systems that are likely to occur during the period August and September. It is expected that any future mining operations will be able to be conducted year-round. Minor interruptions may occur to activities if hurricane conditions develop.

Highway 1 passes through the Project. Access within the Project area is provided by good gravel and dirt roads. There is currently no existing Project infrastructure. Exploration crews stay in San Antonio and travel to site as required. Cell coverage in the area is available. An optic cable line and powerlines pass directly through the Project area. Mexico has sufficient experienced and skilled professionals to run any mining operation proposed for San Antonio.

1.3 Mineral Tenure

Fifteen mineral concessions, acquired in four phases, comprise the current Project, which has a total area of about 46,328 ha. The concessions are held in the name of Compañía Minera Pitalla SA de CV (Pitalla), which is a wholly-owned indirect subsidiary of Argonaut.

As per Mexican requirements for grant of tenure, the concessions comprising the Project have been surveyed on the ground by a licensed surveyor. AMEC received legal opinion and confirmation from Argonaut to state that duty payments for the concessions have been made, as required. Annual exploration reports have been lodged as required.

The Mexican government retains a sliding scale (variable) 1–3% net smelter production royalty on the four claims of the El Triunfo concession group. No other royalties are payable on any other concession, including the concessions on which the deposits are located.

1.4 Surface Rights

Argonaut has purchased 888 ha of surface rights in the Project area. It is a reasonable expectation that any additional surface rights that may be required to support any planned infrastructure locations can be obtained.

Agreements with the San Antonio ejido[1] allow “low impact” and “transition” exploration with appropriate compensation payments.

Water rights agreements have been entered into with a number of parties.

1.5 Environmental

Numerous residents of the San Antonio and El Triunfo communities continue to be active with small-scale *gambusino* (artisanal) production with limited leaching of gold performed on ore that is taken back to the pueblo area.

Argonaut has confirmed to AMEC that the exploration programs to date were performed in accordance with the applicable Mexican Official Standards (*Normas Oficiales Mexicanas*) under NOM-120.

No environmental permits have been granted for mining operations.

1 Ejidos are a communal form of agrarian land ownership.

Permitting will require submission and approval of a Manifiesto Impacto Ambiental (MIA).

Very preliminary assessment of the mineralization and hosts rocks indicates that there is low sulphide content, and therefore the current assessment of acid-rock drainage potential is low.

Environmental baseline studies were begun for the Project in 2008 but were suspended prior to completion. The studies were re-initiated in May 2010 and are ongoing.

1.6 Permits

A number of permits will be required to support mining level activities, in addition to the environmental permits. A detailed list of the required permits should be prepared during feasibility-level studies, and a determination made of which permits are likely to be time-sensitive and therefore on the Project critical path.

1.7 Socio-Economics

DS Dinamica Social, a consulting firm based in Hermosillo, Sonora, Baja California Sur, was contracted in June 2010 to conduct field work and investigations relating to community relations and social impacts of the planned project. Throughout the summer a team of interviewers went house-to-house conducting surveys in villages near the planned Project. In addition, several key government and community leaders were interviewed.

Argonaut has advised AMEC that local community leaders and residents in both the San Antonio and El Triunfo areas appear to be in favour of Project development.

1.8 Geology and Mineralization

Two separate, Mesozoic-age intrusive complexes hosted in sediment-derived schists and gneisses form the basement to the deposits. The granitic bodies and accompanying metasedimentary roof pendants are structurally sutured by the La Paz fault to a western belt of oceanic crustal rocks. A mega-shear of regional extent, possibly part of the La Paz fault system, hosts the Project deposits. Mineralization has preferentially developed in zones of stockworking, cataclasite and mylonite within fault strands and splays off the main shear zone. The deposits are considered to be typical of mineralization developed in shear-zone lode gold deposits.

Alteration typically progresses from chlorite-dominant around the cataclasite units (distal) and to sericite-dominant within the cataclasite units (proximal).

Gold mineralization is interpreted to consist of two stages, the first being disseminated gold–arsenic deposition during mylonitization, and a second-stage gold–silver–bismuth mineralization hosted by crosscutting, high-angle, northeast-trending structures. Chemically, the system has low silver relative to gold, having Ag/Au ratios of approximately 0.4.

1.9 Exploration History

Gold and silver mineralization was reportedly discovered in the Triunfo area around 1748, with limited small scale production occurring mainly in the Triunfo area and south of San Antonio.

The government geological branch, Consejo De Recursos Minerales (CRM), carried out work in the 1970s, consisting of mapping, trenching and limited magnetic and induced polarization (IP) surveys which covered portions of the Project.

From 1990–1998, Echo Bay Exploration Inc. (Echo Bay) and predecessor company Viceroy Resource Corp., (Viceroy) completed detailed geological mapping, stream sediment, soil and rock chip sampling, trenching, ground electromagnetics, airborne radiometrics, magnetic and very-low frequency electromagnetic (VLFEM) surveys, reverse circulation (RC) and core drilling, a first-time mineral resource estimate in 1996, and metallurgical studies.

Exploration work in the area by Pediment staff commenced in 2005. Activities to 2010 included data review, rock chip and grab sampling of old trenches and workings, soil sampling, reconnaissance IP geophysical surveys, RC and core drilling, mineral resource estimation, and metallurgical testwork. This led to completion of a PA in June 2010.

Results of the PA indicated positive Project economics were likely from the mine plan envisaged in the PA. Argonaut is not treating the PA results as current, as the Mineral Resource estimate on which the PA conceptual mine plan and financial analysis was based has been superseded by the Mineral Resource estimate in this Report.

However, some aspects of the PA have been used by AMEC in this Report to provide additional information; this includes a summary of the likely infrastructure requirements, and as supporting background documentation for development of the conceptual mining costs used as input for determination of reasonable prospects of economic extraction of the Mineral Resources.

1.10 Drilling

The Project database provided to AMEC shows drilling completed to December 2010 on the Project comprised 448 drill holes (120,481.9 m), in 349 RC drill holes (63,989.4 m) and 100 core holes (15,345.2 m).

There is limited information available for the Echo Bay drill programs. Echo Bay completed 31 RC holes totalling 6,187.0 m, but no record of the drill contractors, chip trays, logging methods or other data are available.

From 2005 to 2010, Pediment completed 317 RC holes (57,802.4 m), and 100 core holes (15,345.2 m).

Geotechnical logs were completed in sequence prior to the geological logging. Geological logging used standard procedures, and was subsequently transferred to a Microsoft Access database. Standardized logging forms and geological legends have been developed for the Project.

All drill hole collars have been surveyed by contracted professional surveyors using either a global positioning system (GPS) total station instrument or a Z-Max surveying system from Thales Navigation. Down-hole surveys were carried out for dip and deviation using a Reflex Easy Shot system by a contractor.

For holes drilled in 2010, drilling recovery measurement was not attempted for the RC drilling. AMEC received 57 core drill logs of which 47 contained core recovery data. Data was collected by Pediment geological staff. Core drilling recovery measurements within consolidated lithologies range from zero to 100% with a median measurement of 91%, indicating that the recovery is high and acceptable for resource estimation.

At the effective date of this Report, a drill program is underway. The program is planned at 17,000 m and will test the La Colpa zone, define the faulted block boundaries between the Los Planes, Intermediate Zone, and Las Colinas deposits, continue with condemnation drilling, and provide additional hydrological monitoring points. Approximately 4,600 m of this program has been completed.

1.11 Sampling and Assay

RC cuttings were sampled in 5 ft (1.52 m) increments regardless of lithology, alteration, or mineralization. All core sampling is carried out at 1.52 m intervals. In a few areas of poor recovery, core samples can be combined into lengths greater than 1.52 m. The 1.52 m sample intervals are not tied to lithology, alteration or structure.

Specific gravity data are based on water displacement methods of measurement on drill core specimens. Additional tests are recommended to support more detailed studies.

Assays were completed for the Echo Bay programs by Cone Laboratories in Denver using standard fire assay techniques. Limited additional information is available on the program.

Pitalla core and RC chips were submitted to ALS Chemex, Vancouver, Canada. Samples were typically dried, crushed, and pulverized to >85% passing through a 75 µm screen. Analyses comprised gold via fire assay with atomic absorption (AA) finish as well as by aqua regia digestion and inductively-coupled plasma (ICP) analysis to quantify trace elements. When needed, over-range Au analysis (>10 g/t Au) is made by fire assay and gravimetric finish.

Pitalla maintained a quality assurance and quality control (QA/QC) program for the Project. This comprised submission of analytical certified reference materials (CRMs), duplicate and blank samples.

Sample security has relied upon the fact that the samples were always attended or locked in the logging facility. Chain-of-custody procedures consisted of filling out sample submittal forms that were sent to the laboratory with sample shipments to make certain that all samples were received by the laboratory.

1.12 Data Verification

The Project data are stored in a Microsoft Access database. All geological and geotechnical data for Pediment drill programs were entered electronically directly into the system following paper logging in the field or at the core shack. Assays for Pediment drill programs were received electronically from the laboratory and imported directly into the database. Drill hole collar and down hole survey data were manually entered into the database. Data are verified by means of in-built program triggers within the mining estimation software. Checks are performed on surveys, collar co-ordinates, lithology data, and assay data. Paper records were kept for all assay and QA/QC data, geological logging and bulk density information, downhole, and collar coordinate surveys.

A number of data verification programs and audits have been performed over the Project history, primarily by independent consultants in support of compilation of technical reports on the Project. In addition, AMEC performed a database review in support of the PA, and also reviewed the analytical results of the 2010 drill program.

AMEC considers that a reasonable level of verification has been completed, and that no material issues would have been left unidentified from the programs undertaken.

1.13 Metallurgical Testwork

Metallurgical testwork has been conducted on San Antonio mineralized materials during 2008. Agitated cyanide leach, bottle roll and column leach tests were performed by SGS Metallurgical Laboratory, Denver Colorado (SGS) and Metcon Research laboratory (Metcon) in Tucson, Arizona, on drill core composites of oxide, mixed and sulphide mineralization. The testwork indicated that run-of-mine (ROM) leaching of oxide and transition material was feasible.

Additional testwork was preformed by Metcon during 2010, and is ongoing. The test work included bottle roll testing at 80% minus 74 µm, 105 µm and 149 µm and 100% minus 10 mesh. Column testing was done at -3/8", -3/4" and -4". The test results confirm the previous results showing higher recovery at finer sizes. Reagent consumptions remained low. Column test results supported selection of 45% rather than 50% gold recovery. The tests indicate that recovery is generally better at Los Planes than at Las Colinas. The bottle roll test results support selection of over 80% gold recovery by agitation leaching of milled material (oxide and sulphide) to 80% passing 150 µm in a conventional CIP and pressure Zadra stripping circuit. There is potential for increased recovery (6% for oxides and 20% for sulphides) with milling over crushing.

1.14 Mineral Resource Estimation

To support declaration of Mineral Resources for purposes of the PA, AMEC reviewed and audited Argonaut Gold's grade shell domains, developed a resource model and a resource classification. A total of 430 drill holes were available with a combined 48,018 gold assays.

Argonaut Gold constructed four mineralized grade shell zones of ≥0.1 g/t Au. The composite data base was tagged with a domain code based on the four geologic solids; Las Colinas, Los Planes, Intermediate, and La Colpa. All composites outside these four solids were coded as waste. A block model with dimensions of 6 m x 6 m x 6 m was built to encompass all four mineralized domains.

AMEC developed new capping strategies based on results from decile analysis and Monte Carlo simulation, which indicates that an appropriate capping level, for Las Colinas, Intermediate, and La Colpa, is about 5 g/t Au. Los Planes showed two capping domains, a low-sulphide domain capped at 5 g/t Au and a high sulphide

domain capped at 9 g/t Au. Capping of high grades was implemented beyond a distance of 15 m from the composite.

Uniform down-hole composites, 6 m in length, were formed to honour the domain boundaries. Composite lengths of less than 3 m due to honouring mineralized solids were stitched to the previous composite.

Variograms were produced for use in grade estimation and to determine the direction of maximum continuity.

Gold grades, for all blocks with a minimum of 50% inside the four mineralized domain solids, were interpolated using ordinary kriging (OK). The kriging procedure was completed in a series of passes with the search ellipse for each pass a function of the variogram range. The search ellipse was aligned along the three principal variogram directions.

The block model was verified using visual inspection, statistical comparisons of raw data, composite data and block estimates. AMEC is of the opinion that the grades and tonnes in the resource model are sufficiently well-estimated to support mine planning within the framework of a PA.

Resource classifications were based on an overall evaluation consisting of drill hole spacing analysis, variogram results, continuity of grade and geologic domains, density models and recovery models. In summary, drill hole spacing for Measured Resources would broadly correspond to a nominal 25 m grid. Drill hole spacing for Indicated Resources would correspond to a nominal 50 m grid. Based on gold variography and visual reviews, mineralized blocks within 80 m from a drill hole are sufficiently known as to be classified as Inferred Resource. Resources at La Colpa should be classified as Inferred until additional in-fill drill holes, density and metallurgical recovery studies are completed.

AMEC determined the extent of resources that might have reasonable expectation for economic extraction by applying a Lerchs–Grossmann (LG) pit outline to the Mineral Resources. AMEC is of the opinion that there is a reasonable expectation for economic extraction for the mineralized material that displays geological and grade continuity within this LG pit shell.

1.15 Mineral Resource Statement

Mineral Resources take into account geologic, mining, processing, and economic constraints, and have been confined within appropriate Lerchs–Grossmann (LG) pit shells, and therefore are classified in accordance with the 2010 CIM Definition

Standards for Mineral Resources and Mineral Reserves. The Qualified Person for the Mineral Resource estimate is Edward J.C. Orbock III, M.AusIMM, an AMEC employee.

Mineral Resources are reported at a gold price of US$1,200 per ounce and have an effective date of 29 April, 2011. Mineral Resources are stated in Table 1-1 using cut-off grades appropriate to the oxidation state of the mineralization.

1.16 Interpretation and Conclusions

Using the assumptions stated in this Report, an updated Mineral Resource estimate was completed. There is remaining exploration potential within the Project. The current deposits have some open dimensions, and infill drilling is likely to identify additional mineralization. Exploration targets, defined by anomalous surface samples and trends of gambusino workings dating from the early 1900s, represent additional Project upside.

Argonaut has commenced an additional drill program, and has commissioned socio-economic, hydrology, geotechnical and metallurgical studies. A contract to complete a pre-feasibility study has been awarded.

1.17 Recommendations

A two-phase work program is proposed. The first phase comprises drill testing, data collation and metallurgical testwork, and the budget estimate for this work ranges between US$3.4 M and US$3.5 M. The second phase comprises a pre-feasibility study, completion of supporting studies for the pre-feasibility study, and may incorporate additional drilling at the La Colpa zone. The Phase 2 program is estimated at US$1 M to US$1.4 M. Portions of both work programs are underway.

The phases can be undertaken concurrently, with results of Phase 1 incorporated into Phase 2 as they become available; depending on completion date, the additional drilling in Phase 2 may also be available in time to be incorporated in the mining study.

Table 1-1: Mineral Resource Statement, San Antonio Project, Effective Date 29 April, 2011, Edward J.C. Orbock III, M.AusIMM

Deposit	Class	Au Cut-off (g/t Au)	Tonnes (x 1,000)	Au Grade (g/t)	Total Au grams (x 1,000)	Au ounces (x 1,000)
Las Colinas	***Oxide/Transition***					
	Measured	0.23	248	0.76	187	6
	Indicated	0.23	970	0.71	689	22
	Sulphide					
	Measured	0.26	360	0.72	260	8
	Indicated	0.26	5,447	0.84	4,569	147
	Oxide/Transition					
	Inferred	0.23	25	0.48	12	0.4
Los Planes	***Oxide/Transition***					
	Measured	0.13	6,297	0.92	5,804	187
	Indicated	0.13	8,689	0.90	7,830	252
	Sulphide					
	Measured	0.19	3,935	1.30	5,111	164
	Indicated	0.19	22,098	1.03	22,794	733
	Oxide/Transition					
	Inferred	0.13	407	0.92	375	12
	Sulphide					
	Inferred	0.19	464	0.94	436	14
Intermedia	**Oxide/Transition/Sulphides**					
	Measured	0.21	193	1.12	215	7
	Indicated	0.21	2,955	0.94	2,774	89
	Oxide/Transition/Sulphides					
	Inferred	0.21	9	0.56	5	0.2
La Colpa	***Oxide/Transition***					
	Inferred	0.18	1,109	0.43	473	15
	Sulphide					
	Inferred	0.22	741	0.53	395	13
All Deposits	***Oxide/Transition/Sulphides***					
	Measured	Various	11,032	1.05	11,577	372
	Indicated	Various	40,160	0.96	38,655	1,243
	Oxide/Transition/Sulphides					
	Measured+Indicated	Various	51,192	0.98	50,232	1,615
	Oxide/Transition/Sulphides					
	Inferred	Various	2,755	0.62	1,696	55

Notes to Accompany Mineral Resources Table:

1. Mineral Resources are reported at various cut-off grades for oxide, transition, and sulphide material.
2. Mineral Resources are reported as undiluted.
3. Mineral Resources are reported within a conceptual pit shell
4. Mineral Resources are reported using a long-term gold price of US$1,200/oz, variable mining and processing costs and variable recoveries that are based on the oxidation state of the sulphides in the deposit.
5. Summation of values may be may not agree due to rounding.

2.0 INTRODUCTION

Argonaut Gold Inc. (Argonaut) requested AMEC E&C Services Inc. (AMEC) to prepare an updated Mineral Resource estimate for the wholly-owned San Antonio Gold Project (the Project) in Baja California Sur, Mexico (Figure 2-1).

Argonaut will be using the report in support of a press release dated 9 May 2011, entitled “Argonaut Gold Updates Resource for San Antonio”.

Argonaut uses a wholly-owned Mexican subsidiary, Compañia Minera Pitalla S.A. de C.V. (Pitalla), for its holdings in the San Antonio Project. In this Report, the name Argonaut is used interchangeably for the parent and subsidiary companies. Argonaut acquired the Project during 2011 through merger with Pediment Gold Corp. (Pediment Gold).

All measurement units used in this Report are metric, and currency is expressed in US dollars unless stated otherwise. The Report uses United States English.

As at the effective date of the Report, the exchange rate was US$1 equal to approximately 12 Mexican pesos.

2.1 Qualified Persons

The following people served as the Qualified Persons (QPs) as defined in National Instrument 43-101, *Standards of Disclosure for Mineral Projects*, and in compliance with Form 43-101F1:

- Mr Edward J.C. Orbock III, MAusIMM., Principal Geologist, AMEC, Reno
- Dr Lynton Gormely, P.Eng. Principal Process Engineer, AMEC, Vancouver
- Mr Scott Long, MAusIMM, Chief Geochemist, AMEC, Phoenix.

2.2 Site Visits

QPs conducted site visits to the Project as shown in Table 2-1.

Table 2-1: QPs, Areas of Report Responsibility, and Site Visits

Qualified Person	Site Visits	Report Sections of Responsibility (or Shared Responsibility)
Ed Orbock	March 30–31, 2010	Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, and 23
Dr Lynton Gormely	No site visit	Section 16, and that portion of the Summary, Conclusions and Recommendations that pertain to that Section
Scott Long	No site visit	Sections 12, 13, 14 and those portions of the Summary, Conclusions and Recommendations that pertain to that Sections

During the site visit, the scope of the personal inspection by Mr Orbock comprised inspection of core and surface outcrops, drill platforms, and sample cutting and logging areas; discussions of geology and mineralization with Argonaut staff; reviewing geological interpretations with staff; and viewing of potential locations of major infrastructure.

The QP who visited the site is not aware of any material changes to the Project since the site visit.

2.3 Effective Dates

The report has a number of effective dates, as follows:

- 10 December 2010: date for database cut-off for drill information used to support the Mineral Resource estimate
- 29 April 2011: date of the Mineral Resource estimate
- 20 June 2011: last date of information available from the current exploration drill program
- 22 June 2011: supply of updated information on mineral tenure and surface rights

The overall effective date of the Report is based on the date of the supply of information on the current drill program and is 20 June 2011. There has been no

material change to the Project between the effective date of the Report, and the signature date.

2.4 Previous Technical Reports

Argonaut has not previously filed a Technical Report on the Project. The predecessor company, Pediment Gold, has previously filed technical reports on the Project as follows:

Hanson, K., Orbock, E.J.C., Long, S., and Gormely, L, 2010: Pediment Gold Corporation San Antonio Project, Baja California Sur, Mexico NI 43-101 Technical Report on Preliminary Assessment: technical report prepared by AMEC E&C Services Inc. on behalf of Pediment Gold Corp., effective date 2 August 2010.

Herdrick, M.A. and Giroux, G.H., 2009: Technical Report and Resource Update, San Antonio Gold Project, Baja California Sur: technical report prepared on behalf of Pediment Gold Corp., effective date 29 November, 2009.

Thompson, I.S., and Laudrum, D., 2008: Technical Report and Mineral Resource Estimate San Antonio Gold Project Baja California Sur, Mexico: technical report prepared by Derry, Michener, Booth & Wahl Consultants Ltd. for Pediment Exploration Ltd., effective date 31 December 2007.

A technical report was filed by Pediment Gold's precursor company, Skinny Technologies Inc., in 2004, and readdressed to Pediment Gold as follows:

Wallis, C.S., 2004: Technical Report on the Pitalla Properties, Mexico: technical report prepared by Roscoe Postle Associates for Skinny Technologies Ltd.; re-addressed to Pediment Exploration Ltd., effective date 30 June 2004, revised date 29 June 2005.

These reports and the reports and documents listed in the Reference section of this report were used to support preparation of the Report.

2.5 Technical Report Sections and Required Items under NI 43-101

Table 2-2 relates the sections as shown in the contents page of this Report to the Prescribed Items Contents Page of NI 43-101. The main differences are that Item 25 "Additional Requirements for Technical Reports on Development Properties and Production Properties" is incorporated into the main body of the Report, following Item 19, "Mineral Resource and Mineral Reserve Estimates".

Table 2-2: Contents Page Headings in Relation to NI 43-101 Prescribed Items—Contents

NI 43-101 Item Number	NI 43-101 Heading	Report Section Number	Report Section Heading
Item 1	Title Page		Cover page of Report
Item 2	Table of Contents		Table of contents
Item 3	Summary	Section 1	Summary
Item 4	Introduction	Section 2	Introduction
Item 5	Reliance on Other Experts	Section 3	Reliance on Other Experts
Item 6	Property Description and Location	Section 4	Property Description and Location
Item 7	Accessibility, Climate, Local Resources, Infrastructure and Physiography	Section 5	Accessibility, Climate, Local Resources, Infrastructure and Physiography
Item 8	History	Section 6	History
Item 9	Geological Setting	Section 7	Geological Setting
Item 10	Deposit Types	Section 8	Deposit Types
Item 11	Mineralization	Section 9	Mineralization
Item 12	Exploration	Section 10	Exploration
Item 13	Drilling	Section 11	Drilling
Item 14	Sampling Method and Approach	Section 12	Sampling Method and Approach
Item 15	Sample Preparation, Analyses and Security	Section 13	Sample Preparation, Analyses and Security
Item 16	Data Verification	Section 14	Data Verification
Item 17	Adjacent Properties	Section 15	Adjacent Properties
Item 18:	Mineral Processing and Metallurgical Testing	Section 16	Mineral Processing and Metallurgical Testing
Item 19	Mineral Resource and Mineral Reserve Estimates	Section 17	Mineral Resource and Mineral Reserve Estimates
Item 20	Other Relevant Data and Information	Section 19	Other Relevant Data and Information
Item 21	Interpretation and Conclusions	Section 20	Interpretation and Conclusions
Item 22	Recommendations	Section 21	Recommendations
Item 23	References	Section 22	References
Item 24	Date and Signature Page	Section 23	Date and Signature Page
Item 25	Additional Requirements for Technical Reports on Development Properties and Production Properties	Section 18	Additional Requirements for Technical Reports on Development Properties and Production Properties
Item 26	Illustrations		Incorporated in Report under appropriate section number

3.0 RELIANCE ON OTHER EXPERTS

The QPs, authors of this Report, state that they are qualified persons for those areas as identified in the "Certificate of Qualified Person" attached to this Report. The authors have relied on, and believe there is a reasonable basis for this reliance, upon the following reports, which provided information regarding mineral rights, surface rights, and environmental status in sections of this Report as noted below.

3.1 Tenure

The QPs have relied upon and disclaim information relating to the tenure status for the Project through the following confidential legal opinion prepared for Pediment Gold

- Vasquez Servicios Legales, 2010: Title Opinion: unpublished research opinion on Public Mining Registry files relating to Compañía Minera Pitalla, S.A. de C.V. San Antonio Project, dated 21 June 2010.

The QPs have relied upon and disclaim information relating to the tenure status for the Project through the following letter prepared by Argonaut management:

- Dougherty, P., 2011: San Antonio Project: letter prepared by Peter Dougherty, President and CEO, Argonaut Gold, addressed to Mr Kirk Hanson, dated 22 June 2011

This information is used in Section 4.3 of the Report.

3.2 Surface Rights

The QPs have relied upon and disclaim information relating to the surface rights status for the Project through the following confidential legal opinions prepared for Pediment Gold:

- Urias Romero y Asociados S.C., 2010: Pediment Gold Corp: unpublished legal opinion prepared on behalf of Pediment Gold, with respect to land occupation rights, land purchase, dumps transfer, and assignment of water rights relating to the San Antonio Project, dated 26 May 2010.

This information is used in Section 4.4 of the Report.

The QPs have relied upon and disclaim information relating to the tenure status for the Project through the following letter prepared by Argonaut management:

- Dougherty, P., 2011: San Antonio Project: letter prepared by Peter Dougherty, President and CEO, Argonaut Gold, addressed to Mr Kirk Hanson, dated 22 June 2011

This information is used in Section 4.4 of the Report.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Project is centred on longitude 110º 02' west and latitude 23º48' north, adjacent to the historic mining town of San Antonio, about 40 km southeast by paved Highway No.1 from the port city of La Paz, and about 160 km north of the resort town of Cabo San Lucas.

The Project contains three gold deposits, at Los Planes, Intermediate (between Los Planes and Las Colinas) and Las Colinas, and a number of exploration targets (Figure 4-1 and Figure 4-2).

4.2 Property and Title in Mexico

Article 27 of the Mexican Constitution provides that the Mexican Nation has direct ownership of mineral deposits within the national territory, which cannot be transferred. The use and exploitation of such national resources by private parties is only permitted if concessions are granted by the Federal Executive Branch, through its corresponding government agencies. Such concessions are subject to applicable laws and regulations, and these must be complied with; non-compliance can result in cancelled concessions.

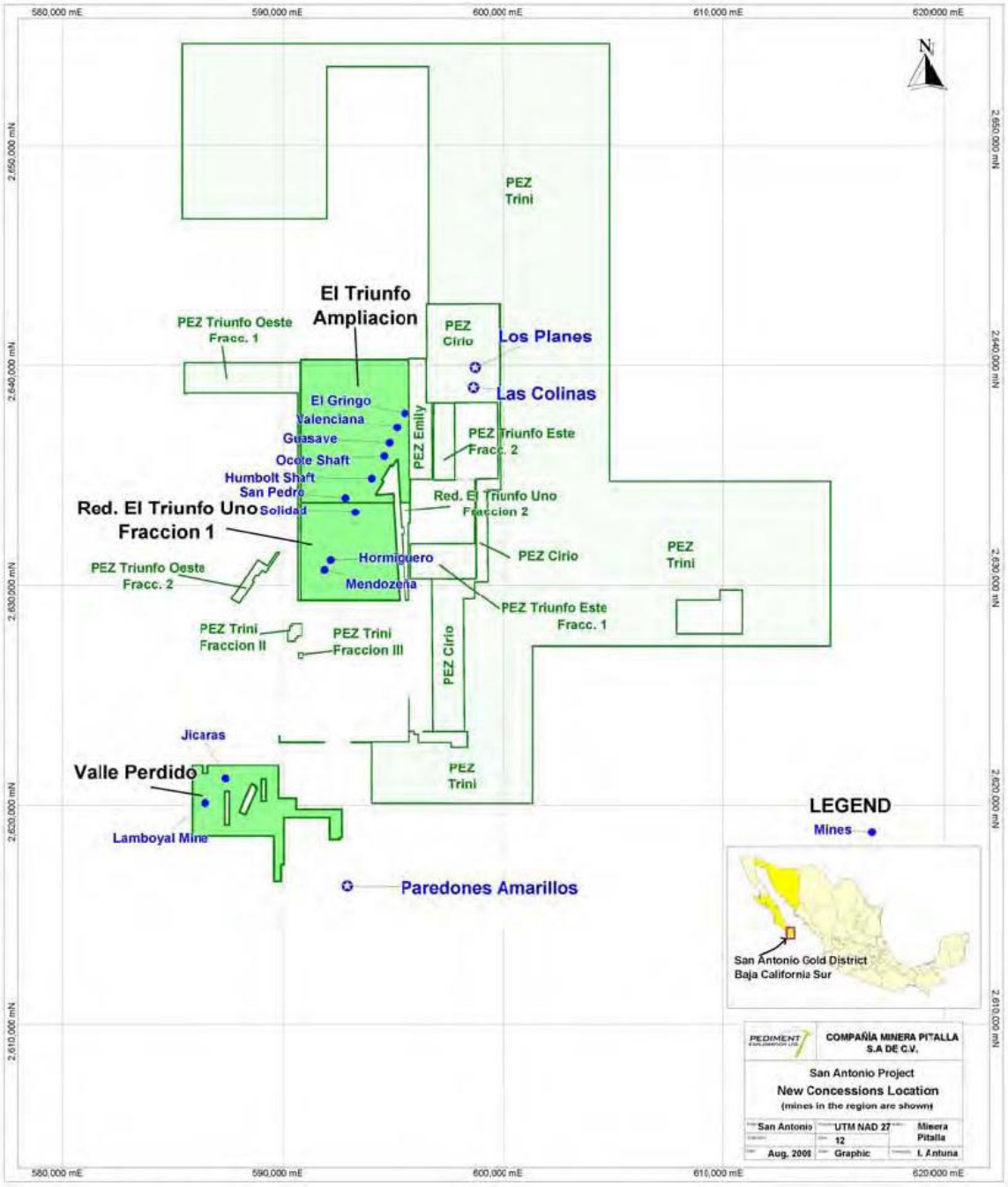
Government agencies may create national Mining Reserves over deposits that are considered essential to the Nation's future. Once incorporated into national mining reserves, the deposits are not subject to mining concessions or allotments, unless such zones are cancelled from the mining reserves through a decree issued by the Federal Executive. Such decrees can enable the Ministry of Economy to declare the zone as "free land" that can then be granted under a mining concession, or call for a bid to grant one or more mining concessions over such deposits.

4.2.1 Mineral Property Title

The Mexican Mining Law was promulgated in 1992, and amended in 1996 and 2005. The current Mining Regulations were published in 1999. A number of Government agencies have responsibility for administering the mining laws, including:

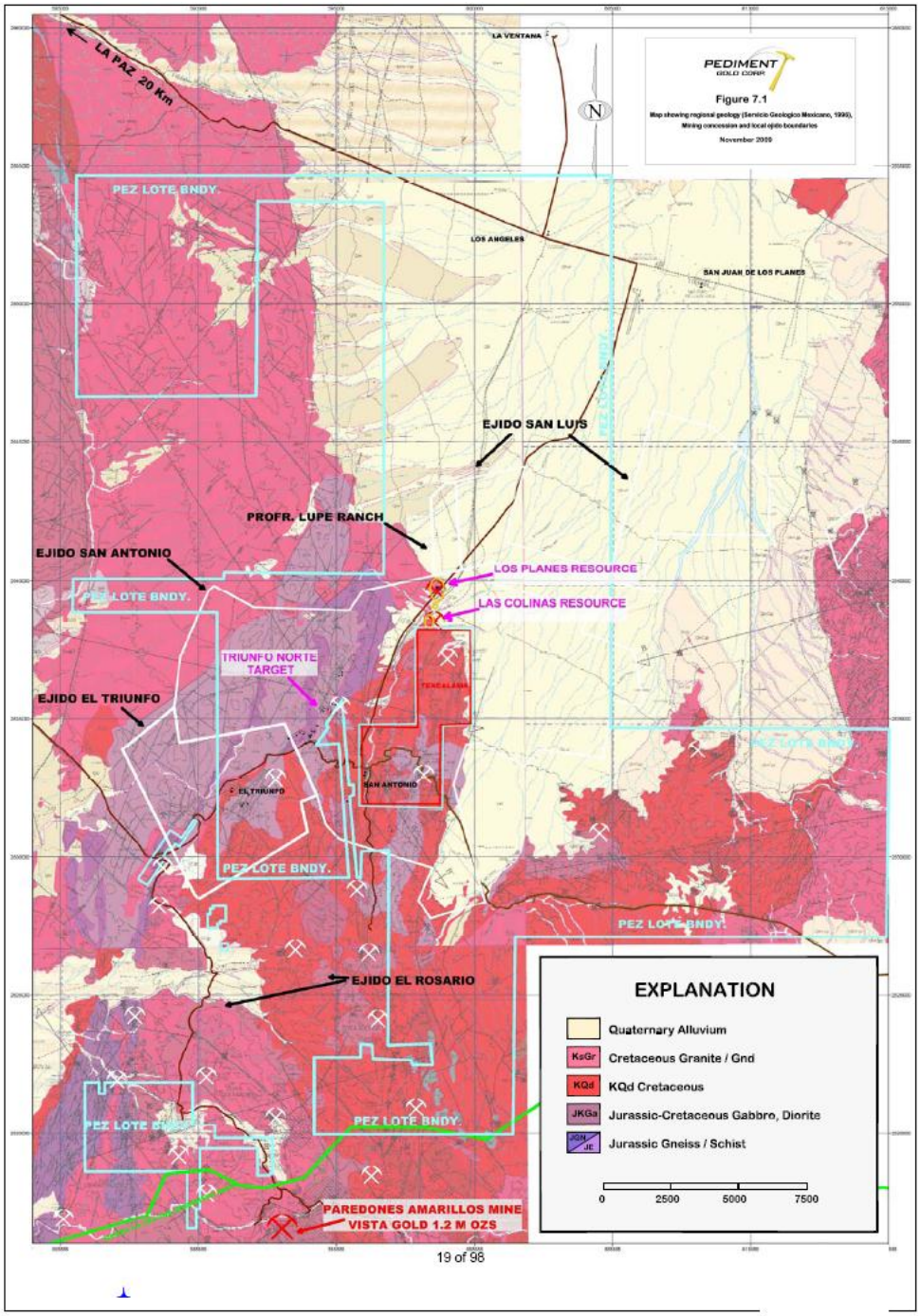
- Ministry of Economy: formulates and directs national mining policy, and promotes the use and development of mineral resources
- General Coordination of Mines: entity under which the Ministry administers mining activities

Figure 4-1: Deposit Location Plan



Note: mines shown on this figure are historic workings and not currently in production. Paredones Amarillos (now Concordia) is owned by third-parties and is not part of the Argonaut ground holding at Baja California Sur.. Figure courtesy Argonaut.

Figure 4-2: Deposit Location Plan Showing Surface Features



Note: figure courtesy Argonaut

- General Bureau of Mines: responsible for management and control of concessions, allotments, and national mining reserves
- Public Registry of Mining: records concessions, allotments, agreements, arrangements and administrative actions that may affect mining rights
- Mexican Geological Service: responsible for identifying and quantifying potential mineral resources, inventorying national mineral deposits and furnishing public geological-mineral information, promoting research, identifying and promoting infrastructure works which foster the development of new mining districts, advising the Ministry regarding concessions and zones to be incorporated into or removed from national mineral reserves, and assisting the Ministry of Economy in bids for land concessions with cancelled allotments and removed land from mineral reserves
- Commission of Appraisal of National Property: may become involved in mineral concessions when the owner of a concession requests the expropriation, temporary occupation, or creation of easements on certain land necessary to carry out work. The Commission determines the value of the land in order to quantify the indemnification to be provided to the landowner
- Mining Promotion Trust: established to support minerals exploration, extraction, processing and marketing, by providing technical advice and financial support to existing and new companies
- National Institute of Statistics, Geography and Information: compiles, processes, submits and distributes statistical and geographical information.

Mining concessions may only be granted to Mexican nationals and companies, ejidos, agrarian communities and communes, and Indian communities. Foreign companies can hold mining concessions through Mexican-domiciled companies.

Mining concessions are granted over “free land”. Free land means any land within the Mexican Nation, except for the following:

- Land covered by existing or pending mining concessions and allotments
- Zones incorporated into mineral reserves
- Land covered by mining concessions granted through a bidding process, or alternatively, land covered by mining lots from which no concessions would be granted due to the cancellation of the bidding process.

There is no difference in Mexico between an exploration concession and a mining concession. All concessions run for a term of 50 years, with the term commencing on

the date recorded in the Registry maintained by the Public Registry of Mining. A second 50-year term can be granted if the applicant has abided by all appropriate regulations, and makes the application within five years prior to the expiration date.

Mining concession boundaries in Mexico are defined by referencing position relative to a legally-surveyed principal post. To stake a concession, a principal monument must be erected, painted and photographed by a registered mining expert and then applied to be registered before the relevant mining district office. Once accepted, an official surveyor must be contracted to provide a survey to locate the concession whereby the official survey is reviewed and taken into consideration. Once the relevant mining district office prepares a proposal of the mining concession title, such draft is sent to the General Mining Direction (Dirección General de Minas) and upon its issuance, the concession title is registered before the Public Registry of Mining (Registro Público de Minería).

Mining concessions confer rights with respect to all mineral substances as listed in the Registry document. The holder must commence exploration or exploitation within 90 days of the Registry date.

Mining concessions give the holder the right to mine within the concession boundary, sell the mining product, dispose of waste material generated by mining activities within the lease boundary, and have access easements. Concessions can be transferred between companies, and can be consolidated.

The main obligations which arise from a mining concession, and which must be kept current to avoid its cancellation, are performance of assessment work, payment of mining taxes (technically called “duties”) and compliance with environmental laws.

The Regulations establish minimum amounts that must be spent; minimum expenditures may be substituted for sales of minerals from the mine for an equivalent amount. A report must be filed in May of each year that details the work undertaken during the previous calendar year.

Mining duties must be paid in advance in January and July of each year, and are determined on an annual basis under the Mexican Federal Rights Law. Duties are based on the surface area of the concession, and the number of years that have elapsed since the mining concession was issued.

Concessions are maintained on an annual basis by payment of appropriate fees, as determined by the Ministry of Economy each year. Holders must also supply the relevant Governmental department with reports on activities, including annual checking reports that are due May of each year.

