

Independent NI 43-101 Technical Report on the Langmuir Nickel Project

Timmins Area
Ontario, Canada

Report Prepared for:



EV Nickel

EV Nickel Inc.
44 Victoria Street, Ste. 1612
Toronto, Ontario
Canada, M5C 1Y2

Report Prepared by:



Caracle Creek International Consulting Inc.
1721 Bancroft Drive
Sudbury, Ontario
Canada, P3B 1R9

Qualified Persons:

Scott Jobin-Bevans (PhD, PMP, P.Geo.)
Principal Geoscientist

Jennifer Gignac (BSc, P.Geo.)
Professional Geologist

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DATE AND SIGNATURE

The Report, "Independent NI 43-101 Technical Report on the Langmuir Nickel Project, Timmins Area, Ontario, Canada", issued 30 April 2021 and with an Effective Date of 19 April 2021, was prepared for EV Nickel Inc. and authored by the following:

"signed and sealed original on file"

Scott Jobin-Bevans (PhD, P.Geo., PMP)
Principal Geoscientist
Caracle Creek International Consulting Inc.

"signed and sealed original on file"

Jennifer Gignac (BSc, P.Geo.)
Professional Geologist

Dated: April 30, 2021

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1.0 SUMMARY

1.1 Introduction

Caracle Creek International Consulting Inc. ("Caracle") was engaged by EV Nickel Inc. ("EVNi" or the "Issuer"), to prepare an independent National Instrument 43-101 ("NI 43-101") Technical Report (the "Report") for its Langmuir Nickel Project ("Langmuir" or the "Project" or the "Property"), located in the Timmins area, Ontario, Canada. The Report has been prepared in accordance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1 (June 30, 2011).

1.1.1 Qualifications of Consultants

The Report has been completed by Dr. Scott Jobin-Bevans and Ms. Jennifer Gignac (together the "Consultants" or the "Authors"). Dr. Jobin-Bevans ("Principal Author") is the Principal Geoscientist at Caracle Creek International Consulting Inc. and Ms. Gignac ("co-Author") is a Professional Geologist and independent consultant.

Dr. Jobin-Bevans is a professional geoscientist (APGO#0183, P.Geo.) with experience in geology, mineral exploration, Mineral Resource and Mineral Reserve estimation and classification, land tenure management, metallurgical testing, mineral processing, capital and operating cost estimation, and mineral economics. Ms. Gignac is a professional geoscientist (APGO#2045, P.Geo.) with experience in geology, mineral exploration, geological modelling, core logging, and database management.

Dr. Scott Jobin-Bevans and Ms. Jennifer Gignac, by virtue of their education, experience, and professional association, are each considered to be a Qualified Person ("QP"), as that term is defined in NI 43-101 and specifically sections 1.5 and 5.1 of NI 43-101CP (Companion Policy). Dr. Jobin-Bevans, as Principal Author, is responsible for preparing all sections of the Report except for Section 2.4 and Ms. Gignac, as co-Author, is responsible for Section 2.4 of the Report. A Certificate of Author for each Consultant is provided in Appendix 1.

1.1.2 Purpose of the Technical Report

The Report has been prepared for EV Nickel Inc., a privately held Canadian Company and provides a summary of the material scientific and technical information concerning Project in support of the Standards of Disclosure for Mineral Projects according to Canadian National Instrument 43-101.

Specifically, the Report provides an independent review of EVNi's Langmuir Nickel Project located near Timmins, Ontario, to verify the validity of data and information related to historical mineral exploration on the Property, and review and report on data and information available in the public domain with respect to the Property.

The Report is the current NI 43-101 Technical Report for the Property, supplanting the most recent mineral resource estimation and technical report prepared by SRK Consulting (Canada) Inc., dated June 2010 (Cole *et al.*, 2010). The Effective Date of the Report is 19 April 2021.

1.1.3 Details of Personal Inspection

Ms. Jennifer Gignac (P.Geo.), visited the Langmuir Nickel Project on 17 and 18 April 2021, accompanied by Mr. Kenneth Bimm (field assistant). Principal Author Dr. Scott Jobin-Bevans was unable to complete a site visit due to quarantine and travel restrictions related to the worldwide COVID-19 pandemic.

The Personal Inspection (site visit) was required for the purposes of verifying Project access, general inspection, ground truthing, information and data collection, confirmation of historical drill core and drill core logging, and observations with respect to the geology and exploration potential of the Project. During the site visit, access to the Property was confirmed and a number of drill collars were located and their coordinates taken with GPS to check against available information.

Historical drill core is preserved on covered racks at a secure core yard facility approximately 1.5 km south of the Timmins Airport, west side of Airport Road. The site and core is maintained in an orderly and clean fashion within a secure and gated fenced compound.

The Authors selected a number of non-sampled historical core intervals along strike of modelled structures and/or mineralized horizons to determine if infill core sampling would be required for future geological modelling and mineral resource estimation. For the most part, the reviewed non-sampled intervals contained nil to locally trace sulphide. Drill core from historical drilling programs on the Property was selectively reviewed and observations compared against original core logs. The QP also spot checked mineralized intercepts for comparison to reported values. Lithology and mineralization observed in selected intervals corresponds to and supports reported results. The predominant mineralized lithology consists of weakly to moderately serpentine +/- talc altered komatiite sequence with pyrrhotite +/- pentlandite as blebby disseminations and fracture filling to semi-massive horizons. The lithology and sulphide mineralization contacts checked by the QP match the information reported in the drill logs. Generally, the boundaries of the sulphide mineralization zones examined in core match the boundaries determined from assay results.

As there was good correlation with the drill core intervals re-logged during the Personal Inspection, there is no outcropping on the Property which is representative of the target mineralization, and there is excellent (complete) documentation of all previous work completed by Golden Chalice Resources/Rogue Resources (2005-2015), including diamond drilling, the Authors determined that no re-sampling of the historical drill core was necessary.

1.2 Property Description and Location

The Langmuir Property, within National Topographic System ("NTS") map sheets 42 A/06 and A/07, is situated in portions of Blackstock, Langmuir, Fallon, Douglas, Eldorado, Carman, and Thomas townships, Porcupine Mining Division, northeastern Ontario, Canada. The centre of the Property is approximately 30 km southeast of the city of Timmins.

The Property, covering the Night Hawk River and southern parts of Night Hawk Lake in Carman and Langmuir townships, is centred at approximately 48 18'N Latitude, 80 58'W Longitude or UTM (NAD83 Z17) coordinates 502000mE 5350000mN. The Property is accessed from the city of Timmins/South Porcupine by a series of all-weather gravel roads.

All known nickel sulphide mineralization that is the focus of the Report and that of EVNi is located within the boundary of the mining lands that comprise the Langmuir Nickel Project. The Langmuir W4 Nickel Deposit is located within unpatented mining claim 299485 and Legacy Mining Claim 4203498.

The Langmuir Property comprises 156 unpatented mining claims (28 Multi-Cell Mining Claims ("MCMC"s), 22 Single Cell Mining Claims ("SCMC"s), and 106 Boundary Claim Mining Claims ("BCMCs")), covers approximately 9,079 ha, and is owned 100% by EVNi. The Property has not been legally surveyed.

Annual assessment work requirements total \$171,600 and historically \$518,200 has been applied to the Property. There is \$1,991,481 in work assessment reserve which is enough to keep the mining claims current for at least 11 years. As of the Effective Date of the Report, all mining claims are valid with expiry dates ranging from 8 February 2022 to 18 July 2023.

1.2.1 Exploration Approval and Permits

No work is currently being conducted on the Project. On 6 April 2021, the Company submitted an application for an Exploration Permit to conduct geophysical surveys (requiring generator), diamond drilling (mechanized drilling), ground geophysical surveys without a generator, trails, airborne geophysical survey, and land sample (<1 cubic metre). Exploration permits generally take about 60 days for approval and as such the Exploration Permit is expected to be approved by approximately June 4, 2021.

1.2.2 Property Access and Operating Season

The Property is located within the boundaries of the City of Timmins, Ontario. It is accessed by motor vehicle south from the village of South Porcupine via a gravel road known as Stringers Road. This road cuts through the central western portion of the Property. Approximately 30 km southeast of Timmins on Stringers Road, a drill trail (ATV/snowmobile accessible) branches off northeastward. Approximately three km along this road, the Langmuir W4 Nickel Deposit is reached.

Exploration work such as drilling and geophysical surveys can be completed year-round, with some surface work (*i.e.*, geological mapping, trenching and surface sampling) limited by snow cover during the winter months.

1.3 History

Langmuir Township area has received much exploration interest over the past 100 years with more recent initiatives focused on nickel exploration as the area is within a highly prospective komatiitic belt known for the formation of magmatic nickel sulphide mineralization.

Golden Chalice Resources Inc. ("Golden Chalice") changed its name to Rogue Resources Inc. ("Rogue" or "Rogue Resources") in October 2010. On 4 March 2021, Rogue announced the sale of the Langmuir Nickel Project to EV Nickel Inc. (www.rogueresources.ca/2021).

Historical results from exploration work on or proximal to the Project have not been verified by the Principal Author or a Qualified Person associated with the Company and as such are not necessarily indicative of the results to be found on the Project.

Industry-related exploration work within the area of the Property (*i.e.*, Langmuir Township) has taken place since 1964 and continued to 2014, with the most recent work completed by Golden Chalice/Rogue Resources Inc. (Table 1-1).

Table 1-1. Summary of historical exploration work conducted on the Property, 1964-2015.

Year	Company	Exploration Activity
1964-65	Min-Ore Mines Limited	Ground magnetic and electromagnetic survey
1965	G.E. Cooper	Diamond drilling (1 hole, 154 m)
1970	Yellowknife Base Metals Limited	Diamond drilling (3 holes, 803 m)
1980-81	Utah Mines Ltd.	Ground magnetic survey; geological survey; diamond drilling (2 holes, 147 m)
1987	Canadian Nickel Company	Airborne electromagnetic survey
2005	Golden Chalice Resources	Ground magnetic and HLEM surveys; diamond drilling (4 holes, 528 m); Heliborne VTEM-Mag survey (687 line-km)
2006	Golden Chalice Resources	Ground magnetometer surveys (8.15 line-km); Mag/VLF-EM (6.0 line-km)
2007	Golden Chalice Resources	Diamond drilling (8 holes, 2,374 m); diamond drilling (37 holes, 16,262 m); MMI orientation geochemical soil survey; MMI geochemical soil survey (West/East grids); heliborne VTEM-Mag survey (2,601 line-km)
2008	Golden Chalice Resources	Diamond drilling (20 holes, 6,938 m); diamond drilling (13 holes, 6,120 m); MMI geochemical soil survey
2009	Golden Chalice Resources	Diamond drilling (11 holes, 3,939 m); down-hole TEM geophysical survey (8 drill holes); drill hole core characterization
2010	Golden Chalice Resources	Diamond drilling (5 holes totalling 1,645 m); Phase 1 Baseline Environmental Studies initiated; Mineral Resource Estimate by SRK Consulting Canada; Mineralogical study
2011	Rogue Iron Ore Corp. (previously Golden Chalice)	Diamond drilling (13 holes, 2,282 m) - 6 HQ (642 m) for metallurgical tests, 7 NQ (1,640 m); Metallurgical testwork (scoping level)
2012	Rogue Resources	Metallurgical testwork review (Starkey)
2014	Rogue Resources	Compilation and re-interpretation of 2005 and 2007 Heliborne VTEM-Mag surveys; Phase 2 Baseline Environmental Studies proposed to begin
2015	Rogue Resources	Mineralogical study

1.3.1 Historical Drilling (2005-2011)

Between May 2005 and February 2011, Golden Chalice/Rogue Resources completed 130 drill holes (40,796 m) on the Property and all of the data and information associated with this drilling is available to the Authors and the Issuer. Information regarding the minor drilling conducted on the Project prior to 2005 is not available to the Authors. This pre-2005 data and information is not considered reliable for the purposes of mineral resource estimation.

All drill holes completed from 2005 to 2011 were collared at surface and were land based, employing NQ-size coring tools, excepting six metallurgical drill holes from 2011 which used HQ size. Services from four

diamond drilling contractors were employed: Norex Drilling (Timmins, Ontario), Orbit-Garant Drilling (Val-d'Or, Quebec), Major Drilling (Val-d'Or, Quebec), and Bradley Brothers (Timmins, Ontario).

Table 1-2. Summary of historical diamond drilling on the Langmuir Nickel Property.

Year	Area of Drilling	No. Holes	Metres
2005	W6 South Central	4	545
2007	W2, W3 Central	8	2,695
2007-08	W4 Nickel Deposit	37	16,262
2007	W4 East	1	413
2008	Eastern area of property	20	6,938
2008	W6 South Central & Central West of W4	31	6,077
2009	W6 South Central & W2, W3 Central	11	3,939
2010	W2 Central	5	1,645
2011	W4 East & Langmuir W4 (metallurgical)	13	2,282
Total:		130	40,796

1.3.2 Historical Mineral Resource Estimates

In 2010, SRK Consulting Canada Inc. ("SRK") completed an initial mineral resource estimate on the Langmuir W4 Nickel Deposit for Golden Chalice (Cole *et al.*, 2010). The effective date of the historical mineral resource estimate was 28 April 2010. Langmuir W4 contains magmatic polymetallic sulphide mineralization. Nickel, copper, platinum, palladium and cobalt were estimated in the SRK study but mineral resources were tabulated on the basis of nickel and copper content only, due to the generally low grades reported for the other metals. A Consolidated Mineral Resources Statement for the Langmuir W4 Nickel Deposit is presented in Table 1-3.