4.2.2 Surface Rights Title

While a mining concession gives its holder the right to carry out mining work in the area covered by the concession and take ownership of any minerals found, it does not automatically grant any surface access rights. Such rights must be negotiated separately with the owner of the surface land. If no agreement can be reached with the surface owner (typically for the purchase or lease of the surface land), the Mining Law grants the concessionaire the right to apply to the General Mining Bureau for the expropriation or temporary occupation of the land, which will be granted to the extent that the land is indispensable for the development of the mining project. Compensation is set through an appraisal carried out by the federal government's National Goods' Appraisal Commission.

Consideration, payable on a one-time basis for expropriation and on a yearly basis for temporary occupation, is set based on an appraisal of the affected land. Typically, a verbal authorisation with no consideration is granted for prospecting and sample gathering. A simple letter agreement or contract will be used for drilling, trenching, basic road building and similar more advanced exploration activities, with a small monetary consideration and/or the obligation to fix a road or fence, build an earth dam, paint the local town church or school, etc. Building and operating a mine requires a more formal agreement.

The existence in Mexico of a communal form of agrarian land ownership called "*ejidos*" and "*comunidades agrarias*" can present special problems for surface land use. *Ejidos* are communal farms where individuals have surface rights to specific plots of land, but most land-use decisions must be made by the members of the *ejido* as a whole. *Ejidos* and *comunidades* represent close to one-half of the Mexican territory.

4.2.3 Environmental Regulations

The Mexican Federal Governmental department responsible for environmental matters is the Secretary of the Environment, Natural Resources and Fisheries (SEMARNAT), which has four sub-departments:

- National Institute of Ecology (INE): responsible for planning, research and development, conservation of national protection areas and promulgation of environmental standards and regulations.
- Federal Prosecutor for the Protection of the Environment (PROFEPA): responsible for enforcement, public participation and environmental education.
- National Water Commission (CNA): responsible for assessing fees related to waste water discharges.

- Federal delegation or state agencies of SEMARNAT, known as COEDE.

Mexico's environmental protection system is based on the General Law of Ecological Equilibrium and the Protection of the Environment (LGEEPA). Under LGEEPA, numerous regulations and standards for environmental impact assessment, air and water pollution, solid and hazardous waste management and noise have been issued.

Environmental laws require the filing and approval of an environmental impact statement for all exploitation work, and for exploration work that does not fall within the threshold of a standard issued by the Federal Government for mining exploration. Environmental permitting for exploitation, absent any strong local opposition to the project, can be usually achieved in less than one year.

4.2.4 Taxation and Royalties

Mexico has been a party to the North American Free Trade Agreement (NAFTA) since 1994 and thus has a tax and trade regime comparable to the USA and Canada. It operates under western-style legal and accounting systems, with a contemporary taxation system and no mining royalties.

4.3 Project Mineral Tenure

4.3.1 Tenure History

On 20 September, 2004, Skinny Technologies Inc. changed its name to Pediment Exploration Ltd., and changed the focus of the company to mineral exploration.

The Cirio and Emily mineral concessions located in Baja California Sur area east of La Paz were the first acquired in the area by Compañía Minera Pitalla SA de CV (Pitalla) in 2003. The Cirio concession, which covers the Planes and Colinas deposits, was acquired by uncontested denouncement of open lands in 2003, while the Emily concession, also staked in 2003, covers a total of 3,308.18 ha. In 2007 the large Trini concession and its fractions were all acquired by denouncement bringing, which brought the concessions held by Pitalla to combined total of 37,813.15 ha.

Pediment Gold issued 5,400,000 shares on October 6, 2005 to acquire all the outstanding shares of El Dragon Minerals LLC, a private Mexican company that owned all the outstanding shares of Pitalla. Approximately 2.8 million of these shares were subject to a three-year "value escrow" agreement.

In addition, Pediment Gold could issue an additional 2.5 million bonus shares to the original shareholders of El Dragon prior to December 31, 2011, if more than 1 Moz gold or gold-equivalent were discovered on three or fewer Pitalla projects, with at least 500,000 ounces on a single project. On December 4, 2008, Pediment Gold issued the 2,500,000 common shares, valued at US$0.47 each, for a total value of US$1,175,000, which has been allocated to the acquisition cost of the San Antonio project.

Five concession fractions were obtained by Pediment Gold from Cortez Resources S. de R.L. de C.V., a Mexican company, by purchase on March 17, 2008, at a cost of $11,250.00 Canadian. These five concessions are the Triunfo Este Fracc. I, II and III, Triunfo Oeste Fracc. I and II which have a combined area of 1,789.36 ha.

The El Triunfo concession group, held by the federal government as part of the National Zone of Mineral Reserve for more than 40 years, was acquired by Pitalla on July 3, 2008 through a competitive bid process. Total cost paid to the Mexican Federal Government for the concession group was 12,615,000 pesos ($1,216,232.00 US) as a lump sum purchase price. Two sub-groups of concessions are included in the package. One is the Triunfo contiguous group of three concessions composed of the El Triunfo Ampliación, the Reducción El Triunfo Uno Fracc. Uno, and the Reducción El Triunfo Uno Fracc. Dos that have a combined area of 5,251.57 ha. The second sub-group is the Valle Perdido concession of 1,473.8423 ha that is located south of the main sub-group.

On February 25, 2009, Pediment Gold changed its name from Pediment Exploration Ltd. to Pediment Gold Corp.

On October 19, 2010, Argonaut and Pediment Gold announced that they entered into a binding agreement to complete a transaction. Pursuant to the terms of the Agreement, all of the Pediment Gold common shares issued and outstanding immediately prior to consummation of the transaction shall become exchangeable into the common stock of Argonaut on the basis of 0.625 of a common share of Argonaut for each one Pediment Gold common share. On January 27, 2011, Argonaut completed the business combination with Pediment Gold. Argonaut acquired all of the issued and outstanding common shares of Pediment Gold in a transaction valued at approximately $140 million. In accordance with the Arrangement, former Pediment Gold shareholders received 0.625 of a common share of Argonaut for each Pediment Gold share. Outstanding options to acquire Pediment Gold shares were converted into options to acquire Argonaut shares, adjusted in accordance with the same ratio.

4.3.2 Mineral Tenure

The mineral concessions comprising the Project were acquired in four stages (refer to Section 4.3). The 15 concessions have a total area of 46,328 ha (Table 4-1 and Figure 4-3).

A number of third-parties hold contiguous tenure in the Project area. An excised area, El Wincho, held by a third-party, occurs within the Trini concession Fracc. 1 (indicated in white on Figure 4-1). An overlap in tenure may exist in the Triunfo area, where a third-party concession, Las Misiones Fracc. II (T. 218018), may overlap with an Argonaut concession. The potential for overlap will be verified by survey.

All concessions were granted for a duration of 50 years. The concessions are held in the name of Compañía Minera Pitalla SA de CV, which is a wholly-owned indirect subsidiary of Argonaut.

As per Mexican requirements for grant of tenure, the concessions comprising the Project have been surveyed on the ground by a licensed surveyor. AMEC was advised by Argonaut that duty payments for the concessions have been made, as required. These typically increase by year, based on a scale determined by the Mexican Government.

Annual exploration reports (Reporte de Comprobación de Obras) are required to be lodged with the Mexican Government, detailing the work performed and costs associated with the exploration programs to ensure minimum exploration commitments are met. AMEC was advised by Argonaut that such reports have been lodged as required.

Table 4-1: Mineral Tenure Summary Table

Concession	Title No.	Title Holder	Surface (has)	Validity From	To*	Comments
Cirio	221072	Compañía Minera Pitalla, S.A. de C.V.	2,789.9356	19-Nov-2003	18-Nov-2053	Initial concessions staked by Pediment Gold/Pitalla
Emily	221074	Compañía Minera Pitalla, S.A. de C.V.	518.2835	19-Nov-2003	18-Nov-2053	Initial concessions staked by Pediment Gold/Pitalla
Trini Fracción I	229908	Compañía Minera Pitalla, S.A. de C.V.	34,450.4779	28-Jun-2007	27-Jun-2057	Following concession staked by Pediment Gold/Pitalla and divided in 4 fractions
Trini Fracción II	229909	Compañía Minera Pitalla, S.A. de C.V.	41.2559	28-Jun-2007	27-Jun-2057	Following concession staked by Pediment Gold/Pitalla and divided in 4 fractions
Trini Fracción III	229910	Compañía Minera Pitalla, S.A. de C.V.	5.6798	28-Jun-2007	27-Jun-2057	Following concession staked by Pediment Gold/Pitalla and divided in 4 fractions
Trini Fracción IV	229911	Compañía Minera Pitalla, S.A. de C.V.	7.5124	28-Jun-2007	27-Jun-2057	Following concession staked by Pediment Gold/Pitalla and divided in 4 fractions
Triunfo Este Fracc.I	227890	Compañía Minera Pitalla, S.A. de C.V.	495.3662	8-Sep-2006	7-Sep-2056	One of five concessions purchased from Cortez Resources.
Triunfo Este fracc.II	227891	Compañía Minera Pitalla, S.A. de C.V.	350.0000	8-Sep-2006	7-Sep-2056	One of five concessions purchased from Cortez Resources.
Triunfo Este fracc.III	227892	Compañía Minera Pitalla, S.A. de C.V.	0.3023	8-Sep-2006	7-Sep-2056	One of five concessions purchased from Cortez Resources.
Triunfo Oeste Fracc. I	227893	Compañía Minera Pitalla, S.A. de C.V.	848.6946	8-Sep-2006	7-Sep-2056	One of five concessions purchased from Cortez Resources.
Triunfo Oeste Fracc.II	227894	Compañía Minera Pitalla, S.A. de C.V.	95.0000	8-Sep-2006	7-Sep-2056	One of five concessions purchased from Cortez Resources.
El Triunfo Ampliación	233086	Compañía Minera Pitalla, S.A. de C.V.	3,140.0077	9-Dec-2008	8-Dec-2058	One of four concessions purchased from the Mexican Geological Survey
Reducción El Triunfo Fracción 1	233087	Compañía Minera Pitalla, S.A. de C.V.	1,974.6653	9-Dec-2008	8-Dec-2058	One of four concessions purchased from the Mexican Geological Survey
Reducción El Triunfo Fracción 2	233088	Compañía Minera Pitalla, S.A. de C.V.	136.9238	9-Dec-2008	8-Dec-2058	One of four concessions purchased from the Mexican Geological Survey
Reduccion Valle Perdido	233089	Compañía Minera Pitalla, S.A. de C.V.	1,473.8423	9-Dec-2009	8-Dec-2059	One of four concessions purchased from the Mexican Geological Survey
Totals			***46,327.9473***			

Figure 4-3: Mineral Tenure Map

Note: Figure courtesy Argonaut

4.4 Surface Rights

Argonaut has purchased 888 ha of surface rights in the Project area. In addition to 260 ha previously acquired by Pediment Gold, Argonaut acquired 500 ha in December 2010 from Ejido San Luis, through a contract for temporary occupation for 30 years. In June 2011, the company acquired an additional 128 ha under contract from Ejido San Antonio with a temporary occupation permit for 15 years.

It is a reasonable expectation that any additional surface rights that may be required to support any planned infrastructure locations can be obtained.

4.4.1 Eijidos

Surface access agreements with the Procuraduria Agraria office in Sonora, Baja California Sur, (paid on an annual basis to the local ejidos) allow for either “low impact” exploration i.e. prospecting, soil and rock sampling and hand trenching, or “transition”, i.e. road building, mechanical trenching, drilling, with higher cash payments.

There are two ejidos that pertain to Project activities: the San Antonio ejido and the San Luis ejido. The San Antonio ejido is a very old farm holding dating from 1919 and comprising 10,846 ha. San Luis comprises about 1,000 ha of surface rights in the exploration area and is owned mainly by one family group. The San Luis ejido has more extensive irrigation-farmed areas southeast of Los Planes pueblo.

There are no work commitments and all types of exploration are permitted except mining. Exploration companies are encouraged to use ejido workers whenever possible. Argonaut has endeavoured to hire all local staff from the ejidos and have consulted with the local village councils on all aspects of exploration; jobs are relatively high-paying for the local communities and are thus sought after.

4.4.2 Access and Compensation Agreements

San Antonio Ejido Land Occupation Agreement

San Antonio ejido has granted to Pitalla, for a term of 30 years in a Land Occupation Agreement dated November 22, 2009:

- Prospecting rights to 8,000 ha of land-in-common-use of the San Antonio ejido, on receipt of a one-time payment of $200,000 Mexican pesos
- Occupation rights to 200 ha of land-in-common-use of the San Antonio ejido for exploration and exploitation activities, on payment of an annual exploration fee per

hectare of $3,000 Mexican pesos for exploration activities and $10,000 Mexican pesos for exploitation activities (adjusted annually by 5%).

Under the terms of the Land Occupation Agreement, the San Antonio ejido has also granted to Pitalla its authorization to obtain all environmental permitting required by applicable laws to carry out exploration and exploitation activities on the San Antonio Project. The Land Occupation Agreement was subsequently approved by a meeting of the San Antonio ejido.

The Land Occupation Agreement and Approval has been certified by the National Agrarian Registry (NAR).

San Antonio Ejido Land Assignment Agreement

A Land Assignment Agreement has been completed with the San Antonio ejido, whereby ownership (parcela) rights to 260 ha of land-in-common-use of the San Antonio ejido is transferred to Pitalla's nominee, Jorge Diaz Avalos, on payment by Pitalla of:

- $6,500,000 Mexican pesos
- The remediation of 50 hectares of ejido land
- The construction of a greenhouse structure of about 30 m x 8 m, which is intended to act as a test project to attempt to grow commercial feed for cattle using hydroponics, or another agreed-upon project to assist in the cattle-raising business of the ejido
- Payment of 85% of the costs of electrification of the Aguajito and Texcalama towns (as quoted by the Federal Utilities Commission)
- Preferential rights on employment vacancies.

Pitalla agreed to transfer back to the San Antonio ejido the 260 ha of agreement lands, upon abandonment or cancellation of the San Antonio Project mineral tenure concessions, and once appropriate rehabilitation had bee completed. The lands cover the Los Planes and Las Colinas deposits and surrounding area.

An additional clause to the Land Assignment Agreement confirmed that should the land transfer not happen due to internal ejido issues or issues arising from agrarian authorities, then Pitalla would be entitled to the occupation rights in and to the 260 ha specified in the Land Assignment Agreement, for a term of 30 years, for the purposes of mining exploration and exploitation. In this instance, no additional payments would

be required to be made to the ejido apart from compensation as noted in the bulleted list above.

The Land Assignment Agreement was formally approved by the ejido. The Land Assignment Agreement and Approval was certified by the NAR.

There is a further agreement between Jorge Diaz Avalos and Pitalla, whereby, on payment of $100,000 Mexican Pesos, the 260 ha specified in the Land Assignment Agreement will be transferred from Jorge Diaz Avalos to Pitalla. This agreement is contingent upon ratification by NAR of the Land Assignment Agreement and Approval. Argonaut expects that the agreement will be in force during the second half of 2011.

San Antonio Ejido Assignment of Dumps Agreement

The San Antonio ejido concluded an agreement with Pitalla on December 9, 2009, under which Pitalla has assigned to the ejido all Pitalla's rights to dump materials that fall within Pediment Gold-owned concessions, and are within San Antonio ejido land. The dumps are related to previous mining activity. The San Antonio ejido will bear all environmental responsibilities inherent to the removal or disposition of the dumps. In addition, if any of these historic dumps are within the El Triunfo concession group area, then any gold recovered from those dumps will be subject to the royalty payments required by the Mexican Geological Survey (refer to Section 4.5), and such royalty payments must be made by the ejido.

Aguajito and Texcalama Residents Compensation Agreement

A compensation agreement, signed December 8, 2009, was entered into by Pitalla and certain residents of Aguajito and Texcalama, La Paz, B.C.S. Under the agreement, Pitalla indemnifies the Aguajito and Texcalama residents for land impact resulting from mining exploration and exploitation activities in Aguajito and Texcalama, as follows:

- $36,000 Mexican Pesos per month, for a term of 30 years
- The remediation of 50 ha of ejido land
- 85% of costs of electrification of the Aguajito and Texcalama towns (as quoted by the Federal Utilities Commission)
- Preferential rights on employment vacancies.

Mexican Geological Survey Agreement

In July 2008, Pediment Gold acquired the El Triunfo–Valle Perdido concessions from the Mexican Geological Survey and committed to a variable 1% to 3% net smelter return (NSR); payable to the Mexican Geological Survey.

As a guarantee for the payment of NSR, Argonaut has to provide a bond to the Mexican Geological Survey for the amount of MXN506,853; which the Mexican Geological Survey could cash should Argonaut produce and not make its NSR payment. The bond is renewed annually, so the amount of the bond is held in trust for as long as the Mexican Geological Survey has its NSR active. Pitalla will remain responsible for payment of royalties on this material to the Mexican Geological Survey, as non-payment of the royalty will result in concession cancellation.

4.4.3 Water Rights

Basin Usage

Water usage is controlled by the government agency, Conagua, for allocation and management of water rights. The San Antonio basin is subscribed for about 12 Mm^3 of water per year.

Water Rights Agreements

All of the water rights agreements that Pitalla has entered into are required to be filed and approved for registration by Conagua; the application for registration still has to be filed with Conagua at the effective date of this Report. Applications will be dependent on the location of the extraction point; this will not be determined until the hydrological studies that are underway are completed.

San Vicente de los Planes Ejido

Pitalla and San Vicente de los Planes ejido entered into a water access agreement on October 31, 2009, whereby the ejido transferred to Pitalla all rights and obligations to 128,000 m^3 of water per year attached to water rights concession number 01BCS102404/06IMGR97. The transfer of the water rights was formally approved by the ejido.

In December 2010, Argonuat and Ejido San Vincente de Los Planes terminated the contract for 128,000 m^3, and signed a new contract for 138,500 m^3 with respect to concession number 01BCS101798/061MOC0.

Mendoza Family

On December 2, 2009, Pitalla and members of the Mendoza family entered into an agreement for water rights, whereby the Mendoza family transferred and assigned to Pitalla all rights and obligations to 31,000 m^3 of water per year that were attached to water rights concession number 01BCS104411/06IMGE99.

Juan Dominguez Cota Ejido

In November 2010, Argonaut acquired 40,000 m^3 of water rights from the Ejido Juan Dominguez Cota that were attached to water rights concession number 01BCS101504/06AMOC07.

In June 2011, an additional 70,000 m^3 of water rights, attached to water rights concession number 01BCS101504/06AMOC07, 32,600 m^3 of water rights attached to water rights concession number 01BCS101504/06AMOC07 and 24,800 m^3 of water rights attached to water rights concession number 01BCS101504/06AMOC07 were acquired from the ejido.

Rancho la Pimientilla

In November 2010, Argonaut acquired 300,000 m^3 of water rights from Rancho la Pimientilla. These rights were attached to water rights concession number 01BCS100177/06AMDL09. Argonaut has made a payment of 22% of the required total payment, and will complete payment when the registration transfer application has been ratified.

Banaga Geraldo Family

In March 2011, Argonaut acquired 30,000 m^3 of water rights from the Banaga Geraldo Family that were attached to water rights concession number 01BCS101165/06AMDL08.

Jorge Geraldo Geraldo

In June 2011, Argonaut acquired 14,000 m^3 of water rights from Jorge Geraldo Gerald attached to water rights concession number 01BCS104669/06AMDL10.

4.5 Royalties

The Mexican government retains a sliding scale (variable) 1–3% net smelter production royalty on the four claims of the El Triunfo concession group. The sliding scale is based on fluctuations in gold price.

No other royalties apply to any other concession, including the concessions within which the deposits are located.

4.6 Permits

4.6.1 Exploration

Argonaut has informed AMEC that work completed to date, which consists of exploration-level activities, has been performed in accordance with Mexican regulatory requirements.

4.6.2 Project Development

A number of additional permits would be required for Project development. Key permits are included in Table 4-2 and Table 4-3.

4.7 Environmental

Argonaut has informed AMEC that current project environmental liabilities are restricted to exploration site activities and access roads constructed to service exploration programs. There may be instances of contamination associated with historic workings; this has not been investigated or verified to date.

4.7.1 Artisanal Production

San Antonio and the nearby village of El Triunfo, while now farming communities, were important gold- and silver-producing centers respectively, over the last two centuries and in the past 20 years were again mine-exploration focused. There is a strong community interest in the benefits of resuming mining activity. Numerous residents of these two communities continue to be active with small-scale *gambusino* (artisanal) production with limited leaching of gold performed on ore that is taken back to the pueblo area.

4.7.2 Exploration Activities

At the current stage of the Project, which is at a drill-testing point of evaluation, routine permits are required prior to drilling. The maximum disturbed areas permitted per drill hole are 720 m^2 for a core hole and 768 m^2 for an RC hole.

Table 4-2: Permits Required For the Development of Mining Exploration Activities

Permit / Authorization	Competent Authority	Governmental fees (rights)	Term of issuance	Object of the Authorization
Environmental Impact Authorization	SEMARNAT	Environmental impact authorization could be, from $23,343.00 MXNPP up to $70,031.00 MXNP. The amount of rights will depend on the complexity of the project.	60 business days, which could be extended for other 60 business days if the project is complex.	Construction and development of works and activities regarding exploration of minerals in matters of environmental impact. Pursuant to LGEEPA, a Preventive Notice ("*Informe preventivo*") instead of an Environmental Impact Statement ("*Manifestación de Impacto Ambiental*") will be required for activities which are regulated on matters of environmental impact by a Mexican official standard. Mexican Official Standard NOM-120-SEMARNAT-1997, establishes the environmental protection requirements for direct mining exploration activities developed in areas with dry and mild climates in which xerofilo shrubs, tropical deciduous forests or conifers or oak woods is developed ("*matorral xerofil, bosques de coníferas o encinos*").Therefore, if the project is located in areas with these environmental characteristics, the environmental impact evaluation process will be simpler.
Forestry Land Use Change Authorization	SEMARNAT	The amount of rights could be from $810.00 MXNP up to $7,231.00 MXNP. The amount of fees shall depend on the total surface area of forestry vegetation to be removed.	75 business days	Authorizes the removal of forestry vegetation or vegetation native to arid or semi arid regions, if applicable for the exploration activities of the project.
Concession for the Use of National Waters	CNA	The amount of rights is $2,745.00 MXNP.	60 business days	According to the Mining Law, the holder of the mining concession is allowed to use groundwater resulting from the working of the mine for its operations. However, if additional volume of water is required or water is used for different purposes from watering of the mine or benefit of minerals, must obtain this concession.
Concession for the Occupation of National Assets	CNA	The amount of rights is $1,163.00 MXNP.	60 business days	Occupation of national assets, such as river beds, surface areas occupied by lakes and water deposits, among others, with hydraulic or other works, require this concession.
Wastewater discharge permit	CNA	The amount of rights is $3,759.00 MXNP.	60 business days	Wastewater discharges into national bodies of water or onto the soil for its use in irrigation.
Hazardous Waste Register	SEMARNAT	N/A	N/A	Concession holder which generates hazardous wastes from mining and metallurgical industries from the mining and treatment of minerals must be registered before SEMARNAT.

Permit / Authorization	Competent Authority	Governmental fees (rights)	Term of issuance	Object of the Authorization
Land Use License	Municipio La Paz	The amount of rights will be determined by the municipality of La Paz, pursuant the type of activity and the project localization.	2 business days after a site visit.	The project activities must be compatible with the provisions and land use set forth in the applicable urban development program.
Permit for the Use of Explosives	SEDENA	The amount of rights is $10,084.00 MXPN	25 business days	The use of explosives for industrial and mining activities requires a specific permit.

Note: SEMARNAT – Ministry of Environment and Natural Resources (Secretaría de Medio Ambiente y Recursos Naturales); SE – Ministry of Energy (Secretaría de Energía); CNA – National Water Commission (Comisión Nacional del Agua); SEDENA – Ministry of National Defense (Secretaría de la Defensa Nacional)

Table 4-3: **Permits Required For the Development of Mining Exploration Activities**

Permit / Authorization	Competent Authority	Governmental Fees (rights)	Term of issuance	Object of the Authorization
Construction				
Environmental Impact and Risk Authorization	SEMARNAT	The amount of rights could be for the environmental impact authorization, from $23,343.00 MXNP up to $70,031.00 MXNP. The amount of rights will depend on the complexity of the project. Risk authorization rights could be from 854.00 MXNP up to $2,653.00 MXNP, depending on the risk involved in the project.	60 business days, which could be extended for other 60 business days if the project is complex.	The construction and operation of facilities dedicated to the exploitation and processing of minerals are regulated in matters of environmental impact, in order to prevent an ecological damage. Additionally, if mining activities involve the use of hazardous substances, such as cyanide, the activities can be considered "highly risky". Therefore, besides the environmental impact evaluation process an environmental risk assessment is required.
Forestry Land Use Change Authorization	SEMARNAT	The amount of rights could be from $810.00 MXNP up to $7,231.00 MXNP. The amount of fees will depend on the total surface area of forestry vegetation to be removed.	75 business days	Authorizes the removal of forestry vegetation or vegetation native to arid or semi arid regions, if required by the exploitation and processing activities of the project, such as the construction of tailings damns or benefit plant.
Concession for the Use of National Waters	CNA	The amount of rights is $2,745.00 MXNP.	60 business days	According to the Mining Law, holders of mining concessions are allowed to use groundwater resulting from the working of the mine for its operations. However, if additional volume of water is required or water is used for different purposes than mining or processing of minerals, a water concession must be obtained.
Permit for the Construction of	CNA	The amount of rights is $3,552.00 MXNP.	60 business days	Construction of works on or affecting national bodies of water, river beds, lakes and water deposits, among others, require a

Permit / Authorization	Competent Authority	Governmental Fees (rights)	Term of issuance	Object of the Authorization
hydraulic works				special construction permit.
Hazardous Waste Register	SEMARNAT	N/A	N/A	All those who generate hazardous wastes from the mining and metallurgical industries must be registered before SEMARNAT.
Land Use License	Municipal Authority	The amount of rights will be determined by the municipality of La Paz, pursuant to the type of activity and its locality.	2 business days after a site visit.	The project activities must be compatible with the provisions and land use set forth in the applicable urban development program.
Operation				
Accident Prevention Program ("APP")	SEMARNAT	The amount of rights is $1,847 MXNP.	Three months	For the commencement of exploitation or processing of minerals considered as "highly risky", the concession holder must obtain the approval of the APP.
Comprehensive Environmental License	SEMARNAT	The amount of rights is $1,870.00 MXNP.	70 business days	Mining facilities which are considered stationary sources of air emissions under federal jurisdiction are obligated to obtain this license.
Concession for the Occupation of National Assets	CNA	The amount of rights is $1,163.00 MXNP.	60 business days	Occupation of national assets, such as river beds, surface areas occupied by lakes and water deposits, among others, with hydraulic works, require this concession.
Wastewater Discharge Permit	CNA	The amount of rights is $3,759.00 MXNP.	60 business days	Wastewater discharges into national bodies of water or onto the soil for its use in irrigation require a permit.
Permit for the Use of Explosives	SEDENA	The amount of rights is $10,084.00 MXNP.	25 business days	The use of explosives for industrial and mining activities requires a specific permit.

Note: SEMARNAT – Ministry of Environment and Natural Resources (Secretaría de Medio Ambiente y Recursos Naturales); SE – Ministry of Energy (Secretaría de Energía); CNA – National Water Commission (Comisión Nacional del Agua); SEDENA – Ministry of National Defense (Secretaría de la Defensa Nacional).

The allowance for road disturbances under the permits is 7% of the area to be drill tested under the granted permit. Argonaut has confirmed to AMEC that the exploration programs to date were performed in accordance with the applicable Mexican Official Standards (*Normas Oficiales Mexicanas*) under NOM-120.AMEC notes that a Profepa visit was requested by Pediment Gold for the Project, and conducted in January 2009 to check the status of the Project. The review indicated several areas were close to maximum disturbance in areas having 25 m drill spacing, but the Project passed the review as being in compliance. All future drilling in the area will be planned to ensure Argonaut does not exceed the limits of disturbance as allowed by NOM-120.

An additional visit was made by Profepa on 16 June 2011; as at the Report effective date, no feedback had been received from Profepa.

4.7.3 Baseline Studies

Environmental baseline studies were begun for the project in 2008 but were suspended prior to completion. Argonaut has recommenced the baseline studies required as part of the permitting process to obtain an MIA (Manifesto Impacto Ambiental) for the Project, with third-party consultants retained.

Argonaut has advised that flora, fauna, soil characterization, and air quality studies are underway and are being performed by Centro de Investigaciones Biologicas del Noroeste (CIBNOR). Water studies are contracted to Schlumberger Water Services (SWS); geotechnical studies and waste rock characterization studies are contracted to Golder Associates (Golder); and DS Dinamica Socia are performing the socio-economic studies.

4.7.4 Acid-Base Accounting

Very preliminary assessment of the mineralization and hosts rocks indicates that there is low sulphide content. Low sulphide content deposits are usually not a significant environmental issue. An analysis of acid production and neutralization potential has not yet been done to estimate potential for acid rock drainage from the Project, but is planned.

Golder has been commissioned by Argonaut to undertake a waste rock characterization program. Argonaut has advised that samples of leached mineralized material and waste rock have been submitted to SGS Laboratories in Vancouver, British Columbia, for testing, and results are expected in the second half of 2011.

4.7.5 Environmental Permits Required for Future Development

Federal permits that could be required for Project development include either a Preventative Notice (Informe Preventivo, or IP), or an Environmental Impact Assessment (Manifestación de Impacto Ambiental, or MIA), and in addition, a Risk Study (Estudio de Riesgo, or ER), and a Permit for Change of Land Use in Forested Area issued by the State Delegations of SEMARNAT. Due to the scope of the Project, Argonaut expects that a MIA will be required rather than an IP.

State authorities may be involved through the State Delegations of SEMARNAT, which assist in the execution of federal requirements: both in the context of SEMARNAT's review of the IP, as well as in the review of the Permit for Change of Land Use in Forested Area; however, authorizations are issued by the Federal Government.

Local authorities are involved in the permitting process in the issuance of Land Use, Construction and Municipal Solid Waste Generator permits, which are granted at the municipal level.

A *Licencia Ambiental Unica (LAU*) must be granted for Project development by SEMARNAT. The LAU incorporates evaluation, approval and monitoring of all environmental obligations of industrial facilities under federal jurisdiction; these cover all procedures for environmental impact and risk, emissions to the atmosphere and the generation and handling of hazardous wastes administered by the General Office of Integrated Pollutant Management of SEMARNAT as well as water services.

As part of this license, the following documents would need to be submitted for approval:

- MIA (Environmental Impact Analysis). Should include a comprehensive review of the significant and potential environmental impacts associated with all phases of the project, from construction through operation phases, based on scientific and technical baseline studies. The MIA should also describe the measures for avoiding/mitigating these environmental impacts
- ER (Risk Analysis). A detailed review covering the potential risks posed by the construction of the mining project, and is required of all projects involving activities or substances designated as hazardous in LGEEPA. Should include at a minimum consideration of probability of occurrence of accidents involving explosions, fire or spills of pollutants, the area likely to be affected, the impact of the event, and any mitigation plan
- ETJ (Change of Land Use in Forested Areas). Is complementary to the MIA, and must be filed with it. The ETJ must be prepared by a forest engineer registered in

the National Forest Inventory. SEMARNAT requires proof of land ownership or right to perform a forest land use change

- PPA (Accident Prevention Program). a specialized plan based on the results of the ER that includes organizational, human and material resources, plans, procedures, and planning and preventative measures involving emergencies with pollutants to protect workers, surrounding communities, the environment and natural resources. The plan must be approved by SEMARNAT, the Secretariat of Energy, the Secretariat of Economy, and the Secretariat of the Interior.

Other federal, state and municipal authorizations would also need to be obtained, and at a minimum would include:

- Explosive use permit (Secretaría de la Defensa Nacional)
- Water use permit (Comisión Nacional del Agua)
- Archaeological land 'liberation', based on authorization by the Instituto Nacional de Antropología e Historia
- Notice to the state and municipal authorities (i.e., local construction permits, land use change, etc.).

4.7.6 Remediation and Closure

The remediation and closure plan developed for the Project is preliminary and subject to change. In the superseded 2010 PA, total closure costs were estimated at $4.6 million, based on an assumption of a heap-leach operation.

Argonaut is reviewing the closure cost estimate, and will update the estimate when the MIA is submitted to the appropriate regulatory authorities.

4.8 Socio-Economics

DS Dinamica Social, a consulting firm based in Hermosillo, Sonora was contracted in June 2010 to conduct field work and investigations relating to community relations and social impacts of the planned project. Throughout the summer a team of interviewers went house-to-house conducting surveys in villages near the planned Project. In addition, several key government and community leaders were interviewed.

Argonaut has advised AMEC that local community leaders and residents in both the San Antonio and El Triunfo areas appear to be in favour of Project development.

Regionally, AMEC notes that there is significant opposition from a well-organized group from the population centers of Todos Santos and Los Cabos to the Concordia gold project (formerly the Paredones Amarillos project) which is located approximately 30 km from the San Antonio Project. This opposition appears to stem mainly from fears of water pollution caused by the liberation of arsenic and use of cyanide, since the Concordia project is located in a basin which drains waters to the Pacific and in the headwaters of drainages that flow near Todos Santos. AMEC comments that San Antonio is located on the other side of the divide with waters draining north into the Gulf of California, outside of major population centres.

4.9 Comment on Section 4

In the opinion of the AMEC QPs, the following conclusions are appropriate:

- Information from legal and Argonaut experts support that the mining tenure held is valid and is sufficient to support declaration of Mineral Resources
- The mineral concessions have been surveyed in accordance with relevant Mexican regulations
- Information from Argonaut experts confirms that annual claim-holding fees have been paid to the relevant regulatory authority
- Pediment Gold had purchased 260 ha of surface rights in the Project area. Argonaut has acquired an additional 628 ha. There is a reasonable expectation that any additional surface rights to support any planned infrastructure locations can be obtained
- Information from Argonaut experts confirms that surface agreements have been entered into with the San Antonio ejido; these agreements allow “low impact” and “transition” exploration with appropriate compensation payments
- Information from Argonaut experts confirms that water rights agreements have been entered into. All of the water rights agreements are required to be filed and approved for registration by Conagua; the application for registration still has to be filed with Conagua at the effective date of this Report. Applications will be dependent on the location of the extraction point; this will not be determined until the hydrological studies that are underway are completed
- Information from Argonaut experts confirms that exploration activities are conducted within the regulatory framework required by the Mexican Government. Pediment Gold requested a visit by Profepa during 2009–2010 to determine whether the exploration had stayed within acceptable affectation limits as stated in the NORMA-120 regulations. An additional visit was made by Profepa on 16 June

2011; no information had been received from Profepa on the findings of the visit at the effective date of the Report

- Additional permits will be required for Project development
- At the effective date of this report, environmental liabilities are restricted to exploration sites and access roads constructed to service exploration programs. There may be instances of contamination associated with historic workings; this has not been investigated or verified to date
- Argonaut has advised AMEC that local community leaders and residents in both the San Antonio and El Triunfo areas appear to be in favour of Project development
- Based on the mineral tenure, agreements, permits and the current state of environmental knowledge for the Project, Mineral Resources can be declared.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Project is within the San Antonio–Triunfo mining district located about 40 km southeast of La Paz (area pop. 200,000), the principal sea port and the capital city of the state of Baja California Sur, Mexico. The closest towns are San Antonio, 8 km west of the Project, Triunfo, 10 km northwest of the Project, and Los Planes, 15 km east of the Project. Travel time from San Antonio is about 10 minutes.

Highway 1, a bitumen highway, passes through the Project. Access within the Project area is provided by good gravel and dirt roads.

La Paz is served by the Manuel Márquez de León International Airport that has flights to the most important cities of Mexico such as Mexico City, Guadalajara, and Monterrey, and has direct flights to Los Angeles in the United States.

5.2 Climate

The climate is normally arid and hot, with an average temperature of 23ºC, and average lows of 12ºC and highs of 35ºC. The warmest months are typically July–September, and can be humid; winters, occurring from about December to February, are typically much cooler, and dry.

Annual precipitation averages 175 mm, much of it associated with the hurricane systems that are most likely to occur during August and September.

It is expected that any future mining operations will be able to be conducted year-round. Minor interruptions may occur to activities if hurricane conditions develop.

5.3 Local Resources and Infrastructure

The closest town is San Antonio, a former mining hub.

5.3.1 Existing Infrastructure

There is no existing Project infrastructure. Exploration crews stay in San Antonio and travel to site as required. Cell coverage in the area is available. Roads and powerlines pass directly through the Project area (refer to Figure 4-1).

5.3.2 Planned Infrastructure

As part of a preliminary assessment (PA) completed on the Project in 2010, AMEC reviewed the potential infrastructure requirements to support development. Information in this sub-section is based on information in the PA, as the infrastructure requirements are likely to be similar for any future development. AMEC notes, however, that the results of the PA (see Section 6) are no longer considered relevant as the Mineral Resource estimate on which the PA was based has been superseded.

The following information is extracted from the PA report.

Access

Highway 1 passes through the Project, and intersects a portion of the area planned for the Las Planes open pit. As a result, the highway will need to be rerouted around the proposed area for mining activities. AMEC has estimated about 1.6 km would be left in place for mine access, with another 1.6 km removed. State highway No. 1 would ultimately be relocated along a 4 km corridor that would also contain the power line and fiber optic cable. Approximately $10.6 M is required to relocate these facilities.

Existing national and provincial roads are planned to be used during construction and operation. These roads will require minimum improvements to accommodate transport of special oversized or heavy parts during the construction stage. Reliance on existing site access routes means that limited site improvements will be required for mine development. The site plan calls for ancillary facilities, including maintenance and warehouse structures, administrative offices, and an assay and metallurgical laboratory, to be located near the proposed site entrance.

Port

The main regional sea port of La Paz is a principal supply point from mainland Mexico and international sources for the state of Baja California Sur. Minor historic shipping activity has taken place at the port of Ventana which is closer to the Project area; however, no current port facilities are available there to support mining activities. Current port infrastructure only supports fishing enterprises and provides for local beach access.

Buildings

AMEC has assumed that the San Antonio facilities are project-owned. This ultimately provides flexibility in changing contractors during the project or moving to owner

mining. Facilities will include site roads, the main office, the truck shop, the fuel bay, the warehouse, the wash bay, and powder magazines and explosive storage bins.

Personnel

Mexico has sufficient experienced and skilled professionals to run the proposed San Antonio operation. The mining centres of San Antonio and Triunfo have inhabitants who have previously been involved in mining, although the operations are primarily closed. AMEC is of the opinion that workforce for any future mining activity could be sourced from the local area; however, the workforce would require dedicated training programs.