Table 1-3. Consolidated Mineral Resource Statement*, Langmuir Nickel Project, Ontario, SRK Consulting, 27 April 2010 (Cole *et al.*, 2010).

Category	Quantity Tonnes	Grade Ni %	Cu %	Metal Ni lbs 000's	Cu lbs 000's
Open Pit**					
Indicated	590,000	0.99	0.06	12,816	840
Inferred	125,000	0.88	0.06	2,437	157
Underground **					
Indicated	87,000	1.04	0.08	1,997	149
Inferred	46,000	0.91	0.05	923	53
Combined					
Indicated	677,000	1.00	0.06	14,813	989
Inferred	171,000	0.89	0.06	3,360	210

* Mineral resources are reported in relation to optimized pit shells. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. All assays have been capped where appropriate.

** Open pit mineral resources are reported at a cut-off of 0.40 percent nickel inside a conceptual pit shell. Underground mineral resources are reported at 0.70 percent nickel and include resource blocks above cut-off outside the conceptual pit shell. Cut-off grades are based on a nickel price of US\$8 per pound and a metallurgical recovery of eighty-seven percent, without considering revenues from other metals..

Nickel grades were estimated in a block model constrained by modelled nickel mineralization wireframe models, using a geostatistical approach. The mineral resources are reported at two cut-off grades to reflect

the “reasonable prospects” for economic extraction. Conceptual pit optimization work to test the “reasonable prospects” for economic extraction was completed with Whittle software (Cole *et al.*, 2010).

The historical mineral resources statement was prepared on the basis of nickel content only. Copper, cobalt and platinum and palladium grades were estimated in the block model however cobalt and platinum and palladium do not contribute significantly to the value of the nickel sulphide mineralization. Accordingly, the mineral resource statement for Langmuir W4 is reported on the basis of nickel and copper only.

The historical mineral resource estimate used categories that conformed to CIM Definition Standards on Mineral Resources and Mineral Reserves (CIM, 2005) at the time of completion of the estimate, as outlined in NI 43-101, Standards of Disclosure for Mineral Projects. However, neither the Principal Author nor a qualified person have done sufficient work to classify any of the historical estimates as current mineral resources and as such, the Principal Author and the Issuer are treating the tonnages and grades reported as historical mineral resources. Investors are cautioned that the historical mineral resource estimates do not mean or imply that economic deposits exist on the Property.

1.3.3 Historical Mineralogical and Metallurgical Studies

In 2011, Rogue Resources contracted the Metallurgical Division of Inspectorate Exploration and Mining Services Ltd. (“Inspectorate”) of Richmond, B.C. (A Bureau Veritas Group Company) to conduct a scoping study level of metallurgical tests on the recovery of base and precious metals using flotation methods (Shi and Redfearn, 2011). This work was overseen by Mr. John Starkey of Starkey & Associates Inc.

A total of 127 drill core samples were submitted to Inspectorate and composited into average grade (RA), low grade (RB), and high grade (RC) samples. Preliminary and scoping flotation tests were performed on the average grade (RA) composite, with confirmatory tests subsequently performed on each of the low (RB) and high (RC) grade composites.

The scoping study metallurgical testing program produced mixed results across the three composites which will require further testing in order to optimize metallurgy. Nickel recovery for the RA composite in the roughers is reasonable at 81.6%, which can probably be increased with further optimization. However, performance in the cleaner circuit is significantly lower and will require additional testing. Cobalt recovery appears to mirror the recovery trends of the nickel very closely. Whereas, copper recovery appears to be relatively independent of the Ni-Co trends. Nickel recovery for the low grade composite, RB, is slightly lower than that of the mid-grade composite, RA, which is expected, considering the feed grade is less than half that of RA. High grade composite, RC, appears to have quite different mineralogical and metallurgical characteristics compared to composites RA and RB. At a significantly higher feed grade (2.5 times RA) and a finer grind, recovery is much lower.

Shi and Redfearn (2011), determined that there were a number of unknowns with respect to the mineralogy, particle sizing, and mineral associations that must be clarified prior to further testing. They recommended a full QEMSCAN mineralogical study be completed to assist the metallurgical testing. This should be performed on all three composites, including the rougher concentrates.

1.4 Geology and Mineralization

The Langmuir Nickel Project lies within the southwestern part of the Abitibi Subprovince of the Archean Superior Province, proximal to the Shaw Dome. The Abitibi Subprovince or "greenstone belt" is the world's largest and best preserved example of an Archean supracrustal sequence. The Abitibi Greenstone Belt ("AGB") is an assemblage of volcanic, sedimentary, and intrusive rocks deformed into a roughly east-trending, 200 km wide belt exposed from the Kapuskasing Structure in Ontario to the Grenville Orogen in Quebec, a distance of 400 kilometres (Ayer *et al.*, 1999).

The Shaw Dome is a major northwest trending anticline centred approximately 20 km southeast of Timmins (Muir, 1979; Green and Naldrett, 1981). Six Ni-Cu-(PGE) deposits have been documented in the Shaw Dome and numerous showings have been identified. These nickel deposits occur in komatiitic rocks found within the Deloro assemblage near the base of the Tisdale assemblage.

1.4.1 Property Geology

The Langmuir Property is predominantly underlain by the middle and lower formations of the Tisdale Group which consist of linear sequences of mafic volcanic units or ultramafic units. These linear sequences trend east-west in the southern portion of Eldorado and Langmuir Township and then swing north-south along the eastern halves of Langmuir and Carman Townships.

1.4.2 Property Mineralization

There are seven (7) primary target areas, W1 to W7, defined mainly from heliborne VTEM Mag-EM surveys (2005 and 2007). These airborne EM anomalies were interpreted to be the result of sulphide mineralization (Orta, 2005 and 2007).

The Langmuir W4 Nickel Deposit was interpreted to consist of three sub-parallel nickel zones (A to C) hosted by komatiitic peridotite flows. The peridotite flows range from 5 to 50 m thick and are near vertical to steeply dipping at about 80 degrees to the north (Cole *et al.*, 2010).

The A, B, and C zones occur within specific komatiitic peridotite flow units. They are vertical to steeply north dipping at 70-75 degrees. The C Zone, which is the deepest occurring zone, is locally steeply south dipping. The east-west strike extent of the zones has been defined for at least 200 metres. They are open below the granodiorite dike and/or a vertical depth of 400 metres. The nickel zones have an average true thickness of 5.5 to 7.0 metres (Cole *et al.*, 2010). The sulphide assemblage consists of primarily pyrrhotite, pentlandite, and minor pyrite and chalcopyrite within the nickel zones. The pentlandite occurs intergrown with pyrrhotite as irregular grains that are generally relatively coarse grained.

The A Zone, the principal and discovery zone, consists of a basal lower horizon of stringer/fracture filling sulphides to semi-massive-massive sulphides and a stratigraphically overlying upper disseminated to blebby sulphide horizon. Locally, massive sulphide veinlets occur mainly in the basal lower horizon. The basal lower horizon sulphide modal abundance is over 15% and the upper horizon sulphide modal abundance varies from 3% to 15%. Nickel grades are typically 0.5% to 3.0% Ni within the upper disseminated sulphide horizon. Higher nickel concentrations of 5% to 7% Ni occur where sulphide concentrations increase to 30% or 35% (semi-massive sulphides). Locally, massive sulphide sections contain up to 17.9% Ni; these higher nickel concentrations generally occur in the lower basal horizon (Cole *et al.*, 2010).

1.5 Deposit Types

The sulphide mineralization discovered to date on the Langmuir Nickel Project can be characterized as ultramafic extrusive komatiite-hosted Ni-Cu-Co-(PGE) deposit type.

Two sub-types or styles of this deposit are recognized by Lesher and Keays (2002) with those types being: the Kambalda-style, komatiite-hosted, channelized flow type which is dominated by net-textured and massive sulphides situated at or near the basal ultramafic/footwall contact; and, the Mt. Keith-style, thick olivine adcumulate-hosted, sheet flow type which is dominated by disseminated and bleb sulphides, hosted primarily in a central core of a thick, differentiated, dunite-peridotite ultramafic body.

At the Langmuir Nickel Project, nickel sulphide mineralization identified to date are interpreted as being Kambalda-style.

1.6 Exploration

No exploration work has taken place on the Property since 2014. In April 2021, the Issuer engaged Caracle to complete an independent review of the 2010 Mineral Resource Estimate completed by SRK. The review was completed by Miguel Vera (B.Sc., Geology, Atticus Chile SA) (the “Reviewer”) and supervised by Dr. Scott Jobin-Bevans (P.Geo.), Principal Author of the Report.

The Reviewer had access to most of the information used and generated for the previous NI 43-101 report, including: drilling database with assays and lithology, density samples, lithological and grade shell models and a preliminary version of the block model. Further references were sourced or inferred from the report itself.

In summary, despite some moderate to minor issues, the estimation process from sampling to resource seems to have been carried out appropriately, and the results can be considered reliable.

1.7 Data Verification

The Authors have reviewed the historical data and information regarding past exploration work on the Project as provided by the Issuer. The Authors have no reason to doubt the adequacy of historical sample preparation, security and analytical procedures for the exploration work completed by past operator Golden Chalice and has a high level of confidence in this historical information and data. The drill core data and information is of sufficient quality that it can be used for future exploration program planning, geological modelling and mineral resource estimation.

1.8 Interpretation and Conclusions

The Langmuir Property comprises 9,079 hectares of unpatented mining claims which contain komatiite-hosted nickel-copper-platinum group metals sulphide mineralization, similar to other mined nickel deposits within the Shaw Dome region.

The historical work completed on the Property between 2005 and 2014 has generated a comprehensive body of exploration data and information from which EVNi will be able to move the Project forward. The historical search for Kambalda-style nickel sulphide mineralization resulted in the discovery of the Langmuir W4 Nickel Deposit in May 2007 (drill hole CGL07-06).

The overall strike length of the target ultramafic (komatiitic) flow package on the Property is at least 20 km long and up to four kilometres wide. Given the large property size and prospective geology, with several known and untested exploration targets, there is ample opportunity for future discovery.

Based on the Property's favourable location within a prolific Kambalda-style nickel belt, the high quality historical systematic exploration work completed from 2005 to 2014, the availability of all of this historical data and information and that from public (government) sources, and the requirement for dedicated and systematic exploration programs which are required to be successful in making discoveries for this particular deposit type, the Project presents excellent potential for the discovery of additional nickel sulphide deposits, and is worthy of further evaluation.

1.9 Recommendations

It is the opinion of the Authors that the geological setting and character of the nickel sulphide mineralization delineated to date on the Langmuir Property are of sufficient merit to justify additional exploration and development expenditures on the Langmuir Nickel Project. A recommended work program, arising through the preparation of the Report and consultation with the Company, is provided below.

A one year, two-phase exploration program, which considers geophysical surveys, diamond drilling, environmental studies and reporting, is outlined in Table 1-4. Implementation of Phase 2, also outlined in general in Table 1-4, is contingent on the results and success of Phase 1. Locations of Phase 2 drill holes and other components of this phase are contingent on the results from Phase 1.

Table 1-4. Budget estimate, recommended two-phase exploration program, Langmuir Nickel Project.

PHASE 1 (7 months)		
Fixed Costs	salaries, room & board, core storage/core shack, vehicle rentals	\$210,100
Geophysics	borehole TEM surveys (~20 holes)	\$85,000
Diamond Drilling	3,000 m; ~10 holes	\$533,000
Analytical Work	core assays	\$67,500
Environmental Studies		\$3,600
NI 43-101 Reports	reporting	\$30,060
	Total (P1):	\$929,260
PHASE 2 (5 months) - contingent on Phase 1 results		
Fixed Costs	salaries, room & board, core storage/core shack, vehicle rentals	\$309,500
Geophysics	follow-up borehole TEM surveys (~15 holes)	\$75,000
Diamond Drilling	2,500 m; 8 holes	\$445,500
Analytical Work	core assays	\$81,000
Metallurgical Testwork/PEA		\$249,000
Environmental Studies		\$4,000
NI 43-101 Reports	reporting	\$150,000
	Total (P2):	\$1,314,000

2.0 INTRODUCTION

Caracle Creek International Consulting Inc. ("Caracle") was engaged by EV Nickel Inc. ("EVNi" or the "Issuer"), to prepare an independent National Instrument 43-101 ("NI 43-101") Technical Report (the "Report") for its Langmuir Nickel Project ("Langmuir" or the "Project" or the "Property"), located in the Timmins area, Ontario, Canada (Figure 2-1). The Report has been prepared in accordance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1 (June 30, 2011).