Communications

A fibre-optic cable currently passes through the Project, and intersects a portion of the area planned for the Las Planes open pit. About 3.2 km of fiber optic cable will need to be removed and then rebuilt around the Project site. The new cable will be sited down the proposed road corridor.

Phones will be installed in all buildings and facilities. Cellular telephone coverage will be available in the camp and mining areas.

An IP (internet protocol) telephone system will be used for off-site communications. The system includes a device for connecting to the public network, voice mail, and direct selection of extension number. The telephone switchboard will share installations with the data network, which will have power and air conditioning back-up support systems.

Hand-held and base-station radios will be provided for survey and ore control personnel, geologists, and ADR operators. The mine base station will tie in to a solar-powered transponder to allow radio communications with camp. Mobile equipment will also be provided with radios.

Power

Power for any mining operation would be available from an upgraded 34.5 kV line that crosses over the Project, originating from the Triunfo substation, which is located approximately 10 km northwest of the Project area. The current route of the powerline will require relocation, as it intersects a portion of the area planned for the Los Planes open pit. About 3.2 km of line will need to be moved to the proposed road corridor.

Although the substation has capacity, the existing 34.5 kV line will require upgrading to service the Project. CFE, the local power supplier, would assume any costs to upgrade the capacity of the El Triunfo substation. CFE provided an upgrade cost of 625,000 pesos per kilometer ($US50,000) to upgrade the line. In total, the cost of upgrading the line over the 13.2 km route is $660,000.

Water

The San Antonio Project is located within the Los Planes hydrologic basin that is bounded by the Gulf of California to the north, the Sierra La Salecita to the south, the Sierra La Gata to the east and the Sierra La Trinchera to the west. The basin has an approximate area of 930 km^2. Water resources within this basin and Project area include creeks with intermittent flows during the year and a generally unconfined aquifer.

Groundwater has been detected in drill holes at the site as shallow as 30 m from surface. Wells in the area have been tested in the past by the National Water Commission responsible for managing Mexico's water resources (Conagua). Groundwater quality in the Los Planes basin has historically been degraded by agricultural runoff containing nitrate, naturally-occurring arsenic in the mineralized zones, and geothermal activity.

Water usage is controlled by Conagua, for allocation and management of water rights. AMEC notes that the Los Planes aquifer has been considered over-exploited since 1954, having been used heavily for agriculture purposes; approximately 11 million m^3 is withdrawn per year. No additional water rights can be licensed and all groundwater users must have a water right. Pediment Gold has been told by the Commission National del Agua, the federal agency governing water rights, that water rights obtained from the Los Planes agricultural users lower in the basin can be transferred nearer to the site and that new wells can provide water needed for the Project.

Pediment Gold recently contracted Schlumberger Water Services (SWS) to commence a baseline delineation and characterization of the potential water resources available for development of the mine. At the end of July, 2010, SWS had met with Conagua officials, reviewed area well and mine shaft data, and conducted site surveys. A preliminary report confirmed that the basin where the Project is located has no new water rights and that those must be purchased from existing users. SWS also noted that the most likely sources of water needed for the Project will be groundwater wells that could be sited in the alluvium east of the Project. There could also be some potential contribution from surface runoff that can be captured and, later in the mine life, pit dewatering. The next phase of study will require the drilling of test wells to determine potential locations in the basin for production water wells

Other potential water supply alternatives that may be reviewed during the course of Project development include the use of sea water directly or desalinated and the construction of reservoirs to capture and use surface run-off during the rainy season.

Two arroyo diversions and one diversion berm are constructed to manage surface water flows through the project site. In total, 1.6 km of diversion berm are constructed to channel water around the Colinas pit and to channel water between the Planes waste rock facility (WRF) and the leach pad. About 225 m of diversion berm is planned to be built adjacent to the proposed Colinas pit to divert surface water away from the pit.

Argonaut has advised AMEC that SWS have commenced the second phase of the planned water studies, with results expected in the second half of 2011.

5.4 Physiography, Flora and Fauna

The northern part of the Project is characterized by rounded hills rising from the pediment with elevations ranging from 200 m to 250 m above sea level (ASL). The southern part is more rugged with elevations from 400 m to 600 m ASL.

Vegetation consists of numerous varieties of thorny desert cacti, small shrubs and bushes, including manzanilla, mesquite, and palo verde.

The closest floral reserve is the Sierra La Laguna Biosphere Reserve. The Project is situated 19 km from the nearest border of the buffer zone of the reserve, and approximately 25 km from the nearest border of the core of the reserve. AMEC notes that a major highway and the village of San Antonio are located between the reserve and the Project, as is the semi-active La Testera mining/milling operation that is conducted by third-parties (refer also to Section 6.1). The Project site and the reserve are also separated by a major divide, and so surface drainage in the Project area flows north–northeast towards the Gulf of California, opposite from the waters draining into the reserve.

5.5 Comment on Section 5

In the opinion of the QPs, the existing and planned infrastructure, availability of staff, the existing power, water, and communications facilities, the methods whereby goods could be transported to any proposed mine, and any planned modifications or supporting studies are well-established, or the requirements to establish such, are well understood by Argonaut, and can support the declaration of Mineral Resources.

It is expected that any future mining operations will be able to be conducted year-round.

The area held under mineral tenure is sufficient to accommodate the majority of any planned infrastructure. Based on the initial Project layout in the superseded 2010 PA, additional surface rights could be needed to accommodate any future waste rock and heap leach facilities. This requirement would be examined during more detailed studies.

6.0 HISTORY

6.1 Historic Production

Gold and silver mineralization was reportedly discovered in the Triunfo area around 1748, with limited small scale production occurring mainly in the Triunfo area and south of San Antonio.

A long period of inactivity followed until about 1862 when 25 mines were reported as working (CRM Baja California Sur Monograph, 2000). These mines produced steadily until 1895 when due to a large cyclone-hurricane, water problems and prices lead to a steady decline to 1915, after which the district was no longer active. Total production is estimated at over 3,580 kg of gold (115,000 oz) and 661 tons of silver (21,250,000 oz Ag), plus lead and zinc.

Minera Tepmin (Tepmin) has produced gold from the Testera Mine approximately 7 km south of San Antonio. Tepmin operated a flotation mill from about 1998–2000 at an intermittent production rate of about 50 tons per day. A current independent production effort restarted the Testera mill in early 2009 to reportedly process material gathered from the dumps of the district (Herdrick and Giroux, 2009).

6.2 Legacy Exploration Activities

The government geological branch, Consejo De Recursos Minerales (CRM), carried out work in the 1970s, consisting of mapping, trenching and limited magnetic and induced polarization (IP) surveys which covered portions of the Project.

A Canadian-based company, Viceroy Resource Corp., (Viceroy) began investigation of the San Antonio district which led to acquisition of the Paredones Amarillos area, 20 km south of the Project, in about 1990. Echo Bay Exploration Inc. (Echo Bay) acquired the Paredones Amarillos area from Viceroy through joint venture (JV) and expanded concession holdings in the district to cover a large area outside the JV in the mid-1990s. This area included the Project area.

During the approximate period from 1993 to 1998 Echo Bay carried out detailed geological mapping, stream sediment, soil and rock chip sampling, trenching, ground electromagnetics, airborne radiometrics, magnetic and very-low frequency electromagnetic (VLFEM) surveys, RC and core drilling, a first-time mineral resource estimate in 1996, and metallurgical studies.

The radiometric survey is reported to have indicated a weakly anomalous potassium and K/Th ratio response associated with the Las Colinas mineralization within the

Project (Brown, Reynolds, and Hauck, 1998). The Los Planes zone however was not recognized due to sand and gravel cover although several Echo Bay drill holes were completed in the deposit area.

6.3 Argonaut and Pediment Gold Activities

Exploration work by Pediment Gold staff in the area commenced in 2005. Activities to 2010 included data review, rock chip and grab sampling of old trenches and workings, soil sampling, reconnaissance IP geophysical surveys, RC and core drilling, mineral resource estimation, and metallurgical testwork. Third-party studies in relation to socio-economics, hydrogeology and geotechnical data have commenced.

A Preliminary Assessment (PA) was commissioned from AMEC in 2010, and indicated positive Project economics were likely from the mine plan envisaged in the PA.

Argonaut is not treating the PA results as current, as the Mineral Resource estimate on which the PA conceptual mine plan and financial analysis was based has been superseded by the Mineral Resource estimate in Section 17 of this Report. However, some aspects of the PA have been used by AMEC to provide support for the cut-off grade grades and in assessing reasonable prospects of economic extraction in the updated Mineral Resource estimate.

Key assumptions for the purposes of the historic PA included:

- Mineral Resource estimate of 16 Mt grading 0.88 g/t Au in the Measured and Indicated Mineral Resource categories of oxide and transition material, and an additional 18.8 Mt grading 1.3 g/t Au in Measured and Indicated Mineral Resource categories of sulphide mineralization. There were 0.8 Mt grading 0.65 g/t Au in the Inferred category of oxide and transition material, and an additional 0.3 Mt grading 1.19 g/t Au in the Inferred category of sulphide material
- The Project was located in an area with good access to power, roads, services, ports, and labour
- The Project could support mining using a conventional truck-and-shovel fleet and processing via proven heap leaching technology. The estimated mining rate was 11,000 t/d
- Metal price assumptions for gold as based on 2010 AMEC guidelines on industry consensus of long-term metal prices, which were $900 per ounce of gold. As a comparison, the three-year trailing-average gold price calculated at the time of the study (August 2010) was $910/oz. AMEC noted at the time that both AMEC's

guideline price and the three-year trailing-average gold price were significantly below prevailing market prices as at the PA report effective date of 2 August 2010

- The proposed mine had a mine life of nine years including a one year pre-strip period
- Mining, G&A, and processing unit costs were respectively US$6.49/t mineralization leached, US$0.81/t of mineralization leached, and US$3.80/t of mineralization leached
- Average annual production of gold was assumed to be approximately 82,500 troy ounces
- Average projected gold recoveries were 75% for Ox/Tran and 50% for crushed sulphide
- The capital expenditures were expected to total US$71.1 million. This figure included allocations for pre-production, initial mining equipment, and initial plant and infrastructure, and included allocations for infrastructure relocation and contingency
- Total sustaining capital costs were estimated at US$27.9 million
- Remediation and closure costs of US$4.6 million were included
- Mining taxes were included
- The base-case economic analysis was based on 100% equity financing
- The base-case economic analysis did not include inflation. Capital and operating costs were expressed in second-quarter 2010 dollars.

Under a $900/oz Au price assumption and using a discount rate of 8%, the pre-tax net present value (NPV8%) was $79.0 million and the internal rate of return (IRR) was 33%. The after-tax NPV8% was $56.6 million and the IRR was 26%. Payback for the project was estimated at 3.28 years and 3.79 years for the pre-tax and after-tax scenarios respectively. Payback for the San Antonio Project was defined as the time it took to recoup the initial investment after the completion of construction.

Following completion of the PA, Pediment Gold commenced an infill core and RC drill program primarily to support potential upgrades in Mineral Resource confidence categories and step-out drill holes along strike to delineate additional mineralization. Additional work encompassed by the program included drilling for metallurgical samples, oriented-core drilling for geotechnical information, exploration drilling at the La Colpa zone and condemnation drilling. This program was conducted from June to December 2010, and comprised 149 RC drill holes (26,746 m) and 57 core drill holes (9,324 m).

In March 2011, Argonaut commenced RC drilling a 10,000 m drill program that will consist of approximately 30 RC drill holes in the Intermediate Zone and 40 RC drill holes in Las Colinas. The primary focus of this program is to support potential upgrades in Mineral Resource confidence categories.

The updated Mineral Resource estimate based on the 2010 drilling is discussed in the remainder of this Report.

7.0 GEOLOGICAL SETTING

7.1 Regional Geology

The basement of the Baja Sur comprises a chain of Mesozoic granitic bodies and accompanying metasedimentary roof pendants structurally sutured by the La Paz fault to a western belt of oceanic crustal rocks (Figure 7-1). The crystalline complex west of the La Paz fault that includes the San Antonio district is composed of two separate intrusive complexes hosted in sediment-derived schists and gneisses (Figure 7-2). A hornblende-rich intrusive complex ranges in composition from gabbro to quartz-diorite, locally shows foliation, and typically hosts mineralization in the San Antonio area. The biotite granodiorite batholith that hosts mineralization at the Concordia (Paredones Amarillo) gold deposit (held by third parties) is considered to be a younger intrusive event.

Cretaceous marine sedimentary rocks of the Eugenia and Valle Formations overlie the basement assemblage. In turn, the Cretaceous rocks are overlain by lower Tertiary marine sediments of the Tepetate Formation. Possibly contemporaneous volcanism represented by tuffs and sandstones of the Salto Formation may have accompanied deposition of the shales, sandstones and tuffs of the Oligocene San Gregorio Formation that overlies the Tepetate Formation. The San Gregorio Formation is in turn overlain by tuffs, conglomerates, siltstones and sandstones of the earliest Miocene Isidro Formation. The widespread early to middle Miocene Comondu Formation, a series of interbedded volcanic sandstones, siltstones, rhyolite ash-fall tuffs, and andesitic lahars and flows, overlies the Isidro Formation. Unconformably overlying the Comondu Formation is a series of mid-Miocene to Holocene basalt flows.

7.2 Project Geology

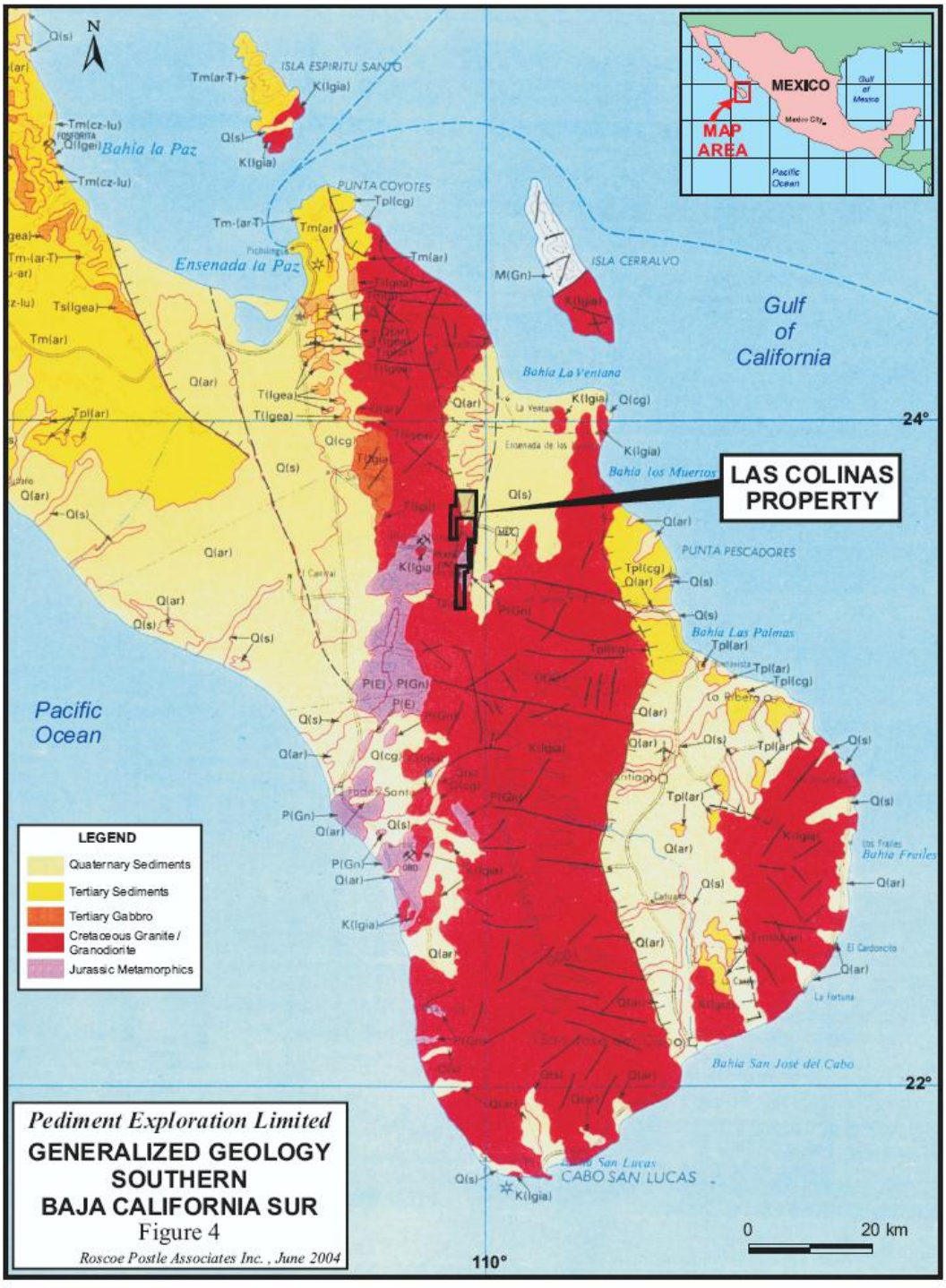
7.2.1 Lithologies

Due to the paucity of outcrop within the Project, geological interpretations are primarily based on drill data.

The primary rock units within the Project belong to the basement of the Baja Sur (Figure 7-3), and include:

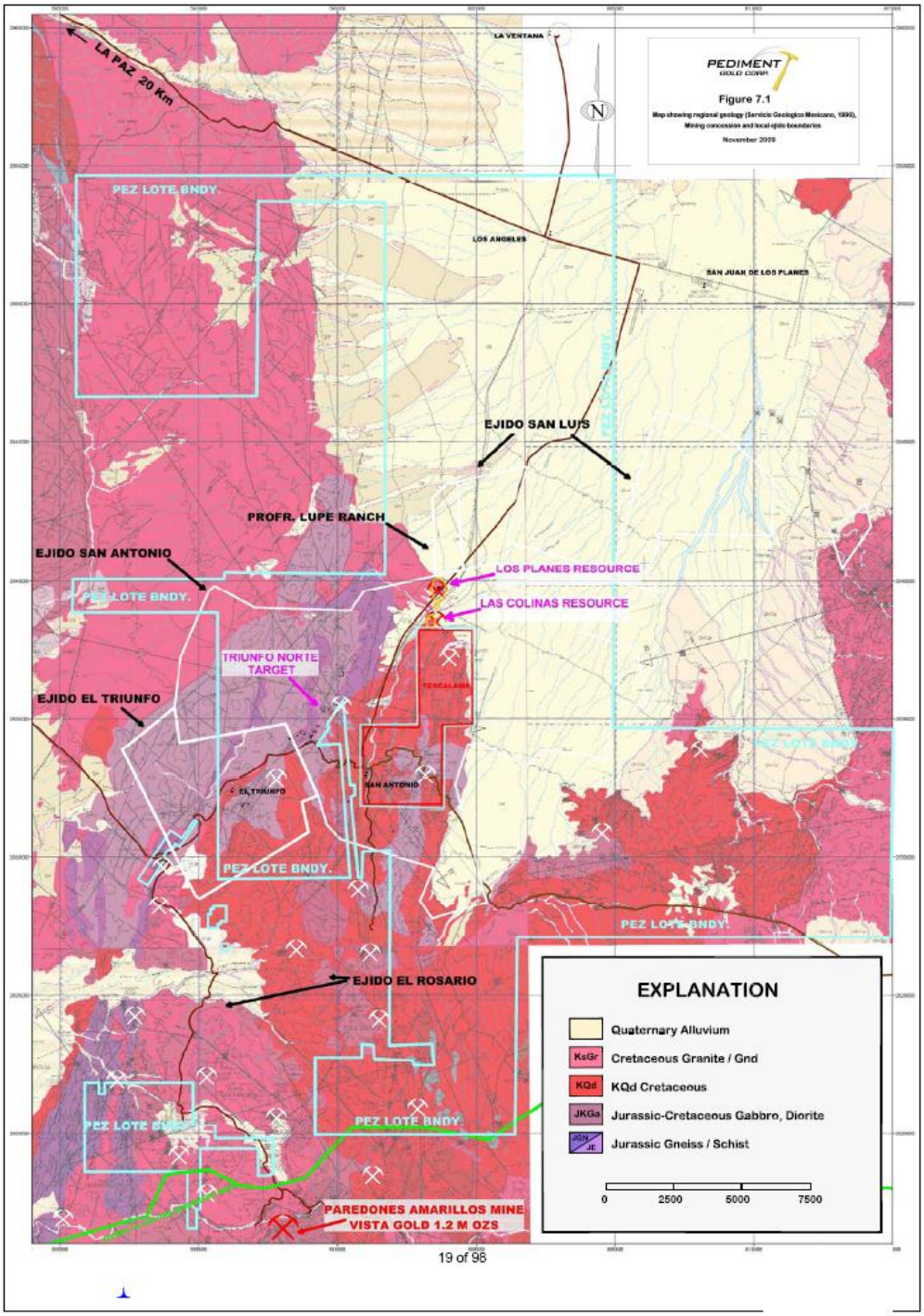
- Diorites and gabbros: usually coarse grained, contain abundant hornblende or augite and are dark-coloured. Common in the southern portion of the Colinas area, and near the historic La Colpa mine. Minor fine-grained variants were noted in the La Colpa area.

Figure 7-1: Geology Map, Baja Sur



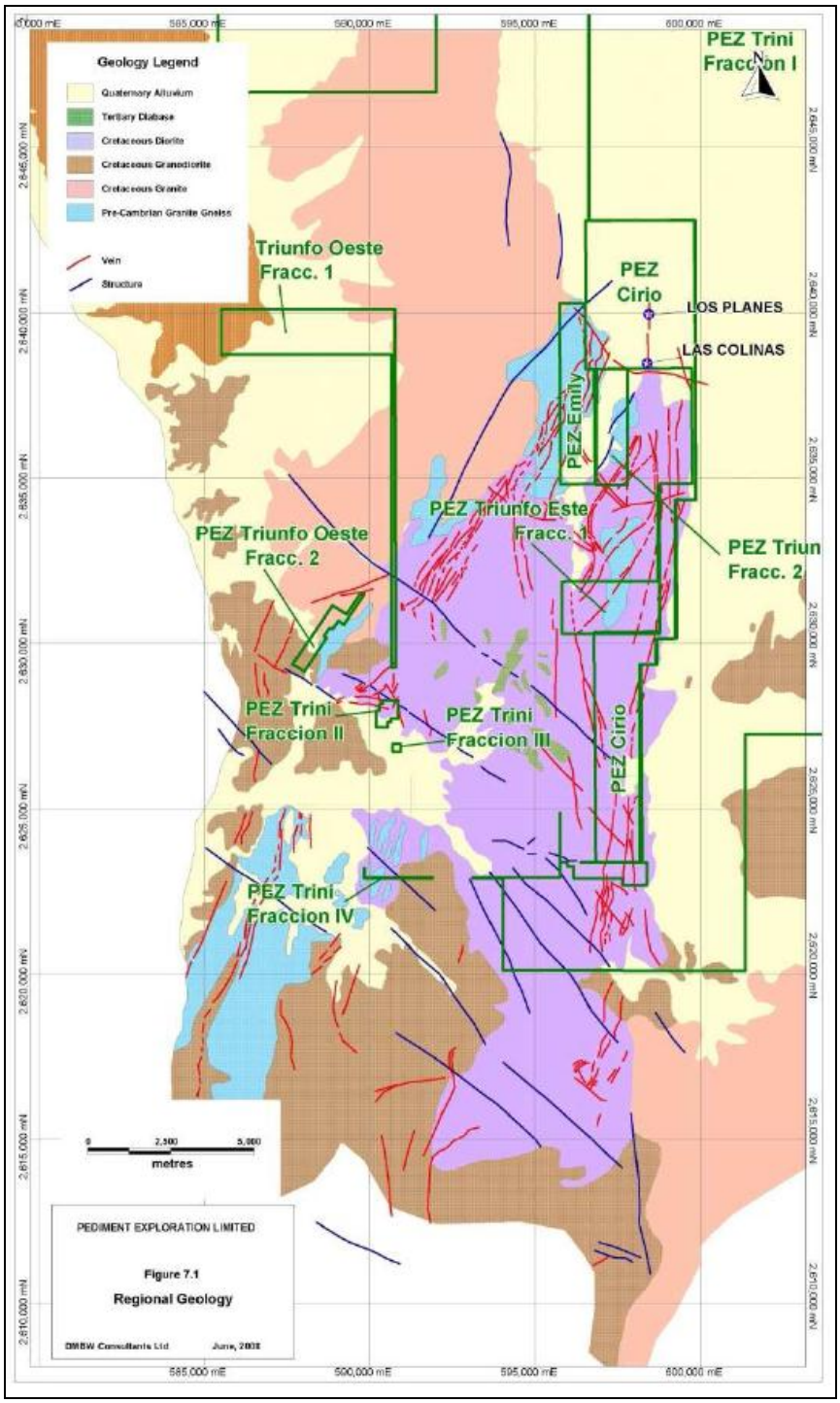
Note: figure from Wallis, 2005, and used courtesy Argonaut.

Figure 7-2: Project Region Geology Map



Note: figure from Wallis, 2005, and used courtesy Argonaut

Figure 7-3: Project Geology Map



Note: figure courtesy Argonaut

- Biotite–hornblende quartz diorites: abundant hornblende and minor quantities of magnetite; commonly have ilmenite as the dominant opaque mineral. Quartz diorite is common in both the hanging-wall and footwall of the Planes deposit, and coarse-grained biotite–hornblende quartz diorite is the most common rock type present in the Planes deposit. Las Colinas has a mix of diorite and quartz diorite.
- Biotite granodiorite–granite: The intrusion has a weakly porphyritic character with fine grained biotite of a brownish coffee color. It is present as a medium-grained quartz-rich intrusive beneath the Planes deposit and is seen mainly in the drill holes which penetrate deeper into the hanging-wall of the large thrust fault shear zone. Rocks of similar texture crop out south of the Colinas deposit and adjacent to the southeast of the La Colpa mine zone.

Post-mineralization northwest-trending andesite dykes were noted in the Colinas area and the Arroyo Fandango.

Overlying the basement material are poorly consolidated arkosic sands to gravels attributed to the locally important Pliocene to Pleistocene Salada Formation. The sediments appear to be a deltaic deposit formed in a relatively rapidly subsiding basin.

A thin mantling along the top planar alluvial surface of the pediment contains numerous scattered exotic cobbles and occasional boulders of schist and gneiss. The same schist and gneiss rock units are more common in the adjacent ridges and mountains located immediately to the west and these fragments were probably carried down by erosion.

7.2.2 Metamorphism and Alteration

The biotite granodiorite–granite intrusive rocks may display a weak pervasive sericitic alteration.

Surface oxidation of the sulphide-bearing deposits has progressed to about 100 m in the Los Planes deposit and about 25–30 m in the Las Colinas deposit.

7.2.3 Structure

The Project deposits are contained in a large mega-shear structure, possibly a Mesozoic-age thrust fault, which is dipping at about 45º to the west. This mega-shear appears to be regional in extent, with strands and splays that may have been more favourable loci for mineralization.

Drilling at Los Planes and Las Colinas shows the thickness of the shear zone to be more than 200 m, and to be hosted in mid-level intrusive rocks of similar age to the

shearing episode. The presence of the structure for 40 km to the south, suggest the shear zone is a thrust fault-related structure.

Drilling has also revealed that a small northwest trending graben basin, probably Pleistocene age, with true listric faulting drops the northeastern part of the Los Planes deposit in domino like fault segments to sequentially more than 200 m deeper to the northeast. These listric faults range from 20 m of movement up to 100 m of movement dropping the blocks down on the northeast side along N40W-trending faults. The movement appears sequential with older faults to the southwest that have been planed by pediment erosion on both sides of the faults, with the more northeastern blocks having gravel-sand filling only on the northeast side of the fault.

7.2.4 Mineralization

Mineralization has preferentially developed in zones of stockworking, cataclasite and mylonite within the shear zones.

The proximity of the Triunfo and San Antonio districts, both of which are localized in similar shear zones settings and in similar host rocks, suggests a possible similar age and origin. However the geochemical signature characterizing the two districts is very different. San Antonio is a gold-only mineralized district with average silver to gold ratios of 1:1 or less, whereas Triunfo is silver dominated with average silver to gold ratios of around 250:1 and associated lead, zinc, and antimony. In addition, the orientations of the mineralized zones are different. The Triunfo zone strikes generally N20–30E and dips to the east. The San Antonio shear zones have a persistent north–south strike and the shears generally dip at about 45ºW.

7.3 Deposits

Mineralization has currently been identified along a 1.8 km strike length, from UTM coordinates (NAD 27 datum) 2,638,300 mN to 2,640,100 mN. The mineralization is divided into three fault-bounded blocks, which have been named Las Colinas, Intermediate, and Los Planes, from south to north. Los Planes is the largest, and best-explored of the deposits to date.

7.3.1 Los Planes

Mineralization in the faulted Los Planes block extends along strike for about 800 m, from UTM coordinates (NAD 27 datum) 2,639,300 mN to 2,640,100 mN.

Drilling has encountered continuous mineralization to about 380 m depth; however, the mineralization thickness is variable. In the southern portion of the Los Planes Zone, mineralization is about 15 m in thickness. Thicknesses increase to the north. Mineralized zones can coalesce and may reach as much as 120 m in thickness.

Los Planes is open in all directions but mainly at depth. To the north, the mineralization is deep, and drilling has been limited. The northernmost drill holes are 07PLRC-08 and 07PLRC-42 on cross section 2,640200 mN. This drilling intersected a narrow interval of mineralization. No further drilling has taken place in this area. To the south, it is interpreted that the Los Planes zone will end as it intersects a west–northwesterly-striking, northeast-dipping fault.

The current geological model for Los Planes consists of two large units interpreted based on structure, alteration and mineralization. The units are separated by a west-dipping gouge zone and consist of a hanging wall unit and a footwall unit.

Mineralization is hosted mainly within the sub-units coded as “hanging wall 1” (HW1) and “stockwork” The former contains the most deformed rocks in the geological model, varying from foliated intrusive to levels of microbreccia, cataclasite, or pseudotachylite. This unit varies in dip from subvertical (in the west end) to subhorizontal (towards the east) and has strong sericite–chlorite alteration. Mineralization is closely associated with arsenopyrite and pyrite which occurs in disseminated form or as small fractures or veinlets.

The stockwork sub-unit is composed of breccia zones of variable dip (from -75º to the west to sub-horizontal) that are about 15 m thick, and are cemented by pervasive arsenopyrite and pyrite. These zones typically contain higher gold grades and are interpreted as feeder zones for HW1.

The sub-zone coded “hanging wall 2” (HW2) is a structural transition from hanging wall 1 to the west and has similar characteristics to those of HW1. However, HW2 is less deformed overall as deformation tends to occur in more localized zones, and has less alteration and fewer sulphides. In some areas the contact between HW1 and HW2 has been described as gouge.

The footwall unit is below a gouge zone, to the east of HW1. The rock in the footwall unit is much less deformed than in the hanging wall unit and is typically unmineralized.

Although mineralization is intimately associated with the presence of sulphides, the Los Planes zone also contains well-oxidized areas, which include pure oxide and oxidize–transition material. The oxidized zone can reach up to 100 m in depth from surface and appears to be related the Quaternary Los Planes fault. Oxidation at Los

Planes is much stronger and deeper than in the Intermediate and Las Colinas zones. When the stockwork sub-zone appears oxidized, it has a physical appearance of hematite-rich rubble.

Minera Pitalla geologists have logged several intrusive types, mainly quartz diorite, granodiorite and granite; however, recent petrographic studies suggest that the intrusive body at Los Planes-Las Colinas is more homogeneous and ranges in composition from granodiorite to tonalite. It is possible that there is only lithological unit that has local variations, but has been logged differently due to alteration and deformation.

Alteration is zoned, progressing from chlorite-dominant around the cataclasite margins to sericite-dominant within the cataclasite units.

Figure 7-4 is a geological cross-section through the Los Planes deposit.

7.3.2 Las Colinas

The geology of the Las Colinas and Intermediate zones are very similar to that of Los Planes; however at Las Colinas, the stockwork sub-zone is absent and the width of HW1 varies from 18 m to 40 m.

The mineralized zone has a roughly north–south strike and dips at about 45º to the west. Mineralization extends along strike for about 500 m in this fault block, from UTM coordinates (NAD 27 datum) 2,638,300 mN to 2,638,800 mN.

Drilling has intercepted continuous mineralization to about 210 m depth. Mineralization at Las Colinas is truncated by the tenement boundary to the south at coordinate 2,638,300 mN. The deposit remains open at depth, but is limited to the north, where it is interpreted to end where a northwest-trending fault intercepts the strike of the mineralization.

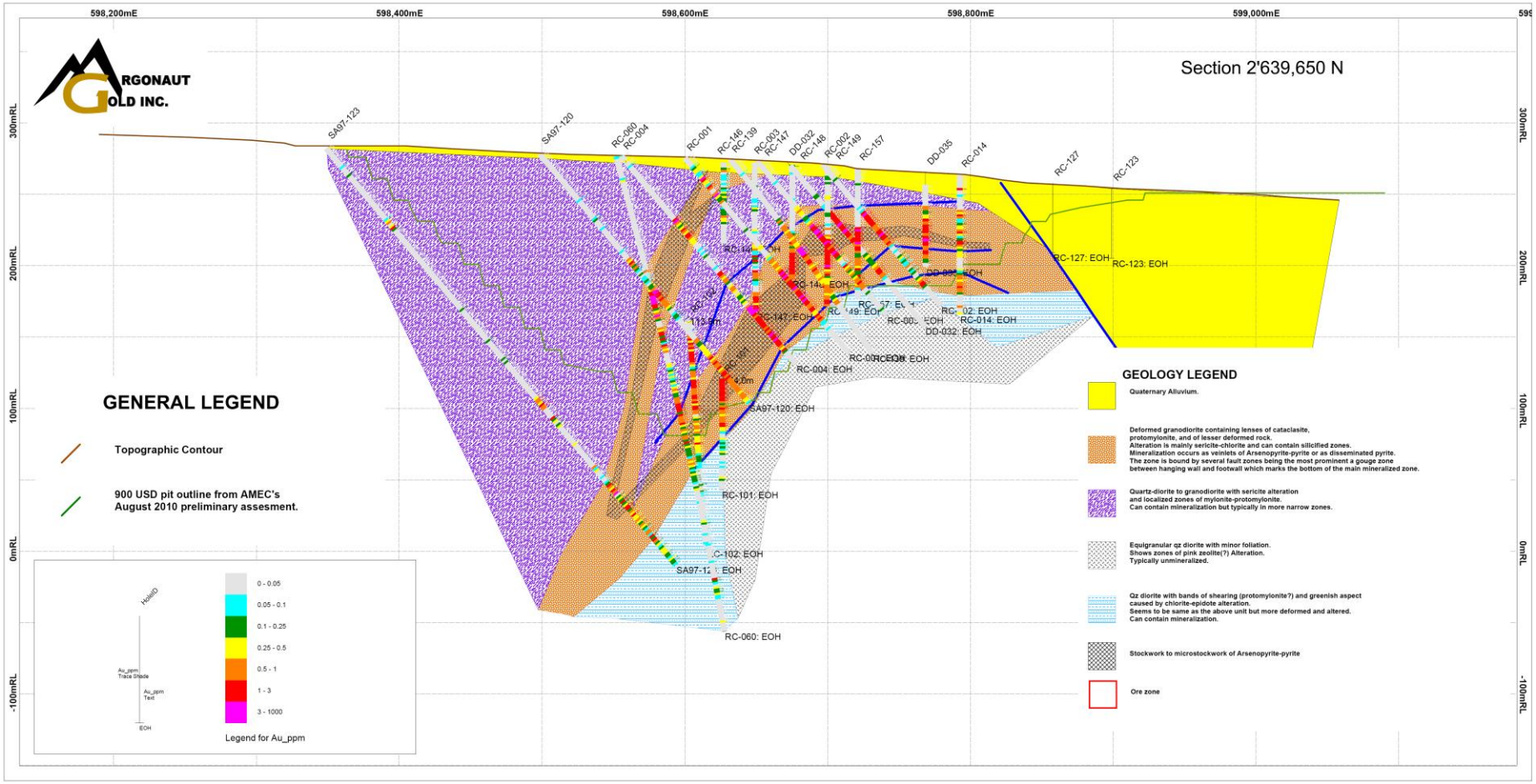
Diorite to gabbro is found irregularly in both the hanging wall and footwall portions of the mega-shear zone. The main shear zone is a dense, competent rock composed of fragments of potassium feldspar and quartz in a matrix of sericite, chlorite, and quartz.

Alteration is zoned, from chlorite-dominant around the cataclasite margins to sericite dominant within the cataclasite unit.

The level of oxidation at Las Colinas extends only a few metres vertically from surface.

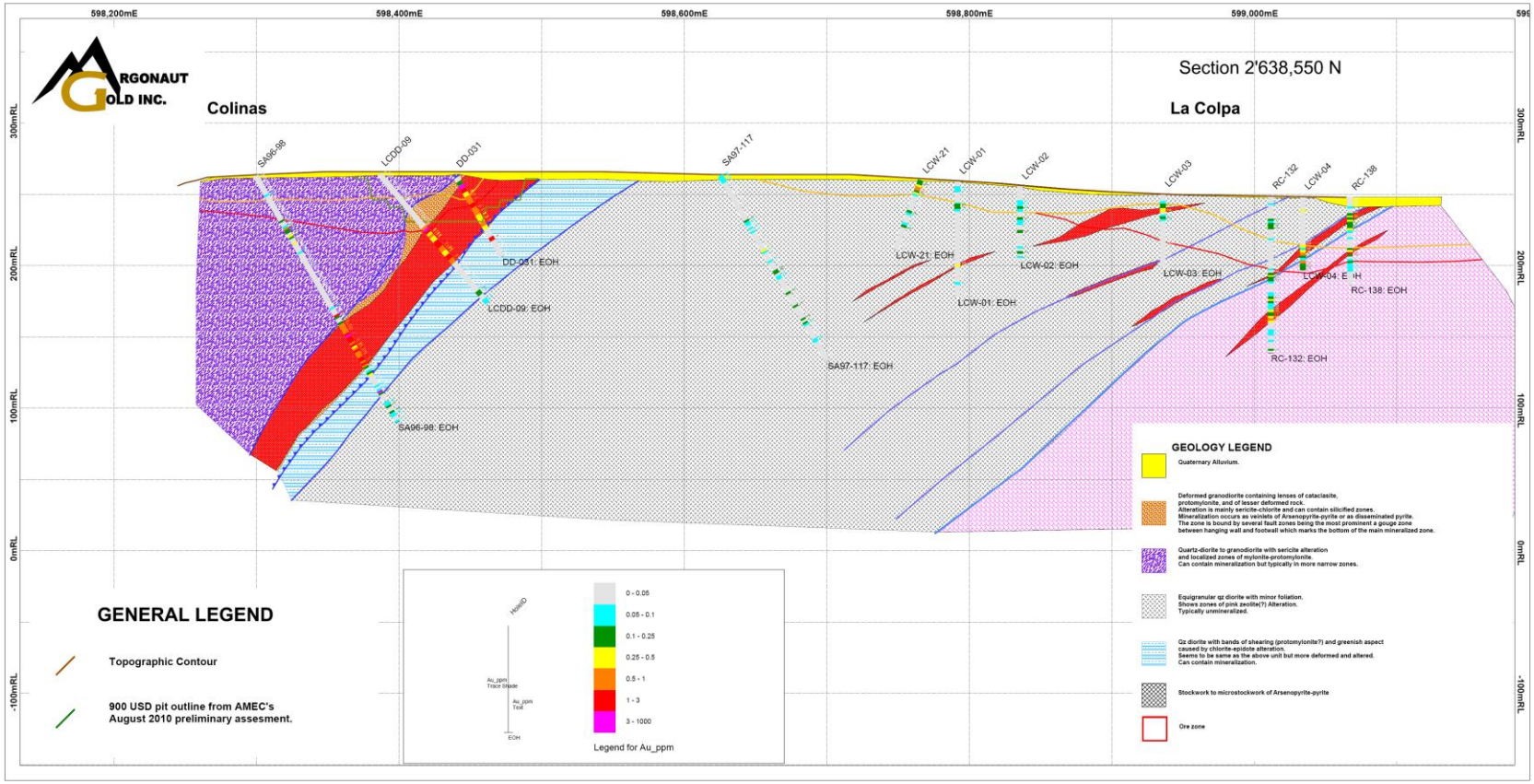
Figure 7-5 shows a geological cross-section through the Las Colinas deposit.

Figure 7-4: Geological Cross-Section, Los Planes



Note: figure courtesy Argonaut. "Ore zone" as shown on the section means outlines the mineralized zone, and does not denote Mineral Reserves

Figure 7-5: Geological Cross-Section, Las Colinas and La Colpa



Note: figure courtesy Argonaut. "Ore zone" as shown on the section means outlines the mineralized zone, and does not denote Mineral Reserves

7.3.3 Intermediate Zone (Intermedia)

The main mineralized body at the Intermediate deposit (also known as the Intermedia or Intermediate Zone) is developed within a shear zone that strikes approximately north–south and dips at about 60º to the west.

Mineralization extends along strike for about 500 m in this fault block, from UTM coordinates (NAD 27 datum) 2,638,800 mN to 2,639,300 mN.

Mineralization widths vary from 50 m on section 39,150mN, to thinner and lower-grade intersections to the south towards Las Colinas. Drilling has intercepted continuous mineralization to about 210 m depth.

As at Los Planes, the better gold grades found in the Intermediate zone are hosted in breccia zones that have been cemented by sulphides (arsenopyrite > pyrite). These breccia zones have been described in drill logs as stockwork zones.

Oxidation depths are similar to those at Las Colinas; however, very little of the gold mineralization is oxidized in the Intermediate zone.

Mineralization is truncated to the north and south by west–northwest-trending faults that that separate the zone from the Los Planes and Las Colinas zones, respectively. Despite being limited on strike, the Intermediate zone remains open down dip to the west.

Figure 7-6 shows a geological cross-section through the Intermediate Zone.

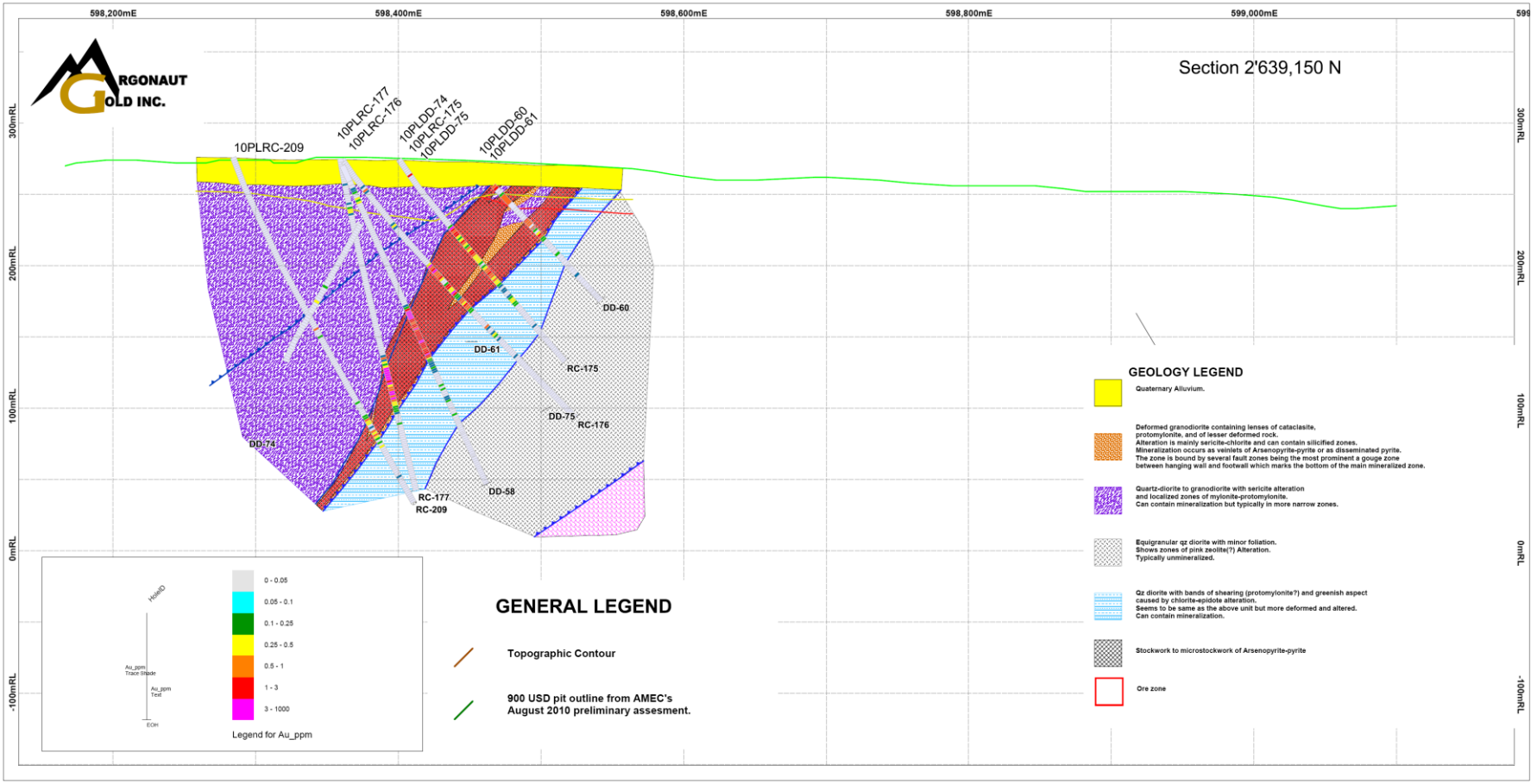
7.3.4 La Colpa

The historic La Colpa mine, which is outside the Project boundary, is reported to have produced “high-grade gold ore” (grades unknown) from a north–south-trending shear zone that had an approximate 45º west dip and a 4 m to 8 m maximum width.

Workings consist of an adit and westerly-inclined shaft that appear to be about 100 years old. Pyrite and arsenopyrite have been observed in grab samples collected from surface dump piles near the shaft. Grab samples that returned 10+ g/t Au have been collected from surface dumps that consist of rocks with high sulphide contents.

No drilling has been performed near these workings since they are located south of the Argonaut concession boundary; however Argonaut’s drill program has focused on the continuation of the trend to the north into the Company’s concession, about 200 m east of the Las Colinas zone.

Figure 7-6: Geological Cross-Section, Intermediate Zone



Note: figure courtesy Argonaut. "Ore zone" as shown on the section means outlines the mineralized zone, and does not denote Mineral Reserves

A body of schist has been described as occurring on the footwall of the La Colpa zone. This schist has also been observed outcropping in the arroyo exposure north of the current La Colpa drill targets.

Drill holes from the 2010 drill program indicate that up to four parallel bands of mineralization are hosted by cataclasitic units that strike approximately north–south and dip at about 10º to 20º to the west. Minor chlorite–sericite alteration has been noted in drill logs.

Mineralization extends along strike for about 300 m from UTM coordinates (NAD 27 datum) 2,638,325 mN and 2,638,625 mN. Mineralization in La Colpa is hosted in less-deformed, subhorizontal shear bands that occur on the footwall zone of the main mineralized zone of Las Colinas and is dominated by pyrite as disseminations and veinlets.

Mineralization band widths vary from 8 m to 25 m, based on drill data. Drilling has intercepted continuous mineralization to about 140 m depth. Currently, the mineralization remains open in all directions.

Oxidation depths are similar to those at Las Colinas, extending only a few metres vertically from surface. However, the transition zone is somewhat more extensive than that at Las Colinas.

Figure 7-5 which presented a section through the Las Colinas zone also shows the La Colpa zone.

7.4 Prospects

7.4.1 Fandango

The Fandango zone is marked by anomalous arsenic in soil values, and to a lesser degree, silver and copper values returned from soil sampling. The zone displays a broad IP geophysical anomaly that returned similar responses to the geophysical anomalies delineated at Los Planes and Las Colinas.

7.4.2 La Virgen

The Virgen zone, located further north of Fandango, is a low-level gold anomaly. Peraluminous granodiorite to granite as a batholith occurs on the west side of the gold-anomalous area in contact with quartz diorite, forming a relatively flat contact zone dipping easterly. Although the outcrop is limited, carbonate alteration and oxidation of iron sulphides to goethitic limonite was observed. Soil sampling indicated a low-level

gold–arsenic–copper–silver anomaly that is co-incident with a broad IP geophysical anomaly.

7.4.3 Canada del Agua

The former Cañada del Agua mine zone is located in the Triunfo Este Fracc. I concession, 3 km south of the San Antonio townsite. The mineralization covers about 1,500 m along strike. Echo Bay Exploration excavated three trenches and drilled six drill holes at Cañada del Agua in 1995–96 (Brown, 1996). The exact position of the drill holes, trenches, and validity of the assays have not been verified, but are included to provide context for selection of the area as an exploration target.

The best historical surface results were reported from Echo Bay trench CATR-3, where 12 m of 5.2 g/t gold with an additional 10 m of 0.8 g/t Au were reported. No information is available to AMEC or Pediment Gold as to whether samples are composited along the trench or represent a single sample interval.

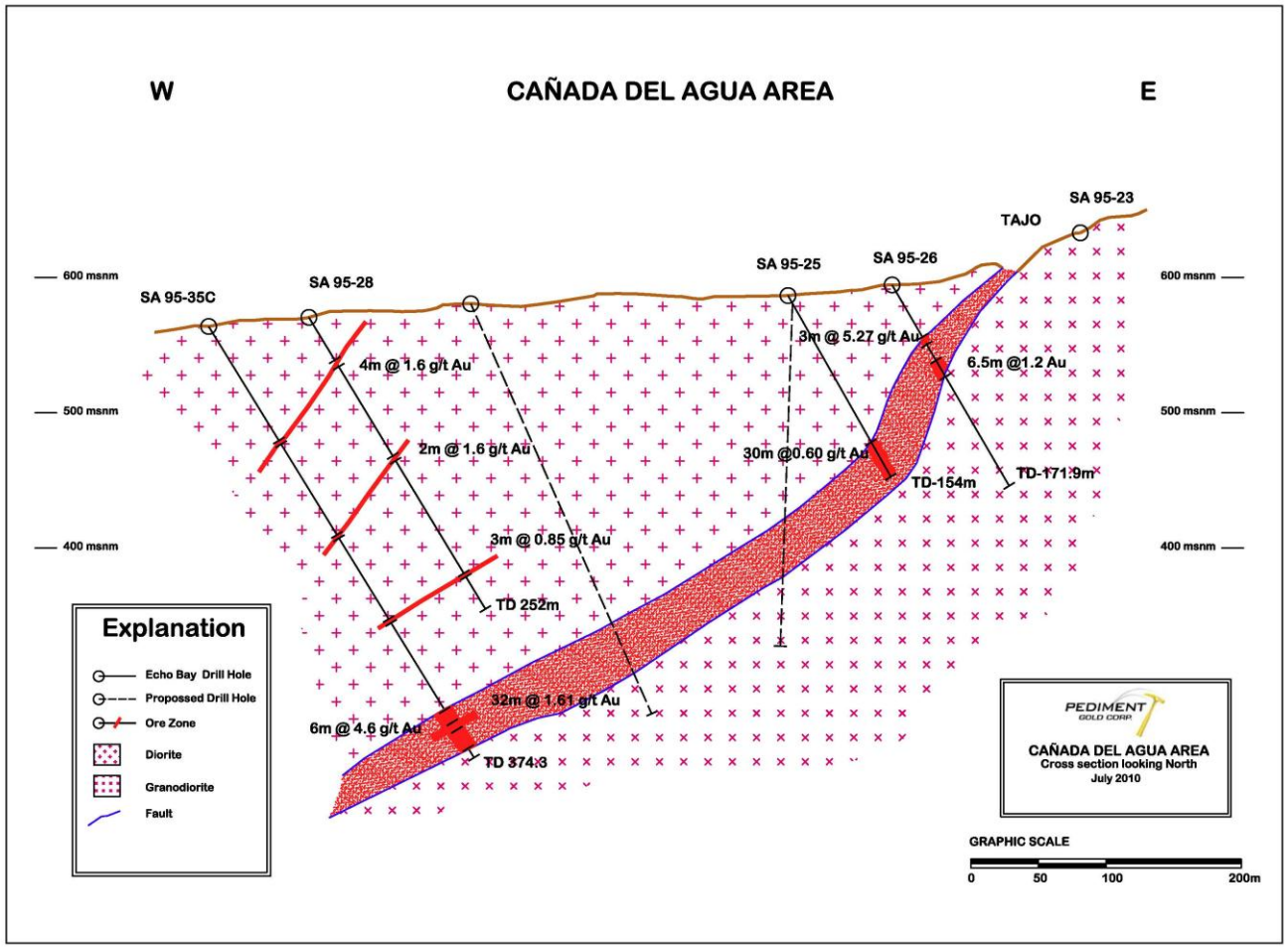
A section through the target is shown in Figure 7-7.

7.4.4 El Triunfo

At El Triunfo, systematic geological mapping with an emphasis on the detailed structural setting is being conducted. Several smaller, historic, past-producing mines exist in this area that produced gold and silver with lead and zinc mineralization and appear to be a mesothermal mineralized system like the San Antonio mineral deposits. Evidence of past production from the Triunfo mine is in the form of large waste dumps and old artisanal workings that exist over a discontinuous distance of 15 km. Although the gold mineralization is augmented with silver, lead, and zinc along the Triunfo trend, El Triunfo is a priority exploration target.

The higher-grade Triunfo veins are reported by CRM geologists to have been mined at an average of 6 g/t Au and 328 g/t Ag, with associated lead and zinc in oxidized veins with widths from 0.3 m to 2.5 m. These veins extend from surface to up to a depth of 300 m depth in workings (Bustamante-Garcia, 2000, cited in Herdrick and Giroux, 2009).

Figure 7-7: Cross-section, Canada del Agua



Note: Ore zone indicates mineralized zone, and does not denote Mineral Reserves. Figure courtesy Argonaut

7.4.5 Aurora

The Aurora trend is located about 2 km south of Las Colinas deposit, and appears to be a continuation of the same shear zone. The trend extends from the Aurora Mine, an area of old workings just outside the eastern boundary of the Triunfo Este Fracc 2 concession to a *gambusino*-worked area on the southern concession boundary called La Cruz. This zone has an approximate north–south strike with a westerly dip of about 40º. A historical document that mentions the Aurora mine (Avirette, 1910, cited in Herdrick and Giroux, 2009) reports workings to about 40 m depth that accessed oxidized mineralization. The historical report describes the Aurora mine material as reaching peaks of 10 g/t Au and 200+ g/t Ag but these results have not yet been verified and are presented as historical, and anecdotal, evidence of nearby mineralization only. There is no certainty that such results can be replicated. The north-trending ridge that defines the Aurora trend hosts numerous old workings but no drilling has been performed by Pediment Gold or Argonaut to date in the area.

7.5 Comments on Section 7

In the opinion of the QPs, knowledge of the deposit settings, lithologies, and structural and alteration controls on mineralization is sufficient to support Mineral Resource estimation.

Prospects are at an earlier stage of exploration, and the lithologies, structural, and alteration controls on mineralization are currently insufficiently understood to support estimation of Mineral Resources.

8.0 DEPOSIT TYPES

The deposits discovered explored by Argonaut to date in the Project are considered to be typical of mesothermal vein-style, or orogenic-style gold deposits. The discussion below is sourced from Moritz (2000), Goldfarb et al., (2005), and Groves et al., (1998; 2003). Orogenic deposits have many synonyms, including mesozonal and hypozonal deposits, lode gold, shear zone-related deposits, or gold-only deposits.

Orogenic gold deposits occur in variably deformed metamorphic terranes formed during Middle Archaean to younger Precambrian, and continuously throughout the Phanerozoic. The host geological environments are typically volcano–plutonic or clastic sedimentary terranes, but gold deposits can be hosted by any rock type. There is a consistent spatial and temporal association with granitoids of a variety of compositions. Host rocks are metamorphosed to greenschist facies, but locally can achieve amphibolite or granulite facies conditions.

Gold deposition occurs adjacent to first-order, deep-crustal fault zones. These first-order faults, which can be hundreds of kilometers long and kilometers wide, show complex structural histories. Economic mineralization typically formed as vein fill of second- and third-order shears and faults, particularly at jogs or changes in strike along the crustal fault zones. Mineralization styles vary from stockworks and breccias in shallow, brittle regimes, through laminated crack-seal veins and sigmoidal vein arrays in brittle-ductile crustal regions, to replacement- and disseminated-type orebodies in deeper, ductile environments.

Mineralization can be disseminated, or vein hosted, and displays a timing that is structurally late, and is syn- to post-peak metamorphic. Quartz is the primary constituent of veins, with lesser carbonate and sulphide minerals. In volcano-plutonic settings, pyrite and pyrrhotite are the most common sulphide minerals in greenschist and amphibolite grade host rocks, respectively.

Gold is usually associated with sulphide minerals, but can occur as free gold. Gold to silver ratios typically range from 5:1 to 10:1 and, less commonly, the ratios can reach 1:1.

Alteration intensity is related to distance from the hydrothermal fluid source, and typically displays a zoned pattern. Scale, intensity, and mineralogy of the alteration are functions of wall rock composition and crustal level. The main alteration minerals can include carbonate (calcite, dolomite, and ankerite), sulphides (pyrite, pyrrhotite or arsenopyrite), alkali-rich silicate minerals (sericite, fuchsite, albite, and less commonly, K-feldspar, biotite, paragonite), chlorite, and quartz.

The larger examples of orogenic deposits are generally 2 km to 10 km long, about 1 km wide, and can persist over 1 km to 2 km vertical extents.

8.1 Comment on Section 8

The deposits of the Project area are considered to be examples of shear-zone lode gold deposits, based on the following:

- Development in a volcano-plutonic terrane, association with granitoids;
- Association with a regional fault system;
- Mineralization typically hosted in later-stage structures;
- Strong structural control on mineralization, related to jogs and rheology contrasts;
- Better grades associated with cataclasite and tectonic breccias;
- Vein and disseminated mineralization styles;
- Gold mineralization in association with pyrite; gold can occur as free grains;
- Alteration is zoned, from distal to proximal to the hydrothermal fluid source. Alteration typically includes silicification, albitization and pyritization.

9.0 MINERALIZATION

A discussion of the mineralization styles and related depth, width (thickness), orientation and continuity is presented by deposit in Section 7 of this Report. The discussion below relates to the mineralization type, character, and mineralogy of the Project deposits.

9.1 Los Planes

Typically, the cataclasite contains a zone where sulphides increase with abundance to as much as 20%. Pyrite appears more commonly throughout the system; however the more intense development of mineralization is accompanied by an increase of arsenopyrite and pyrite in addition to pyrrhotite. Sulphides are present in brittle structures including cracks, faults, joints and micro-fractures. Pyrite lines the walls of many fractures and joints as observed from drill core and outcrop. Quartz veining is also common (Coyan et al. 2007).

The alteration progresses from chlorite-dominant around the cataclasite units (distal) and to sericite-dominant within the cataclasite unit (proximal).

Chemically, the system has low silver relative to gold, having Ag/Au ratios of approximately 0.4. Gold is also accompanied by anomalous As, Cu, and Bi.

9.2 Las Colinas

The Las Colinas deposit consists of gold and arsenic occurring with disseminated and veinlet sulphides associated with cataclasite and locally extending into the wall rocks.

Where high-angle structures intersect open flat-lying thrust faults, mineralization is developed over 1 m to 50 m thicknesses. The mineralized zone averages 20–40 m in thickness and grades into strongly fractured and altered gabbro or diorite. The wall rock may locally be extensively sheared.

The gold mineralization is interpreted to consist of two stages, the first being disseminated gold–arsenic deposition during mylonitization, and a second stage gold–silver–bismuth mineralization hosted by crosscutting, high-angle, northeast-trending structures.

The primary alteration assemblage consists of sericite, 2–5% sulphides including pyrite, arsenopyrite, pyrrhotite, and minor quartz and K-feldspar.

9.3 Intermediate Zone

Gold mineralization in the Intermediate zone is transitional between Las Colinas and Los Planes. In the southern part of the zone, mineralization tends to occur as more narrow and lower-grade intercepts. Gold grades are higher in the stockwork zones (typically 1+ g/t Au) and decrease away into the cataclasite to <1 g/t Au.

Similarly to both Los Planes and Las Colinas, silver values in the Intermediate zone are very low and Ag/Au ratios range from 0.3 to 1 in low-gold-grade zones, to 0.8 to 1 in zones with higher gold grades.

Between cross sections 39,100mN and 39,200mN, mineralization is in clear, sharp contact with the footwall, and demarcated by a gouge/fault zone that is sub-parallel to the west-dipping mineralized zone.

9.4 La Colpa

At La Colpa, pyrite is the dominant sulphide and arsenopyrite is less common than in Las Colinas. The mineralization has currently been interpreted as being subhorizontal with a gentle dip to the west

9.5 Comment on Section 9

In the opinion of the QPs, the mineralization style and setting of the Project deposit is sufficiently well understood to support Mineral Resource estimation.

10.0 EXPLORATION

Exploration has been undertaken by Argonaut, predecessor companies such as Pediment Gold and Echo Bay, or by contractors (e.g. geophysical surveys).

Exploration activities on the Project have included regional and detailed geological mapping, rock, grab, and soil sampling, trenching, RC and core drilling, ground magnetic and IP geophysical surveys, mineralization characterization studies, and metallurgical testing of samples. Petrographic studies and density measurements on the different lithologies have also been carried out.

10.1 Grids and Surveys

The datum currently being used for the project is NAD-27.

The Intrasearch topographic survey was flown in the late 1990s, and covers the majority of the Project area. In addition, topographic data are available from INEGI as 1:50,000-scale sheets, with topographic contours at 20 m intervals. These sheets cover the entire Project area and beyond in all directions. Data are provided in WGS-84 datum and can be easily converted to NAD-27 by a conversion factor provided by INEGI.

10.2 Geological Mapping

During 2008, Pediment Gold performed prospect-scale geological mapping along the strike from Las Colinas to Intermediate, and at the Fandango prospect. Outcrop in the area was limited, and the program was discontinued in favour of drill data.

In 2010, Pediment Gold hired geologist Thomas Chapin to map the area from Los Planes through Las Colinas including the La Colpa zone.

During 2010 Pediment undertook prospect-scale mapping over the Triunfo area, at a scale of 1:2,000 by geologists Tom Chapin and Héctor Córdova; with Chapin focusing more on detailed geology and Córdova on detailed mapping of mine showings and old dumps. The program focused on the northeast end of the Triunfo trend and identified general areas of alteration, structure, and mineralization at outcrop level. This mapping effort will be followed-up in the future by Argonaut with a surface-sampling program that will include trenches and rock-chip sampling and may extend to a drill program.

10.3 Geochemistry

Geochemical sampling performed by Echo Bay and CRM included rock chip, grab, and soil sampling. Rock and trench samples were collected by qualified Mexican geologists/prospectors with data, including UTM coordinates, lithology and mineralization recorded in field books.

Soil samples were collected mainly in 2007 and the results are not contoured. A total of 3,600 samples were collected every 50 m east–west across the trend of the mineralized zones, on lines 200 m apart north–south. The sample depth was about 10–30 cm, so samples tested the B zone of the pediment cover.

The surveys identified two gold anomalous trends that were related to the northern extent of the Las Colinas trend and the northern trend from Mina La Colpa. A large western zone, Fandango, showed anomalous gold values. The La Virgen zone, also returned a broad low-level gold anomaly.

Anomalous As, Ag, Pb, and Sb, characteristic of the El Triunfo mineralization, occurred in a zone with no outcrop, called the 602 anomaly, near the east side of the Trini concession.

A small number of trial pits were reportedly dug in areas of anomalous IP response, stronger sulphide mineralization, or shearing. Other than LCOT-19 in 2006, results were not compiled by Pitalla and are superseded by drilling.

10.4 Geophysical Surveys

During the mid-1990s, Echo Bay completed an IP survey over the Las Colinas deposit, using 100 m dipole spacing on lines spaced 200 m apart. Additional lines to the north were run using 50 m dipoles on 200 m line spacing. Results of the survey indicated continuation of the Las Colinas mineralization to the north of the then-existing drilling.

Reconnaissance IP was completed by Minera Pitella in 2006, comprising 16 east–west lines, with 100 m dipoles stationed along lines that were 3–5 km in length. Results of the survey showed two large polarization anomalous areas which extended off the Cirio concession north and east. The central RIP anomaly was concluded to probably connect to the Las Colinas deposit area, while the eastern chargeable anomaly was located out east of the concession in the 602,000 east UTM coordinate. The Los Planes zone could be traced in the IP data a distance of 600 m further north from Line 2639800N.

Argonaut has commissioned a controlled source audio-frequency magneto tellurics (CSAMT) geophysical survey, which is expected to be completed during July 2011. Zonge Engineering is performing the work under subcontract to SWS.

10.5 Trenching

Trenches were excavated by Echo Bay; however, there is limited information on this program.

In 2006 Pitalla completed a resampling program of four Echo Bay trenches and widespread rock chip sampling over an area 550 m north–south by 700 m east–west. Results confirmed gold mineralization in the trenches.

Two additional trenches of about 40 m length each were dug and bulk sampled in 2008 to provide samples of gold mineralization averaging about 1 g/t Au for leach testing. The grade of the sampled parts of the trenches averaged about 0.4 g/t Au, and was subsequently rejected for testing due to the low grade.

10.6 Drilling

Drilling completed on the Project is discussed in Section 11 of the Report.

10.7 Bulk Density

Bulk density data collected to date on the Project are discussed in Section 12 of this Report.

10.8 Geotechnical and Hydrology

Golder Associates Inc. was contracted in July 2010 to complete a final feasibility-level pit slope study. Field work was conducted including the drilling and logging of six oriented drill core holes to better characterize the type of rock and existence of geologic structures such as faults and formations.

Phase 1 of this work consisted of:

- Review of the geologic model, particularly the structural and alteration components, to assess potential geologic controls on stability and possible structural domains

- Review of the relevant geotechnical information including geologic core logs, core photographs, surface maps, and cross sections
- Review available hydrogeologic information to assess whether groundwater issues may be pertinent to pit slope stability
- Development of a geotechnical characterization program of core drilling and oriented coring to characterize structural conditions and rock quality to support pit slope design recommendations

The Phase 2 work will consist of:

- A program of drilling and oriented coring.
- A laboratory testing program to test the mechanical characteristics of the important geotechnical units.
- Developing a geotechnical model that incorporates all available sources of information to define the limits of domains, representing areas of the pit with similar structural conditions, and geotechnical units, representing units of similar mechanical properties. The framework of design sector boundaries forms the basis for stability analyses and developing slope design criteria.
- Developing design strength parameters for intact rock, discontinuity strength, and rock mass strength.
- Evaluating slope stability using engineering analysis methods based on conventional limit equilibrium and structural analysis techniques.
- Developing recommendations for design bench-face angles, inter-ramp slope angles, and overall slope angles for the various design sectors.
- Assessing the potential for steepening the design slope angles based on improving site conditions by methods such as slope drainage; modifying the pit design; or changing operating practices such as drilling, blasting, and excavation to increase achievable bench-face angles.
- Preparing a geotechnical report that documents the site conditions and engineering analyses, presents the conclusions developed from the analyses, and provides detailed slope design recommendations.

A final report on this work is expected during the second half of 2011.

AMEC used the initial pit slope recommendations from the Golder studies in Section 17 of this Report, when considering reasonable prospects of economic extraction.

In May 2010, a hydrologic consulting firm, Schlumberger Water Services (SWS), was contracted to perform an initial investigation into issues related to water supply and usage for the project. SWS completed field work and literature reviews over a four-month period and in September 2010 provided a Phase 1 hydrologic report. The Phase I report summarized work performed on the following tasks:

- Data collection and analysis (water quality, precipitation, pumping, precipitation, well construction, etc.). This included an evaluation of data quality and a gap analysis of the data for the Los Planes basin. Information was also obtained for the surrounding basins to determine if water resources might be available.
- Meetings with CONAGUA to obtain additional data that might not be in the public domain and to determine if and how CONAGUA might want to collaborate on the solution of some of the water quantity and/or quality issues in the basin.
- Well census. While the CONAGUA database reports the amount of water that each well is allowed to pump, SWS noted that these data are frequently incorrect. To obtain a more accurate water balance for the basin, SWS performed a well census to determine the volume and timing of groundwater extraction.
- Precipitation calculations. A key element in the evaluation of water resources and leach facilities will be a detailed analysis of precipitation data for the proposed mine area and the basin. SWS will generate such data to determine the 100 year/24 hour storm event for tailings dam design as well an improved estimation of recharge to the basin.

Phase 2 was initiated in December 2010 to continue key areas of the Phase 1 work including the development of monitoring and production water wells and an assessment of the general effect of the San Antonio operation on other users in the Los Planes groundwater basin. Objectives of the Phase 2 program include:

- Further evaluation and quantification of the most favourable water supply alternatives identified (mine shafts, alluvial aquifer, and surface water)
- Assessment of groundwater conditions in the immediate planned open pit and mine facilities area and analysis of pit inflow and pore pressures
- Monitoring of baseline water quality
- Evaluation of potential impacts to downstream water users associated with groundwater pumping.

Results are expected in the second half of 2011.

10.9 Other Studies

To Argonaut staff knowledge, only two thesis studies have been undertaken in the general Project area. One PhD study, through the University of Arizona, commenced on the Project area in 2007, and although a preliminary report is available, it is not clear if the thesis was ever submitted. A second PhD study, through the same university, was on the Quaternary faulting regime in the area. One district-scale Quaternary fault was identified in the Project area.

10.10 Exploration Potential

The La Colpa target is currently the main exploration target for the 2011 drill program. The 2010 drilling was very widely spaced but identified low-grade mineralization zones that remain open in all directions. Argonaut considers that there is potential to add to the known Mineral Resources at La Colpa by infill drilling with a 50-m grid.

The 2010 condemnation drilling encountered mineralized zones to the west and northwest of the main Los Planes zone. Drilling during 2011 is planned follow-up on these mineralized intervals and to test their continuity and potential to support additional Mineral Resource estimates.

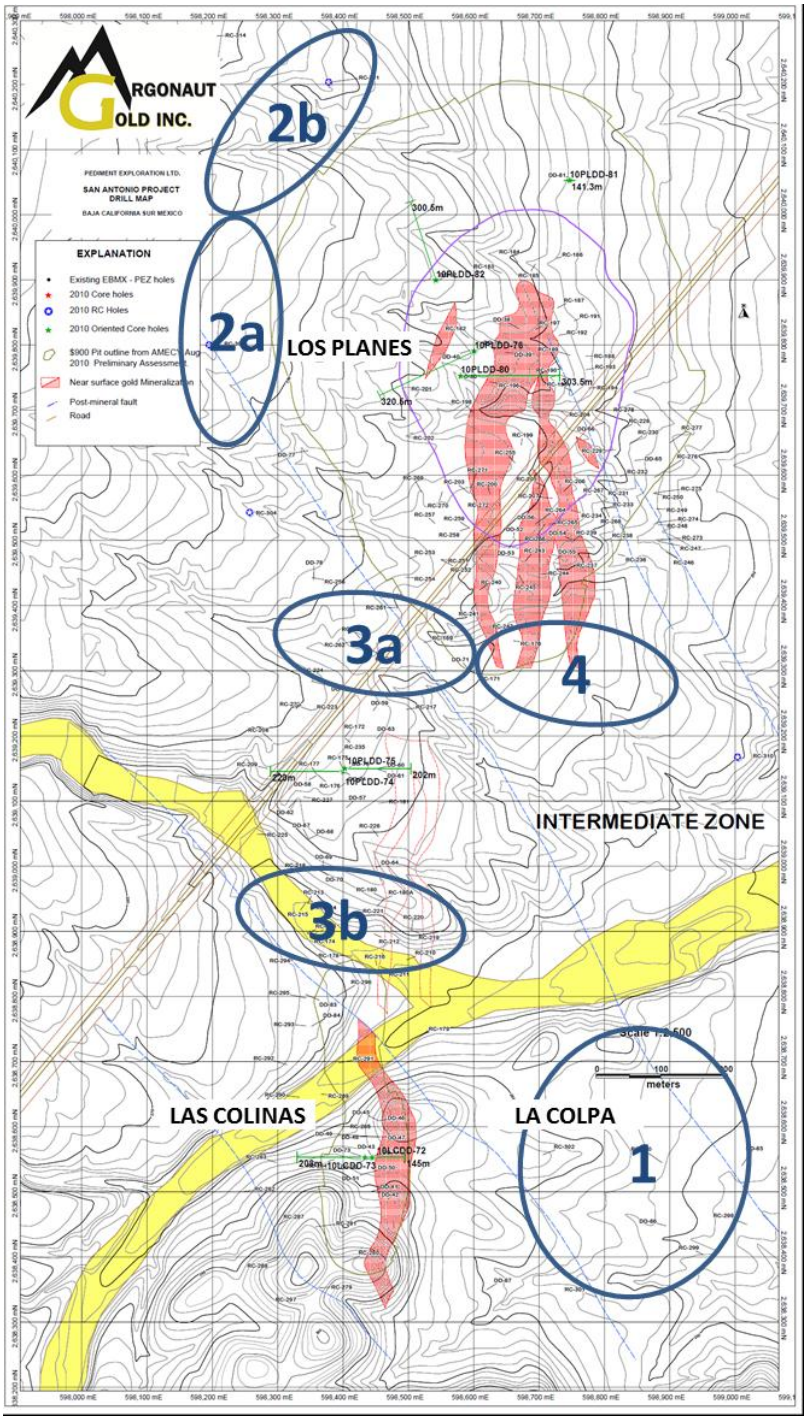
The fault zones bounding the Intermediate zone to the Las Colinas and Los Planes zones are still not well defined. Drilling in 2011 will further study these zones and look for additional potential for mineralization in this zone.

The Los Planes mineralization remains open along strike to the south and there is potential to add 50 m to 100 m of mineralized trend to this zone with additional drilling.

Figure 10-1 shows the exploration targets proposed to be drilled. The key to the plan is:

- 1: La Colpa zone
- 2a and 2b: follow-up on condemnation drilling results
- 3a and 3b: definition of fault zones between Intermediate-Planes and Intermediate-Colinas;
- 4: extension to the south of Los Planes zone

Figure 10-1: Exploration Potential Map, Deposits Area



Note figure courtesy Argonaut

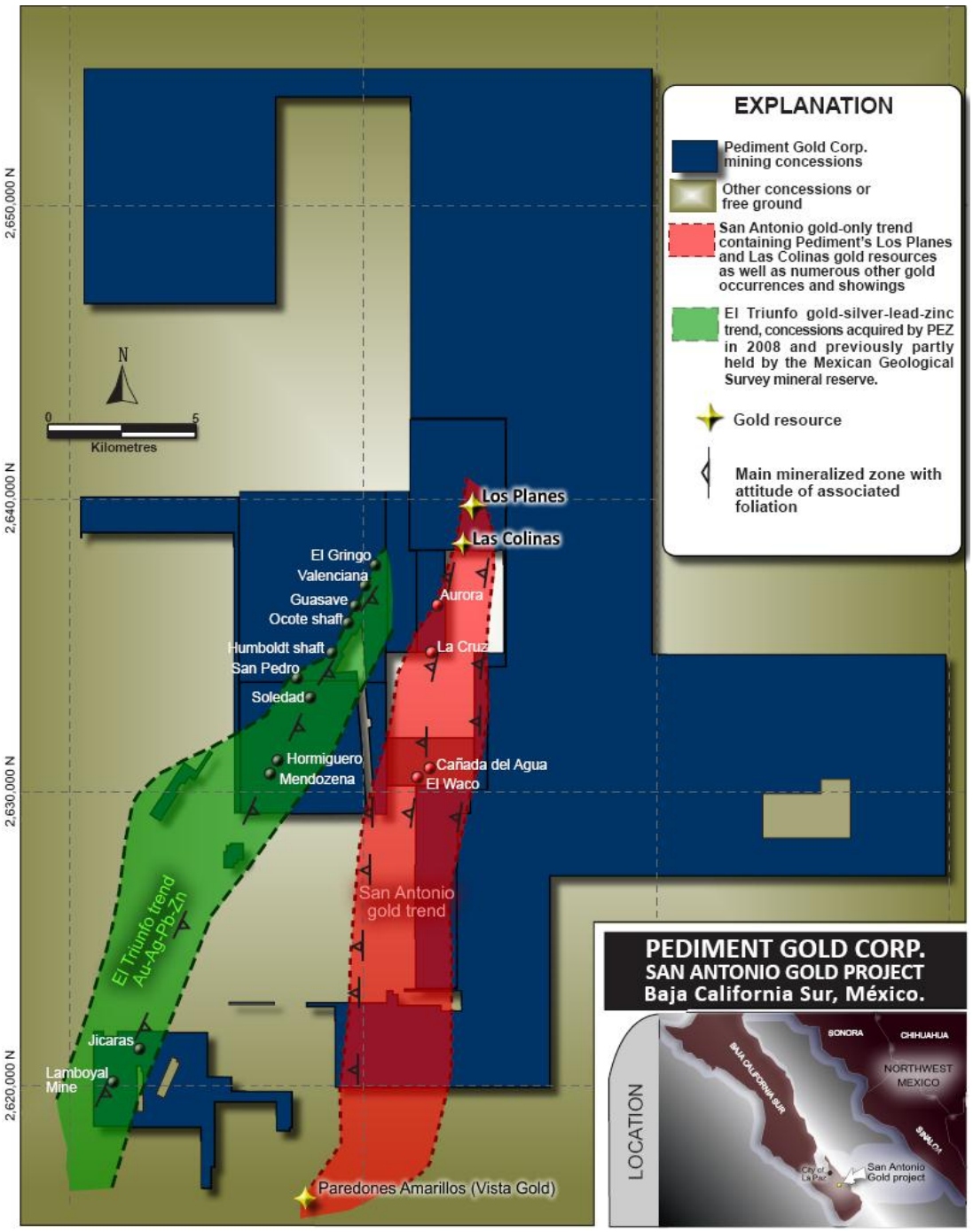
The Triunfo area is the principal zone of exploration interest outside of the current known resource zones (Figure 10-2). This zone is about 7–8 km in length, and is defined by a anomalous surface samples and trends of *gambusino* workings dating from the early 1900s.