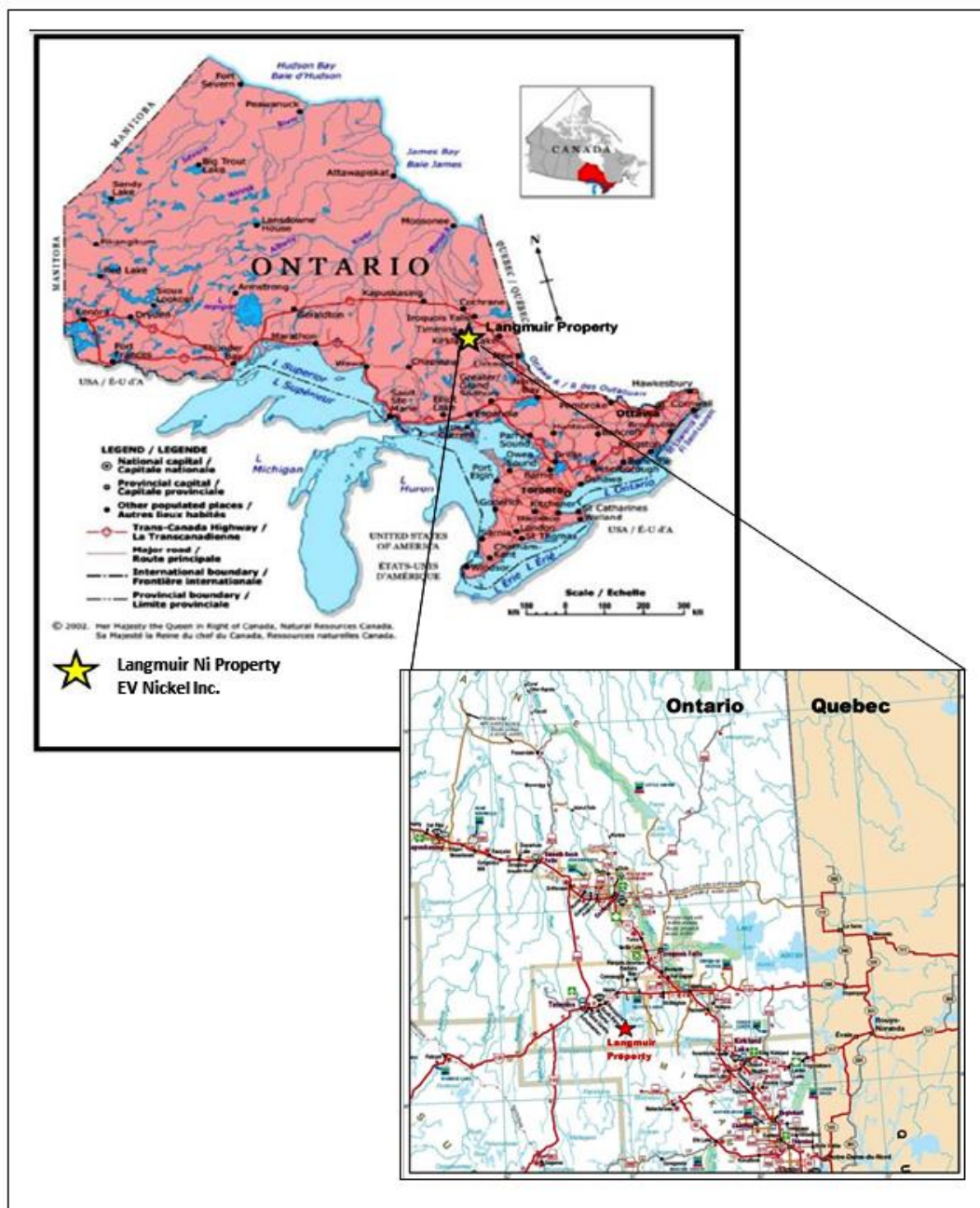


Figure 2-1. Provincial-scale location of the Langmuir Nickel Project (yellow star and red star), Timmins area, Ontario, Canada (after Cole *et al.*, 2010).

2.1 Qualifications of Consultants

The Report has been completed by Dr. Scott Jobin-Bevans and Ms. Jennifer Gignac (together the “Consultants” or the “Authors”). Dr. Jobin-Bevans (“Principal Author”) is the Principal Geoscientist at Caracle Creek International Consulting Inc. and Ms. Gignac (“co-Author”) is a Professional Geologist and independent consultant.

Dr. Jobin-Bevans is a professional geoscientist (APGO#0183, P.Geo.) with experience in geology, mineral exploration, Mineral Resource and Mineral Reserve estimation and classification, land tenure management, metallurgical testing, mineral processing, capital and operating cost estimation, and mineral economics. Ms. Gignac is a professional geoscientist (APGO#2045, P.Geo.) with experience in geology, mineral exploration, geological modelling, core logging, and database management.

Dr. Scott Jobin-Bevans and Ms. Jennifer Gignac, by virtue of their education, experience, and professional association, are each considered to be a Qualified Person (“QP”), as that term is defined in NI 43-101 and specifically sections 1.5 and 5.1 of NI 43-101CP (Companion Policy). Dr. Jobin-Bevans, as Principal Author, is responsible for preparing all sections of the Report except for Section 2.4 and Ms. Gignac, as co-Author, is responsible for Section 2.4 of the Report. A Certificate of Author for each Consultant is provided in Appendix 1.

The Consultants employed in the preparation of the Report have no beneficial interest in EVNi and are not insiders, associates, or affiliates of EVNi. The results of the Report are not dependent upon any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings between EVNi and the Consultants. The Consultants are being paid a fee for their work in accordance with normal professional consulting practices.

2.2 Purpose of the Technical Report

The Report has been prepared for EV Nickel Inc., a privately held Canadian Company, and provides a summary of the material scientific and technical information concerning the Project, in support of the Standards of Disclosure for Mineral Projects according to Canadian National Instrument 43-101.

Specifically, the Report provides an independent review of EVNi’s Langmuir Nickel Project located near Timmins, Ontario, verify the validity of data and information related to historical mineral exploration on the Property, and review and report on data and information available in the public domain with respect to the Property.

The quality of information, conclusions, and recommendations contained herein have been determined using information available at the time of Report preparation and data supplied by outside sources as outlined in Section 2.5 and Section 27.

The Report is the current NI 43-101 Technical Report for the Property, supplanting the most recent mineral resource estimation and technical report prepared by SRK Consulting (Canada) Inc., dated June 2010 (Cole *et al.*, 2010).

2.3 Effective Date

The Effective Date of the Report is 19 April 2021.

2.4 Details of Personal Inspection – Site Visit

Ms. Jennifer Gignac (P.Geo.), visited the Langmuir Nickel Project on 17 and 18 April 2021, accompanied by Mr. Kenneth Bimm (field assistant). Principal Author Dr. Scott Jobin-Bevans was unable to complete a site visit due to quarantine and travel restrictions related to the worldwide COVID-19 pandemic.

The Personal Inspection (site visit) was required for the purposes of verifying Project access, general inspection, ground truthing, information and data collection, confirmation of historical drill core and drill core logging, and observations with respect to the geology and exploration potential of the Project. Photographs from the Personal Inspection are provided in Appendix 2.

During the site visit, access to the Property was confirmed and a number of drill collars were located and their coordinates taken with GPS to check against available information. Table 2-1 shows the coordinates for relevant points and drill hole collars located in the field (Figure 2-2).

Table 2-1. Drill hole collar sites visited during Personal Inspection of the Langmuir Nickel Project.

Drill Hole Collar	Easting Surveyed	Easting GPS Check	Northing Surveyed	Northing GPS Check	Elevation Surveyed	Comments
GCL07-31	497664.679	497660.00	5349290.344	5349287.00	294.52	Cleared area, picket, NW casing with no cap.
GCL07-39	497666.629	497665.00	5349287.663	5349279.00	294.53	Cleared area, picket, capped NW casing.
GCL07-44	497777.498	497772.00	5349309.515	5349308.00	294.23	Cleared area, picket, no casing.
GCL07-45	497615.340	497612.00	5349269.300	5349268.00	294.69	Cleared area, picket, capped NW casing.
GCL-08-09WA	497400.000	-	5349000.000	-	295.00	Cleared area; couldn't find casings or pickets Presumably casings removed due to failed holes/re-drill.
GCL-08-09WB	497398.000	-	5349003.000	-	295.00	Cleared area; couldn't find casings or pickets Presumably casings removed due to failed holes/re-drill.
GCL-08-09WC	497396.000	-	5349006.000	-	295.00	Cleared area; couldn't find casings or pickets Presumably casings removed due to failed holes/re-drill.

*NAD83 Zone 17N; hand-held GPS points taken at the drill sites were approximately 5 m off of drill hole collar survey positions recorded in historical reports, which is expected due to sensitivity of the hand-held GPS when in a forested area.



Figure 2-2. Selection of photos taking during the Personal Inspection of the Property (see also Appendix 2). (A) Main access trail conditions showing blow down and overgrowth; (B) First creek crossing with makeshift “bridge”, main access trail; (C) Drill hole collar GCL07-39; and (D) Drill hole collar GCL07-45.

The Langmuir Property is accessed via a network of well-maintained gravel roads: Langmuir and Forks Roads (formerly Tisdale Street and Stringers Road), from South Porcupine, Ontario. Approximately 5 km southeast of the McWatter's Mine Road, a trail on the east side of the road leads to the main Langmuir W4 Nickel Deposit drilling area. The trail cannot be traversed by truck as it crosses two creeks, but does have a firm base. From the start of the trail, it is approximately 2.8 km to the main western part of the drilling area. Access on the trail was hampered by a lot of tree blown down which required clearing to pass. The access trail is relatively flat to gently sloping through a forested area with patches of tag alder swamp overgrowing the trail and locally higher ground with sub-crop to outcrop (e.g., 496716E 5347878N, UTM NAD83 Z17N). There are numerous side trails all along the main access trail and between drill sites that are more heavily overgrown.

Overall impressions from drill site visits and recommendations:

- Drill sites and drill trails left in orderly condition, and have since somewhat grown in with underbrush.
- Casings could be flagged again to ensure they remain clearly visible for future reference. Most pickets have fallen over. Some of the pickets were re-flagged by the QP.
- Blow down and overgrowth along main access trail needs to be cleared.
- Both creeks are narrow (<5 m wide): first creek crossing (495903E 5347328N, UTM NAD83 Z17N) near the start of the main access trail has a makeshift narrow log bridge with low marshy banks; second creek crossing (497337E 5348711N, UTM NAD83 Z17N) has steep sand/gravel banks.

2.4.1 Core Facility and Historical Core Review

Historical drill core is preserved on covered racks at a secure core yard facility approximately 1.5 km south of the Timmins Airport, west side of Airport Road. The site and core is maintained in an orderly and clean fashion within a secure and gated fenced compound.

After a general review of the core boxes, it is noted that original drill core samples were sawn in half, lengthwise, with the other half remaining in the core box. Sample tags were inserted at the beginning of the sample intervals. Blank and standard reference material sample tags were observed in numerical sequence in sampled core boxes. Sampling was done selectively in areas with visible sulphides, bounded by shoulder sampling.

The Authors selected a number of non-sampled historical core intervals along strike of modelled structures and/or mineralized horizons to determine if infill core sampling would be required for future geological modelling and mineral resource estimation. For the most part, the reviewed non-sampled intervals contained nil to locally trace sulphide. Some infill sampling is suggested based on the observations provided in Table 2-2.

Table 2-2. Observations from review of historical drill core and sampling gaps, Personal Inspection.

Drill Hole	Zone	From (m)	To (m)	Length (m)	Comments	Comments/Observations Site Visit	Sample tags correspond to assays?	Mineralization supports assays?
GCL07-15	A	180.00	210.00	30.00	Less than 15 m away from, and aligned with at least 3 mineralized intervals.	reviewed 178.0-214.0 m as logged; massive mafic intrusive with no obvious sulphides from 178.0-208.4 m; lower contact of dike is talc-serpentine altered weakly mineralized komatiite; suggest sample interval 208.4-214.0 m with shoulders.	NA	NA
GCL08-52	A	176.90	180.60	3.70	Sampling gap right where the structure could be passing.	reviewed 174.0-186.9 m as logged; has 3.7 m gap in massive orthocumulate; few low angle fractures with calcite and trace pyrrhotite that could represent structure of interest; should sample 3.7 m gap to close this interval.	Yes	Yes
GCL08-58	A	80.80	89.00	8.20	Sampling gap right where the structure could be passing.	reviewed 79.0-91.0 m as logged; has 8.2 m gap; blocky with local gouge; calcite fractures with trace pyrrhotite; shoulders of this gap have low assays; warrants closing the sample gap.	Yes	Yes
GCL07-22	A	235.00	265.00	30.00	Close to other mineralized intervals and to the modelled structure.	reviewed 232.2-265.4 m as logged; open fractures at 232.5-235.0 m with iron staining; trace pyrrhotite fracture filling from 242.0-265.4 m; suggest sample entire interval to close gap between structure and mineralization.	Yes	Yes
GCL07-17	B	225.00	268.00	43.00	Approx. 7 m away and parallel to a mineralized interval in GCL07-14.	reviewed 222.2-269.4 m as logged; open fractures at 222.0-224.0 m and 238.0-252.0 m with weak to moderate iron staining and local trace pyrrhotite fracture filling; fault zone with gouge from 253.0-255.0 m followed by ~20-25% biotite alteration in matrix with trace very fine-grained disseminated pyrrhotite, then by strong serpentine-ankerite alteration to 256.5 m; massive with no obvious sulphides from 224-238 m and 256.5-268 m; suggest sampling from 222.0-224.0 m and 238.0-256.5 m with shoulders.	Yes	Yes

Drill core from historical drilling programs on the Property was selectively reviewed and observations compared against original core logs (Table 2-3). The QP also spot checked mineralized intercepts for comparison to reported values. Lithology and mineralization observed in selected intervals corresponds to and supports reported results. The predominant mineralized lithology consists of weakly to moderately serpentine +/- talc altered komatiite sequence with pyrrhotite +/- pentlandite as blebby disseminations and fracture filling to semi-massive horizons.

The lithology and sulphide mineralization contacts checked by the QP match the information reported in the drill logs. Generally, the boundaries of the sulphide mineralization zones examined in core match the boundaries determined from assay results.

Table 2-3. Historical drill core reviewed as part of the Personal Inspection of the Property.