Additional targets are located in the San Antonio trend, such as Aurora and Cañada del Agua. Echo Bay performed some exploration over these targets and Argonaut plans to continue exploration there in the future.

10.11 Comment on Section 10

In the opinion of the QPs, the exploration programs completed to date are appropriate to the style of the deposits and prospects within the Project. The structural, age dating, and petrographic research work supports the genetic and affinity interpretations.

Figure 10-2: Exploration Potential Map Showing Locations of Additional Exploration Targets



Note figure courtesy Argonaut

11.0 DRILLING

The Project database supplied to AMEC indicates that drilling completed to 2010 on the Project by Argonaut, Pediment Gold and Echo Bay comprises 448 drill holes (79,334.6 m), in 348 RC drill holes (63,,898.4 m) and 100 core holes (15,345.2 m). Drilling is summarized in Table 11-1, and collar locations are presented as Figure 11-1 and Figure 11-2.

Drilling has been completed in five sub-areas of the Las Colinas–Los Planes mineralized areas. The largest and main area of drilling is the Los Planes mineral deposit area. The second largest is the Las Colinas mineral deposit area. Additional areas include the Intermediate zone, which is the area between Las Colinas and Los Planes, and the nearby Colpa area located east and adjacent to Las Colinas. The Fandango and La Virgin zones are located about 1.5 km west of the Colinas–Planes zone and have a parallel trend based on geophysical anomalies.

11.1 Legacy Drill Programs

There is limited information available for the Echo Bay programs. Echo Bay completed 31 RC holes totalling 6,187.0 m, but no record of the drill contractors, chip trays, logging methods or other data are available.

11.2 Pediment Gold Drill Programs

11.2.1 Drill Contractors

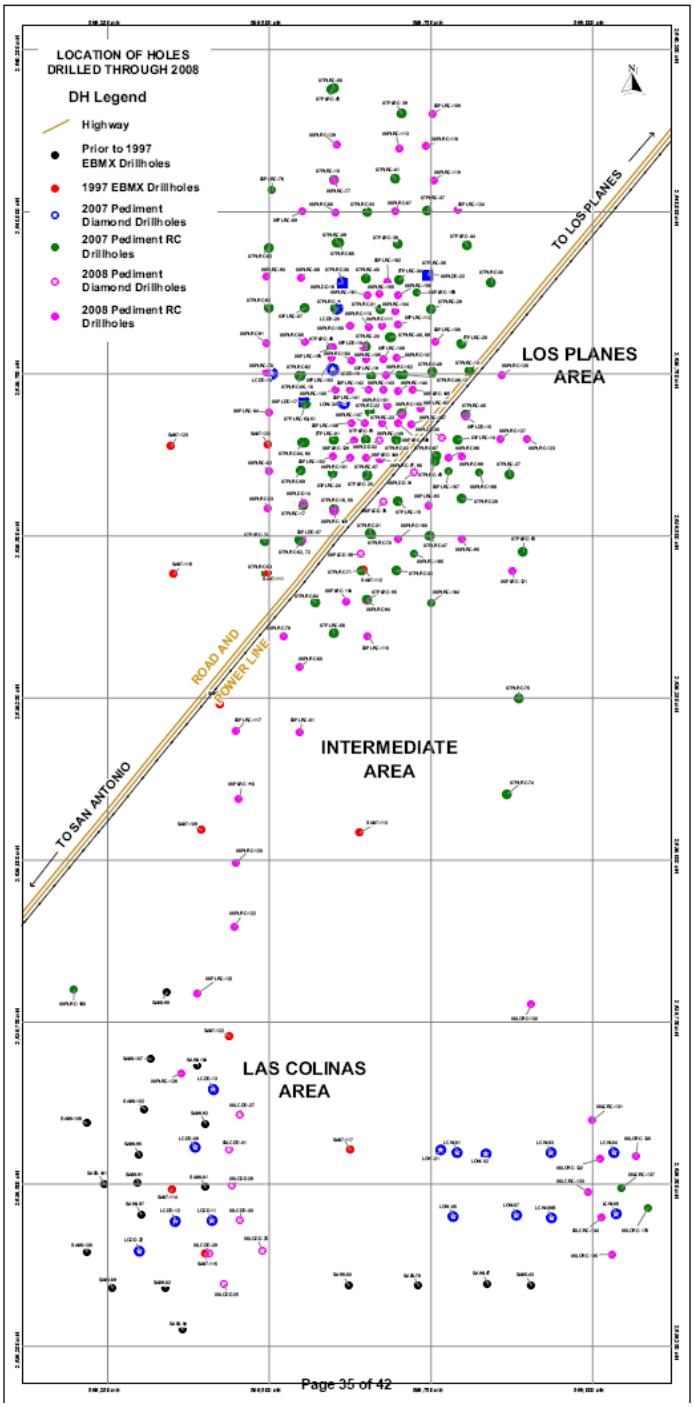
From February 24 to March 30, 2007, a total of five HQ core drill holes, LCDD 9, 11, 12, 13, and 22, totalling 823 m, were drilled at Las Colinas using a Longyear 44 rig, by Diamond Drilling Specialists, of New Mexico.

Prior to the main RC program, three short core holes, LCDD18, 19, and 20 (398.2 m) were drilled by Diamond Drilling Specialists, of Arizona, in May 2007 using a Longyear 44 drill, to confirm the near surface gold mineralization in the central–north section of the Los Planes zone.

Table 11-1: Drill Hole Summary Table 1995 to 2010

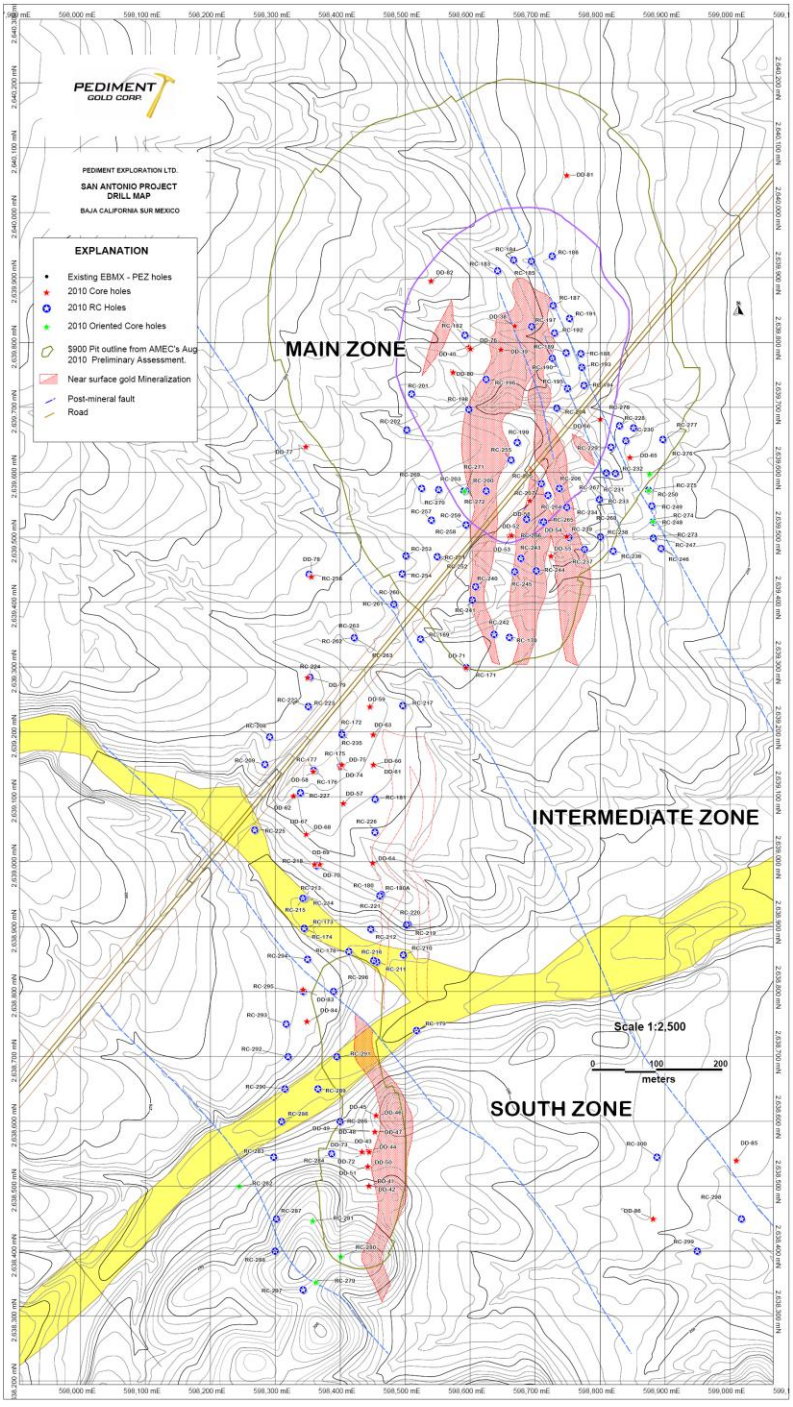
Year	Area	Company	RC Drill Holes		Core Drill Holes	
			Number	Metres	Number	Metres
1995	La Colpa	Echo Bay	2	310.0		
1996	La Colpa	Echo Bay	2	397.5		
	Intermediate	Echo Bay	1	144.0		
	Las Colinas	Echo Bay	14	2,628.0		
1997	La Colpa	Echo Bay	1	150.0		
	Las Colinas	Echo Bay	3	528.0		
	Los Planes	Echo Bay	6	1,599.0		
	Intermediate	Echo Bay	2	430.5		
2007	La Colpa	Pediment Gold			9	476.2
	Las Colinas	Pediment Gold			5	823.0
	Los Planes	Pediment Gold	74	14,851.1	5	672.7
	Intermediate	Pediment Gold	1	128.6		
2008	La Colpa	Pediment Gold	9	950.4		
	Las Colinas	Pediment Gold	1	128.6	7	613.8
	Los Planes	Pediment Gold	76	13,616.0	11	2,030.7
	Intermediate	Pediment Gold	7	1,382.0		
	Fandango–La Virgen	Pediment Gold			6	1404.7
2010	La Colpa	Pediment Gold	5	1,214.7	3	753.0
	Las Colinas	Pediment Gold	20	3,814.6	13	1,085.2
	Los Planes	Pediment Gold	79	12,734.0	15	2,611.3
	Intermediate	Pediment Gold	31	5,650.1	13	2,449.7
	Oriented Geotechnical Drilling	Pediment Gold			6	1,399.0
	Condemnation	Pediment Gold	12	2977.7	6	917.4
	Water-monitor Well	Pediment Gold	2	354.8	1	108.5
			348	***63,989.4***	***100***	***15,345.2***

Figure 11-1: Drill Hole Location Map Pre-2010 Drilling



Note figure courtesy Argonaut

Figure 11-2: Drill Hole Location Map 2010 Drilling



Note: South Zone = Las Colinas. Figure courtesy Argonaut

From February 11 to May 9, 2007, nine BTW thin-wall (4.7 cm) Hydro-Winke holes, were drilled by Diamond Drilling Specialists using a JKS 300 skid-based drill machine.

Layne Christiansen Drilling Co. of Hermosillo completed the 2007, 2008, and 2010 RC drill programs. The RC/core rig was a truck-mounted Schramm drill. A large hammer-driven drilling machine with air circulation recovery of coarse sample material, a Becker Hammer AP 1000, was used for cutting through less consolidated material was used in the Planes pediment covered area of the Project. About 25 drill holes were pre-collared with this machine that would move off the drill hole for the Schramm RC machine to complete drilling RC in rock, and then the Becker Hammer machine would return to reclaim the casing set.

The core drill rig was also supplied by Layne and was a modern hydraulic-based Atlas Copco CS 1500 skid based setup capable of drilling PQ, HQ, and smaller core sizes. All drilling was done with standard HQ diameter core (63.5 mm) except for the metallurgical drill holes, which were drilled at PQ size (81 mm).

11.2.2 Logging

RC chips were logged at the drill site on paper, and where required, geological interpretations checked by viewing chips under a binocular microscope.

Core is washed initially to remove drilling fluids, and then logged and photographed and recovery noted by measuring the net amount received between drillers wooden markers, which are marked in feet and meters.

Logging used standard procedures, and was subsequently transferred to Microsoft Excel spreadsheet files. Standardized logging forms and geological legends have been developed for the Project. The geological legend is partly built on historical observations of the local geology.

Unique features not accounted for in the geological legends were noted under written comments.

Geotechnical logs were completed in sequence prior to the geological logging. These logs include digital photo records, estimations of core recovery (REC), rock quality designations (RQD), fracture types, fracture counts and frequencies, dips of structures, measurements of rock strength and weathering alteration indices.

The six oriented geotechnical drill holes were subject to more detailed logging by Golder personnel, which included total and solid core recovery, RQD, joint condition

ratings, strength and weathering indices, collection of detailed discontinuity data, and logging of gouge and rubble.

11.2.3 Collar Surveys

Pre-numbered drill sites were laid out by Brunton compass and chain, working off the surveyed grid. All drill holes were marked with permanent flat cement monuments with identification scribed into the wet cement after completion during the drill pad cleanup. All drill holes were GPS located in NAD 27 grid datum.

All drill hole collars were GPS surveyed by Mario Alberto Moyron, a contracted professional surveyor, working from La Paz, in February 2007. Moyron was also able to accurately tie the old Echo Bay drill hole locations to the INEGI National Survey monuments near Los Planes, although Echo Bay had, in their program, continued to use an established local grid in their exploration and mine development program.

From 2008 to 2010, drill collar surveys were undertaken by Jorge Montaño, a professional surveyor from La Paz, using a Z-Max surveying system from Thales Navigation equipment.

11.2.4 Down-Hole Surveys

Down-hole surveys were carried out for dip and deviation using a Reflex Easy Shot system by the contactor Layne de Mexico.

11.2.5 Recovery

Drilling recovery measurement has not been attempted for the RC drilling. AMEC received 57 core drill logs of which 47 contained core recovery data. Data was collected by Pediment geological staff. Core drilling recovery measurements within consolidated lithologies range from zero to 100% with a median measurement of 91%, indicating that the recovery is high and acceptable for resource estimation.

11.2.6 Drill Intercepts

Table 11-2 summarizes a selection of drill intercepts from the Las Planes deposit. Table 11-3 presents similar data from Los Colinas. Table 11-4 includes drill summary data for a selection of drill holes from the Intermediate Zone. Drilling is normally perpendicular to the strike of the mineralization. Depending on the dip of the drill hole, and the dip of the mineralization, drill intercept widths are typically greater than true widths.

Table 11-2: Drill Intercept Summary Table, Las Planes

Drill Hole	From (m)	To (m)	Drilled Width of Intercept (m)	Gold Grade (g/t Au)	Comment
PLRC-01	16.76	41.15	24.38	1.2	Oxide zone
and	89.92	149.35	59.44	1.58	Sulphide
including	105.16	109.73	4.57	3.08	
including	126.49	131.06	4.57	3.14	
PLRC-21	14.3	23.5	9.1	0.66	Oxide zone
and	32.6	90.5	57.9	1.11	Oxide zone
including	52.4	55.5	3	6.69	
and	96.6	148.4	51.8	2.09	Mixed zone
including	124.1	133.2	9.2	8.05	
PLRC-36	95.1	151.5	56.4	1.17	Sulphide zone
including	131.7	145.4	13.7	3	
Including	134.7	136.2	1.5	7.93	
PLRC-43	43.27	63.08	19.81	1.23	
including	56.98	61.56	4.58	4.02	
and	84.42	87.46	3.04	0.6	
and	98.13	134.71	36.58	1.02	
including	127.09	130.14	3.05	4.65	
and	140.8	174.33	33.53	1.02	
including	154.52	156.04	1.52	5.45	
and	180.43	249.01	68.58	1.01	
including	186.52	188.05	1.52	8.57	
including	218.53	220.05	1.52	3.72	
08PLRC-100	54	61	7.62	0.51	Oxide
and	66	151	85.65	1.75	Sulphide
including	72	77	4.57	4.83	Sulphide
including	80	81	1.52	4.53	Sulphide
including	95	98	3.05	4.45	Sulphide
including	101	104	3.05	3.41	Sulphide
including	134	136	1.52	3.26	Sulphide
10PLDD-38	92.80	109.20	16.40	4.37	Metallurgy
and	118.00	148.50	30.50	3.73	
10PLDD-39	28.05	54.64	26.59	1.85	Metallurgy
and	61.66	95.90	34.24	0.80	
and	103.30	169.50	66.20	1.85	
10PLDD-40	70.51	115.50	44.99	8.53	
and	155.85	192.50	36.65	1.55	

Table 11-3: Drill Intercept Summary Table, Los Colinas

Drill Hole	From (m)	To (m)	Drilled Width of Intercept (m)	Gold Grade (g/t Au)	Comment
LCDD-18	119.2	159.4	40.2	2.22	
including	128.3	146.6	18.3	4.07	
including	133.8	139.3	6.1	8.11	
and	166.7	187.6	20.9	0.9	Ended in mineralization
Including	177.7	186.2	8.5	1.54	Last 2.6 m averages 2.59 g/t
LCDD-20	82.91	95.71	12.8	0.55	Ended in mineralization
08LCDD-25	10.05	28	17.95	0.71	
and	36	42	6	0.53	
08LCDD-29	15.00	51.00	36.00	1.06	Mixed
and	60.00	63.00	3.00	2.17	Sulphide
08LCRC-135	20.42	24.99	4.57	1.40	Oxide
08LCRC-138	37.19	40.23	3.05	1.61	Mixed

Table 11-4: Drill Intercept Summary Table, Intermediate Zone

Drill Hole	From (m)	To (m)	Drilled Width of Intercept (m)	Gold Grade (g/t Au)
10PLDD	18.00	36.27	18.27	1.27
and	62.90	78.20	15.30	0.99
and	84.20	100.40	16.20	0.48
10PLDD-62	155.00	189.90	34.90	1.27
10PLDD-63	20.72	55.60	34.88	0.66
10PLDD-67	137.80	167.00	29.20	1.57
10PLDD-70	159.90 192.00 32.10 0.77	159.90 192.00 32.10 0.77	159.90 192.00 32.10 0.77	159.90 192.00 32.10 0.77
10PLDD-75	57.00	91.00	34.00	2.51
and	97.00	120.00	23.00	0.68

11.3 Metallurgical Drill Holes

During 2010, 27 of the drill holes at Los Planes, Las Colinas and the Intermediate zone were specifically completed to provide additional material for metallurgical testwork. The locations of these drill holes are shown in Figure 11-3.

11.4 2011 Drill Program

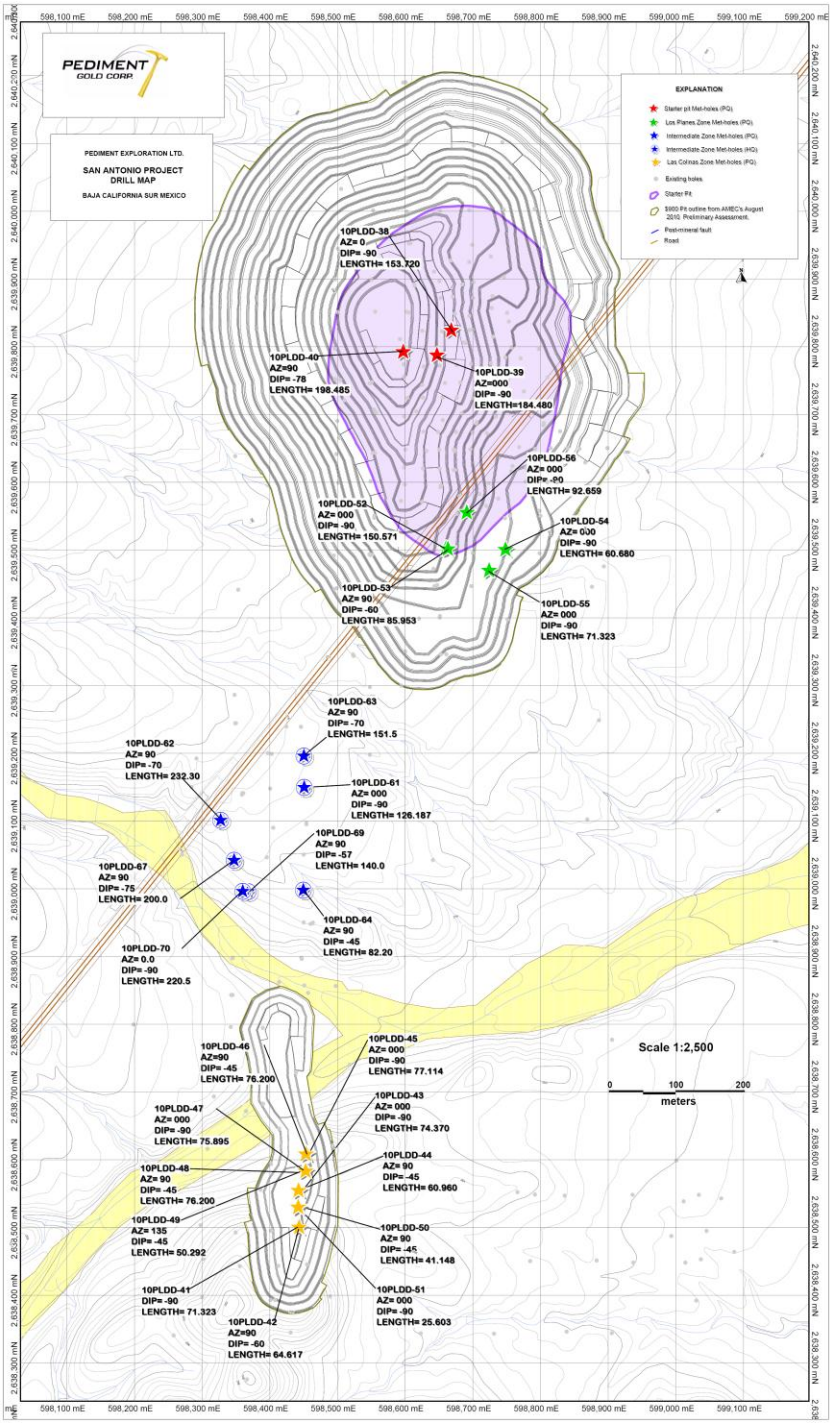
In March 2011, Argonaut commenced a planned 17,000 m infill and exploration drill program based on RC drilling. This drill program is summarized in Table 11-5, with drill hole locations included as Figures 11-4 and 11-5. A portion of the program has been completed, and the table shows the information that was current as at 9 June 2011.

AMEC is of the opinion that the additional drilling will provide support for a potential increase in the degree of confidence in the mineralization identified to date at La Colpa, and provide the appropriate water bore monitoring sites. The drilling to define the fault zones between the Las Planes and Colinas zones is required to support more detailed studies. AMEC concurs with the program metreage and layout.

To date, the 2011 RC drilling has been limited to La Colpa. As at 20 June, 2011, a total of 25 exploration drill holes (3,327.0 m) had been drilled and assays received for nine of these drill holes. Assay results are generally positive with expected mineralized zones wider and higher in gold grade than anticipated. A 2011 drill hole collared 100 m to the north of La Colpa's most northern 2010 drill hole indicates that mineralization extends beyond 100 m and is still open to the north. Two drill holes to the west have extended the mineralization in that direction and mineralization is still open to the west and at depth.

Seven water monitor wells at Los Planes have been drilled for 1,620.8 m.

Figure 11-3: 2010 Drill Hole Locations, Metallurgical Testwork Program



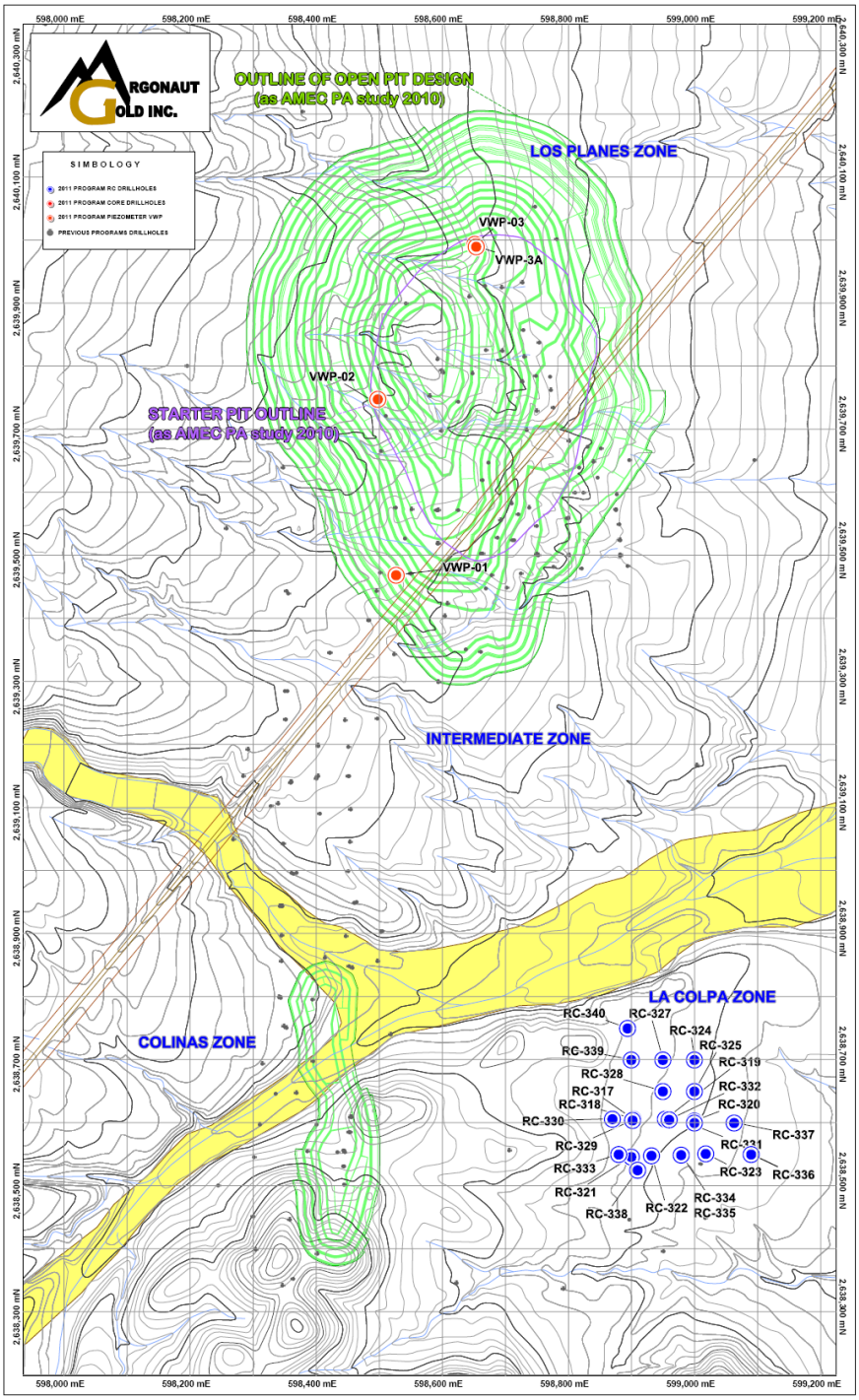
Note: figure courtesy Argonaut

Table 11-5: 2011 Planned Drill Program

Area	Drill Program (m)	Drilled to 9 June 2011 (m)	Remaining (m)
Exploration drilling at La Colpa (Phase 1)	5,000	3,083	1,917
Exploration drilling at La Colpa (Phase 2)	5,000	0	5,000
Extension Planes south	1,000	0	1,000
Definition fault zone Intermediate-Planes	1,000	0	1,000
Definition fault zone Intermediate-Colinas	1,000	0	1,000
Follow-up condemnation drilling	1,750	0	1,750
Hydrology drill holes	2,500	1,600	900
Total	17,250	4,683	12,567

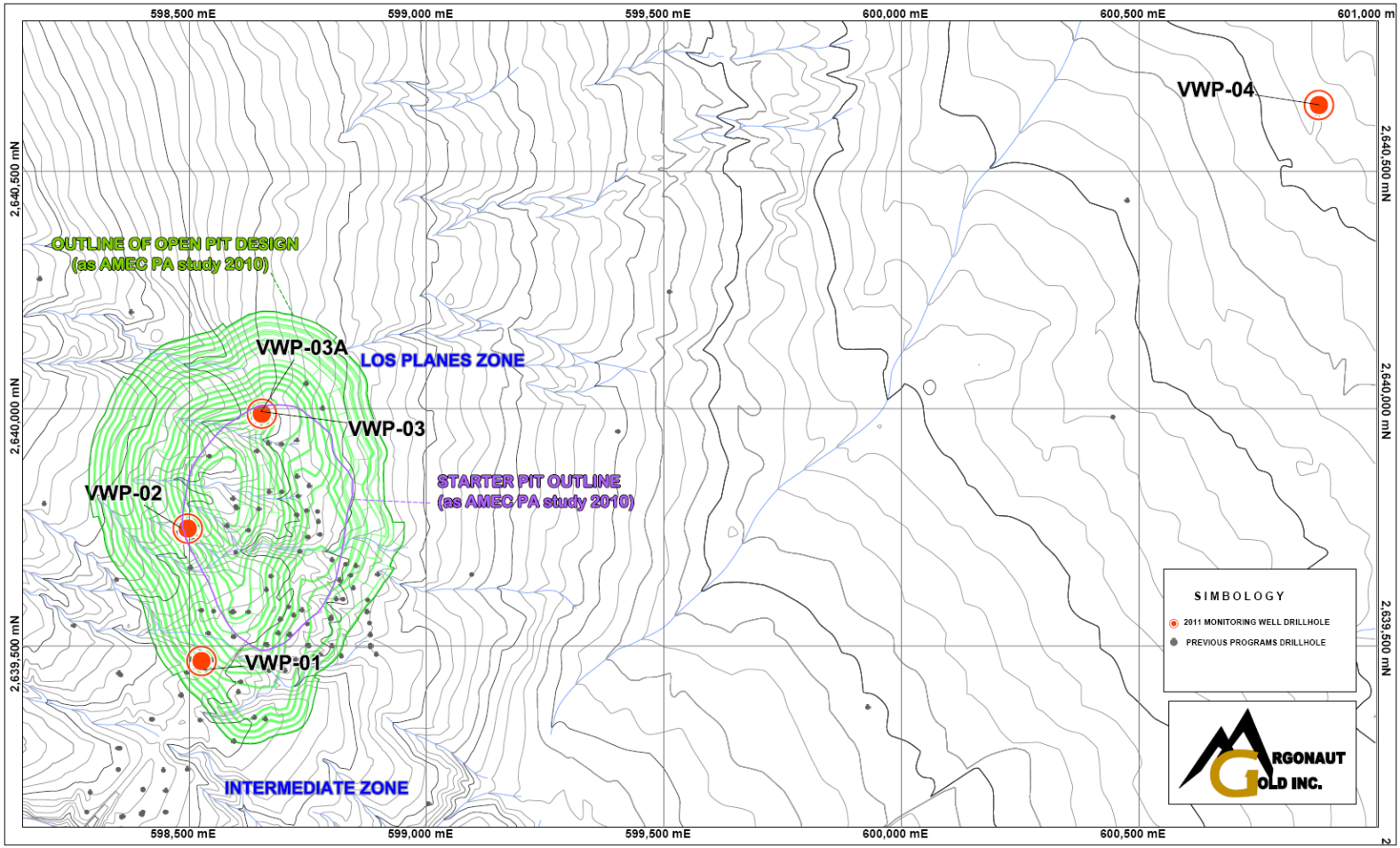
Notes: Phase 2 drilling will be performed contingent on results of Phase 1. Hydrology drilling will comprise a combination of mud rotary, RC and Becker Hammer for vibrating wire piezometers.

Figure 11-4: Drilling Planned Deposit Areas



Note: figure courtesy Argonaut

Figure 11-5: Drilling Planned Outside Deposit Areas



Note: figure courtesy Argonaut

11.5 Comment on Section 11

In the opinion of the QPs, the quantity and quality of the lithological, geotechnical, collar and downhole survey data collected in the exploration and infill drill programs completed by Argonaut are sufficient to support Mineral Resource estimation as follows:

- Core logging meets industry standards for gold exploration within a shear-zone setting
- Collar surveys have been performed using industry-standard instrumentation
- Downhole surveys were performed using industry-standard instrumentation
- Recovery data from core drill programs are acceptable
- Geotechnical logging of drill core meets industry standards for planned open pit operations
- Drilling is normally perpendicular to the strike of the mineralization. Depending on the dip of the drill hole, and the dip of the mineralization, drill intercept widths are typically greater than true widths
- Drill orientations are generally appropriate for the mineralization style, and have been drilled at orientations that are optimal for the orientation of mineralization for the bulk of the deposit area
- Drill orientations are shown in the example cross-sections included in Section 7, and can be seen to appropriately test the mineralization. The sections display typical drill hole orientations for the deposits, show summary assay values using colour ranges for assay intervals that include areas of non-mineralized and very low grade mineralization, and outline areas where higher-grade intercepts can be identified within lower-grade sections. The sections confirm that sampling is representative of the gold grades in the deposits, reflecting areas of higher and lower grades
- Drill hole intercepts as summarized in Tables 11-2 to 11-4 appropriately reflect the nature of the gold mineralization
- No material factors were identified with the data collection from the drill programs that could affect Mineral Resource estimation.

12.0 SAMPLING METHOD AND APPROACH

12.1 Geochemical Sampling

Geochemical samples were collected during early-stage exploration on the Project and are superseded by drill data.

All trench sampling consisted of chip samples of 3 m length along the trench bottom, with the exception of trench LCOT-19 where three 10 m samples were taken.

Grab and representative chip samples are placed in standard plastic rock sample bags, tagged and the locations recorded in a master database. he plastic bags are sealed using plastic pull ties. All geochemical samples are taken to the central logging facility at San Antonio prior to laboratory despatch.

12.2 RC Sampling

Cuttings were sampled in 5 ft (1.52 m) increments regardless of lithology, alteration, or mineralization. In the sample recovery process, a cyclone is set up to initially split the material in half using a vertical and a lateral discharge. When normal samples are collected, material from the vertical discharge (50%) is disposed and the side discharge goes through a second splitter to obtain two samples, each representing 25% of the total discharge. These two samples are collected and sealed with plastic pull ties in pre-numbered cloth bags (for wet material) or plastic bags (for dry material). One of the bags is later weighed and stored in large rice sacks in the fenced yard at the Pitalla warehouse as a duplicate, while the other is weighed and sent to the ALS Chemex preparation laboratory in Hermosillo.

All samples are taken by Pitalla staff in a pickup truck at the end of the shift to the central logging facility at San Antonio (about 10 minutes drive) where they are stored under lock and key in a gated and fenced compound (finca) with security guards watching the premises 24 hours per day. The core shack and yard in San Antonio village is rented from the family of one of the staff who acts as a daytime security guard.

The samples are packaged in rice sacks and trucked to the city of La Paz by bonded carrier and then by truck ferry (8 hours) to the Mexican mainland in Sinaloa State. The truck then proceeds to Hermosillo, Sonora (8 hours) and to the ALS Chemex preparation facility.

12.3 Core Sampling

All sampling is carried out at 1.52 m intervals. In a few areas of poor recovery, core samples can be combined into lengths greater than 1.52 m. The 1.52 m sample intervals are not tied to lithology, alteration, or structure.

Core is split using a diamond saw. Fault zones (clay gouge) and other alteration, or small rubble zones are split with a spoon. Oxide core is normally solid clay and is cut in half (lengthwise) using a butcher knife; solid lumps are split with a hammer splitter.

One half of the core is put into individual sample bags while the other remaining half is retained in the core boxes and stored on site in San Antonio. The plasticized cardboard core boxes, standard in Mexico, can store four runs of 1.52 m.

12.4 Quality Assurance and Quality Control

The quality assurance and quality control (QA/QC) programs for the Project are discussed in Section 13.

12.5 Density (Specific Gravity) Determinations

A total of 119 pieces of drill core from the Los Planes and Las Colinas domains were submitted to Oestec de Mexico S.A. de C.V. in Hermosillo, Mexico for specific gravity tests. Samples were coated in wax and weighed both dry and in water. Results of the tests are summarized in Table 12-1.

12.6 Comment on Section 12

A description of the geology and mineralization of the deposit, which includes lithologies, geological controls and widths of mineralized zones, is given in Section 7 and Section 9.

A description of the sampling methods, location, type, nature, and spacing of samples collected on the Project is included in Section 10 and Section 12.

A description of the drilling programs, including sampling and recovery factors, are included in Section 11 and Section 12. All collection, splitting, and bagging of RC and core samples were carried out by either Echo Bay or Argonaut/Pediment Gold personnel, depending on the date of the drill program. No material factors were identified with the drilling programs that could affect Mineral Resource estimation.

Table 12-1: Summary, Density (Specific Gravity) Determinations

Domain	Zone	Number	Minimum SG	Maximum SG	Average SG
Colinas	Oxide	8	2.62	2.87	2.76
Colinas	Sulphide	23	2.41	2.93	2.70
Planes	Oxide	39	2.32	2.76	2.60
Planes	Sulphide	49	2.50	2.84	2.68
Total	Oxide	47	2.32	2.87	2.62
Total	Sulphide	72	2.41	2.93	2.69

Figures 11-1 and 11-2 in Section 11, which show drill hole collar locations for Los Planes, Intermediate Zone and Las Colinas respectively, indicate that the sizes of the sampled areas are representative of the distribution and orientation of the mineralization.

The drill cross-section figures in Section 7 show approximate drill hole collar traces in relation to the orientation of the mineralization. The figures also show drill hole assay intervals include areas of non-mineralized and very low-grade mineralization, and confirm that sampling is representative of the gold grades in the deposit, reflecting areas of higher and lower grades. This is confirmed by the lists of drill intercepts in Tables 11-2, 11-3 and 11-4.