Drill Hole	Zone	From (m)	To (m)	Length (m)	Ni (%)	Cu (%)	Pt (g/t)	Pd (g/t)	Lithology as logged?	Mineralization as logged?
GCL07-21	A	245.00	253.30	8.30	1.20	0.12	0.43	0.17	Yes	Yes
GCL07-24	A	96.00	100.00	4.00	0.58	0.02	0.03	0.07	Yes	Yes
GCL07-24	A	136.00	144.00	8.00	0.82	0.05	0.06	0.13	Yes	Yes
GCL07-27	A	203.10	208.00	4.90	1.62	0.14	0.13	0.30	Yes	Yes
GCL07-29	A	217.80	222.35	4.55	2.23	0.17	0.12	0.26	Yes	Yes
GCL07-33	A	121.00	124.60	3.60	1.40	0.09	0.01	0.02	Yes	Yes

Overall impressions from the drill core inspection and recommendations:

- Full and half cut core is preserved in an organized and secure area.
- Blanks and certified reference material was used in sampling sequence.
- Lithology and mineralization accurately captured in historical drill core logs.
- Suggest some infill sampling along strike of mineralized zones and structures (see Table 2-2).

As there was good correlation with the drill core intervals re-logged during the Personal Inspection, there is no outcropping on the Property which is representative of the target mineralization, and there is excellent (complete) documentation of all previous work completed by Chalice Resources (2005-2015), including diamond drilling, the Authors determined that no re-sampling of the historical drill core was necessary.

2.5 Sources of Information and Data

Standard professional review procedures were used by the Authors in the preparation of the Report. The Authors consulted and utilized various sources of information and data, including historical files provided by the Issuer and government publications. In addition, co-Author and QP Jennifer Gignac (P.Geo.) completed a site visit to confirm features within the Project area, including infrastructure, mineralization, and historical data and information as presented.

Company personnel and associates were actively consulted post and during the Report preparation and during the Property site visit, including Paul Davis (Project Coordinator, EV Nickel Inc.; Vice-President, Technical and Director, Rogue Resources Inc., P.Geo.).

The Report is based on but not limited to internal Company emails and memoranda, historical reports, maps, data, and publicly available information and data (e.g., government and internet), as cited throughout the Report and listed in Section 27.

The mining lands system for Ontario was accessed online through the Mining Lands Administration System ("MLAS") at: <https://www.mndm.gov.on.ca/en/mines-and-minerals/applications/mining-lands-administration-system-mlas-map-viewer>. Digital data and historical work reports (assessment reports)

filed with the Ministry of Energy, Northern Development and Mines ("MENDM"), Ontario were accessed online at: <http://www.geologyontario.mndm.gov.on.ca/index.html>.

Additional information was reviewed and acquired through public online sources including EV Nickel's website <https://evnickel.com/>, SEDAR (www.sedar.com), and various corporate websites. Additional internet sources are listed in Section 27.

2.6 Commonly Used Terms and Units of Measure

All units in the Report are based on the International System of Units ("SI Units"), except for units that are industry standards, such as troy ounces for the mass of precious metals. Additional information and definitions for SI Units can be found at <https://www.nist.gov/pml/weights-and-measures/metric-si/si-units>. Table 2-4 provides a list of commonly used terms and abbreviations.

Unless specified otherwise, the currency used is Canadian Dollars (CAD\$ or CAD) and coordinates are given in North American Datum of 1983 ("NAD83"), UTM Zone 17N (EPSG:26917 – North America between 84°W and 78°W).

Table 2-4. Commonly used terms and abbreviations in the Report.

Units of Measure		Abbreviations and Initialisms	
above mean sea level	AMSL	Atomic Absorption	AA
annum (year)	a	Abitibi Greenstone Belt	AGB
billion years ago	Ga	Association Professional Geoscientists of Ontario	APGO
centimetre	cm	All-Terrain Vehicle	ATV
degree	°	Boundary Cell Mining Claim	BCMC
degrees Celsius	°C	Certified Reference Material	CRM
dollar (Canadian)	C\$	Crawford Ultramafic Complex	CUC
dollar (United States)	US\$	Diamond Drill Hole	DDH
eotvos	Eo	Department of Fisheries and Oceans Canada	DFO
foot	ft	Doctor of Philosophy	Ph.D.
gram	g	Electromagnetic	EM
grams per tonne	g/t	End of Hole	EOH
greater than	>	European Petroleum Survey Group	EPSG
hectare	ha	Fire Assay	FA
hour	hr	Geological Survey of Canada	GSC
inch	in	Inductively Coupled Plasma	ICP
kilo (thousand)	K	Interval	Int.
kilogram	kg	Lower Detection Limit	LDL
kilometre	km	Lower Limit of Detection	LLD
less than	<	Letter of Intent	LOI
litre	L	Land Use Permit	LUP
megawatt	Mw	Magnetics or Magnetometer	MAG
metre	m	Master of Science (degree)	M.Sc.
millimetre	mm	Ministry of Energy Northern Development and Mines	MENDM
million	M	Mining Licences of Occupation	MLO
million tonnes per year	Mtpa	Ministry of Natural Resources	MNR
million years ago	Ma	Mining Rights (only)	MR
nanogram per gram (q.v. ppb)	ng/g	Mining and Surface Rights	MSR
nanotesla	nT	Mining Lands Administrative System	MLAS
NQ - 47.6 mm diameter core tube	NQ	National Instrument 43-101	NI 43-101
ounce	oz	North American Datum 1983	NAD83
parts per million (by weight)	ppm	Net Smelter Return Royalty	NSR
parts per billion (by weight)	ppb	Ontario Geological Survey	OGS
percent	%	Professional Engineer	P.Eng.
pound	lb	Professional Engineers Ontario	PEO
short ton (2,000 lb)	st	Professional Geoscientist Ontario	P.Geo.
specific gravity	t/m ³	Quality Assurance / Quality Control	QA/QC
square kilometre	km ²	Qualified Person	QP
square metre	m ²	Reverse Circulation	RC
thousand tonnes per year	ktpa	Right of First Refusal	ROFR
three-dimensional	3D	Single Cell Mining Claim	SCMC
tonne (1,000 kg) (metric tonne)	t	Scanning Electron Microscope	SEM
tonne per year	tpa	Specific Gravity	SG
Elements		International System of Units	SI
cobalt	Co	Standard Reference Material	SRM
copper	Cu	Surface Rights (only)	SR
gold	Au	Township	Twp
nickel	Ni	Universal Transverse Mercator	UTM
platinum-group elements	PGE	Volcanogenic Massive Sulphide	VMS
palladium	Pd	World Geodetic System 1984	WGS84
platinum	Pt		
silver	Ag		
sulphur	S		
iron	Fe		

3.0 RELIANCE ON OTHER EXPERTS

The Report has been prepared by Caracle Creek International Consulting Inc. (Caracle) for EV Nickel Inc. (EVNi). The information, conclusions, opinions, and estimates contained herein are based on:

- information available to the Authors at the time of preparation of the Report;
- assumptions, conditions, and qualifications as set forth in the Report; and
- data, reports, and other information supplied by EVNi and other third party sources.

For the purposes of the Report, the Principal Author has relied on ownership information provided by EVNi. The Principal Author has not researched legal Property title or mineral rights for the Langmuir Nickel Project and expresses no opinion as to the ownership status of the Property.

Except for the purposes legislated under Canadian provincial securities laws, any use of the Report by any third party is at that party's sole risk.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Langmuir Property, within National Topographic System (“NTS”) map sheets 42 A/06 and A/07, is situated in portions of Blackstock, Langmuir, Fallon, Douglas, Eldorado, Carman, and Thomas townships, Porcupine Mining Division, northeastern Ontario, Canada. The centre of the Property is approximately 30 km southeast of the city of Timmins (see Figure 2-1; Figure 4-1).

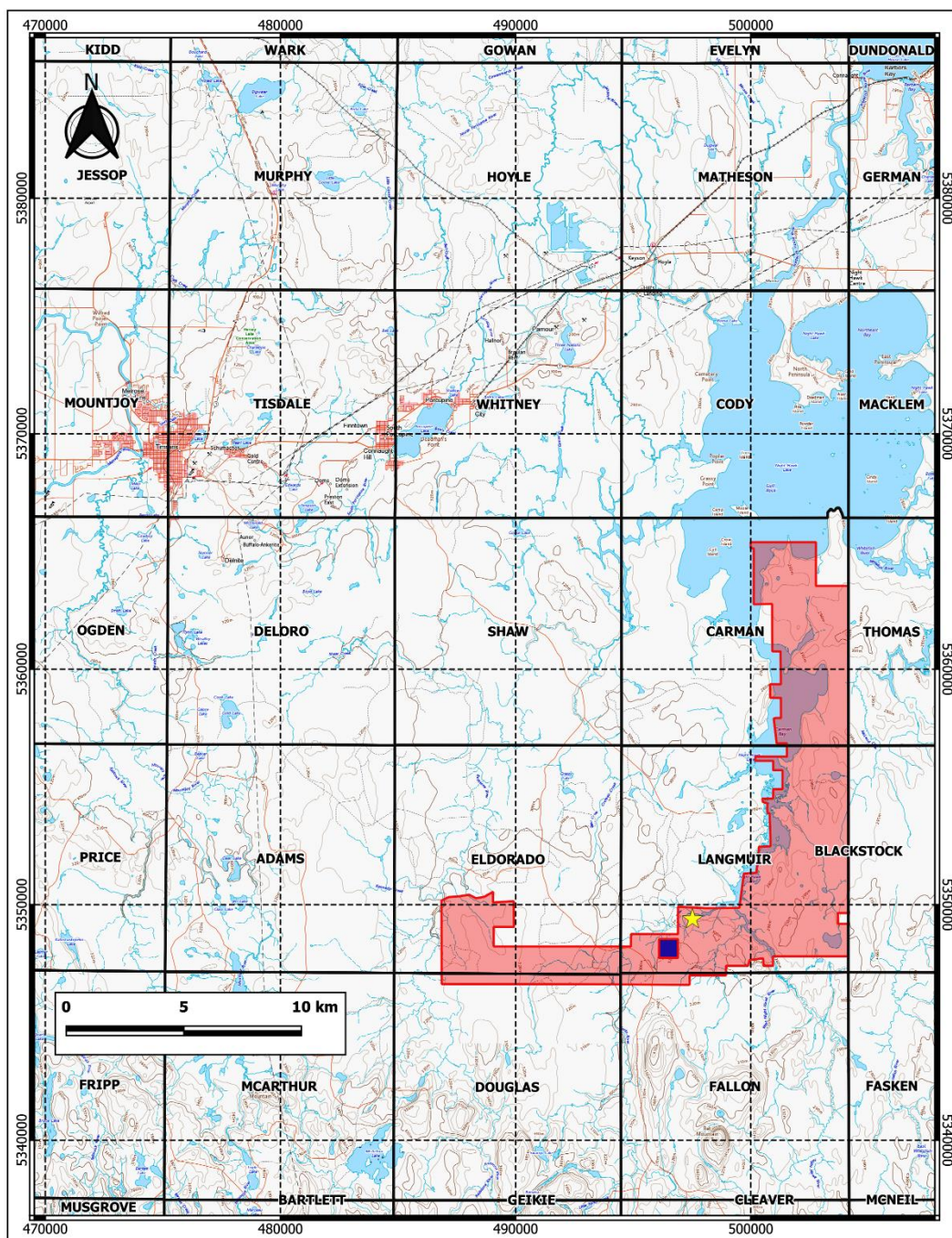


Figure 4-1. Township-scale location of the Langmuir Nickel Project (red region) and the Langmuir W4 Nickel Deposit (yellow star) near Timmins, Ontario, Canada. The dark blue square within the shaded red area of the Property is held by a third party.

The Property, covering the Night Hawk River and southern parts of Night Hawk Lake in Carman and Langmuir townships, is centred at approximately 48 18'N Latitude, 80 58'W Longitude or UTM (NAD83 Z17) coordinates 502000mE 5350000mN. The Property is accessed from the City of Timmins/South Porcupine by a series of all-weather gravel roads.

All known nickel sulphide mineralization that is the focus of the Report and that of EVNi is located within the boundary of the mining lands that comprise the Langmuir Nickel Project. The Langmuir W4 Nickel Deposit is located within unpatented mining claim 299485 and Legacy Mining Claim 4203498.

4.1 Mineral Disposition

The Langmuir Property comprises 156 unpatented mining claims (28 Multi-Cell Mining Claims ("MCMC"s), 22 Single Cell Mining Claims ("SCMC"s), and 106 Boundary Claim Mining Claims ("BCMCs")), covers approximately 9,079 ha, and is owned 100% by EVNi. The Property has not been legally surveyed. A summary of the mining claims is provided in Table 4-1 and the distribution of the mining claims is shown in Figure 4-2. Detailed information about the mining claims is provided in Appendix 3.

Table 4-1. Summary of mining claims that comprise the Langmuir Nickel Project.

Legacy Claim	Township / Area	Tenure	Type	Anniversary	Status	%	Annual Work Required	Work Applied	Reserve
4203567	BLACKSTOCK,LANGMUIR	103893	BCMC	2022-02-08	Active	100	\$200	\$600	\$0
4203567	BLACKSTOCK,LANGMUIR	120525	BCMC	2022-02-08	Active	100	\$200	\$600	\$0
4203568	BLACKSTOCK,LANGMUIR	301506	BCMC	2022-02-08	Active	100	\$200	\$600	\$0
4203564	FALLON,LANGMUIR	111353	BCMC	2022-02-08	Active	100	\$200	\$600	\$0
4203563	FALLON,LANGMUIR	318889	BCMC	2022-02-08	Active	100	\$200	\$600	\$0
4203564	FALLON,LANGMUIR	321292	BCMC	2022-02-08	Active	100	\$200	\$600	\$0
4203568	LANGMUIR	106744	SCMC	2022-02-08	Active	100	\$400	\$1,200	\$0
4203564	LANGMUIR	149823	SCMC	2022-02-08	Active	100	\$400	\$1,200	\$0
4203563	LANGMUIR	300910	BCMC	2022-02-08	Active	100	\$200	\$600	\$0
	LANGMUIR	535770	MCMC	2022-02-08	Active	100	\$10,000	\$30,000	\$0
	LANGMUIR	535772	MCMC	2022-02-08	Active	100	\$800	\$2,400	\$0
	LANGMUIR	535774	MCMC	2022-02-08	Active	100	\$8,000	\$24,000	\$0
	LANGMUIR	535775	MCMC	2022-02-08	Active	100	\$800	\$2,400	\$0
	LANGMUIR	535779	MCMC	2022-02-08	Active	100	\$6,400	\$24,000	\$19,012
	LANGMUIR	535780	MCMC	2022-02-08	Active	100	\$2,400	\$8,400	\$1,153
	DOUGLAS,ELDORADO	535787	MCMC	2022-02-15	Active	100	\$9,600	\$28,800	\$0
	DOUGLAS,ELDORADO	535788	MCMC	2022-02-15	Active	100	\$10,000	\$30,000	\$0
4201271	ELDORADO	126674	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201267	ELDORADO	135066	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201271	ELDORADO	138627	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201270	ELDORADO	171189	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201269	ELDORADO	197132	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201274	ELDORADO	236384	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201271	ELDORADO	240049	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201267	ELDORADO	255018	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201269	ELDORADO	265744	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201271	ELDORADO	285948	SCMC	2022-02-15	Active	100	\$400	\$600	\$0
4201274	ELDORADO	292227	BCMC	2022-02-15	Active	100	\$200	\$600	\$0

Legacy Claim	Township / Area	Tenure	Type	Anniversary	Status	%	Annual Work Required	Work Applied	Reserve
4201270	ELDORADO	300335	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201267	ELDORADO	303588	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201267	ELDORADO	310430	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201269	ELDORADO	320238	BCMC	2022-02-15	Active	100	\$200	\$600	\$0
4201271	ELDORADO	323202	SCMC	2022-02-15	Active	100	\$400	\$1,200	\$0
	ELDORADO	535789	MCMC	2022-02-15	Active	100	\$5,600	\$16,800	\$0
	ELDORADO	535791	MCMC	2022-02-15	Active	100	\$1,600	\$4,800	\$0
	LANGMUIR	535776	MCMC	2022-05-03	Active	100	\$4,000	\$13,600	\$0
	BLACKSTOCK,CARMAN, LANGMUIR,THOMAS	535766	MCMC	2022-05-22	Active	100	\$10,000	\$30,000	\$0
4220201	CARMAN	115598	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220206	CARMAN	125667	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220201	CARMAN	133643	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220201	CARMAN	133644	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220206	CARMAN	142686	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220201	CARMAN	178857	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220207	CARMAN	180281	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220208	CARMAN	185546	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220204	CARMAN	188351	SCMC	2022-05-22	Active	100	\$400	\$600	\$0
4220201	CARMAN	205780	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220205	CARMAN	207557	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220206	CARMAN	227667	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220206	CARMAN	227668	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220201	CARMAN	245539	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220208	CARMAN	264338	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220201	CARMAN	282787	SCMC	2022-05-22	Active	100	\$400	\$600	\$0
4220201	CARMAN	301666	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220205	CARMAN	304060	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220208	CARMAN	318362	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220206	CARMAN	323521	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
	CARMAN	535758	MCMC	2022-05-22	Active	100	\$1,200	\$3,600	\$0
	CARMAN	535759	MCMC	2022-05-22	Active	100	\$8,000	\$24,000	\$0
	CARMAN	535760	MCMC	2022-05-22	Active	100	\$2,400	\$7,200	\$0
	CARMAN	535761	MCMC	2022-05-22	Active	100	\$3,200	\$9,600	\$0
	CARMAN	535762	MCMC	2022-05-22	Active	100	\$7,200	\$21,600	\$0
	CARMAN	535765	MCMC	2022-05-22	Active	100	\$2,000	\$6,000	\$0
4220208	CARMAN,LANGMUIR	149581	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220208	CARMAN,LANGMUIR	300894	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220215	CARMAN,THOMAS	141448	SCMC	2022-05-22	Active	100	\$400	\$600	\$0
4220214	CARMAN,THOMAS	202098	SCMC	2022-05-22	Active	100	\$400	\$600	\$0
4220215	CARMAN,THOMAS	219679	SCMC	2022-05-22	Active	100	\$400	\$600	\$0
4220215	CARMAN,THOMAS	226958	SCMC	2022-05-22	Active	100	\$400	\$600	\$0
4220214	CARMAN,THOMAS	228986	SCMC	2022-05-22	Active	100	\$400	\$600	\$0
4220214	CARMAN,THOMAS	320665	SCMC	2022-05-22	Active	100	\$400	\$600	\$0
	CARMAN,THOMAS	535763	MCMC	2022-05-22	Active	100	\$7,200	\$21,600	\$0
	CARMAN,THOMAS	535764	MCMC	2022-05-22	Active	100	\$10,000	\$30,000	\$0

Legacy Claim	Township / Area	Tenure	Type	Anniversary	Status	%	Annual Work Required	Work Applied	Reserve
4220197	LANGMUIR	134044	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220197	LANGMUIR	234847	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220209	LANGMUIR	235549	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220197	LANGMUIR	264141	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220210	LANGMUIR	264670	SCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220197	LANGMUIR	320823	BCMC	2022-05-22	Active	100	\$200	\$600	\$0
4220197	LANGMUIR	333474	SCMC	2022-05-22	Active	100	\$200	\$600	\$0
	LANGMUIR	535767	MCMC	2022-05-22	Active	100	\$1,800	\$5,400	\$0
	LANGMUIR	535768	MCMC	2022-05-22	Active	100	\$9,800	\$29,400	\$0
4202816	BLACKSTOCK,LANGMUIR	146777	BCMC	2022-06-06	Active	100	\$200	\$600	\$0
4202816	BLACKSTOCK,LANGMUIR	146778	BCMC	2022-06-06	Active	100	\$200	\$600	\$0
4202815	LANGMUIR	199799	BCMC	2022-06-06	Active	100	\$200	\$600	\$0
4202744	LANGMUIR	241369	BCMC	2022-06-06	Active	100	\$200	\$600	\$0
4202816	LANGMUIR	242757	BCMC	2022-06-06	Active	100	\$200	\$600	\$0
4202744	LANGMUIR	295906	BCMC	2022-06-06	Active	100	\$200	\$600	\$0
4202815	LANGMUIR	297320	BCMC	2022-06-06	Active	100	\$200	\$600	\$0
4202816	LANGMUIR	337561	SCMC	2022-06-06	Active	100	\$400	\$1,200	\$0
4202816	LANGMUIR	337562	BCMC	2022-06-06	Active	100	\$200	\$600	\$0
4202815	LANGMUIR	341771	BCMC	2022-06-06	Active	100	\$200	\$600	\$0
4220198	CARMAN	132299	BCMC	2022-06-12	Active	100	\$200	\$600	\$0
4220198	CARMAN	244209	BCMC	2022-06-12	Active	100	\$200	\$600	\$0
4220198	CARMAN	263756	BCMC	2022-06-12	Active	100	\$200	\$600	\$0
4220198	CARMAN	339161	BCMC	2022-06-12	Active	100	\$200	\$600	\$0
	BLACKSTOCK,LANGMUIR	535769	MCMC	2022-07-18	Active	100	\$4,000	\$13,200	\$973
	BLACKSTOCK,LANGMUIR	535771	MCMC	2022-07-18	Active	100	\$4,800	\$14,400	\$0
3018143	LANGMUIR	110230	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
3015576	LANGMUIR	110455	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
3018143	LANGMUIR	122224	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
3018143	LANGMUIR	135020	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
3015576	LANGMUIR	135745	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
3013180	LANGMUIR	149016	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
3015576	LANGMUIR	207164	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
3015576	LANGMUIR	267159	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
3013180	LANGMUIR	285460	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
3013181	LANGMUIR	318319	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
3013180	LANGMUIR	320848	BCMC	2022-07-18	Active	100	\$200	\$600	\$0
	LANGMUIR	535773	MCMC	2022-07-18	Active	100	\$800	\$2,400	\$0
	DOUGLAS,ELDORADO, FALLON,LANGMUIR	535786	MCMC	2022-11-01	Active	100	\$8,400	\$25,200	\$0
4201275	ELDORADO	135742	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201276	ELDORADO	244320	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201275	ELDORADO	255679	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201275	ELDORADO	264364	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201274	ELDORADO	292226	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201276	ELDORADO	339761	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201275	ELDORADO	342543	BCMC	2022-11-01	Active	100	\$200	\$600	\$0

Legacy Claim	Township / Area	Tenure	Type	Anniversary	Status	%	Annual Work Required	Work Applied	Reserve
4201276	ELDORADO,LANGMUIR	263791	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201279	FALLON	157965	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201279	FALLON	325934	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201279	FALLON,LANGMUIR	109292	SCMC	2022-11-01	Active	100	\$400	\$1,200	\$0
4201279	FALLON,LANGMUIR	252364	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
	FALLON,LANGMUIR	535783	MCMC	2022-11-01	Active	100	\$1,600	\$4,800	\$0
4201277	LANGMUIR	120972	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201278	LANGMUIR	122970	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201278	LANGMUIR	122971	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201281	LANGMUIR	133039	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201278	LANGMUIR	133721	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201278	LANGMUIR	178942	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201277	LANGMUIR	214371	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201279	LANGMUIR	222171	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201277	LANGMUIR	244245	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201281	LANGMUIR	244957	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201278	LANGMUIR	245617	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201281	LANGMUIR	248169	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201281	LANGMUIR	252999	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201277	LANGMUIR	280773	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201278	LANGMUIR	280858	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201279	LANGMUIR	299470	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201281	LANGMUIR	319001	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
4201279	LANGMUIR	331465	BCMC	2022-11-01	Active	100	\$200	\$600	\$0
	LANGMUIR	535785	MCMC	2022-11-01	Active	100	\$800	\$2,400	\$0
4203498	LANGMUIR	149608	BCMC	2023-07-18	Active	100	\$200	\$600	\$205,194
3018143	LANGMUIR	186360	BCMC	2023-07-18	Active	100	\$200	\$600	\$0
4201278	LANGMUIR	197711	BCMC	2023-07-18	Active	100	\$200	\$600	\$205,094
4203498	LANGMUIR	214435	BCMC	2023-07-18	Active	100	\$200	\$600	\$205,394
4203498	LANGMUIR	244331	SCMC	2023-07-18	Active	100	\$400	\$1,200	\$204,494
4202748	LANGMUIR	252374	SCMC	2023-07-18	Active	100	\$400	\$1,200	\$201,594
3018143	LANGMUIR	253690	BCMC	2023-07-18	Active	100	\$200	\$600	\$0
4203498	LANGMUIR	264368	SCMC	2023-07-18	Active	100	\$200	\$600	\$205,794
4202748	LANGMUIR	290189	BCMC	2023-07-18	Active	100	\$200	\$600	\$0
4202748	LANGMUIR	299464	SCMC	2023-07-18	Active	100	\$200	\$600	\$233,394
4203498	LANGMUIR	299485	SCMC	2023-07-18	Active	100	\$400	\$1,200	\$254,394
4202748	LANGMUIR	302251	BCMC	2023-07-18	Active	100	\$200	\$600	\$597
4202748	LANGMUIR	339767	SCMC	2023-07-18	Active	100	\$400	\$1,200	\$254,394
						Total:	\$171,600	\$518,200	\$1,991,481

Annual assessment work requirements total \$171,600 and historically \$518,200 has been applied to the Property. There is \$1,991,481 in work assessment reserve which is enough to keep the mining claims current for at least 11 years. As of the Effective Date of the Report, all mining claims are valid with expiry dates ranging from 8 February 2022 to 18 July 2023.

The unpatented mining claims were independently verified by the Principal Author, online through the MLAS system of the MENDM:

<https://www.mndm.gov.on.ca/en/mines-and-minerals/applications/mining-lands-administration-system-mlas-map-viewer>).