Data validation of the drilling and sampling program is discussed in Section 14, and includes review of database audit results.

In the opinion of the QPs, the sampling methods are acceptable, meet industry-standard practice, and are adequate for Mineral Resource estimation based on the following:

- Data are collected following Project-approved sampling protocols;
- Sample collection and handling of core was undertaken in accordance with industry standard practices, with procedures to limit potential sample losses and sampling biases. Core-handling facilities are suitable for the logging and sampling of drill core;
- Sample intervals in RC and core drilling, comprising 1.52 m intervals, are considered to be adequately representative of the true thicknesses of mineralization. Sampling is performed on strict sample increments regardless of lithology, alteration, or mineralization.
- Specific gravity determination procedures are consistent with industry-standard procedures;

- There are sufficient acceptable specific gravity determinations to support the specific gravity values utilized in tonnage interpolations for the Mineral Resource estimate. Additional determinations should be undertaken to support more detailed Project studies.

13.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

From Project inception to date, Project staff employed by either Argonaut, Pediment Gold or Pitella were responsible for the following:

- Sample collection
- Core splitting
- Density determinations
- Sample storage
- Sample security.

13.1 Legacy Data

Information on the procedures and analyses for the Echo Bay data are limited. Wallis (2004) noted in the 2004 technical report on the Project that:

"The sample preparation and analysis procedures used at Las Colinas are not available at the present time. During the Las Colinas drill program, Echo Bay was also carrying out drilling programs at the nearby Paredones project and a sample prep lab had been set up on site. Analyses were carried out by Cone Laboratories in Denver using standard fire assay techniques. The author is familiar with this lab and it is considered to have an excellent reputation in the industry. RPA assumes that similar methods would have been used during the Las Colinas drilling. There is no record of any particular security measures undertaken by Echo Bay. RPA is of the opinion that the sampling and analytical procedures were carried out according to industry standards and that the assay results used in the historical resource estimate are considered reliable and representative of the mineralization on the property."

13.2 Analytical Laboratories

The primary analytical laboratory for the Argonaut and Pediment Gold drill programs has been ALS Chemex, Vancouver, Canada. ALS Chemex is an independent, privately-owned analytical laboratory group. The Vancouver laboratory holds ISO 17025 accreditation. The ALS Chemex preparation facility in Mexico is ISO-9000 accredited.

For the 2010 drill program, Inspectorate America Corporation Laboratories (Inspectorate), based in Reno, Nevada, USA, and a subsidiary of Bureau Veritas Group of Companies, were the secondary laboratory.

13.3 Sample Preparation and Analysis

A standard sample preparation procedure was used for samples, comprising:

- Crushing: >70% of crushed sample passes through a 2 mm screen
- Ringing: >85% of the ring pulverized sample passes through a 75 μm screen (Tyler 200 mesh)
- Samples received as pulps: >80% of the sample passes through a 75 μm screen.

Analyses comprised gold via fire assay with atomic absorption (AA) finish as well as by aqua regia digestion and inductively-coupled plasma (ICP) analysis to quantify trace elements. When needed, over-range Au analysis (>10 g/t Au) is made by fire assay and gravimetric finish.

13.4 Quality Assurance/Quality Control Programs

In general, the exploration geologists inserted one control sample (i.e. duplicate, certified reference material (CRM), or blank) every 10 drilled samples. Thus each mineralized interval, normally >30 m, typically contains two to three control samples. All CRM and blank material was obtained from “RockLabs Limited”, and consisted of sulphide and oxide pulverized material with different certified Au content values.

From November 7, 2007 to January 3, 2008, sample pulps from the Chemex Hermosillo preparation laboratory were air freighted to the ALS Chemex assay laboratory in Reno. This was done to speed up assay turn around since the Vancouver facility was seriously over-booked. This practice was discontinued immediately following this date, as the assays from the Reno laboratory were found to be consistently 10% lower in gold grade than the assays from Vancouver. Samples from a total of 18 holes were sent. Upon Minera Pitalla identifying this problem the samples pulps were redirected to Vancouver. ALS Chemex have resolved this problem and those pulp assays meeting the QA/QC protocols are now included in the final database.

13.5 Databases

The Project data are stored in a MS Access database.

All geological and geotechnical data for the Pediment Gold drill programs were entered electronically directly into the system following paper logging in the field or at the core shack. Argonaut has continued this practice.

Assays for Pediment Gold drill programs were received electronically from the laboratory and imported directly into the database. Argonaut assays are also supplied electronically by the assay laboratory.

All drill hole collar and down hole survey data are manually entered into the database.

Data are verified by means of in-built program triggers within the mining estimation software. Checks are performed on surveys, collar co-ordinates, lithology data, and assay data prior to Mineral Resource estimation.

Paper records were kept for all assay and QA/QC data, geological logging and bulk density information, downhole, and collar coordinate surveys.

13.6 Sample Security

Sample security is reliant upon the fact that the samples were always attended or locked at the sample dispatch facility. Sample collection and transportation have always been undertaken by company or laboratory personnel using corporately-owned vehicles.

Drill samples were prepared to a pulp at a sample preparation facility operated by ALS Chemex, and pulps were transported by laboratory personnel to the Vancouver analytical facility.

Chain of custody procedures consisted of filling out sample submittal forms that were sent to the laboratory with sample shipments to make certain that all samples were received by the laboratory.

13.7 Sample Storage

Half-cores are stored in the San Antonio camp core storage warehouse.

13.8 Comment on Section 13

The QPs are of the opinion that the quality of the gold analytical data are sufficiently reliable (also see discussion in Section 14) to support Mineral Resource estimation and that sample preparation, analysis, and security are generally performed in accordance with exploration best practices and industry standards as follows:

- Geochemical sampling covered sufficient area and was adequately spaced to generate first-order geochemical anomalies, and thus was representative of first-pass exploration sampling.
- Drill sampling has been adequately spaced to first define, then infill, gold anomalies to produce prospect-scale and deposit-scale drill data. Drill hole spacing varies with depth. Drill hole spacing in the core of the deposit is about 25–50 m. Drill hole spacing increases with depth as the number of holes decrease and holes deviate apart;
- Sample preparation for samples that support Mineral Resource estimation has followed a similar procedure for all Pediment Gold drill programs. The preparation procedure is in line with industry-standard methods for shear-zone related gold deposits;
- Exploration and infill RC and core samples were analysed by independent laboratories using industry-standard methods for gold analysis;
- Typically, drill programs included insertion of blank, duplicate and standard reference material samples. QA/QC submission rates meet industry-accepted standards of insertion rates. The QA/QC program results do not indicate any problems with the analytical programs, therefore the gold analyses from the RC and core drilling are suitable for inclusion in Mineral Resource estimation;
- Data that were collected were subject to validation, using in-built program triggers that automatically checked data on upload to the database;
- Verification is performed on all digitally-collected data on upload to the main database, and includes checks on surveys, collar co-ordinates, lithology data, and assay data. The checks are appropriate, and consistent with industry standards;
- Sample security has relied upon the fact that the samples were always attended or locked in the on-site sample preparation facility. Chain-of-custody procedures consist of filling out sample submittal forms that are sent to the laboratory with sample shipments to make certain that all samples are received by the laboratory;
- Current sample storage procedures and storage areas are consistent with industry standards.

14.0 DATA VERIFICATION

A number of data verification programs and audits have been performed over the Project history, primarily in support of compilation of technical reports on the Project.

14.1 Roscoe Postle Associates (2004)

During a 2004 site visit Roscoe Postle Associates (RPA) took eight samples from the various dumps and trenches from the area explored by Echo Bay. In addition, three samples were taken from old workings within several hundred metres of the highway on the south part of the Cirio concession south of San Antonio. Samples were delivered by RPA directly to ALS Chemex in Hermosillo, where they were prepared, and then assayed in the Vancouver laboratory using standard assay techniques. Although direct comparisons with the Echo Bay sample results were not possible as Pitalla did not have access to the detailed Echo Bay data, the samples indicated the presence of gold and silver and substantiated the general tenor of the mineralization.

14.2 Derry, Michener, Booth & Wahl Consultants Ltd. (2008)

At Derry, Michener, Booth & Wahl's recommendation a catch-up lot of 10 mineralized intervals from previously assayed holes were sent by bonded carrier to the ALS Chemex Hermosillo laboratory with instructions to forward the reject pulp, including control samples, blanks, standards and duplicates to the ACME preparation laboratory in Guadalajara, Jalisco. Derry, Michener, Booth & Wahl reported that all samples passed QA/QC checks.

An RC hole was twinned by a core drill hole. The cored hole was offset about 5 m and the intersections are about 10 m deeper. Derry, Michener, Booth & Wahl note that:

"the average grade-thickness products in the lower intercept are too variable."

14.3 Herdrick and Giroux (2009)

Duplicate, CRM and blank sample submissions were examined and found to indicate no concerns with sample preparation.

Five RC holes were twinned by core drill holes. the cored holes had an offset of about 5 m and the intersections were approximately 10 m deeper; however, the zone continuity was confirmed by geology, mineralization, and the average Au content-length products (gram meters results).

14.4 AMEC (2010)

AMEC performed a database review in support of the 2010 Preliminary Assessment. Work performed included checks of the following areas.

14.4.1 Drill Collars

Most drill collar locations have a field entry indicating the survey was “total station”. All records with this entry have x, y, and z coordinates entered to the nearest 0.01 m. Three drill collars may have an elevation rounded to the nearest 10 m. These entries should be checked and in the three cases where the rounded elevation cannot be verified against source documentation, the hole location should be re-surveyed

14.4.2 Down-hole Surveys

There is no field in the survey table to indicate method but there are two fields for azimuth indicating a correction for magnetic reading, although there are 11 survey points where only the corrected azimuth field has an entry. AMEC recommends the 1972 declination corrections that are currently in use be updated in the survey table before the next run of a resource model. The difference is too small to have a significant impact on the current resource estimate; the corrections are a minor but desirable refinement of sample locations.

There are 14 unsurveyed drill holes that have drilled lengths exceeding 250 m. Three of these drill holes are in Fandango prospect area and may not be of immediate interest.

A plot of dip deviations relative to -90º for vertically-collared RC holes shows mostly minor dip deviations. Applying a dip correction to unsurveyed vertical RC drill holes is not warranted in AMEC’s opinion. There are only 16 surveys of RC drill holes inclined between -45º and -65º. The dip steepens with increasing depth in a fairly predictable way. The unsurveyed holes using a linear projection of the collar heading will therefore on average locate geologic contacts and samples at a somewhat shallower depth than would be the case if the drill holes were surveyed. The amount of offset is significant at depths exceeding 200 m and a dip correction is warranted in future resource models.

The change in azimuth of inclined drill holes tends to reflect a clockwise change because the drill steel rotates clockwise. Hence the change in azimuth with depth tends to be positive. The azimuth correction should be included with the dip correction in creating modeled survey points for unsurveyed drill holes in order to minimize systematic error in sample locations in unsurveyed holes.

The data are very limited and any additional down hole survey data should be included to determine the equation for dip and azimuth corrections prior to the next run of the resource model. The number of unsurveyed inclined drill holes is too small to have a material effect on the current resource model. This should be regarded as a needed refinement to future models to help improve the estimate.

14.4.3 Drill Sample Coverage

Some drill holes that are collared in alluvium or colluvium were drilled and cased using different equipment. The cased portions of such holes were not sampled. Casing is set in these holes to bedrock. At several drill sites, the bedrock was not reached before casing was exhausted and the hole was terminated without any sampling. Sampling in most drill holes is nearly complete with the exception of the first interval and in some cases an upper portion in gravels that was pre-drilled and cased. Only one of these drill holes, SA96-90, appears to have a significant unassayed portion below the uppermost sample (i.e. below the pre-collar). If possible, it should be re-sampled and re-assayed in its entirety, using a shorter sample length.

14.4.4 RC Sample Intervals

The initial RC sample interval varies from 1 m to 2.44 m (except for two RC holes with pre-collars, SA96-90 and 08PLRC-113). Of 180 RC drill holes in the assay table, all but two (07PLRC-06 and SA96-90) have an Au grade entered for this first interval. This grade, 0.0025 g/t Au, is probably an assigned rather than an assay value, equal to half the detection limit. There are 46 other drill holes that have this value for the first interval and there is no easy way to judge where the value is assigned and where it is sampled.

Most other RC sample intervals have lengths of 1.50 m to 1.53 m, corresponding to four samples per 20 ft drill rod. Some errors noted with overlapping and inconsistent sample intervals were corrected during upload to the resource modelling software, but need to be corrected in the assay table before the next update of the resource model.

14.4.5 Core Sample Intervals

Core sample interval lengths vary from 0 m to 12.00 m; most sample intervals are between 1.5 and 3.0 m long.

14.4.6 Assay Verification Checks

Approximately 10% of assay reports were semi-randomly selected for verification of the ALS Chemex Au fire assay results. Of 5,558 records, AMEC identified 25 results

that did not match. Twenty-two of the 25 non-matching results were located in certificate HE07132725. Pediment Gold personnel had already noted that the certificate was erroneous and required laboratory re-issue:

"Results reported in the database belong to a first rerun on these samples (check file "UUUJ_HE07132725, HE08016813.xls"); however, a corrected certificate was not issued by the lab. A corrected certificate has to be requested to ALS."

One of the remaining three results was located in certificate HE08062368 and did not agree because it was the average of the original and two reported checks. AMEC only averaged the original and one check field when calculating results for comparison. The remaining two results were in certificate HE08089141; AMEC was provided with an explanatory table which showed that these two values had been corrected, with the explanation *"Do not match Lab assay*". The cause of these two mismatches is not fully understood, but the frequency of such exceptions is acceptably low.

14.4.7 QA/QC Review

AMEC reviewed laboratory and project CRM results and found the extent and nature of the CRMs sufficient. CRMs included certified reference materials from Rocklabs and other widely-recognized vendors. Project materials have certificates, as do most of the laboratory's controls.

For field duplicates, including RC sample duplicates, AMEC regards good performance as 90% of duplicate pairs of 'mineralized' samples agreeing within ± 30%. Only about 60% of the duplicate pairs agree this closely. In the case of gold projects having a substantial nugget effect, the best that can be achieved is 90% of pairs agreeing within ± 40%; this was met in about 70% of pairs in 2007 and in about 75% of pairs in 2008.

The project does not have any coarse reject duplicates. AMEC recommends that re-splits of 50 to 100 coarse rejects randomly selected from mineralized drill intercepts be re-split, then prepared and assayed using the same procedures as the original assays. This will provide additional information to determine whether improving the sampling (i.e. collecting a larger sample mass at the drill rig) or improving the preparation (e.g. crushing more finely, using rotary splitter, preparing a larger sample pulp) will be most effective at improving overall precision.

For pulp duplicates, AMEC regards good performance as 90% of duplicate pairs of 'mineralized' samples agreeing within ± 10%. This criterion is met for the 2008 data and is nearly met for the 2009 results. From this, AMEC concludes that improvement in precision can be achieved by upgrading either the sampling methodology or the sample preparation procedure rather than upgrading the assay procedure.

14.4.8 RC Down-Hole Contamination Evaluation

AMEC evaluated RC holes for down-hole contamination by looking at the distribution of gold grades in drill sample intervals located below high-grade intercepts that might contaminate some of the samples below them. The cyclicity check seeks a pattern of gold grades where the first sample collected when a drill rod is added shows a higher grade than the other three samples collected before another drill rod is added. This can occur if more mineralized material washes down the drill hole each time the hole is raised off the bottom of the hole and depressurized in the process of adding a drill rod. In addition, the frequency ("decay analysis") with which the samples above gold spikes are higher in grade than their corresponding samples below spikes should be similar to the frequency of samples below spikes having higher grade than samples above such spikes.

Cyclicity candidates were identified by selecting portions of drill holes located below sample intervals with a gold grade exceeding 10 g/t. None of the selected drill intervals gives a compelling case for downhole contamination.

Local maxima of Au grade exceeding 3 g/t were selected for decay analysis. The candidate intervals were higher in grade than the four nearest samples below them and the four nearest samples above. Some of the asymmetric distributions of the decay analysis are at or near the water table or the transition from sulphide to oxidized rock. Ponding of hydrothermal solutions below a less permeable rock facies may have created the disproportionate frequency of these down-hole skewed grade distributions. The occurrences warrant more study.

14.4.9 Specific Gravity Checks

The density of the mineralized oxide material is more variable and slightly lower than the sulphide mineralized material. There are adequate measurements to make density assignments in AMEC's opinion, except for the "mixed" category.

14.5 AMEC (2011)

AMEC reviewed the QA/QC data for the drill program conducted between June and December 2010.

14.5.1 Assay Quality Control

The San Antonio drill sample submissions for the 2010 drilling included blind blanks, certified reference materials, and field duplicate samples. These provided an

independent assessment of the ALS Chemex assay quality. Each control was inserted at a frequency of one per 30 drill samples. Coverage is very good. In addition, about 10% of pulp samples assayed in 2010 were submitted to Inspectorate to check the ALS Chemex assay accuracy.

In all cases where assays did not meet established criteria for agreement, selected samples associated with the questionable results were re-assayed. There were 630 re-assays associated with 71 drill holes. Duplicate disagreements were the most common reason for follow-up assays, and are believed to be a normal consequence of the large gold particle size (nugget effect). Excessively low results on inserted standard reference materials may be attributed to episodic gold losses during firing; these were more common for the sulphidic standard than the oxide standard used by the project. Rare occurrences of anomalous values in blanks were accounted for by sample mix-ups.

In AMEC's opinion, the diligence exercised over assay quality control exceeds that typical of gold exploration drilling projects.

14.5.2 RC Sampling

Project drilling is performed dry, hence there is a low probability of down-hole contamination in RC drilling. However, AMEC analyzed the RC drilling for patterns suggestive of contamination (cyclicity). One RC drill hole, 10RC-297, was identified as showing potential down-hole contamination below 159 m depth. Minor down-hole contamination in one drill hole will not measurably impact Mineral Resource estimation. In AMEC's opinion, it would be prudent to review this drill hole for other evidence that down hole contamination may have taken place, and if so, set the gold values located below 159 m to the detection limit value of 0.025 g/t Au.

14.6 Comment on Section 14

The process of data verification for the Project has primarily been performed by third-party external consultancies. AMEC considers that a reasonable level of verification has been completed, and that no material issues would have been left unidentified from the programs undertaken.

The QPs, who rely upon this work, have reviewed the appropriate reports, and are of the opinion that the data verification programs undertaken on the data collected from the Project adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource estimation:

- No material sample biases were identified from the QA/QC programs;
- Sample data collected adequately reflect deposit dimensions, true widths of mineralization, and the style of the deposits;
- External reviews of the database have been undertaken in 2004, 2008, 2009, and 2011, producing independent assessments of the database quality. No significant problems with the database, sampling protocols, flowsheets, check analysis program, or data storage were noted;
- AMEC performed an approximate 5% data check in 2010; no significant data issues were noted;
- AMEC reviewed the analytical data from the June–December 2010 drill program and found no errors or biases that would affect Mineral Resource estimation.
- Drill data are typically verified prior to Mineral Resource estimation, by running a software program check.

15.0 ADJACENT PROPERTIES

There are no immediately-adjacent properties that are at the same stage of development as the Project.

16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

16.1 Legacy Metallurgical Testwork

Wallis (2004) reported that Echo Bay had metallurgical testwork carried out by the Colorado Minerals Research Institute (CMRI), in 1997, as follows:

> *"Two samples of RC drill cuttings grading 1.07 and 1.6 g/t Au respectively, were found to contain pyrite with minor pyrrhotite, arsenopyrite and other sulphides, along with very fine-grained gold. Gravity test recovered only minimal gold, 9% and 16% respectively. Bottle cyanidation of the cuttings, nominally 7 to 10 mm in size, resulted in gold recoveries ranging from 48% to 63% with reasonable sodium cyanide consumption at approximately 1 kg/t. The samples responded well to flotation and cyanidation of the reground concentrate indicated 98% to 99% recovery of the gold. Sodium cyanide consumption was high at 2.7 to 2.8 kg/t of ore because of the presence of copper sulphides and pyrrhotite in the concentrate. Further testing was recommended."*

16.2 Pediment Gold Metallurgical Testwork

Bottle roll metallurgical tests were conducted by the independent SGS Metallurgical Laboratory, located in Durango, Mexico, on behalf of Pediment Gold in 2008. Tests were performed on nine composites made from 99 samples taken from Los Planes RC drill cuttings. Selections were made of three grade categories: high, medium, and low grade, and three mineral types: oxide, mixed, and sulphide.

The average gold recovery for all nine composites after 96 hours of testing was 78.5%, with a variance from 88.6% for high-grade oxidized material to 67.7% for high-grade sulphide material (Herdrick and Giroux, 2009).

Sample material of split diamond drill core from the Los Planes area was collected in 2008 and sent to the independent Metcon Research laboratory in Tucson, Arizona for column and bottle roll testing with cyanide leaching methods. Testwork was performed on three drill core composites identified by Pediment Gold as oxide, mixed and sulfide composites. The primary objective of this test program was to generate gold and silver extraction and cyanide and lime consumption data at two different crush sizes and three material types. Results presented here are from bottle roll leach testing conducted at minus 10 mesh and open cycle column leach testing conducted at 80 percent passing 3/8 inch (10 mm) and 1-1/2 inch (38 mm) crush sizes.

16.2.1 Agitated Cyanide Leach Tests

Prior to conducting the column leach study, an agitated cyanide leach test was conducted on the oxide, mixed and sulphide composites at minus 10 mesh size. This test provided data relative to expected precious metal extraction and the lime and cyanide consumptions for all three material types. This information was utilized to select initial leach parameters for the column leach tests conducted on the three composites.

The agitated cyanide leach test was conducted under the following conditions:

- Leach cycle of 72 hours at a pulp density of 33% solids
- Leach solution containing 1 g/L cyanide, with the lime addition to maintain pH of solution 10.5 to 11.5.

Results are summarized in Table 16-1.

Table 16-1: Summary of Results - Preliminary Bottle Roll Cyanide Leach Test

Test No.	Sample ID	Crush Size	Calculated Head		Reagent Consumption		Cumulative Extraction	
			Au (g/t)	Ag (g/t)	NaCN (kg/t)	CaO (kg/t)	Au (%)	Ag (%)
BR- 01	Oxide	- 10 mesh	0.80	0.28	0.06	2.00	80.24	82.42
BR- 02	Mixed	- 10 mesh	0.89	0.59	0.27	2.09	79.89	99.16
BR- 03	Sulfide	- 10 mesh	2.69	1.74	0.70	1.38	63.23	42.54

Cyanide leach data indicated the following:

- The lowest achieved gold extractions among three composites were for the sulphide ore sample. The oxide and mixed composite samples showed similar gold extractions
- Leaching of the sulphide composite had the highest cyanide consumption of the three samples
- Similar lime consumption was noted for the oxide and mix composites, while sulphide composite exhibited lower lime consumption.

16.2.2 Crush Size Open Cycle Column Leach on Oxide Composite and Results

Two column leach tests were conducted to evaluate the leaching characteristics at two crush sizes. The open cycle column leach tests were conducted at 80% passing 3/8 inch (10 mm) and 1-1/2 inch (38 mm) crush sizes. Single test charges from the oxide composite sample were reconstituted after screening and loaded into 8 inch (200 mm)

diameter PVC columns to a height of approximately 3.5 m. Prior to loading the columns, lime was added to the test charge. The columns were subjected to open cycle leaching using a feed solution containing 0.5 gram per liter sodium cyanide at a pH of approximately 10.5. Throughout the leach cycle, the pH of the feed solution was adjusted using lime in an attempt to maintain an effluent pH between 10.5 and 11.0. The leaching parameters common to the two column leach tests were:

- Lime blended into test charge at a dosage of 2 kilograms per metric ton (100 % addition of the preliminary bottle roll consumption).
- 0.5 grams per litre sodium cyanide concentration in the leach solution.
- Leach solution application flow rate of 6 litres per hour per square meter.
- 111 days of continuous leach cycle.

Significant results of this program were:

- The finest crush size achieved slightly better gold and silver extraction than the coarser crush size.
- The cyanide consumption was not increased by finer crushing
- The lime consumption was increased by finer crushing.

Results are summarized in Table 16-2.

Table 16-2: Summary of Results – Open Cycle Column Leach on Oxide Composite

Test No.	Sample ID	Crush Size	Extraction		Reagent Consumption	
			Au (%)	Ag (%)	NaCN (kg/t)	CaO (kg/t)
CL - 01	Oxide	p80 10 mm	80.65	64.13	0.06	1.80
CL - 02	Mixed	p80 38 mm	75.15	61.39	0.06	1.58

16.2.3 Material Type Open Cycle Column Leach Test Work and Results

Three column leach tests were conducted to evaluate the gold leaching characteristics and the cyanide and lime consumptions on three material types (oxide, mixed and sulphide mineralization). The open cycle column leach tests were conducted at 80 percent passing 3/8 inch (10 mm) crush sizes. Single test charges from oxide, mixed and sulphide composites were reconstituted and loaded into 8 inch diameter PVC columns to a height of approximately 3.5 m. Prior to loading the columns, lime was added to the test charge. Columns were subjected to open cycle leaching using a feed solution containing 0.5 gram per litre sodium cyanide at a pH of approximately 10.5. Throughout the leach cycle, the pH of the feed solution was adjusted using lime

in an attempt to maintain an effluent pH between 10.5 and 11.0. The leaching parameters common to the two column leach tests were:

- Lime blended into test charge at a dosage of 2 kg/tonne (100 percent addition of the preliminary bottle roll consumption).
- 0.5 grams per litre sodium cyanide concentration in the leach solution.
- Leach solution application flow rate of 6 liters per hour per square meter.
- 111 to 120 days of continuous leach cycle.

The column leach test work data are summarized in Table 16-3.

Table 16-3: Summary of Results – Open Cycle Column Leach Study

Composite ID	Test No.	Crush Size	Calculated Head		Cum. Extraction		Reagent Consumption	
			Au (g/t)	Ag (g/t)	Au (%)	Ag (%)	NaCN (kg/t)	CaO (kg/t)
Oxide	CL - 01	p_{80} 10 mm	0.87	0.31	80.65	64.13	0.06	1.80
	CL - 02	p_{80} 38 mm	0.81	0.29	75.15	61.39	0.06	1.58
Transition	CL - 03	p_{80} 10 mm	0.85	0.58	71.87	35.59	0.33	1.84
Sulfide	CL - 04	p_{80} 10 mm	2.98	1.49	47.10	26.21	0.45	0.92

To better understand the effect of particle size on gold extraction, gold extractions by screen fraction for all composites tested are presented in Table 16-4.

Table 16-4: Summary of Results – Gold Extraction by Screen Fraction – Oxide, Mixed and Sulphide Composites

Composite ID	Test No.	Screen Fraction	Head Assay Au (ppm)	Leach Residue Assay Au (ppm)	Extraction Au (%)
Oxide	CL - 01	+3/8 inch	0.93	0.17	84.90
		+1/4 inch	0.70	0.19	74.14
		+6 mesh	0.73	0.29	61.02
		+10 mesh	0.82	0.13	84.19
		-10 mesh	1.19	0.09	91.53
Oxide	CL - 02	+1 1/2 inch	1.01	0.20	84.73
		+1 inch	0.88	0.29	71.14
		+3/4 inch	0.77	0.18	74.71
		+1/2 inch	0.84	0.17	78.19
		+3/8 inch	1.02	0.24	76.91
		+1/4 inch	0.86	0.20	81.83
		+6 mesh	0.88	0.14	76.40
		+10 mesh	1.57	0.28	80.15
		-10 mesh	1.26	0.09	90.07
Transition	CL - 03	+3/8 inch	0.85	0.27	70.79
		+1/4 inch	0.86	0.31	64.36
		+6 mesh	0.80	0.35	57.06
		+10 mesh	0.83	0.16	79.67
		-10 mesh	0.88	0.09	89.40
Sulfide	CL - 04	+3/8 inch	1.69	1.43	16.36
		+1/4 inch	1.89	1.75	8.72
		+6 mesh	2.61	1.72	33.53
		+10 mesh	3.59	1.44	60.50
		-10 mesh	4.56	1.44	67.20

The column leach test work data indicated the following:

- The gold and silver extraction gradually decreased with the amount of sulphide mineralization present in the sample.
- The cyanide consumption was incrementally increased when the sulphide content increased.
- The sulphide mineralization revealed low lime consumption when compared to the oxide and transition composites.
- Amount of residual gold within all size fractions was very similar (around 0.2 ppm), for two different particle size oxide composite samples (CL-01 and CL-02), which indicates that particle size does not have a very significant effect on gold extraction. A similar observation can be made for the transition composite (CL-03).

- Unlike previous samples, the amount of gold in the leach residue of the sulphide composite varies considerably depending on the size fraction. For the particle sizes greater than 6 mesh, the amount of gold in residue is significantly higher, which results in significantly lower gold extraction rates. It is obvious that particle size is important in determining the gold extraction for the sulphide heap leach material.

For both oxides and sulphides:

- Limited degradation of the material was observed during the column leach testing as indicated by the weight gain in the minus 10 mesh fraction for the three composites. Oxide samples showed higher degradation than sulphide samples.
- Leach solution percolation problems were not identified during the column leaching process.

16.2.4 2010–2011 Metallurgical Testwork

Metcon Research was retained to undertake a new round of test work on core samples of oxide and transition material and sulphide material from the area that may be initially mined during any open pit operation, termed the “Starter Pit” area, and from the Las Colinas, Los Planes and Intermediate Zone deposits. The test work included bottle roll testing at 80% minus 74 µm, 105 µm and 149 µm and 100% minus 10 mesh. Column testing was done at -3/8”, -3/4” and -4”.

The test results confirm the previous results, showing higher recovery at finer sizes. The bottle roll tests showed recovery ranging from 77% to 92% at 74 µm and the sulphide recovery was normally equivalent to the oxide/transition recovery in the previous program.

The recovery for 3/8” (-10 mm) column tests ranged from 22% to 84%, with the sulphide recovery normally being about 20% lower than the recovery on the oxide/transition sample from the same ore deposit.. The sulphide recovery on the new material was slightly lower than the previous work averaging 47.3% compared to 43.2%. However, the oxide/transition averaged 55.4% extraction compared to 76.3% for the previous testing program. The Las Colinas material had a very low recovery of 30.4% and the Intermediate Zone material has a relatively low recovery as well at 43.2%. Without these samples the oxide/mixed extraction was 67.9%, which is closer to the previous results, but still lower.

The reagent consumptions remained low in the recent test program.

Results of the testwork are shown in Tables 16-5 to 16-8.

Table 16-5: Summary of Starter Pit Test Results

Column Test	Composite ID	Crush Size	µm	Head Assay (g/t)		Leach Cycle (Days)	Indicated Extraction		Reagent Consumption	
				Au	Ag		Au (%)	Ag (%)	NaCN	CaO
CL-01	Starter Pit, Oxide + Mixed	P_{100} 4"	101600.0	0.90	0.53	90	77.19	15.60	0.41	1.18
CL-07	Starter Pit, Oxide + Mixed	P_{80} 3/4"	19050.0	1.25	0.50	90	72.57	24.49	0.49	1.28
CL-08	Starter Pit, Oxide + Mixed	P_{80} 3/8"	9525.0	1.27	0.50	90	83.29	33.51	0.37	1.28
BR-01	Starter Pit, Oxide + Mixed	100% - 10 m	1400.0	0.82	0.32		62.82	40.92		
BR-02	Starter Pit, Oxide + Mixed	P_{80} 100	149.0	0.86	0.43		77.61	46.87		
BR-03	Starter Pit, Oxide + Mixed	P_{80} 150	105.0	0.86	0.45		85.34	80.58		
BR-04	Starter Pit, Oxide + Mixed	P_{80} 200	74.0	0.90	0.52		88.30	82.89		
CL-02	Starter Pit, Sulphide	P_{100} 4"	101600.0	1.98	0.76	90	14.10	11.82	0.34	0.56
CL-09	Starter Pit, Sulphide	P80 3/4"	19050.0	1.72	1.33	90	53.14	16.19	0.55	0.74
CL-10	Starter Pit, Sulphide	P80 3/8"	9525.0	1.76	1.25	90	55.88	28.02	0.65	0.76
BR-05	Starter Pit, Sulphide	100% - 10 m	1400.0	0.60	0.32		52.04	38.75		
BR-06	Starter Pit, Sulphide	P_{80} 100	149.0	0.90	0.43		84.14	46.10		
BR-07	Starter Pit, Sulphide	P_{80} 150	105.0	0.98	0.45		85.54	47.17		
BR-08	Starter Pit, Sulphide	P_{80} 200	74.0	1.12	0.52		88.03	51.56		

Table 16-6: Summary of Las Colinas Test Results

Column Test	Composite ID	Crush Size	µm	Head Assay (g/t)		Leach Cycle (Days)	Indicated Extraction		Reagent Consumption	
				Au	Ag		Au (%)			
CL-04	Las Colinas, Oxide + Mixed	P_{100} 4"	101600.0	0.78	0.50	90	31.26	13.36	0.73	1.87
CL-15	Las Colinas, Oxide + Mixed	P80 3/4"	19050.0	0.80	0.50	90	30.12	15.98	0.48	2.08
CL-16	Las Colinas, Oxide + Mixed	P80 3/8"	9525.0	0.89	0.50	90	48.56	36.25	0.50	2.04
BR-17	Las Colinas, Oxide + Mixed	100% - 10 m	1400.0	0.58	0.16		66.28	24.63		
BR-18	Las Colinas, Oxide + Mixed	P80 100	149.0	0.74	0.24		74.81	49.26		
BR-19	Las Colinas, Oxide + Mixed	P80 150	105.0	0.75	0.20		74.94	28.27		
BR-20	Las Colinas, Oxide + Mixed	P80 200	74.0	0.66	0.23		77.00	48.42		
CL-05	Las Colinas, Sulfide	P_{100} 4"	101600.0	0.87	0.50	90	11.50	7.06	0.50	0.55
CL-17	Las Colinas, Sulfide	P80 3/4"	19050.0	0.92	0.50	90	19.33	19.33	0.59	0.61
CL-18	Las Colinas, Sulfide	P80 3/8"	9525.0	0.92	0.50	90	22.04	22.04	0.47	2.21
BR-21	Las Colinas, Sulfide	100% - 10 m	1400.0	0.56	0.16		58.33	24.03		
BR-22	Las Colinas, Sulfide	P80 100	149.0	0.80	0.24		81.26	32.49		
BR-23	Las Colinas, Sulfide	P80 150	105.0	0.69	0.18		81.33	41.61		
BR-24	Las Colinas, Sulfide	P80 200	74.0	0.66	0.28		85.18	53.23		

Table 16-7: Summary of Los Planes Test Results

Column Test	Composite ID	Crush Size	µm	Head Assay (g/t)		Leach Cycle (Days)	Indicated Extraction		Reagent Consumption (kg/t)	
				Au	Ag		Au (%)	Ag (%)	NaCN	CaO
CL-03	Los Planes, Oxide + Mixed	P_{100} 4"	101600.0	0.90	0.65	90	46.87	6.12	0.49	1.17
CL-11	Los Planes, Oxide + Mixed	P80 3/4"	19050.0	0.78	0.46	90	77.34	23.50	0.43	1.25
CL-12	Los Planes, Oxide + Mixed	P80 3/8"	9525.0	0.92	0.58	90	84.26	25.17	0.39	1.29
BR-09	Los Planes, Oxide + Mixed	100% - 10 m	1400.0	0.69	0.24		79.57	32.12		
BR-10	Los Planes, Oxide + Mixed	P80 100	149.0	0.79	0.27		93.07	35.28		
BR-11	Los Planes, Oxide + Mixed	P80 150	105.0	0.78	0.36		93.63	41.64		
BR-12	Los Planes, Oxide + Mixed	P80 200	74.0	0.77	0.28		92.32	36.02		
CL-13	Los Planes, Sulfide	P80 3/4"	19050.0	0.89	0.61	90	60.94	36.62	0.48	1.27
CL-14	Los Planes, Sulfide	P80 3/8"	9525.0	0.91	0.52	90	58.90	40.43	0.42	1.28
BR-13	Los Planes, Sulfide	100% - 10 m	1400.0	0.56	0.25		63.15	38.17		
BR-14	Los Planes, Sulfide	P80 100	149.0	0.80	0.36		86.71	58.80		
BR-15	Los Planes, Sulfide	P80 150	105.0	0.69	0.36		87.41	58.93		
BR-16	Los Planes, Sulfide	P80 200	74.0	0.86	0.40		89.84	61.30		

Table 16-8: Summary of Intermediate Zone Test Results

Column Test	Composite ID	Crush Size	µm	Head Assay (g/t)		Leach Cycle (Days)	Indicated Extraction		Reagent Consumption (kg/t)	
				Au	Ag		Au (%)	Ag (%)	NaCN	CaO
CL-06	Intermediate, Oxide+ Mixed+Sulfide	P_{100} 4"	101600.0	0.95	0.55	90	22.88	22.60	0.37	0.60
CL-19	Intermediate, Oxide+ Mixed+Sulfide	P80 3/4"	19050.0	0.86	0.50	90	33.56	29.77	0.44	0.60
CL-20	Intermediate, Oxide+ Mixed+Sulfide	P80 3/8"	9525.0	0.99	0.50	90	52.56	48.05	0.46	0.79
BR-25	Intermediate, Oxide+ Mixed+Sulfide	100% - 10 m	1400.0	0.61	0.19		62.77	27.41		
BR-26	Intermediate, Oxide+ Mixed+Sulfide	P80 100	149.0	0.87	0.26		84.14	34.72		
BR-27	Intermediate, Oxide+ Mixed+Sulfide	P80 150	105.0	0.90	0.42		87.74	45.91		
BR-28	Intermediate, Oxide+ Mixed+Sulfide	P80 200	74.0	0.91	0.30		89.44	37.54		

16.3 Process Design Studies

Argonaut has retained Kappes, Cassiday & Associates (KCA) to commence work on process design studies in support of a pre-feasibility study.