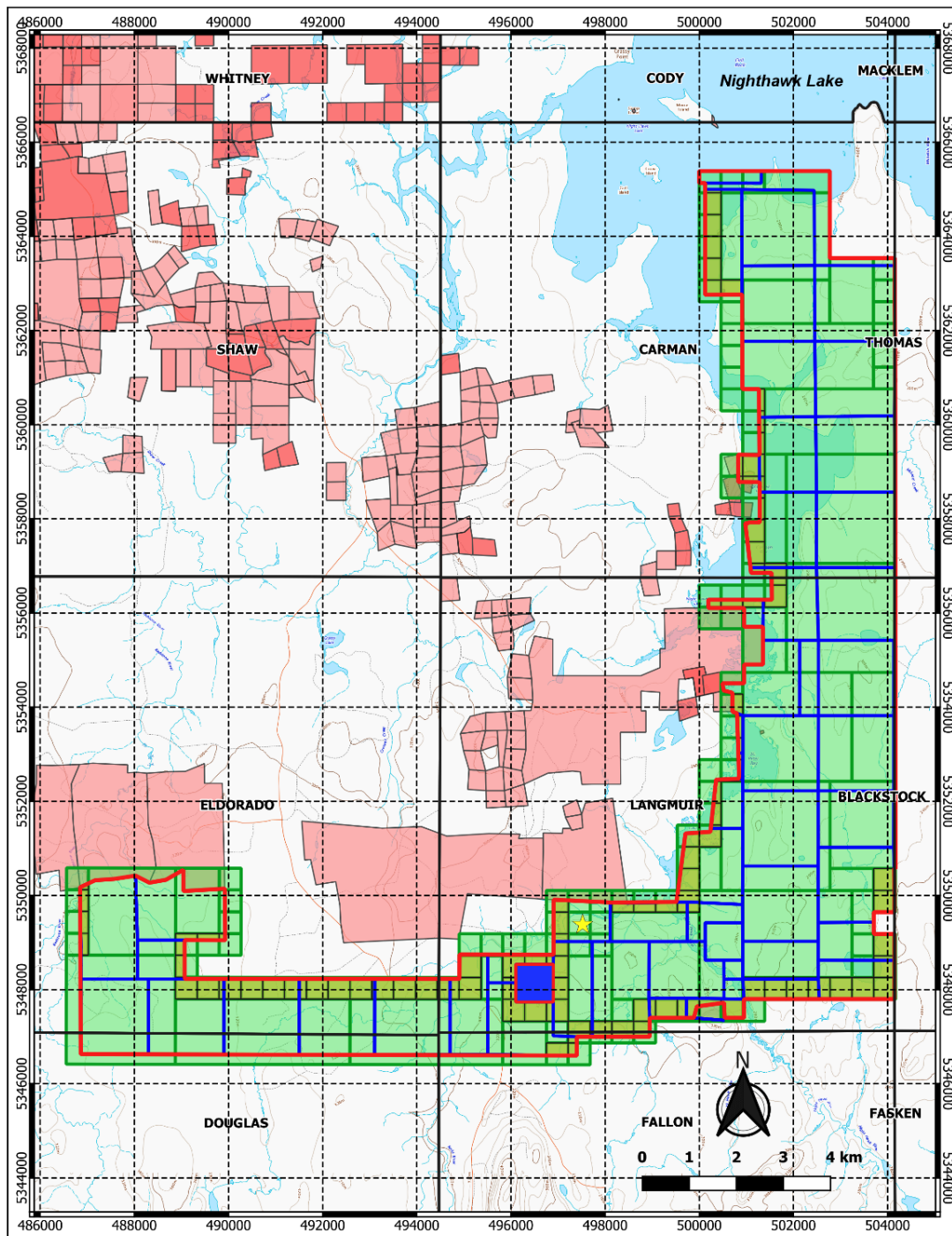


Figure 4-2. Mining claims (property outline in red) that comprise the Langmuir Nickel Project with the location of the Langmuir W4 Nickel Deposit (yellow star). Patents = 2 shades of pink; Legacy Claims = blue outlines; BCMC = Dark Green; SCMC = Light Green; Dark Blue Square = third party mining claims.

4.2 Mining Lands Tenure System in Ontario

Traditional field-based claim staking (physical staking) in Ontario came to an end on January 8, 2018 and on April 10, 2018 the Ontario Government converted all existing claims (referred to as Legacy Mining Claims) into one or more “cell” claims or “boundary” claims as part of their new provincial grid system. The provincial grid is latitude- and longitude-based and is made up of more than 5.2 million cells ranging in size from 17.7 ha in the north to 24 ha in the south. Dispositions such as leases, patents and licenses of occupation were not affected by the new system. Mining claims are registered and administrated through the Ontario Mining Lands Administration System (MLAS), which is the online electronic system established by the Ontario Government for this purpose.

Mining claims can only be obtained by an entity (person or company referred to as a “prospector”) that is a registered MLAS User, has completed the Mining Act Awareness Program, and holds a valid Prospector’s License granted by the MENDM. A licensed prospector is permitted to register open lands for exploration on the MLAS system onto provincial Crown and private lands that are open for registration. Once the mining claim has been registered, the prospector is permitted to conduct exploratory and assessment work on the subject lands. To maintain the mining claim and keep it properly staked, the prospector must adhere to relevant staking regulations and conduct all prescribed work thereon. The prescribed work is currently set at \$400 per annum per single cell mining claim and \$200 per annum per boundary cell mining claim. The prescribed work must be completed or payments in lieu of work can be made to maintain the claim. No minerals may be extracted from lands that are subject to a mining claim – the prospector must possess either a mining lease or a freehold interest to mine the land, subject to all provisions of the Ontario Mining Act.

A mining claim can be transferred, charged or mortgaged by the prospector without obtaining any consents. Notice of the change of owner of the mining claim or charge thereof should be recorded in the mining registry maintained by the MENDM.

4.2.1 Mining Lease

If a prospector wants to extract minerals, the prospector may apply to the MENDM for a mining lease. A mining lease, which is usually granted for a term of 21 years, grants an exclusive right to the lessee to enter upon and search for, and extract, minerals from the land, subject to the prospector obtaining other required permits and adhering to applicable regulations.

Pursuant to the provisions of the Ontario Mining Act (the “Act”), the holder of a mining claim is entitled to a lease if it has complied with the provisions of the Act in respect of those lands. An application for a mining lease may be submitted to the MENDM at any time after the first prescribed unit of work in respect of the mining claim is performed and approved. The application for a mining lease must specify whether it requests a lease of mining and surface rights or mining rights only and requires the payment of fees.

A mining lease can be renewed by the lessee upon submission of an application to the MENDM within 90 days before the expiry date of the lease, provided that the lessee provides the documentation and satisfies the criteria set forth in the Act in respect of a lease renewal.

A mining lease cannot be transferred or mortgaged by the lessee without the prior written consent of the MENDM. The consent process generally takes between two and six weeks and requires the lessee to submit various documentations and pay a fee.

4.2.2 Freehold Mining Lands

A prospector interested in removing minerals from the ground may, instead of obtaining a mining lease, make an application to the Ontario Ministry of Natural Resources (“MNR”) to acquire the freehold interest in the subject lands. If the application is approved, the freehold interest is conveyed to the applicant by way of the issuance of a mining patent. A mining patent can include surface and mining rights or mining rights only.

The issuance of mining patents is much less common today than in the past, and most prospectors will obtain a mining lease in order to extract minerals. If a prospector is issued a mining patent, the mining patent vests in the patentee all of the provincial Crown’s title to the subject lands and to all mines and minerals relating to such lands, unless something to the contrary is stated in the patent.

As the holder of a mining patent enjoys the freehold interest in the lands that are the subject of such patent, no consents are required for the patentee to transfer or mortgage those lands.

4.2.3 Licence of Occupation

Prior to 1964, Mining Licences of Occupation (“MLO”) were issued, in perpetuity, by the MENDM to permit the mining of minerals under the beds of bodies of water. MLOs were associated with portions of mining claims overlying adjacent land. As an MLO is held separate and apart from the related mining claim, it must be transferred separately from the transfer of the related mining claim. The transfer of an MLO requires the prior written consent of the MENDM. As an MLO is a licence, it does not create an interest in the land.

4.2.4 Land Use Permit

Prospectors may also apply for and obtain a Land Use Permit (“LUP”) from the MNR. An LUP is considered to be the weakest form of mining tenure. It is issued for a period of 10 years or less and is generally used where there is no intention to erect extensive or valuable improvements on the subject lands. LUPs are often obtained when the land is to be used for the purposes of an exploration camp. When an LUP is issued, the MNR retains future options for the subject lands and controls its use. LUPs are personal to the holder and cannot be transferred or used as security.

4.3 Mining Law - Province of Ontario

In the Province of Ontario, The Mining Act (the “Act”) is the provincial legislation that governs and regulates prospecting, mineral exploration, mine development and rehabilitation. The purpose of the Act is to encourage prospecting, online mining claim registration and exploration for the development of mineral resources, in a manner consistent with the recognition and affirmation of existing Aboriginal and treaty rights in Section 35 of the Constitution Act, 1982, including the duty to consult, and to minimize the impact of these activities on public health and safety and the environment (<https://www.mndm.gov.on.ca/en/mines-and-minerals/mining-act>).

4.3.1 Required Plans and Permits

There are two types of applications that must be considered prior to starting an exploration programs. An Exploration Plan is a document provided to the MENDM by an Early Exploration Proponent indicating the location and dates for prescribed early exploration activities. An Exploration Permit is an instrument which allows an Early Exploration Proponent to carry out prescribed early exploration activities at specific times and in specific locations. An Exploration Plan or Exploration Permit must be submitted prior to undertaking any of the prescribed work listed by the Ministry but neither of these permits are necessary on Crown Patents (patented lands).

Exploration plans, exploration permits and closure plans obtained prior to the conversion are not affected by the conversion of the mining claims or the MLAS registration system. A plan or permit will continue to apply only to the area to which it is applied.

4.3.1.1 Exploration Plans

Exploration Plans are used to inform Aboriginal Communities, Government and Surface Rights Owners and other stakeholders about these activities. In order to undertake certain prescribed exploration activities, an Exploration Plan application must be submitted, and any surface rights owners must be notified. Aboriginal communities potentially affected by the Exploration Plan activities will be notified by the MENDM and have an opportunity to provide feedback before the proposed activities can be carried out.

Early Exploration Proponents who wish to undertake prescribed exploration activities on claims, leases or licenses of occupation must submit an Exploration Plan. The early exploration activities that require an Exploration Plan are as follows:

- Line cutting that is a width of 1.5 m or less.
- Geophysical surveys on the ground requiring the use of a generator.
- Mechanized stripping a total surface area of less than 100 square metres within a 200 m radius.
- Excavation of bedrock that removes one cubic metre and up to three cubic metres of material within a 200 m radius.
- Use of a drill that weighs less than 150 kilograms.

Exploration Plan applications should be submitted directly to the MENDM at least 35 days prior to the expected commencement of activities. Submission of an Exploration Plan is mandatory.

4.3.1.2 Exploration Permits

Exploration Permits include terms and conditions that may be used to mitigate potential impacts identified through the consultation process. Some prescribed early exploration activities will require an Exploration Permit. Those activities will only be allowed to take place once the permit has been approved by the MENDM.

Surface rights owners must be notified when applying for an Exploration Permit. Aboriginal communities potentially affected by the Exploration Permit activities will be consulted by the MENDM and have an opportunity to provide comments and feedback before a decision is made on the Exploration Permit. Permit proposals will be posted for comment on the Ontario Ministry of the Environment Environmental Registry for 30 days.

Early Exploration Proponents who wish to undertake prescribed exploration activities on claims, leases or licenses of occupation should submit an Exploration Permit application. The early exploration activities that require an Exploration Permit are as follows:

- Line cutting that is a width greater than 1.5 metres.
- Mechanized stripping of a total surface area of greater than 100 square metres within a 200-m radius (and below advanced exploration thresholds).
- Excavation of bedrock that removes more than three cubic metres of material within a 200 m radius.
- Use of a drill that weighs more than 150 kilograms.

Exploration Permit applications should be submitted directly to the MENDM at least 55 days prior to the expected commencement of activities. Submission of an Exploration Permit is mandatory.

4.4 Work Status and Current Permits

No work is currently being conducted on the Project. On 6 April 2021, the Company submitted an application for an Exploration Permit to conduct geophysical surveys (requiring generator), diamond drilling (mechanized drilling), ground geophysical surveys without a generator, trails, airborne geophysical survey, and land sample (<1 cubic metre). Exploration permits generally take about 60 days for approval and as such the Exploration Permit is expected to be approved by approximately June 4, 2021.

The Principal Author is not aware of any other permits or authorizations required to complete the proposed exploration program, however some other regulatory permits and notable requirements for early exploration activities outside of the MENDM could apply. For example, permits would be required from the Ministry of Natural Resources and Forestry (“MNRF”) for road construction, cutting timber, fire permits (burning), and water crossing should they be required (<https://www.ontario.ca/page/ministry-natural-resources-and-forestry>). Projects in close proximity to water may require provisions to protect fish habitats under the jurisdiction of the Department of Fisheries and Oceans Canada (<https://www.dfo-mpo.gc.ca/index-eng.htm>).

4.5 Surface Rights and Legal Access

The surface rights associated with the Project are owned by the Government of Ontario (Crown Land) and access to the property is unrestricted .

4.6 Environmental Liabilities

At this early stage of the Project’s development there are no requirements for environmental studies and the Company will implement best practices in terms of preserving and minimizing its impact on the environment. Previous owners of the Project conducted various components of early stage environmental baseline studies (see Section 6.9).

The Authors are unable to comment on any remediation which may have been undertaken by previous companies. The Principal Author is not aware of any environmental liabilities associated with the Property.

4.7 Royalties and Obligations

All claims forming the Langmuir Property were staked by contractors for Golden Chalice with the exception of Legacy Mining Claims 3017517 and 3017518 (15 claim units totalling 243 hectares) which were optioned from Mr. David Healey (45%), Mr. Todd Keast (45%), and Kirnova Corp. (10%) on 13 July 2004 (“Healey Option”). On 14 October 2004, Golden Chalice exercised the underlying option on the two claims after paying a total of C\$5,000 in option payments and issuing 100,000 fully paid ordinary shares to the three vendors.

EVNi presently owns 100 percent of the mining claims that comprise the Property. However, some of the mining claims are subject to a 2% net smelter return (“NSR”) royalty. A half percent (0.5%) NSR can be purchased from the vendors at any time for C\$500,000, thereby reducing the outstanding NSR to 1.5%.