16.4 Comment on Section 16

AMEC reviewed the results of the tests, and concluded:

- For oxide/transition ore, the column leach studies revealed a dependency on crush size in order to generate high levels of gold extraction. The best column results were obtained at P80 3/8 inch (10 mm) crush size, approximately 13% improvement over the results obtained at P80 ¾" inch (19 mm) and 19% improvement compared to the results from the 4" columns

- The column test results support selection of 75% recovery from the preliminary study of ROM leaching of oxide and transition material. But the recent test work does not support an oxide/transition ROM operation as the recovery would be significantly less than 28% average recovery obtained from the minus 4" column tests. The elimination of ROM should have a negligible capital cost impact as the

crushing equipment necessary to crush to - 10 mm (-3/8") had been included in the estimate for sulphide processing

- For sulphides, the column leach studies revealed the same dependency on a fine crush in order to generate high levels of gold extraction as the oxide/transition samples. But ultimately sulphide recovery (~40% at-3/8") is less than oxide/transition recovery (+75% at -3/8"). It may be worthwhile looking into quaternary crushing for sulphide as crushing to minus -10 mesh would increase sulphide recovery from ~40% to almost 62%

- The recent column test results support selection of 45% rather than 50% gold recovery from the previous work done on heap leaching sulphide material crushed to minus 10 mm. A significant reduction in gold recovery would be anticipated for ROM leaching

- The bottle roll test results support selection of over 80% gold recovery by agitation leaching of milled material (oxide and sulphide) to 80% passing 150 µm in a conventional CIP and pressure Zadra stripping circuit. There is potential for increased recovery (6% for oxides and 20% for sulphides) with milling over crushing

- The column sodium cyanide consumptions ranged from 0.37 to 0.73 kg/t (expected usage is 0.19 to 0.32 kg/t as column usage normally is higher than actual usage). The cyanide consumption was similar in both oxide/mixed and sulphide materials. Lime consumption range from 0.76 kg/t to 2.21 kg/t. In most cases, the oxide/transition consumed more lime than the sulphide, indicating that the natural pH of the oxide/mixed is lower than the sulphide.

AMEC recommends that:

- Potential metallurgical variability over the deposit should be evaluated by a combination of bottle roll and column leach tests on samples selected to fully represent the material to be processed
- The potential of higher gold recovery from oxide/mixed and sulphide material indicates that a trade-off study on quaternary crushing should be performed to see if finer crushing would enhance the project economics
- A trade-off study on the potential for milling is also recommended to see if project economics could be enhanced by grinding the run-of-mine material. This trade-off will require grindability testing on the major mineralization types
- Further leach test work, including analytical and mineralogical examination of heads and metallurgical products is recommended to evaluate precious metals

liberation at finer crushed sizes than tested to determine of -1/4", - 6 mesh or - 8 mesh would be economic alternative for sulphide recovery at the San Antonio Project.

17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

The San Antonio mineral resource estimate was prepared by Edward J. C. Orbock III, M.AusIMM, Principal Geologist (AMEC, Reno) and has an effective date of 29 April, 2011.

The mineral resource estimates were prepared using 3-D models in the commercial mine planning software MineSight® (version 5.50, Build 42793-529) with reference to the Canadian Institute of Mining Metallurgy and Petroleum (CIM) Definition Standards (2010) and CIM Best Practice Guidelines for preparing Mineral Resources and Mineral Reserves. Mineral Resources were constrained inside open pit shells.

AMEC received from Argonaut and reviewed gold grade shell solids that were used to define mineralized zones within the drill hole database and block model.

17.1 Database

Argonaut provided AMEC with a Microsoft Excel® database containing all drilling information within the San Antonio project. AMEC imported the collar and downhole survey, geology, and assay data into MineSight®. AMEC ran software validation routines to check for survey errors, overlapping intervals, missing intervals, skipped intervals, and values outside of range. No significant errors were reported.

The database was closed by AMEC for estimation purposes as of 10 December, 2010. A total of 448 drill holes were available for resource modeling with a combined 47,527 gold assays and totalling 73,326.9 m. Figure 17-1 shows the drill collar location plan for the drill holes used to inform the modelling and estimation process.

Four deposits were modeled, Los Planes, Las Colinas, Intermediate and La Colpa.

17.2 Geological Models

17.2.1 Mineralized Grade Shells

Argonaut constructed mineralized grade shell domains using assays intervals of ≥0.1 g/t Au (Figure 17-2) for the four deposits. AMEC reviewed the grade shells on computer screen in cross section and in plan and is of the opinion that they are adequate for resource estimation. AMEC recommends that future grade shell domain modeling be constructed using composite length values. Compositing assays to the planned mining bench heights will more closely match expected grade during production and potentially identify areas of the deposit with narrow mineralization that will be diluted to below cut-off grade.

Figure 17-1: Drill Hole Collar Plan Location Map (Blue = Pre-2010 drill holes, red = 2010 drill holes. Grid spacing is 250 meters and two meter contours are indicated).

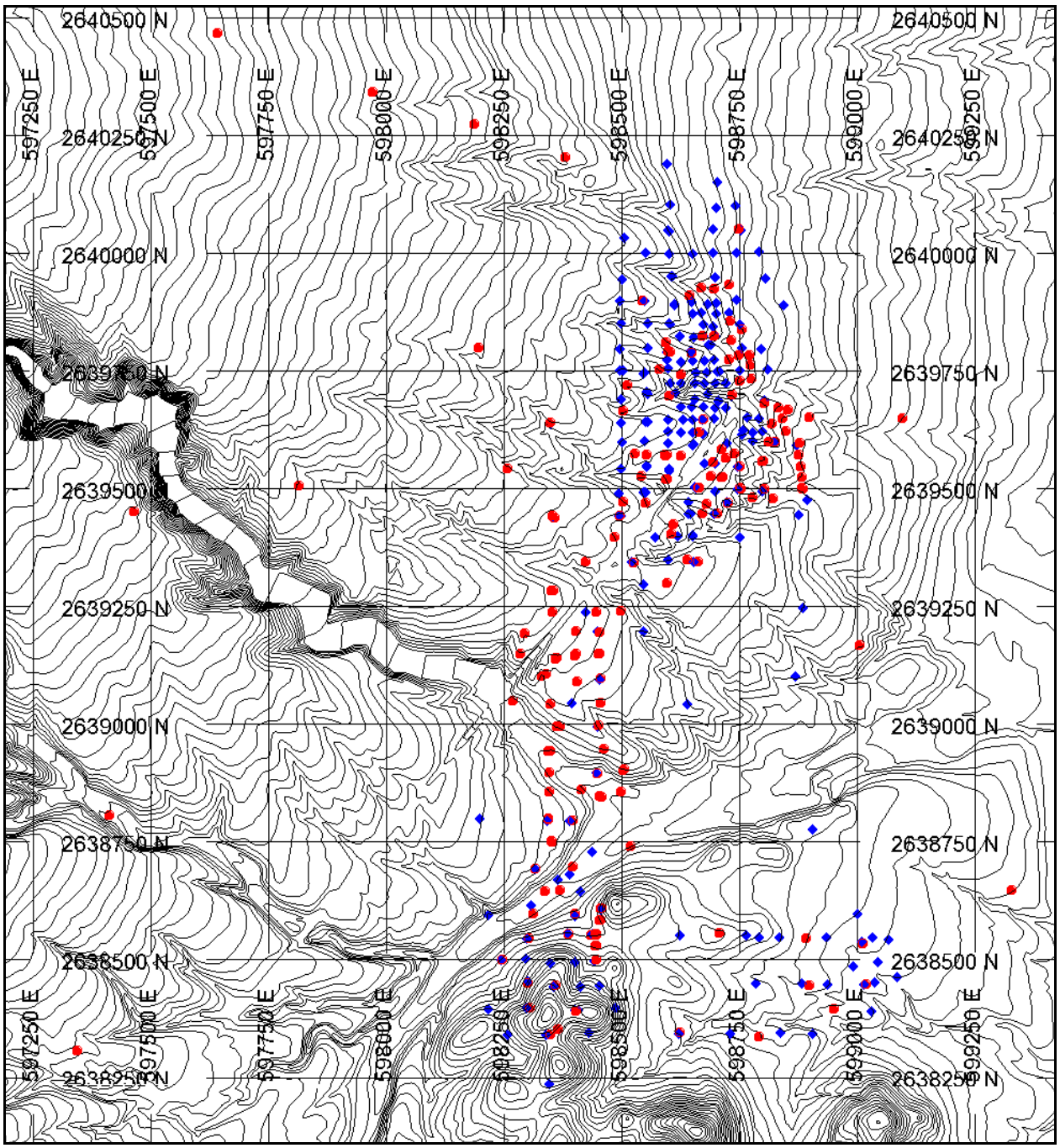
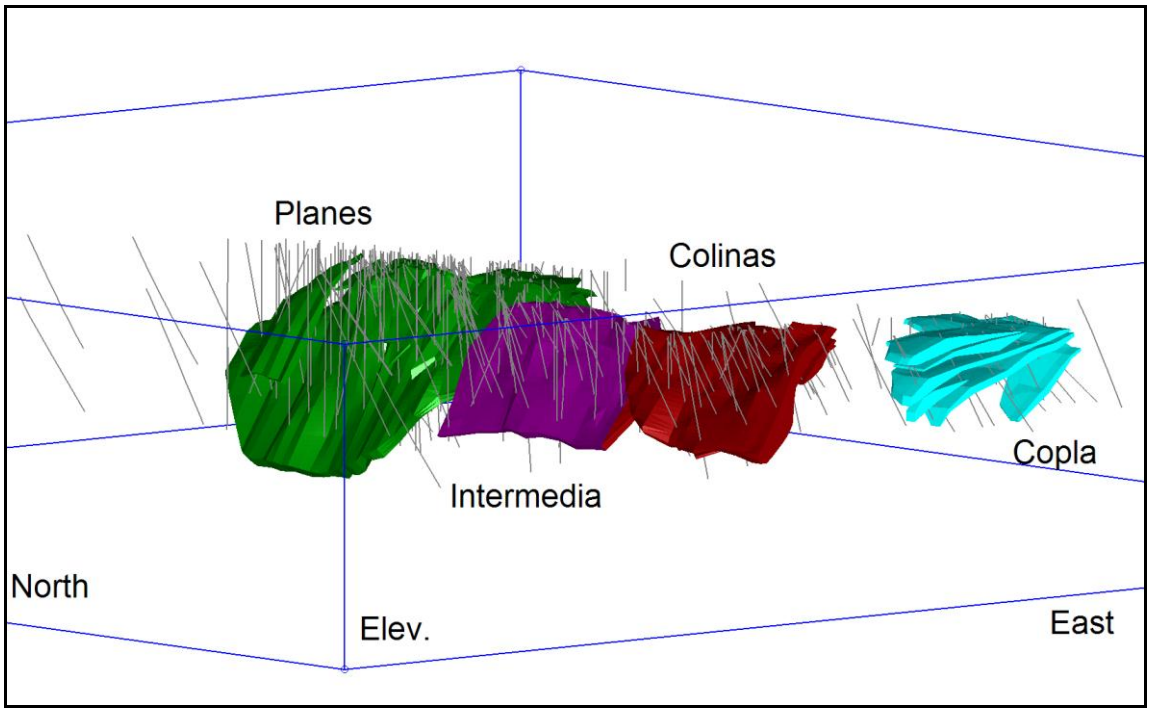


Figure 17-2: Isometric View showing Grade Shell Domains and Drill Hole Traces



The assay database and model blocks were tagged with a unique domain code for each of the four mineralized solids; Las Colinas, Los Planes, Intermediate and La Colpa. All assays and blocks outside these four solids were coded as waste.

A block model with blocks of 6 m x 6 m x 6 m in dimension was built to encompass all four deposits. For each block the percentage below the surface topography was recorded. In addition each block was assigned a deposit code, oxidation state, density, gold recovery, and resource classification.

17.2.2 Sulphide Domain

Internal to the Los Planes grade shell, the area was further domained by low and high sulphide content. It was noted that assay samples generally contained higher gold values when sulphide content was equalled to or greater than five percent. The deposit at Intermediate, Las Colinas and La Colpa shows minor amounts of high sulphide intercepts and were not further domained based on their sulphide content.

The low and high sulphide domains internal to the Los Planes grade shell was determined by probabilistic methods. The following modeling sequence describes the implementation of the probabilistic approach:

- Composites indicators were created based on sulphide content. Composites equal to or greater than 5% were tagged with a value of 1. All other composites were set to a value of 0.
- A Nearest-neighbour (NN) model was interpolated from the sulphide composite indicators.
- Total number of NN blocks of 0s and 1s were tabulated within a distance of 33 m to the nearest composite.
- Blocks were then kriged with the sulphide composite indicators. Kriged values were stored in the block model. Indictor values ranged between 0 and 1.
- A single indicator passes was used to krige the blocks.
- Search ranges of 100 m x 600 m x 300 m, (x, y, z) were used, and the LRL rotation angles were 10^0 x -5^0 x 55^0 (Z_{rot}, X_{rot}, Y_{rot}). To estimate a block, the following parameters were implemented:
  - a minimum of three composites,
  - a maximum of six composites, and
  - a maximum of two composites per drill hole.
- A cumulative frequency table was generated on blocks for kriged values with a distance to the nearest composite of 0 to 33 m.

Using the total number of the NN high-sulphide blocks within a 33 m distance from the nearest composite, a threshold value was chosen in the cumulative frequency tables from the kriged indicator sulphides, which were also tabulated within a 33 m distance to the nearest composite. The threshold value is determined when the total number of NN blocks closely matches the total number kriged blocks, which in this case is at 0.35 probability value. Figure 17-3 shows a cross section through the Los Planes deposit displaying low and high sulphide blocks with drill holes.

17.2.3 Oxidation Model

Argonaut provided AMEC with oxidation surfaces for the boundary between oxide and transition and a boundary surface between transition and sulphide as shown in Figure 17-4. AMEC reviewed the surfaces against oxidation codes from drill holes is of the opinion that the surfaces adequately represent the oxidation state contacts.

Figure 17-3: Los Planes Cross Section 2639800N Showing Low (blue) and High (red) Sulphide Blocks and Drill Hole Intercepts.

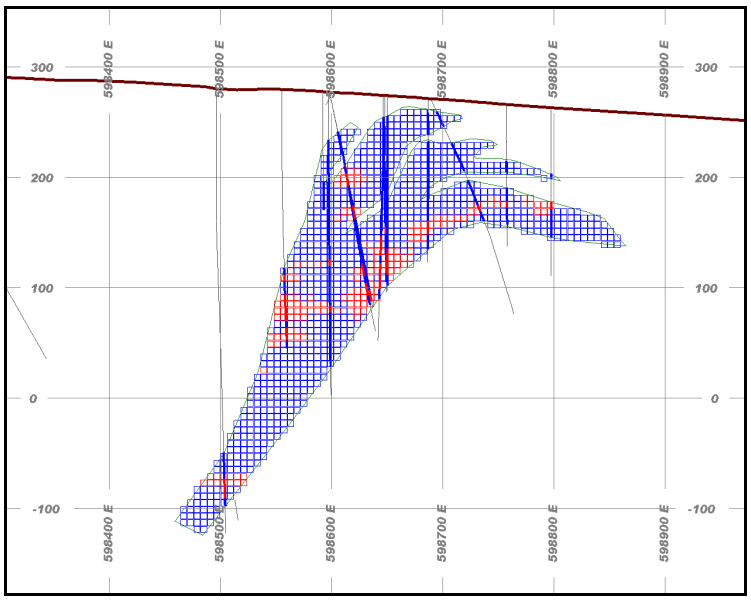
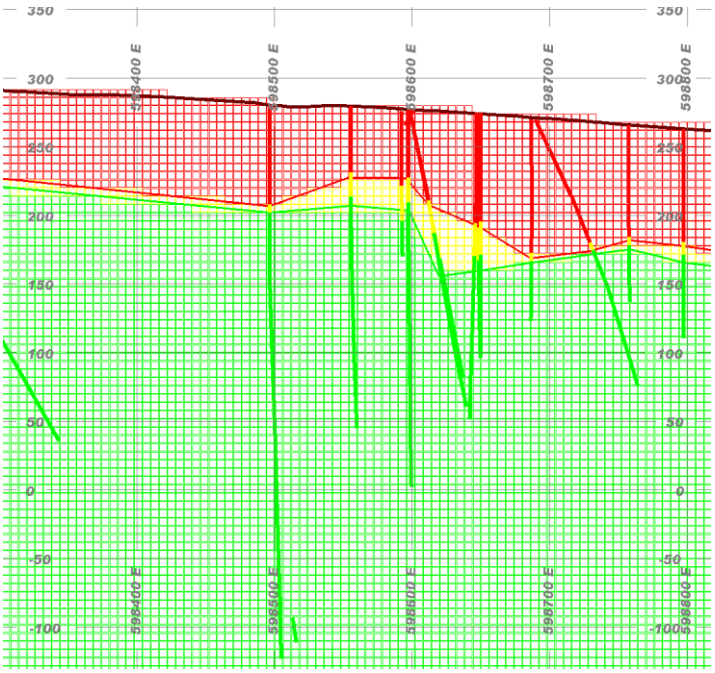


Figure 17-4: Los Planes Cross Section 2639800N Showing Oxidation State Model with Drill Holes. Oxide (red), Transition (yellow), and Sulphide (green).



17.2.4 Density Model

AMEC used the SG values as shown in **Error! Reference source not found.** to assigned mean SG values to the block model.

17.3 Exploratory Data Analysis

17.3.1 Assay Box Plots

An analysis of assays falling within the grade shell domains were studied to determine if additional domaining is required to further separate the deposit into smaller domains suitable for grade estimation. **Error! Reference source not found.** shows a box plot of all weighted gold assays within the grade shell at the Los Planes deposit. Figure 17-6 shows a similar box plot, but without the assays from samples equal to or greater than 5% logged sulphide content. The average grade of all Los Planes assay intervals is 1.032 g/t Au, whereas assays, excluding the higher sulphide intervals, show an average grade of 0.825 g/t Au, a percentage difference of approximately 25%.

Quartz–diorite (Qd) shows a reduction in Au grade by 18.8% if the higher sulphide assay were removed. Mean gold grade averaged 1.068 g/t Au for all quartz–diorite intervals but averaged 0.867 g/t Au without the higher-grade sulphide intervals. The mean gold grade for higher 700 sulphide intervals is 2.944 g/t as compared to the 6,549 lower sulphide intervals of 0.867 g/t Au.

Granodiorite (Gd) intervals with the higher logged sulphide material have an average gold grade of 0.959 g/t and without the higher-grade sulphide material, the average gold grade is 0.746 g/t, a 28.5% reduction in grade. The 404 high-sulphide granodiorite samples have an average gold grade of 2.164 g/t.

Intermediate Dike (Id) intervals totalled eight assays and all were logged with a sulphide content equal to or greater than 5%. The average gold grade is 4.097 g/t.

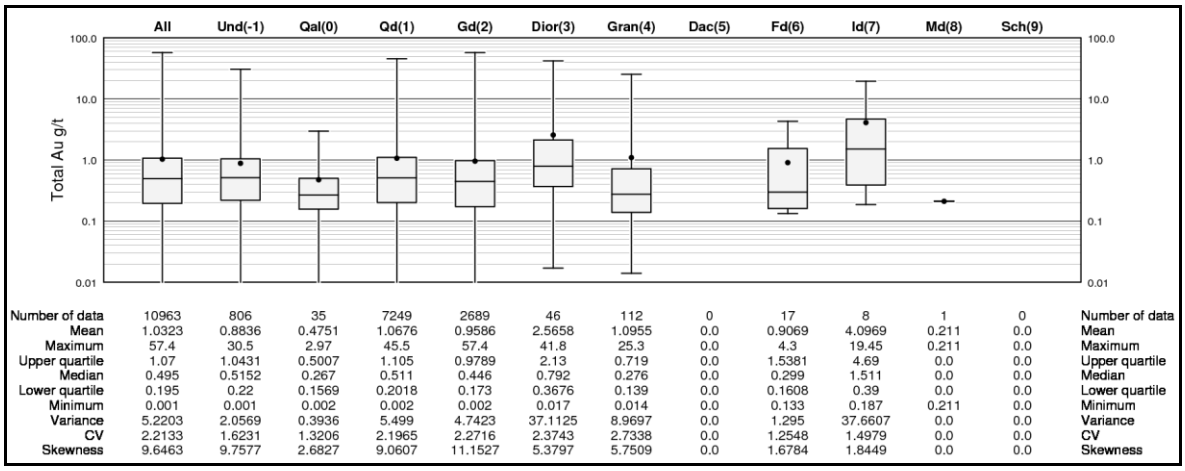
Drill hole logging has identified 1,303 assay intervals with sulphide content equal to or greater than 5% sulphide and having an average grade of 2.57 g/t Au.

AMEC is of the opinion that intervals with sulphide content equal to or greater than 5% should be domained separately for interpolation within the Los Planes deposit.

Table 17-1 Density Assigned to Mine Blocks

Domain	SG g/cm^3
Sand / Overburden	2.0
Waste	2.65
Oxide	2.62
Transition	2.69
Sulphide	2.69

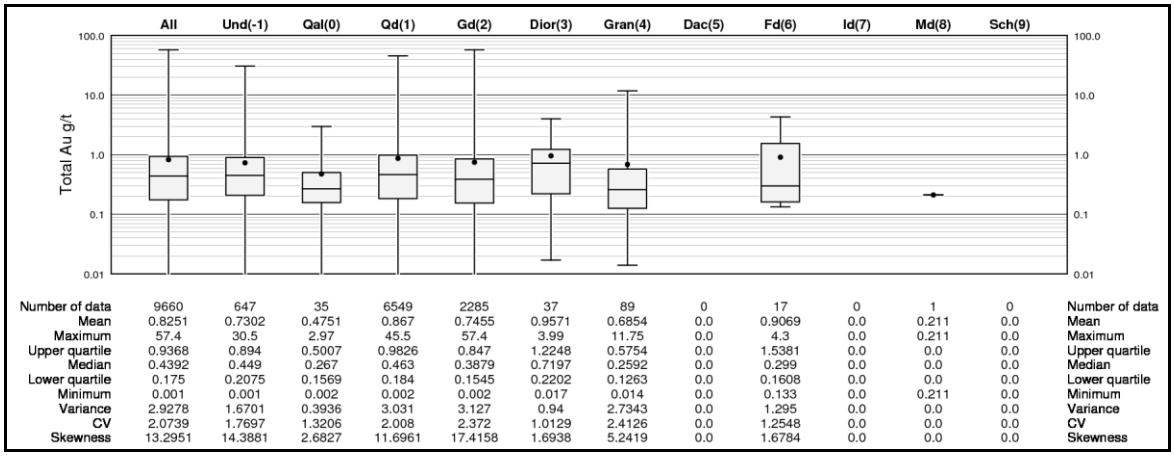
Figure 17-5: Los Planes Box Plot of All Assays within the Grade Shell by Lithology



	All	Und(-1)	Qal(0)	Qd(1)	Gd(2)	Dior(3)	Gran(4)	Dac(5)	Fd(6)	Id(7)	Md(8)	Sch(9)	
Number of data	10963	806	35	7249	2689	46	112	0	17	8	1	0	Number of data
Mean	1.0323	0.8836	0.4751	1.0676	0.9586	2.5658	1.0955	0.0	0.9069	4.0969	0.211	0.0	Mean
Maximum	57.4	30.5	2.97	45.5	57.4	41.8	25.3	0.0	4.3	19.45	0.211	0.0	Maximum
Upper quartile	1.07	1.0431	0.5007	1.105	0.9789	2.13	0.719	0.0	1.5381	4.69	0.0	0.0	Upper quartile
Median	0.495	0.5152	0.267	0.511	0.446	0.792	0.276	0.0	0.299	1.511	0.0	0.0	Median
Lower quartile	0.195	0.22	0.1569	0.2018	0.173	0.3676	0.139	0.0	0.1608	0.39	0.0	0.0	Lower quartile
Minimum	0.001	0.001	0.002	0.002	0.002	0.017	0.014	0.0	0.133	0.187	0.211	0.0	Minimum
Variance	5.2203	2.0569	0.3936	5.499	4.7423	37.1125	8.9697	0.0	1.295	37.6607	0.0	0.0	Variance
CV	2.2133	1.6231	1.3206	2.1965	2.2716	2.3743	2.7338	0.0	1.2548	1.4979	0.0	0.0	CV
Skewness	9.6463	9.7577	2.6827	9.0607	11.1527	5.3797	5.7509	0.0	1.6784	1.8449	0.0	0.0	Skewness

Note: Und-Undefined, Qal-Alluvium, Qd-Quartzdiorite, Gd-Granodiorite, Dior-Diorite, Gran-Granite, Dac-Dacite, Fd-Felsic Dike, Id-Intermediate Dike, Md-Mafic Dike, Sch-Schist.

Figure 17-6: Los Planes Box Plot of Assay (except those =>5% Sulphide) within in Grade Shell by Lithology



	All	Und(-1)	Qal(0)	Qd(1)	Gd(2)	Dior(3)	Gran(4)	Dac(5)	Fd(6)	Id(7)	Md(8)	Sch(9)	
Number of data	9660	647	35	6549	2285	37	89	0	17	0	1	0	Number of data
Mean	0.8251	0.7302	0.4751	0.867	0.7455	0.9571	0.6854	0.0	0.9069	0.0	0.211	0.0	Mean
Maximum	57.4	30.5	2.97	45.5	57.4	3.99	11.75	0.0	4.3	0.0	0.211	0.0	Maximum
Upper quartile	0.9368	0.894	0.5007	0.9826	0.847	1.2248	0.5754	0.0	1.5381	0.0	0.0	0.0	Upper quartile
Median	0.4392	0.449	0.267	0.463	0.3879	0.7197	0.2592	0.0	0.299	0.0	0.0	0.0	Median
Lower quartile	0.175	0.2075	0.1569	0.184	0.1545	0.2202	0.1263	0.0	0.1608	0.0	0.0	0.0	Lower quartile
Minimum	0.001	0.001	0.002	0.002	0.002	0.017	0.014	0.0	0.133	0.0	0.211	0.0	Minimum
Variance	2.9278	1.6701	0.3936	3.031	3.127	0.94	2.7343	0.0	1.295	0.0	0.0	0.0	Variance
CV	2.0739	1.7697	1.3206	2.008	2.372	1.0129	2.4126	0.0	1.2548	0.0	0.0	0.0	CV
Skewness	13.2951	14.3881	2.6827	11.6961	17.4158	1.6938	5.2419	0.0	1.6784	0.0	0.0	0.0	Skewness

Note: Und-Undefined, Qal-Alluvium, Qd-Quartzdiorite, Gd-Granodiorite, Dior-Diorite, Gran-Granite, Dac-Dacite, Fd-Felsic Dike, Id-Intermediate Dike, Md-Mafic Dike, Sch-Schist.

The average grade of all Los Colinas and Intermediate assay intervals is 0.83 g/t Au, whereas assays when excluding the higher sulphide intervals show an average grade of 0.7732 g/t Au, a percentage difference of approximately 7%. The occurrence of assay intervals with higher sulphide content are not as frequent in the Los Colinas and Intermediate deposits as compared to what is observed at the Los Planes deposit. It is AMEC's opinion that further sub-domaining the grade shells based on sulphide content at Las Colinas and Intermediate is not warranted.

17.3.2 Assay Contact Plots

To determine whether assays should be used across lithological boundaries during gold estimation, AMEC constructed contact plots for the different combinations of lithological, oxidation state, and sulphide boundaries. A contact profile is a plot of the average grade as a function of distance from the contact. For example the grade profile can be plotted on an X-Y graph with grade plotted on the Y-axis and distance from the contact plotted on the X-axis. The contact is located mid-way along the X-axis so that the profile from one domain can be plotted to the left of the contact while the profile from a second domain can be plotted to the right of the contact.

Hard contacts (only those composites that lie within each domain are used for estimation of that domain) are generally justified if there is a substantial grade difference between the domains and soft contacts (composites in adjacent domains are included in the estimation) are justified if the grade difference is minor or if the grades at the boundary are nearly identical. If a hard boundary was imposed where grades tend to change gradually, grades may be overestimated on one side of the boundary and underestimated on the opposite side.

Results from the Los Planes contact profiles shows that the lithology boundaries are generally soft if the high-sulphide domains are excluded. At Intermediate, Las Colinas and La Colpa, AMEC is of the opinion that the occurrences of high sulphide zones are minimal to non-existent and domaining low-grade and high-grade sulphide intercepts are not necessary. As a result, the following domains were created:

- At Los Planes, a grade shell domain was created to separate mineralized material from waste zones and internal to the grade shell, a sulphide domain to separate low and high sulphide zones.
- Intermediate and Las Colinas were combined into a single grade shell domain to separate mineralized areas from waste.
- At La Colpa, a grade shell domain was created to separate mineralized areas from waste.

17.4 Examination of Extreme Values (Grade Caps)

Establishment of grade caps for a mineral deposit is typically at the discretion of the QP. AMEC investigated the potential for metal at risk using decile analysis and Monte Carlo simulation. Results indicate that an appropriate capping level for Los Planes is 5 g/t Au for areas with low sulphide content (> 5%) and 9 g/t Au for areas with high sulphide content (=>5%) . The capping level for Intermediate, Los Colinas and La Colpa were set to 5 g/t Au. These capping levels were implemented on composites gold grades that were at an outlier distance greater than 15 m from a block.

Total gold metal ounces removed from the Measured and Indicated Mineral Resource estimates by use of outlier restriction and capped composites is approximately 2.6%.

17.5 Composites

The drill holes were “passed” through the mineralized solids and the points at which the drill holes entered and exited the solid was determined. Uniform down-hole composites, 6 m in length, were formed to honour the solid boundaries. Assay segments at the grade shell domain boundaries, which were less than 3 m, were combined with the adjoining sample to produce a uniform support of 6 m ± 3 m. Figure 17-7 and Figure 17-8 shows the composite histogram within the grade shells for Los Plane and Los Colinas/Intermediate deposits respectively.

17.6 Variography

AMEC constructed gold variograms for each of the four deposits using Sage2001® software. For Los Planes, Los Colinas and Intermediate, the variograms were moderate to good in quality. La Colpa variograms show poor quality. The nugget was first modeled using a single-structure, down-the-hole correlogram, and directional correlograms were modeled using two-structure spherical (Sph) models to fit experimental correlograms. An additional domain was created at Los Planes “Low-Sulphide – Oxide” due to the variography differences from “Low-Sulphide – “Trans/Sulphide”. AMEC conducted two kriging passes; with pass one having a larger search range than the second pass. Search parameters used for gold estimation in Pass 1 and Pass 2 are listed in Table 17-2 and Table 17-3 respectively. Gold variogram parameters are listed in Table 17-4.

AMEC is of the opinion that the quality of the variograms for Los Planes, Las Colinas and Intermediate are adequate for Measured and Indicated Resource classification. Due to limited drilling at La Colpa, the poor variograms are not un-expected. AMEC is of the opinion that La Colpa should be limited to the Inferred classification.

Figure 17-7: Los Planes Composite Gold Histogram

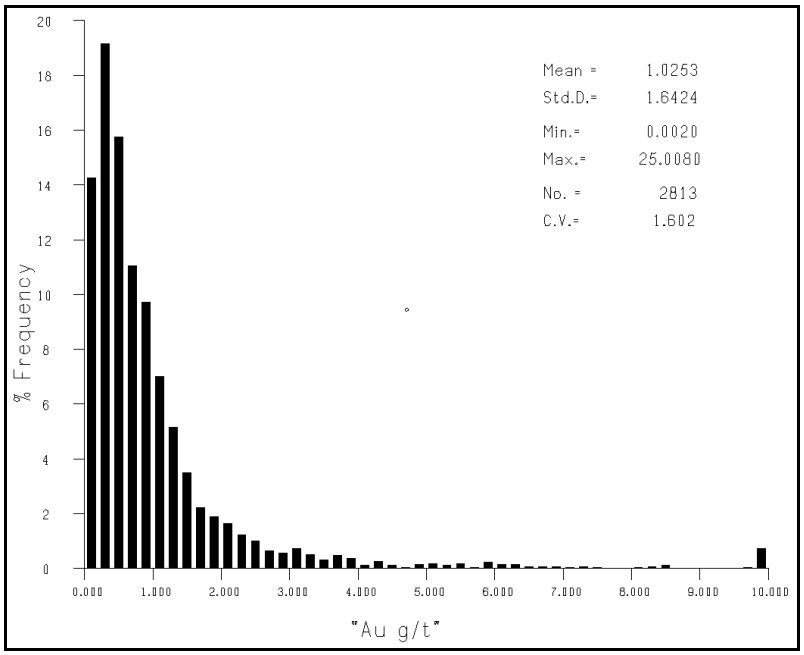


Figure 17-8: Los Colinas and Intermedia Composite Gold Histogram

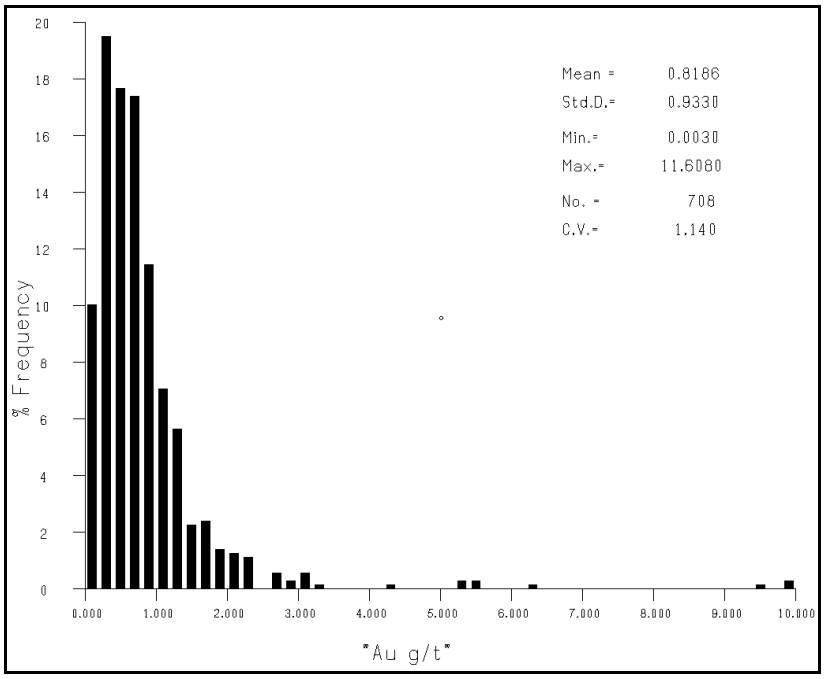


Table 17-2: Pass 1 Gold Model 3D Composite Search Strategies. Rotation is LRL

Domain	Strike* (z rot)	Pitch* (x rot)150	Dip* (y rot)	Y Range m	X Range m	Z Range m
Los Planes Low Sulfide–Oxide	-56	-12	-11	100	300	30
Los Planes Low Sulfide–Trans/Sulfide	45	31	-41	375	30	100
Los Planes High Sulfide–All Dom.	45	31	-41	375	30	100
Intermedia and Los Colinas-All Dom.	5	3	-40	150	60	300
La Copla-All Dom.	0	0	0	75	75	75

*Rotations are left-, right-, left-hand rule

Table 17-3: Pass 2 Gold Model 3D Composite Search Strategies. Rotation is LRL

Domain	Strike* (z rot)	Pitch* (x rot)150	Dip* (y rot)	Y Range m	X Range m	Z Range m
Los Planes Low Sulfide – Oxide	-56	-12	-11	50	150	15
Los Planes Low Sulfide –Trans/Sulfide	45	31	-41	190	15	50
Los Planes High Sulfide	45	31	-41	190	15	50
Intermedia and Los Colinas	5	3	-40	75	30	150
La Copla	0	0	0	25	25	25

*Rotations are left-, right-, left-hand rule

Table 17-4: Gold Variography Parameters

Domain	Nugget, Sill1 & Sill2			Orientation*			Range (m)		
	C0	C1	C2	Strike (z rot)	Pitch (x rot)	Dip (y rot)	Y	X	Z
Los Planes Low Sulfide Oxide	0.352	342	306	-29	-24	8	56	75	10
				-56	-12	-11	94	304	30
Los Planes Low Sulfide Tran/Sulfide	0.084	0.684	0.231	-8	38	-37	62	14	11
				45	31	-41	375	31	93
Los Planes High Sulfide	0.084	0.684	0.231	-8	38	-37	62	14	11
				45	31	-41	375	31	93
Intermedia and Los Colinas	0.380	0.418	0.202	10	11	54	46	58	8
				5	3	-40	153	60	300
La Copla	0.402	0.414	0.184	0	0	0	12	12	12
				0	0	0	47	47	47

*Rotations are left-, right-, left-hand rule

17.7 Grade Interpolation

Gold grades were estimated using a two-pass estimation method.

Pass 1 used a larger search distance then Pass 2 and required a minimum of one composite, a maximum of three composites and a maximum of one composite per hole. A minimum of one drill hole is required to interpolate gold grades into a block.

Pass 2 used a smaller search radii then Pass 1 and required a minimum of three composites, a maximum of six composites, and a maximum of two composites per any one drill hole. A minimum of two drill holes is required to interpolate gold grades into a block.

17.8 Block Model Validation

17.8.1 Nearest-Neighbour Block Model

AMEC constructed a declustered composite distribution for gold by creating a NN model. The model was then compared to the kriged block model to check for global and local bias. The NN model used a block size of 6 m x 6 m x 6 m. Nearest-neighbour grade interpolation also honoured the outlier grade restrictions as applied to the OK gold model.

17.8.2 Global Bias

AMEC checked the gold model for global bias by comparing the means of the kriged model with means from the NN model. The NN model theoretically produces an unbiased estimate of average value at a zero cut-off grade. A relative percentage value of less than 5% difference between the means is an acceptable result and demonstrates a reasonable estimation of the global mean by the kriged model. The kriged gold estimates from Los Planes, Intermediate, and Las Colinas are within a 5% relative difference and indicate a good correlation with the NN model as shown in Table 17-5.

La Colpa shows a 5.7% relative difference which is slightly above the 5% threshold. AMEC is of the belief that this may be due to the limited number of drill holes in this deposit and expects that further drilling will reduce the relative difference. AMEC recommends that until additional in-fill drilling is completed at La Colpa, along with other geotechnical information such as density, and metallurgical recovery studies, that resource classification for this deposit be limited to Inferred.

Table 17-5: San Antonio Global Bias Check by Deposit (at a 0 g/t cut-off)

Deposit	Tonnes	Mean Gold Grade of Krige Model (g/t)	Mean Gold Grade of NN Model (g/t)	Relative Percent Difference
Los Planes	48,362,191	0.9367	0.9414	-0.5
Intermedia	7,633,795	0.8003	0.7992	0.1
Las Colinas	10,317,868	0.7484	0.7306	2.4
La Copla	4,633,482	0.3042	0.2878	5.7

17.8.3 Visual Inspection

Gold grades were viewed in cross sections and plans on the computer screen by domain. Gold grades from the kriged and NN blocks were compared to the composite grades and the comparisons looked reasonable. Figure 17-9 presents an example cross-section showing gold grades from blocks and drill holes through Los Planes.