There is an area of interest clause within the Healey Option, which states that any claims, acquired after the effective date of the option, that are within a five kilometre radius of the boundaries of the two optioned mining claims are also subject to the same 2% NSR. Legacy Mining Claim 4203498, within which the Langmuir W4 Nickel Deposit is located, lies within the 5 km area of interest and is thus subject to a 2% NSR. A complete list of the 35 Legacy Mining Claims that are subject to the 5 km area of interest is provided in Table 4-2. The Principal Author is unaware of any other royalties or obligations associated with the Property.

Table 4-2. Legacy Mining Claims that are subject to a 2% NSR as per the 2004 Healey Option.

Legacy Claim No.	Date Recorded (dd/mm/yyyy)	Legacy Claim No.	Date Recorded (dd/mm/yyyy)
3013180	18/07/2005	4202815	06/06/2005
3013181	18/07/2005	4202816	06/06/2005
3013182	18/07/2005	4203498	18/07/2005
3013183	18/07/2005	4203563	08/02/2005
3013184	18/07/2005	4203564	08/02/2005
3013185	18/07/2005	4203567	08/02/2005
3015576	18/07/2005	4203568	08/02/2005
3018143	18/07/2005	4203569	08/02/2005
4201276	01/11/2005	4203570	08/02/2005
4201277	01/11/2005	4203571	08/02/2005
4201278	01/11/2005	4207038	18/07/2005
4201279	01/11/2005	4220210	22/05/2007
4201281	01/11/2005	4278675	06/09/2016
4201289	01/11/2005	4278676	06/09/2016
4201290	01/11/2005	4280621	13/12/2016
4202744	06/06/2005	4280637	13/12/2016
4202748	18/07/2005	4280638	13/12/2016
4202814	06/06/2005		

4.8 Other Significant Factors and Risks

The Company will maintain an open dialogue with all stakeholders associated with the Project, including private landowners, government officials and representatives of the First Nations and Metis Nation of Ontario Identified by the MENDM:

- Matachewan First Nation, Wabun Tribal Council
- Mattagami First Nation, Wabun Tribal Council
- Taykwa Tagamou First Nation, Mushkegowuk Tribal Council
- Wahgoshig First Nation
- Métis Nation of Ontario, Timmins Métis Council
- Métis Nation of Ontario, Northern Lights Métis Council
- Métis Nation of Ontario - Temiskaming Métis Council

As of the Effective Date of the Report, the Principal Author is not aware of any significant factors that may affect access, title, or the right or ability to perform the proposed work program on the Property.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Property is located within the boundaries of the city of Timmins, Ontario. It is accessed by motor vehicle south from the village of South Porcupine via a gravel road known as Stringers Road. This road cuts through the central western portion of the Property. Approximately 30 km southeast of Timmins on Stringers Road, a drill trail (ATV/snowmobile accessible) branches off northeastward. Approximately three km along this road, the Langmuir W4 Nickel Deposit ("Langmuir W4" or "W4 Deposit") location is reached (see Figure 4-1).

5.2 Climate and Operating Season

The climate in the Project area is warm and generally dry during the summer months from May through to September and cold and snowy from November to March. Temperature extremes range from summer highs of +30 Celsius to winter lows of -30 Celsius. Average winter temperatures are in the range of -10 Celsius to -20 Celsius and average summer temperatures are in the range of 10 Celsius to 20 Celsius. Annual precipitation is approximately 83 centimetres (32.6 inches) with 60 centimetres of rain and 310 centimetres of snow annually. Average winter mean daily snow depths in the region are about 60 to 65 centimetres.

Exploration work such as drilling and geophysical surveys can be completed year-round, with some surface work (*i.e.*, geological mapping, trenching and surface sampling) limited by snow cover during the winter months.

5.3 Local Resources and Infrastructure

The full range of equipment, supplies and services required for any mining development is available in Timmins (2016 population of 41,788). The general Timmins area also possesses a skilled mining work force from which personnel could be sourced for any new mine development on the Property.

There would appear to be ample room on or about the Property to build a mine and mill should this eventuality arise. Likewise, any number of locations would appear to offer potential to construct environmentally sound tailings disposal area(s). Regional power lines extend south of Timmins in close proximity to the Property.

A nickel processing capability is currently present at Northern Sun Mining's Redstone Mill Facility (<http://northernsunmining.ca/Redstone-Mill/Redstone-Mill-Overview/default.aspx>), located south of Timmins, approximately 8 km northwest of the Project (see Figure 4-1). The Redstone nickel concentrator plant, designed to process up to 2,000 tonnes per day of high MgO Ni-Cu-PGE mineralization, was commissioned in July 2007. The plant was on care and maintenance from November 2008 until June 2009, at which time nickel prices rebounded and the mill continued to process nickel ore from the Redstone and McWatters mines.

This facility is very close to the Langmuir W4 Nickel Deposit and the haulage distance would be approximately 13 kilometres. This facility might be available to custom mill any potential nickel ore from the Property, thereby obviating the need to build a mill.

5.4 Physiography

The topography of the Langmuir Property is comprised of flat to gently rolling relief with little outcrop exposure. Elevation ranges from 280 to 330 metres above sea level ("mASL"). The Property lies entirely within the Night Hawk Lake sub-watershed.

The Langmuir W4 Nickel Deposit is located in an area that is generally low-lying with a few local rock outcrops and ranges in elevation from 290 to 300 mASL. It is relatively flat with poor drainage. The deposit location site naturally drains to the north into the Forks River. The Forks River drains north-easterly into the Night Hawk River which flows north-easterly into Night Hawk Lake. Night Hawk Lake in turn drains to the Frederick House River. The Frederick House River drains to the Abitibi River (north of Cochrane) then to Moose River, which ultimately discharges into James Bay.

5.4.1 Water Availability

Abundant water resources are present in the lakes, rivers, creeks, and beaver ponds throughout the Project area.

5.4.2 Flora and Fauna

Vegetation is a boreal forest combination of black spruce, jack pine, alders and white birch in lowland areas and poplar, white birch and jack pine on slightly higher ground. Wildlife found in the area of the W4 Langmuir nickel deposit is typical of other poorly drained northern boreal forest areas. The majority of the several species present are small mammals and songbirds that are common and widely distributed. Moose populations in the area are low to moderate. Furbearers in the vicinity include beaver, marten, mink, muskrat, fox, lynx and black bear. Other animal types include the snowshoe hare, fisher and wolf.

6.0 HISTORY

Langmuir Township area has received much exploration interest over the past 100 years with more recent initiatives focused on nickel exploration as the area is within a highly prospective komatiitic belt known for the formation of magmatic nickel sulphide mineralization. The 1970's discovery of such nickel deposits as the Langmuir No. 1, Langmuir No. 2, Redstone and McWatters, fuelled and sustained nickel exploration activity in the region. In 2007, additional nickel deposit discoveries were made such as Northern Sun Mining Corp.'s Hart deposit and Golden Chalice Resources Inc.'s Langmuir W4 Nickel Deposit. With the exception of the Langmuir W4, none of the aforementioned deposits or mines occur within the boundaries of the Property.

Golden Chalice Resources Inc. ("Golden Chalice") changed its name to Rogue Resources Inc. ("Rogue" or "Rogue Resources") in October 2010. On 4 March 2021, Rogue announced the sale of the Langmuir Nickel Project to EV Nickel Inc. (www.rogueressources.ca/2021).

Historical results from exploration work on or proximal to the Project have not been verified by the Principal Author or a Qualified Person associated with the Company and as such are not necessarily indicative of the results to be found on the Project.

Unless otherwise referenced, much of the historical work summary to 2010 that follows, has been summarized from Cole *et al.* (2010). Government of Ontario published reports and data that cover the area of the Project include a 1967 mapping program covering Langmuir and Blackstock townships by the Ontario Department of Mines (Pyke, 1970a), a 1988 airborne electromagnetic EM and magnetic survey over the Timmins Area, which included Langmuir Township by the Ontario Geological Survey ("OGS"), geological mapping of Carman and Langmuir townships in 2004 (Houlé and Guilmette, 2005), a 2007 Bartlett Dome MEGATEM II survey which encompassed the area of the Langmuir W4 Nickel Deposit, and geological compilation of the Bartlett and Halliday Domes in 2019 (Préfontaine *et al.*, 2019) which covers part of the Property in Eldorado Township.

Industry-related exploration work within the area of the Property (*i.e.*, Langmuir Township) has taken place since 1964 and continued to 2015, with the most recent work completed by Golden Chalice/Rogue Resources Inc. (Table 6-1).

Table 6-1. Summary of historical exploration work conducted on the Property, 1964-2015.

Year	Company	Exploration Activity
1964-65	Min-Ore Mines Limited	Ground magnetic and electromagnetic survey
1965	G.E. Cooper	Diamond drilling (1 hole, 154 m)
1970	Yellowknife Base Metals Limited	Diamond drilling (3 holes, 803 m)
1980-81	Utah Mines Ltd.	Ground magnetic survey; geological survey; diamond drilling (2 holes, 147 m)
1987	Canadian Nickel Company	Airborne electromagnetic survey
2005	Golden Chalice Resources	Ground magnetic and HLEM surveys; diamond drilling (4 holes, 528 m); Heliborne VTEM-Mag survey (687 line-km)
2006	Golden Chalice Resources	Ground magnetometer surveys (8.15 line-km); Mag/VLF-EM (6.0 line-km)

Year	Company	Exploration Activity
2007	Golden Chalice Resources	Diamond drilling (8 holes, 2,374 m); diamond drilling (37 holes, 16,262 m); MMI orientation geochemical soil survey; MMI geochemical soil survey (West/East grids); heliborne VTEM-Mag survey (2,601 line-km)
2008	Golden Chalice Resources	Diamond drilling (20 holes, 6,938 m); diamond drilling (13 holes, 6,120 m); MMI geochemical soil survey
2009	Golden Chalice Resources	Diamond drilling (11 holes, 3,939 m); down-hole TEM geophysical survey (8 drill holes); drill hole core characterization
2010	Golden Chalice Resources	Diamond drilling (5 holes totalling 1,645 m); Phase 1 Baseline Environmental Studies initiated; Mineral Resource Estimate by SRK Consulting Canada; Mineralogical study
2011	Rogue Iron Ore Corp. (previously Golden Chalice)	Diamond drilling (13 holes, 2,282 m) - 6 HQ (642 m) for metallurgical tests, 7 NQ (1,640 m); Metallurgical testwork (scoping level)
2012	Rogue Resources	Metallurgical testwork review (Starkey)
2014	Rogue Resources	Compilation and re-interpretation of 2005 and 2007 Heliborne VTEM-Mag surveys; Phase 2 Baseline Environmental Studies proposed to begin
2015	Rogue Resources	Mineralogical study

Researched from MENDM files (online) and documents provided by the Issuer, the following summary addresses work conducted mostly within the region around the Langmuir W4 Nickel Deposit.

1964-1965 Min-Ore Mines Limited: held 12 unpatented mining claims south of McWatters Gold Mines Limited 1964 nickel discovery. In December 1964, ground magnetic and electromagnetic (“EM”) surveys were carried out on the property. The EM survey detected two conductive zones that are located immediately east and west of the W4 Deposit. A short AXT core size hole was drilled into the westernmost EM conductive zone, the weaker of the two conductors. The drill hole intersected fine sulphide mineralization but only two drill core samples were sent for analysis and returned no significant metal values.

1965 G.E. Cooper: drilled one hole (154 m) north of the Fork River and the Langmuir W4 Nickel Deposit. The hole cut felsic to intermediate volcanics with no sulphide mineralization.

1970 Yellowknife Base Metals Limited: conducted a three hole diamond drilling program (803 m) in the area of the Langmuir W4 Nickel Deposit. The holes intersected ultramafic rocks with minor volcanic tuffs and graphitic units. No records of assaying are available.

1980-81 Utah Mines Ltd.: optioned nine leased mining claims from A.B. McLennan on January 30, 1980 (north half) and an additional twelve claims were staked (south half) to create their Forks River Property. A ground magnetic survey was conducted by Utah Mines personnel over a 64 line km grid in January 1981. During the summer of 1981, this grid was mapped by Duncan McIvor and P Ramsay of Utah Mines Ltd. They mapped a 30 x 70 m outcrop knoll of serpentinized ultramafic volcanic rocks in the centre of the Langmuir W4 Nickel Deposit area. Four ultramafic rock samples were collected from the outcrop knoll and returned nickel values ranging from 0.12 to 0.21% Ni.

Subsequently in October and November 1981, a diamond drilling program consisting of four holes totalling 332 m was completed on the property. The first two holes (FR81-1, 63 m long and FR81-2, 84 m long) were drilled from north to south in the centre of the Langmuir W4 Nickel Deposit area. Both holes intersected peridotites with graphite units with hole 1, the southernmost of the two, terminating within a dacitic quartz-feldspar porphyry. The assessment drill logs of the two holes indicate only five drill core samples were sent for nickel analysis and returned up to 0.15% Ni. The remaining two holes of the drill program were sunk along strike and west of the W4 Deposit area.

1987 Canadian Nickel Company: conducted an airborne electromagnetic survey of Eldorado and Langmuir Townships that covered the Langmuir W4 area. No EM conductors were detected in the area of the Langmuir W4.

2005 to 2015 Golden Chalice Resources: subsequently re-named company Rogue Resources, completed extensive exploration programs on the Property. No exploration work has been conducted on the Property since 2014.

6.1 Historical Geophysics

6.1.1 Horizontal Loop Electromagnetic Survey (2005)

In March 2005, Golden Chalice Resources Inc. commenced exploration on the property with a ground magnetometer and horizontal loop electromagnetic ("HLEM") survey, contracted to Exploration Services Reg. (Chartre, 2005). The surveys were carried out on a cut grid with a 1.1 km long east-west baseline and 100 m spaced cross lines that extend 400 m north and south of the baseline. The HLEM survey covered 9.6 line-km and the magnetometer survey 10.7 line-kilometres.