17.8.4 Swath Plots (Local Bias)

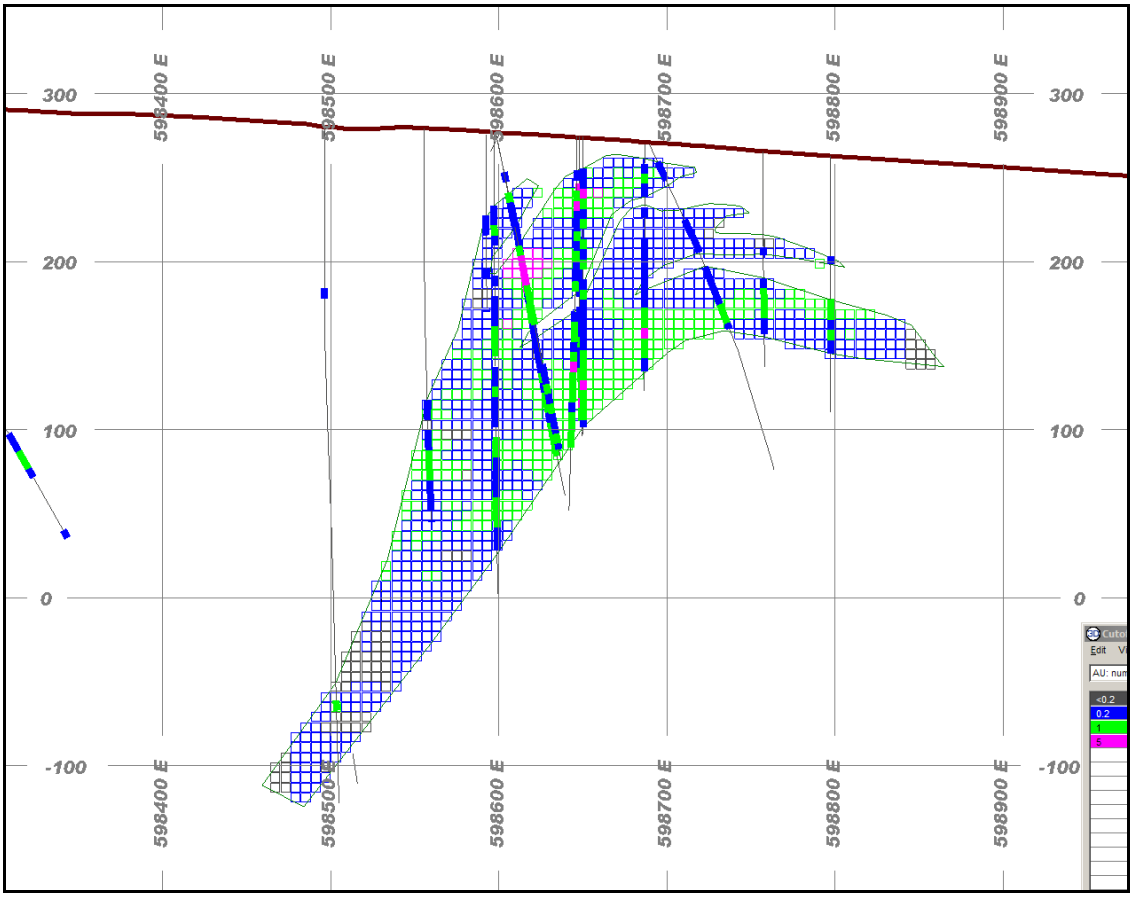
Swath plot validation was performed with the in-house AMEC FORTRAN program SWATH2.EXE that allows for spatial comparison of the kriged estimate, the NN estimate, and the drill hole composites. The program separates the block model into user defined slices (swaths) that are orthogonal to easting, northing, and elevation and calculates the average grade and number of blocks (or composites) for each swath. Swath plots allow for a visual comparison of how well the estimated model follows the local variations as observed in composite sample location, number of composite samples and grade. Figure 17-10 shows an example of the swath plot for Los Planes. Swath plots of kriged and NN models compare well and indicate that the estimation is locally unbiased. Swath plots for the other deposit also indicate that the estimation is locally unbiased.

17.8.5 Checks on Change of Support

The degree of smoothing in the block model estimates were evaluated using the discrete Gaussian or Hermitian polynomial change of support (Herco) method (Journel and Huijbregts, 1978). The Herco validation was performed with the AMEC Fortran programs HERCO04D.exe and GTCOMP.exe.

From Figure 17-11, gold grades and tonnages estimated by OK are not under or overly-smoothed as compared to the Herco predictions. Using Measured and Indicated mine blocks at a cut-off grade of 0.2 g/t Au, the Herco grade is approximately 3.8% higher than the kriged grade estimate and Herco tonnes are about 4.6% less than the estimated kriged tonnes.

Figure 17-9: Los Planes Cross Section 2639800N Showing Gold Grades in Blocks and Drill Holes.



Note: Gold grades in g/t Au are Gray <0.2, Blue =>0.2, Green =>1, and Magenta =>5

Figure 17-10: Los Planes Gold-Mineralized Domain Swath Plot

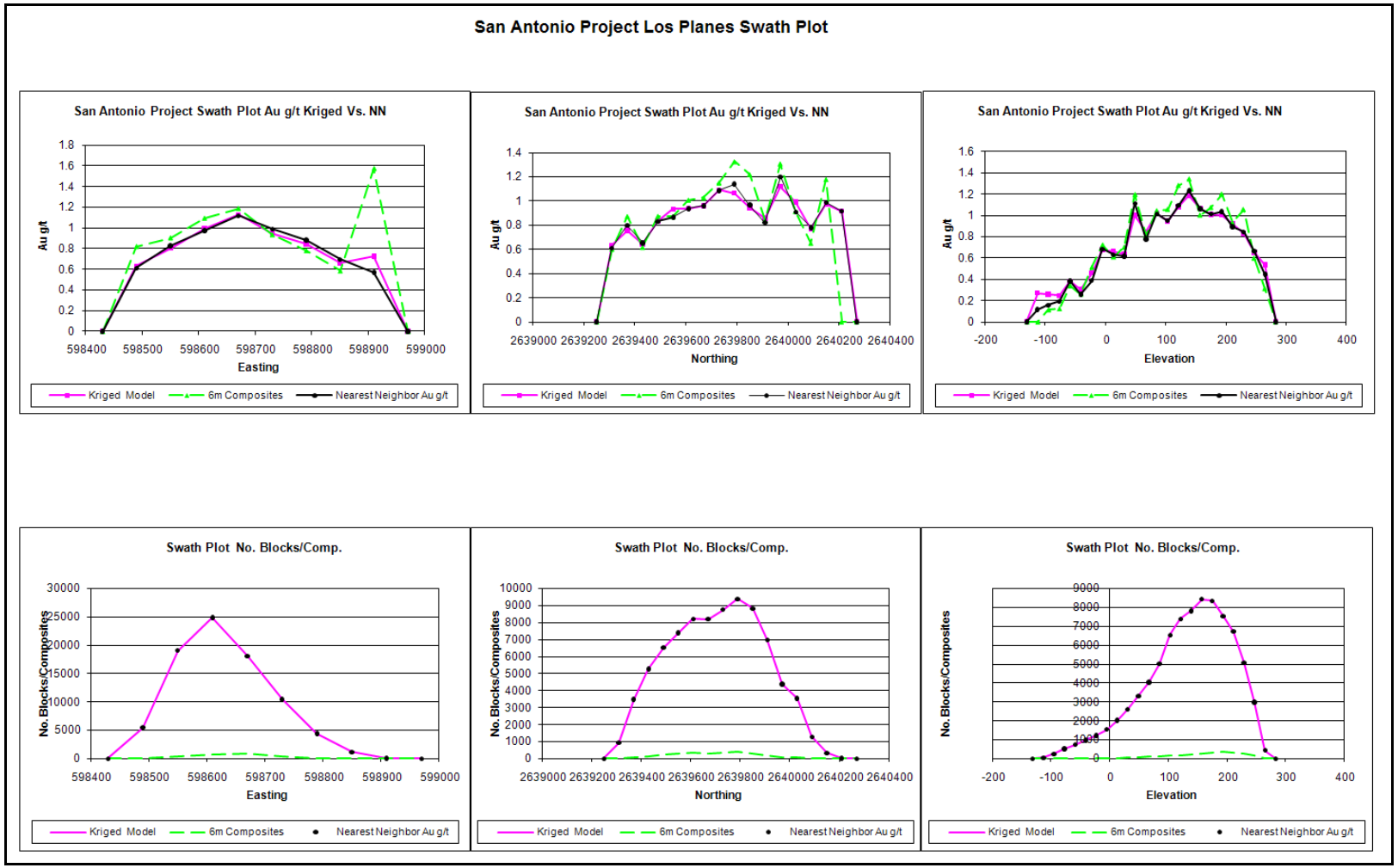
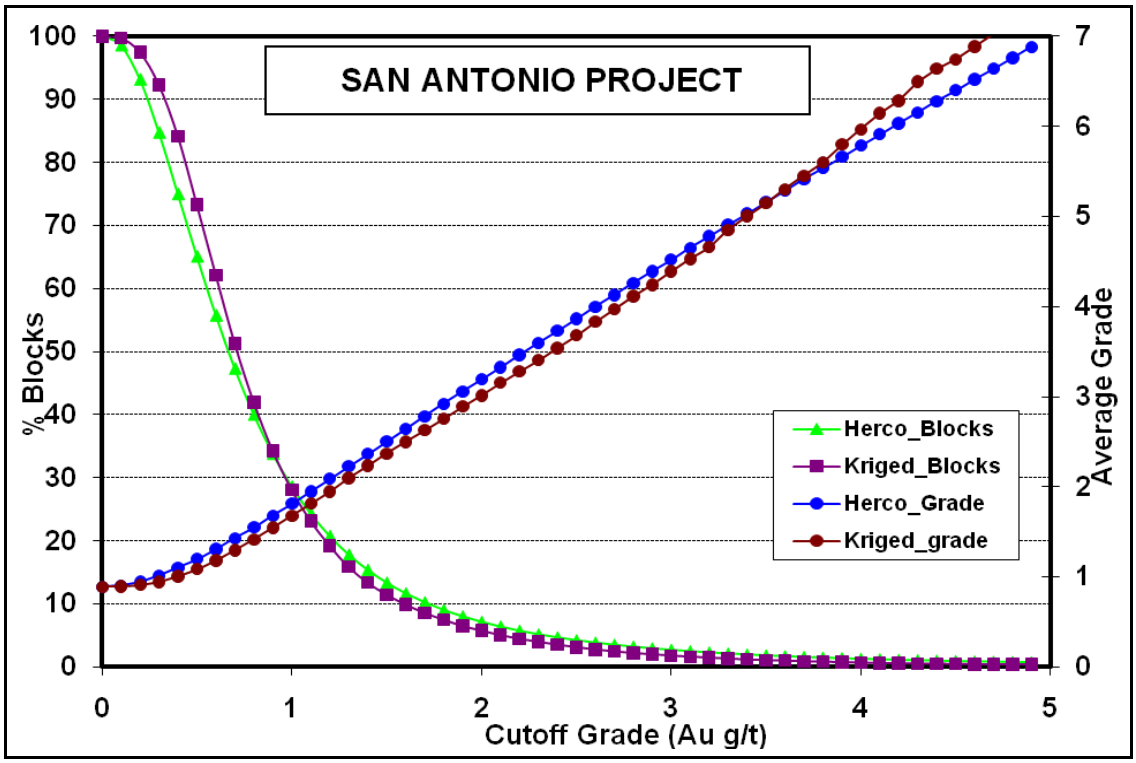


Figure 17-11: San Antonio Herco Graph



17.8.6 Check on Restricted Kriging Approach

To assess the effect of using a restricted kriging estimation plan in the blocks estimated primarily in the outer pass of in the model, AMEC re-interpolated the model using an increased number of composites for each of the two passes. Pass 1 was allowed a minimum of one composite, a maximum of 12 composite and maximum of three composites per drill hole. Pass 2 was allowed a minimum of six composites, a maximum of 12 composites and a maximum of three composites per drill hole. All other variables were not changed.

Using Measured and Indicated mine blocks at a cut-off grade of 0.2 g/t Au, the Herco grade is approximately 4.8% higher than the kriged grade estimate and Herco tonnes are about 6.4% less than the estimated kriged tonnes. Consequently, AMEC concludes that the differences are relatively small and acceptable between the less restrictive estimation plan and the current plan. AMEC would expect these results to change as and if additional infill sampling is applied.

17.9 Resource Classification

17.9.1 Confidence Limits

AMEC has developed internal guidelines for declaration of Mineral Resources, such that for Indicated Mineral Resources, estimation for tonnage and grade should be known within ± 15% at 90% confidence on an annual basis. Measured Mineral Resources should be known within ± 15% with a 90% confidence on a monthly or quarterly basis. At this level, the drill spacing is usually close enough to permit the assumption of grade and volume (tonne) continuity between the drill holes.

Assumption for monthly production was based on scaling up the daily mineralized material production of 11,000 t to a one month period. The size of the mineable block would be 75 m x 75 m x 20 m. Figure 17-12 and Figure 17-13 show confidence limit for Measured and Indicated Resources. Table 17-6 lists the parameters used to determine the Measured and Indicated confidence limits.

The co-efficient of variation (CV) is used in the confidence limit calculations, and for San Antonio composites the CV is 1.56. The CV is the standard deviation divided by the mean and is a measure of dispersion of values from the mean. The lower the CV, the less variability is observed in the grade and also results in lower relative standard error (RSE) As drill spacing increases, the ordinary kriging variance (KV) also increases.

17.9.2 Measured Mineral Resources

Confidence limit studies indicated that the maximum drill hole spacing required to meet the 90% confidence level of ±15% on a quarterly production increment is 22 m x 22 m. Visual inspection of volume and grade along 25 m sections shows that continuity of resource is adequately maintained at a 25 m grid. Mineral resources are classified as Measured when a block is located within 19 m to the nearest composite and a composite from two additional drill holes are within 27.5 m. Drill hole spacing for Measured Resources would broadly correspond to a 25 m grid.

Figure 17-12: San Antonio Confidence Limits Graph for Measured Resources

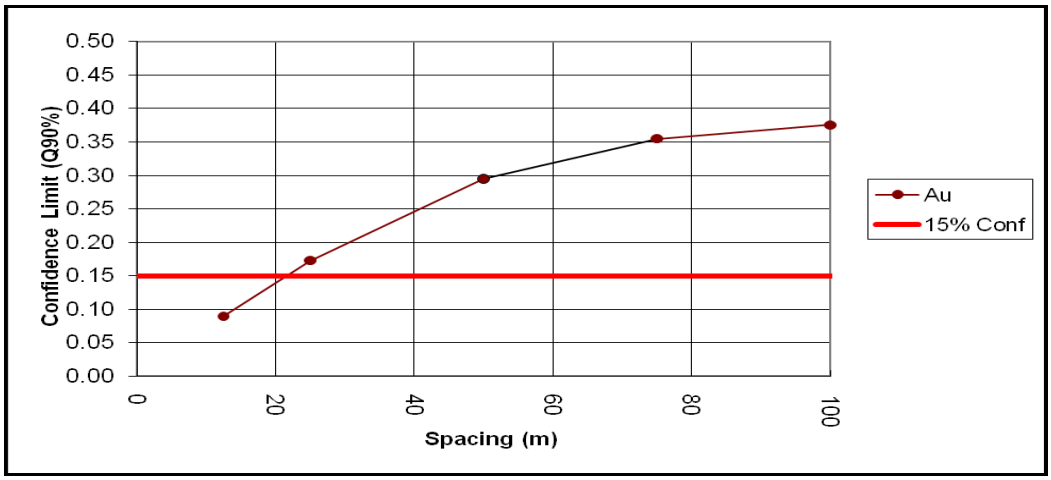


Figure 17-13: San Antonio Confidence Limits Graph for Indicated Resources

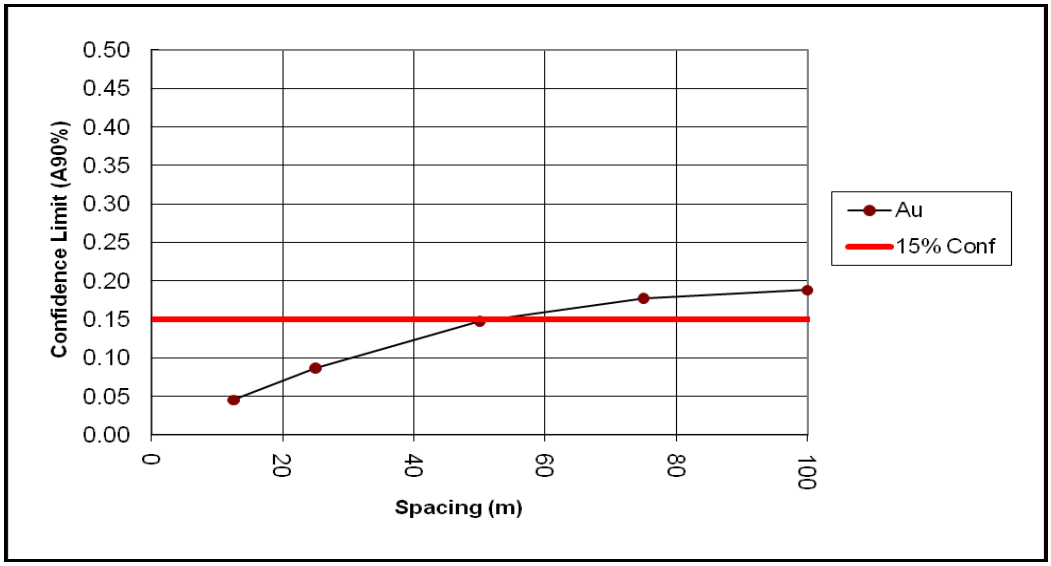


Table 17-6: Confidence Limits Parameters

Spacing	San Antonio Project				
(m)	CV	KV	RSE	Q90	A90
150	1.56	0.067	0.40	0.38	0.19
100	1.56	0.065	0.40	0.38	0.19
75	1.56	0.058	0.37	0.35	0.18
50	1.56	0.040	0.31	0.30	0.15
25	1.56	0.014	0.18	0.17	0.09
12.5	1.56	0.004	0.09	0.09	0.04

Note: Global variogram used to determine kriging variance.

17.9.3 Indicated Mineral Resources

AMEC calculated from the confidence limit study that the maximum drill hole spacing required to meet the 90% confidence level of ±15% for an annual product increment for Indicated Resources is 50 m x 50 m. AMEC visually reviewed shapes and grade in cross- and long- sections, and concluded that drill holes spaced farther apart than 50 m x 50 m could pose a risk in accurately interpolating gold grades >1 g/t Au. Therefore, a drill spacing of 50 m x 50 m was selected as the drill spacing required to meet the Indicated classification, and ensuring that the continuity of discontinuous higher-grade gold zones is sufficiently delineated to give a reliable estimate of tonnes and grade.

To implement the 50 m x 50 m drill hole spacing in the block model, the distance from block centroid to the closest and next closed composite were calculated. Mineral resources were then classified as Indicated when the distance from block centroid to the closest drill hole is less than 39 m and the distance to next closest drill holes is less than 55 m. AMEC recommends that Argonaut maintain the practice of drilling the deposit at 50 m centers which is a typical drill spacing of many hydrothermal gold deposits.

17.9.4 Inferred Mineral Resources

AMEC is of the opinion that based on gold variography ranges, a mineralized blocks within 80 m from a drill hole is sufficiently known as to be classified as Inferred Resource. AMEC is of the opinion that resources at La Colpa should be classified as Inferred until additional in-fill drill holes, density and metallurgical recovery studies are completed.

Figure 17-14 shows a Los Planes 2639800N cross section of Measured, Indicated and Inferred Resource blocks with the US$1200 LG Pit and drill hole traces.

17.10 Assessment of "Reasonable Prospects for Economic Extraction"

AMEC determined the extent of resources that might have reasonable expectation for economic extraction by applying a Lerchs–Grossmann (LG) pit outline to the resources. Cost parameters used for assessment of reasonable prospects were updated and do not reflect the cost assumptions used in the historic PA. The pit shells were run using the following assumptions:

- AMEC's long-range gold price guideline for cash-flow models in United States dollars (US$) plus 15%, which equated to a gold price of US$1,200 per ounce.
- Gold recovery is expected to range from 48.46% to 84.26% in the oxide/transition zone and from 43.50% to 58.90% in the sulphide zone.
- Processing and general and administrative (G&A) costs of US$4.30 per tonne
- Average mining cost structure that applied a base cost of US $1.47 per tonne for rock and sand.
- Transportation and selling cost of US$3.00 per ounce gold were applied to resource blocks above economic cut-off.
- Las Colinas & La Colpa Pits: 44º to 50º pit slope angles in rock
- Los Planes and Intermediate Pits: 41º to 47º pit slope angles in rock and 35º pit slope angles in alluvium.

AMEC is of the opinion that there is a reasonable expectation for economic extraction for the mineralized material that displays geological and grade continuity within the LG cone. Figure 17-15 shows an oblique view toward the northeast of the US$1200 ounce gold LG pit shell with mine blocks at a 0.20 g/t Au cut-off grade and showing drill hole traces in black.

Figure 17-14: Los Planes Cross Section 2639800N Showing Measured (Red), Indicated (Blue), and Inferred (Cyan) Resource with US$1200 LG pit and Drill Hole Trace. Looking North.

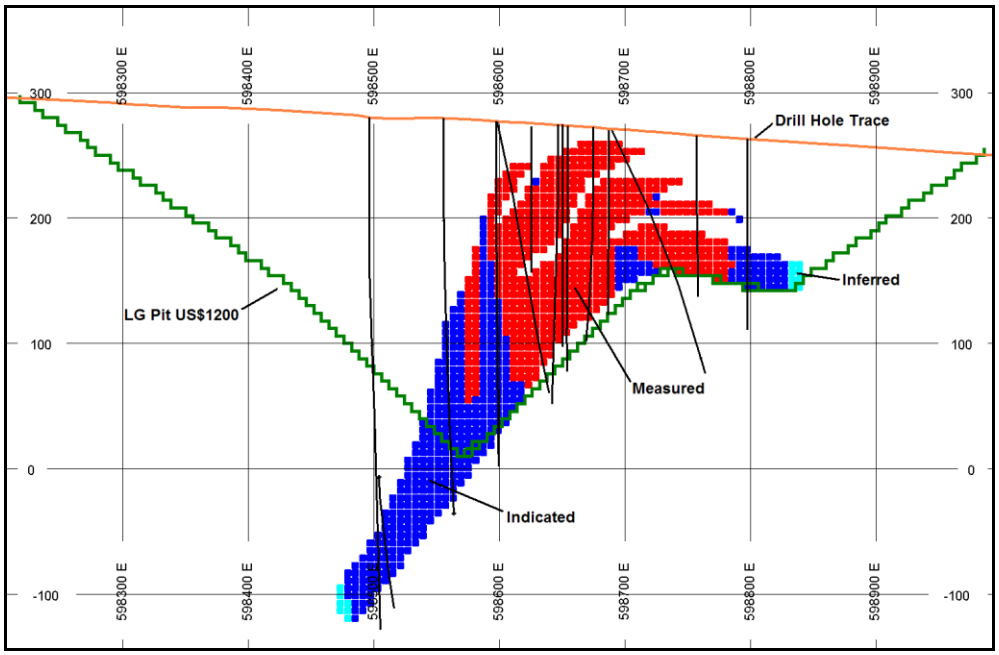
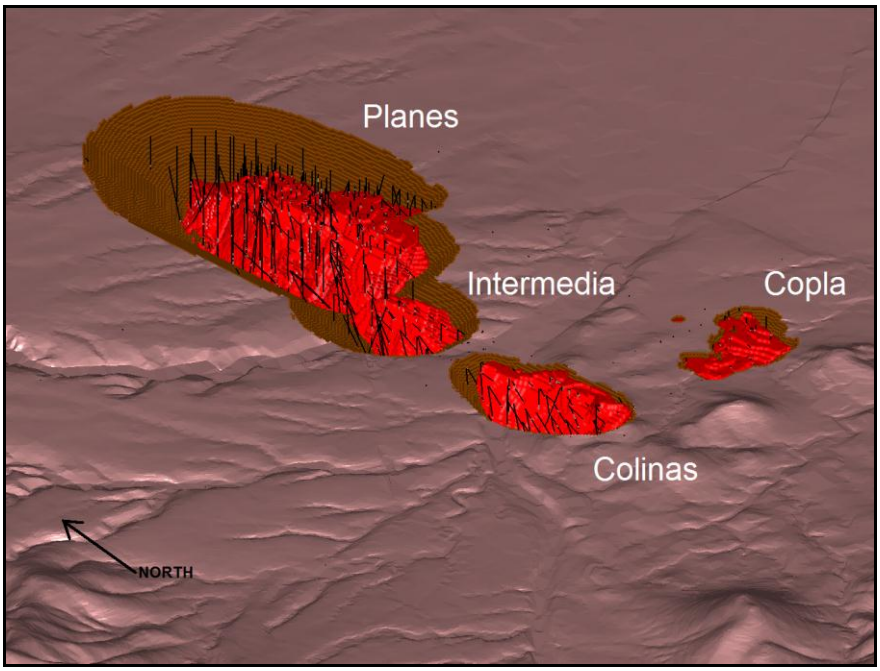


Figure 17-15: Oblique Northeast View of US$1200 LG Pits with Mineralized Mine Blocks at a 0.2 g/t Au Cut-off and Drill Hole Trace.



17.11 Mineral Resource Statement

Mineral Resources take into account geologic, mining, processing and economic constraints, and have been confined within appropriate LG pit shells, and therefore are classified in accordance with the 2010 CIM Definition Standards for Mineral Resources and Mineral Reserves.

The Qualified Person for the Mineral Resource estimate is Edward J.C. Orbock III, M.AusIMM, an AMEC employee. Mineral resources are reported at a gold price of US$1,200 per ounce and have an effective date of 29 April, 2011.

AMEC cautions that Mineral Resources that are not Mineral Reserves and do not have demonstrated economic viability.

Mineral Resources are stated in Table 17-7 using cut-off grades appropriate to the oxidation state of the mineralization.

Table 17-7: Mineral Resource Statement, San Antonio Project, Effective Date 29th April, 2011, Edward J.C. Orbock III, M.AusIMM

Deposit	Class	Au Cut-off (g/t Au)	Tonnes (x 1,000)	Au Grade (g/t)	Total Au grams (x 1,000)	Au ounces (x 1,000)
Las Colinas	***Oxide/Transition***					
	Measured	0.23	248	0.76	187	6
	Indicated	0.23	970	0.71	689	22
	Sulphide					
	Measured	0.26	360	0.72	260	8
	Indicated	0.26	5,447	0.84	4,569	147
	Oxide/Transition					
	Inferred	0.23	25	0.48	12	0.4
Los Planes	***Oxide/Transition***					
	Measured	0.13	6,297	0.92	5,804	187
	Indicated	0.13	8,689	0.90	7,830	252
	Sulphide					
	Measured	0.19	3,935	1.30	5,111	164
	Indicated	0.19	22,098	1.03	22,794	733
	Oxide/Transition					
	Inferred	0.13	407	0.92	375	12
	Sulphide					
	Inferred	0.19	464	0.94	436	14
Intermedia	**Oxide/Transition/Sulphides**					
	Measured	0.21	193	1.12	215	7
	Indicated	0.21	2,955	0.94	2,774	89
	Oxide/Transition/Sulphides					
	Inferred	0.21	9	0.56	5	0.2
La Colpa	***Oxide/Transition***					
	Inferred	0.18	1,109	0.43	473	15
	Sulphide					
	Inferred	0.22	741	0.53	395	13
All Deposits	***Oxide/Transition/Sulphides***					
	Measured	Various	11,032	1.05	11,577	372
	Indicated	Various	40,160	0.96	38,655	1,243
	Oxide/Transition/Sulphides					
	Measured+Indicated	Various	51,192	0.98	50,232	1,615
	Oxide/Transition/Sulphides					
	Inferred	Various	2,755	0.62	1,696	55

Notes to Accompany Mineral Resources Table:

1. Mineral Resources are reported at various cut-off grades for oxide, transition, and sulphide material.
2. Mineral Resources are reported as undiluted.
3. Mineral Resources are reported within a conceptual pit shell
4. Mineral Resources are reported using a long-term gold price of US$1,200/oz, variable mining and processing costs and variable recoveries that are based on the oxidation state of the sulphides in the deposit.
5. Summation of values may not agree with table entries due to rounding.

17.12 Comment on Section 17

The QPs are of the opinion that the Mineral Resources for the Project, which have been estimated using RC and core drill data, have been performed to industry best practices, and conforms to the requirements of CIM (2010).

AMEC reviewed the surfaces against oxidation codes from drill holes is of the opinion that the surfaces adequately represent the oxidation state contacts.

Composite intervals in Los Planes with sulphide content equal to or greater than 5% should be domained separately for interpolation.

The quality of the variograms for Los Planes, Las Colinas and Intermediate are adequate for Measured and Indicated Resource classification.

Mineralization grade and continuity at Los Planes, Los Colinas and Intermediate are sufficiently known to support Measured, Indicated and Inferred classifications. Mineralization grade and continuity at La Colpa are not sufficiently known to support either Measured or Indicated classifications but sufficient data are available to support Inferred classification.

Factors which may affect the Mineral Resource estimates include the gold price assumptions, metallurgical recovery assumptions, rock type densities, and the assumed pit slope angles used to constrain the estimates.

18.0 ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORT ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES

As the Project is not at a production or development stage, this section is not relevant to the Report.

19.0 OTHER RELEVANT DATA AND INFORMATION

Since the completion of the 2010 PA, Argonaut has commenced work on a pre-feasibility study, which will address environmental, permitting, metallurgy, process design, mine layout and scheduling, geotechnical and hydrological aspects, marketing, taxation, financial analysis and derive a project execution plan.

A contract for the work has been awarded to SRK Consultants (SRK).

Portions of the supporting studies for the pre-feasibility study are underway. To date, Argonaut has advised that this work encompasses the following on-going studies by the third-party consultants indicated:

- Baseline flora, fauna, soil characterization, and air quality studies (CIBNOR)
- Metallurgical testwork (Metcon and KCA)
- Geotechnical and waste rock characterization studies (Golder)
- Hydrological assessments (SWS)
- Socio-economic studies (DS Dinamica Social).

20.0 INTERPRETATION AND CONCLUSIONS

The following interpretations and conclusions are made based on the updated Mineral Resource estimate for the Project. Some conclusions use information from 2010 historic PA as supporting background documentation, or the supporting information has been sourced from Argonaut:

- Legal opinion and opinions from Argonaut management were provided to AMEC that indicates Argonaut holds 100% of the Project. The Mexican government retains a sliding scale (variable) 1–3% net smelter production royalty on the four claims of the El Triunfo concession group. No other royalties are payable on any other concession, including the concessions that host the deposits
- Argonaut has purchased 260 ha of surface rights in the Project area. Argonaut has acquired an additional 628 ha. It is a reasonable expectation that sufficient surface rights to support any planned infrastructure locations can be obtained
- Surface agreements have been entered into with the San Antonio ejido; these agreements allow “low impact” and “transition” exploration with appropriate compensation payments
- Water rights agreements have been entered into; registrations of the agreements will be dependent on the location of the extraction point; this will not be determined until the hydrological studies that are underway are completed
- Argonaut will need to apply for appropriate mining operations-related permits under local, State and Federal laws to allow proposed mining operations. Exploration activities to date have been conducted under the relevant permits
- No environmental permits have been granted for mining operations. This will include submission and approval of an MIA. Baseline environmental studies are underway
- At the effective date of this Report, environmental liabilities are expected to be restricted to rehabilitation of exploration access roads and drill pads. There may be instances of contamination associated with historic workings; this has not been investigated or verified to date
- Closure provisions are preliminary in nature and are based on the superceded 2010 PA. Closure costs were estimated in the PA as about US$4.6 M, based on an assumption of a heap leach operation. Argonaut is reviewing the closure cost estimate, and will update the expected figure when the MIA is submitted to the appropriate regulatory authorities
- Argonaut is not aware of any significant environmental, social or permitting issues that would prevent the proposed exploitation of the Project deposits

- The existing and planned infrastructure, availability of staff, the existing power, water, and communications facilities, the methods whereby goods are transported to the mine, and any planned modifications or supporting studies are well-established, or the requirements to establish such, are well understood by Argonaut, and can support the declaration of Mineral Resources
- Knowledge of the controls on mineralization at Los Planes, Las Colinas, the Intermediate Zone and La Colpa is sufficient to support estimation of Mineral Resources
- Exploration programs completed to date are appropriate to the mineralization styles known to occur within the Project boundary
- The 2010 PA indicated robust Project economics, but as the Mineral Resource on which the PA is based has been superceded by the updated, larger, Mineral Resource estimate in this Report, the PA is considered to be historic and should not be considered current to the most recent information available on the project. The project economics are planned to be updated in the pre-feasibility study, which is currently underway
- The quantity and quality of the lithological, geotechnical, and collar and down hole survey data collected in the exploration, delineation, and grade control drill programs are sufficient to support Mineral Resource estimation
- Sampling methods are acceptable, meet industry-standard practice, and are acceptable for Mineral Resource estimation
- The quality of the gold analytical data is reliable and sample preparation, analysis, and security have generally been performed in accordance with exploration best practices and industry standards
- Data verifications programs undertaken on the data collected from the Project acceptably support the geologic interpretations and the database quality, and therefore support the use of the data in Mineral Resource estimation. No data biases have been identified
- Metallurgical test work completed on the Project has been appropriate to establish processing routes for the different mineralization styles encountered in the deposits. Testwork was generally completed on mineralization that was typical of the deposit. Recovery factors used to support determination of reasonable prospects of economic extraction for the Mineral Resource estimates were developed from metallurgical testwork
- Gold recovery is expected to range from 48.46% to 84.26% in the oxide/transition zone and from 43.50% to 58.90% in the sulphide zone

- The proposed process route in the superceded 2010 PA used conventional technology. There are no indications from the additional testwork that would indicate that the proposed heap leach/adsorption and recovery plant envisaged in the PA is non-feasible
- The test work shows that higher recoveries for sulphide could be obtained by crush to 2.00 mm (10 mesh). While this crush size is very fine, it has been attained in other production facilities
- Estimations of Mineral Resources for the Project conform to industry best practices, and meet the requirements of CIM (2010)
- An open pit extraction scenario is appropriate to the style of mineralization and a LG shell has been used to constrain the Mineral Resource estimate. The LG parameters use updated commodity prices and cost assumptions to those of the superceded 2010 PA
- Factors which may affect the Mineral Resource estimates include gold price assumptions, metallurgical recovery assumptions, and mining cost assumptions used to constrain the LG shells, rock-type densities, and the assumed pit slope angles used to constrain the estimates.

There is remaining exploration potential within the Project. The current deposits have some open dimensions, and infill drilling is likely to identify additional mineralization. Exploration targets, defined by anomalous surface samples and trends of *gambusino* workings dating from the early 1900s, represent additional Project upside.

21.0 RECOMMENDATIONS

A two-phase work program is proposed. The first phase comprises drilling, data collation and metallurgical testwork and studies. The second phase comprises a detailed project study at the level of a pre-feasibility study, supporting studies for the pre-feasibility study, and may incorporate additional drilling at the La Colpa zone.

The phases can be undertaken concurrently, with results of Phase 1 incorporated into Phase 2 as they become available. Depending on completion date, the additional drilling recommended for the La Colpa Zone in Phase 2 may also be available in time to be incorporated in the mining study.

Portions of both work programs are underway.

21.1 Phase 1

The Phase 1 program costs range from US$3.48 M to US$3.53 M.

21.1.1 Drill Program

Argonaut has commenced a drill program of approximately 17,000 m on the Project. Drill holes are designed to test the La Colpa zone, define the faulted block boundaries between the Los Planes, Intermediate Zone and Las Colinas deposits, continue with condemnation drilling, and provide additional hydrological monitoring points. Approximately 4,600 m of this program has been completed. Argonaut has estimated that the program will cost approximately US$2.7 M.

21.1.2 Mineral Resource Estimates

AMEC recommends that:

- Future grade shell modeling is constructed using composite length values.
- Additional drilling be performed in the area between the Intermediate Zone and Los Planes deposits to test for possible extension of mineralization prior to the offsetting fault (nine RC drill holes at 1,235 m for a total estimated cost of US$200,000)
- Step-out and infill drilling is undertaken at La Colpa at 100 m spacing (13 RC drill holes at 2,355 m for a total estimated cost of US$235,500)
- A program to determine density of expected waste material to be mined should be undertaken. AMEC recommends at least 30 spatially-representative samples be collected from each rock type (estimated cost of US$30,000)

21.1.3 Metallurgy

AMEC recommends that:

- Potential metallurgical variability over the deposit should be evaluated by a combination of bottle roll and column leach tests on samples selected to fully represent the material to be processed (estimated cost of US$150,000 to US$200,000, depending on the number of samples selected)
- The potential of higher gold recovery from oxide/mixed and sulphide material indicates that a trade-off study on quaternary crushing should be performed to see if finer crushing would enhance the project economics (estimated cost of US$30,000).
- A trade-off study on the potential for milling is also recommended to see if project economics could be enhanced by grinding the run-of-mine material. This trade-off will require grindability testing on the major mineralization types (estimated cost of US$100,000).
- Further leach test work, including analytical and mineralogical examination of heads and metallurgical products is recommended to evaluate precious metals liberation at finer crushed sizes than tested to determine of -1/4", - 6 mesh or -8 mesh would be an economic alternative for sulphide recovery at the San Antonio Project (estimated cost of US$35,000).

21.2 Phase 2

The Phase 2 program costs could range from about US$1 M to US$1.4 M.

21.2.1 Prefeasibility Study

Argonaut has selected SRK Consultants to undertake a preliminary feasibility study on the Project. This study will address environmental, permitting, metallurgy, process design, mine layout and scheduling, geotechnical and hydrological aspects, marketing, taxation, financial analysis and derive a project execution plan. Some of the supporting work for the study, such as evaluation of geotechnical and hydrological considerations and environmental baseline studies has already commenced.

Argonaut has allocated between $0.1 M and $0.3 M to the pre-feasibility study. The ongoing geotechnical, hydrological and baseline environmental studies have a budget allocation of between $0.3 M and $0.5 M.

21.2.2 Additional Drilling

Depending on successful results from the Phase 1 drilling, AMEC considers that additional step-out and infill drilling may be warranted at La Colpa at 50 m spacing (39 RC drill holes at 6,650 m for a total estimated cost of $665,000).

22.0 REFERENCES

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23.0 DATE AND SIGNATURE PAGE

The effective date of this Technical Report, entitled “Argonaut Gold Inc., San Antonio Gold Project, Baja California Sur, Mexico, NI 43-101 Technical Report” is 20 June 2011.

Signed on behalf of AMEC E&C Services Inc.

“signed and sealed”

Larry Smith, P.Geo.
Vice President, Consulting

22 June 2011