The magnetometer survey was completed using a Terraplus GEM-19 magnetometer with an accompanying base station to correct for diurnal variation. Readings were taken every 12.5 metres. An Apex Parametrics Maxmin II horizontal loop unit was used for the EM survey tuned to the 444 and 1777 frequencies. Readings were taken every 25.0 m with a coil separation of 100 metres (Chartre, 2005).

In general, the intensity of the magnetic readings increase from north to south and from west to east. Most of the readings over the surveyed area are in the range of 1 000 to 3 000 gammas indicating the presence of an ultramafic body. The 1000 gamma contour line defines a very irregular contact in the northern part of the grid between 200 and 300 m north. The readings varying between 3000 gammas to 6 000 gammas are randomly distributed and do not convey the presence of structural or lithological bedding, however, there is a certain symmetry to the magnetic high profile along most of the length of the outlined conductor between lines 300 W and 400 E (Chartre, 2005).

The HLEM survey outlined a good conductor has been outlined in the central part of the grid between lines 300 W and 400 E - the conductor appears to continue eastwards beyond the surveyed area. The optimum response has been observed on line 400 E - the conductor axis crosses this line at 75 m S and is coincident with a definite magnetic anomaly. The EM anomaly was interpreted to be caused by a sulfide body containing pyrrhotite (Chartre, 2005).

6.1.2 Heliborne VTEM-Magnetic Survey (2005)

In 2005, a 75 m flight line spacing VTEM airborne survey, totalling 687 line-km (47.9 square km), was flown by Geotech Limited over the southeastern part of the property (Figure 6-1) (Orta, 2005). Processing of the EM data identified 18 separate airborne EM anomaly clusters which were interpreted as potential sulphide targets (see Figure 7-5). The clusters were defined by two or more flight line EM anomalies and are largely covered by overburden or swamp. Deliverables included a survey report electromagnetic and magnetic survey maps, gridded data in Geosoft GRD format, maps in Geosoft MAP format, and all raw survey data in digital format.

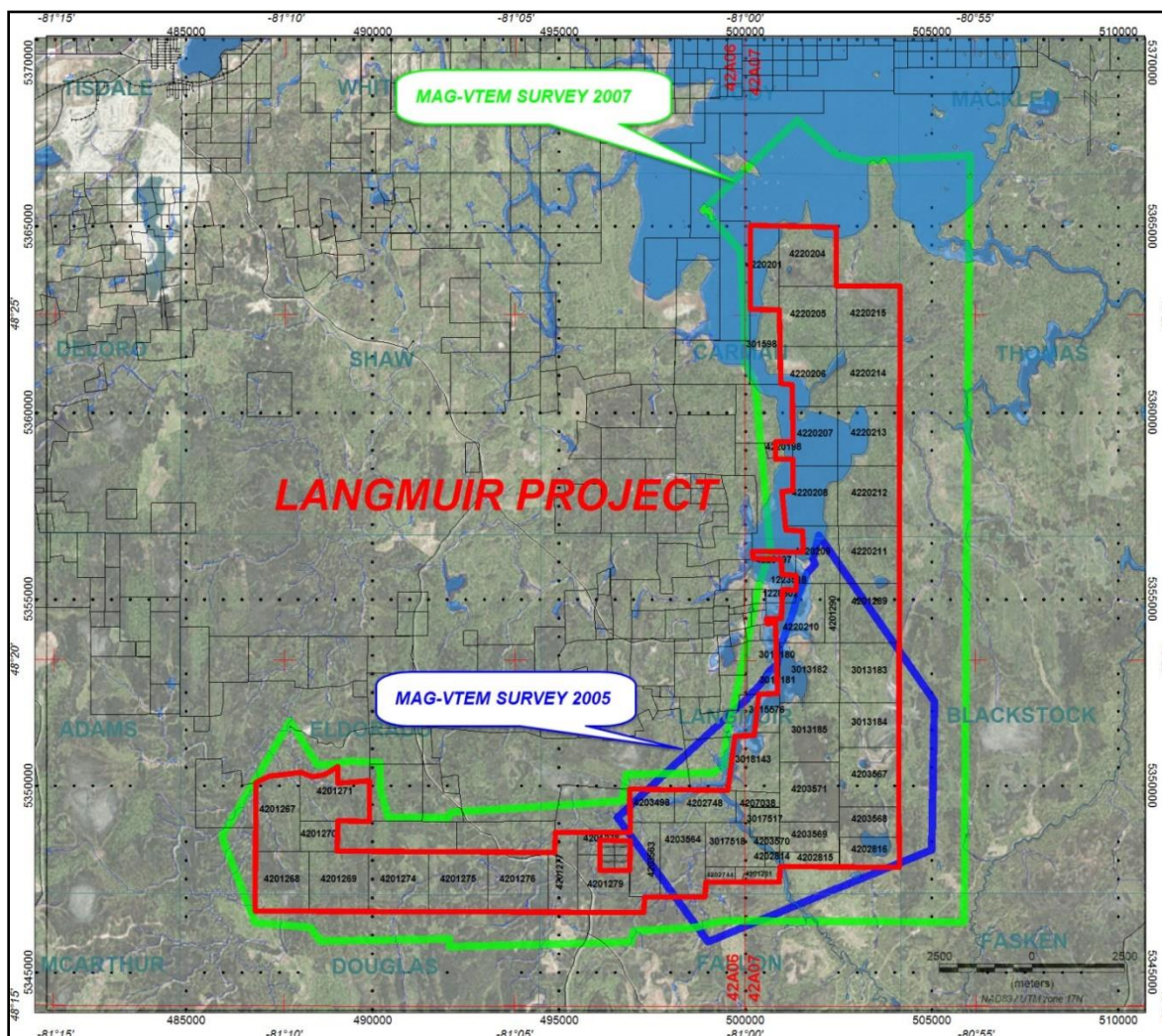


Figure 6-1. Location of the 2005 and 2007 GeoTech heliborne VTEM and magnetometer surveys (Simard, 2014).

6.1.3 Ground Magnetic Surveys (2006)

In October and November 2006, Larder Geophysics Ltd. completed ground magnetometer surveys over five airborne magnetic targets as well as VLF-EM surveys over two of the five targets (Ploeger, 2006). A total of 8.15 line-km of magnetometer and 6.0 line-km of Mag/VLF-EM survey was read, totalling 326 magnetometer stations and 240 simultaneous Mag/VLF-EM stations.

The magnetic survey was conducted using a GSM-19 v5 Overhauser magnetometer/VLF-EM in base station mode for diurnal correction. A magnetic datum of 56500nT was used for all the target areas and was chosen based on sample readings taken in the vicinity of the base station. Generally repeatability was within 5nT in low gradient areas. A total of five main Mag/VLF-EM anomalies were identified (Ploeger, 2006).

6.1.4 Heliborne VTEM-Magnetic Survey (2007)

In 2007, a 75 m flight line spacing VTEM airborne survey, totalling 2,601 line-km (175.5 square km), was flown by Geotech Limited over the entire property (see Figure 6-1) (Orta, 2007). Processing of the EM data identified several EM anomalies, interpreted as potential sulphide targets (see Figure 7-5). Deliverables included a survey report electromagnetic and magnetic survey maps, gridded data in Geosoft GRD format, maps in Geosoft MAP format, Google Earth flight path file, and all raw survey data in digital format.

6.1.5 Borehole TEM Surveys (2009)

From February to May 2009, Quantec Geoscience Ltd. completed borehole transient electromagnetic ("TEM") surveys on eight (8) drill holes within the Langmuir property (Coulson, 2009). The objective of the borehole TEM surveys was to determine the extent of sulphide mineralization intersected in drill holes and the potential for other conductive mineralization within up to 50 m radius of the drill holes. A total of 2,596 m of borehole were surveyed and survey coordinates are in NAD83 Zone 17N (Table 6-2).

Table 6-2. Details for the 8 drill holes surveyed by TEM in 2009 (Coulson, 2009).

Hole #	Collar – UTM Nad83 (Local)	Az/Dip	Start (m)	End (m)	Total (m)
GCL09-01	499100E, 5349185N	325°/-70°	60	383	323
GCL09-03	499563E, 5348153N	325°/-55°	10	400	390
GCL09-04	499522E, 5348216N	360°/-45°	10	240	230
GCL09-05	498847E, 5349348N	360°/-70°	20	390	370
GCL09-07	499030E, 5349230N	360°/-53°	60	338	278
GCL09-09	498845E, 5348990N	360°/-50°	30	245	215
GCL09-10	499010E, 5349250N	360°/-55°	40	370	330
GCL09-11	497971E, 5349428N	360°/-65°	30	495	465

Each drill hole was located within a 200 x 200 m loop an in-hole readings were taken at 5 and 20 metres (Coulson, 2009). As no report with respect to an interpretation of the results is available, the Principal Author has provided some comments with respect to the results of the borehole TEM surveys (Table 6-3).

Table 6-3. Summary of results from 2009 Quantec Geoscience borehole TEM surveys (Caracle, 2021).

Drill Hole	Comments
GCL09-01	in-hole response in early time transitioning to an off-hole in late time; elevated amplitudes in late time suggest good conductance; intersection in core around 325 m
GCL09-03	mostly off-hole response at 180 m and may have intersected edge of mineralized zone; late off-time still anomalous suggesting good conductance
GCL09-04	off-hole anomaly at 110 m with high amplitude due to the shallow depth of the source and its proximity to the surface transmitter loop; "y" component shows late time reversal suggesting there is more conductive material in one direction; hole is close to the source and may have intersected an edge of the zone
GCL09-05	combination in-hole and off-hole with the off-hole located below the intersection; likely intersection at 185 m; late time response is almost zero, suggesting lower conductance (or smaller size)

Drill Hole	Comments
GCL09-07	complex response from three closely spaced zones between 200 and 300 m
GCL09-09	no response
GCL09-10	weak in-hole response at 260 m; off-hole response at 200 m
GCL09-11	off-hole response at 100 m; edge response at 400 m with an off-hole developing below the 400 m intersection; another small intersection at 450 m

Montgomery (2011), noted that the borehole TEM survey outlined an EM anomaly off hole from hole GCL09-01, detected to the east and along strike.

6.1.6 Drill Core Characterization (2009)

In June 2009, JvX Ltd. (Geophysical Surveys and Consulting) reported on a series of physical property measurements (density, susceptibility, EM conductivity, DC resistivity and chargeability) for 15 drill core samples provided by Golden Chalice. The study was aimed at providing useful information to assist in the design and interpretation of future geophysical surveys (Webster, 2009).

The 15 drill core samples were 5 to 6 inches long with the ends of the sample cut flat to get a good current – electrode contact for the resistivity measurements. Samples were water saturated in a water-filled vacuum vessel before taking any measurements, in order to closely approximate the field measurement conditions for non-porous materials.

For density measurements, a precision scale was used to measure the weight of each sample in air (W_a). Then each sample was submersed in water (making sure that the samples do not touch the walls of the container) and the core weight (W_w) was measured again. By applying the formula $P = (W_a - W_w) / V$, the core density (P) was calculated. The results of these measurements indicate that the average density (g/cm^3) of the samples is around 2.85. The highest densities measured correspond to samples 104260 Zone A (3.14) and 104269 Zone A (2.96). These two core samples contain visual mineralization.

Conductivity measurements were made using the Scintrex CTU-2 which uses an inductive method for measuring the conductivity of samples. It makes use of the fact that the response of a cylinder in an exciting loop has a linear out-of-phase response when the in-phase response is small. Three ranges of conductivity were measured: C1 (100 kHz), C2 (100 kHz) and C3 (2.5 MHz). The results indicate that the conductivity of some of the samples from the A Zone (104260, 104265, 104269, 104270) could be high enough to be detected by EM surveys. The high conductivity (and therefore low resistivity) contrast could allow the detection of possible mineralized zones associated to this host rock. The EM-resistivity values calculated with the induction coils are much higher than the ones found with the DC measurements (Webster, 2009).

Magnetic susceptibility measurements were made using a Scintrex CTU-2, by placing the core sample close to the magnetic sensor. The susceptibility of the samples was measured by sliding the sensor head across the sample. The maximum and the minimum values are recorded. If the value of the susceptibility is very high, the measurements are made with a ¼ inch fiberglass pad placed between the head of the sensor and the sample. The results indicate that the susceptibility of the samples 104259 KPd flow Zone A host, 104265 Zone A and especially 104269 Zone A are relatively high. The rest of the samples show low values of the susceptibility. The different values of the susceptibility in these samples may be used to delineate areas of different rock types that contain different contents of magnetite. Therefore, magnetic methods could be a useful exploration tool in this area.

Resistivity/IP measurements were made by passing a current through the core using a Scintrex CTU-IP module and measuring the apparent resistivity and chargeability with the Scintrex receiver IPR-12 (Webster, 2009). Saturated copper sulphate pads form the current electrodes and saturated copper sulphate soaked cotton covered wire forms the potential electrodes. Resistivity and chargeability values were then calculated from the measurements. The results showed that samples 104265, 104266, 104267 and 104269 have low resistivity and high chargeability, which seems to be related to a high content of mineralization. The remaining samples have a medium resistivity and, in general, a high chargeability (excluding samples 104258, 104263 and 104264).

6.2 Historical Surface Sampling

Golden Chalice Resources completed two Mobile Metal Ions (“MMI”) soil surveys over two areas of the Property, proximal to the Langmuir W4 Nickel Deposit. The MMI soil sampling technique is based on the vertical ascension of ions from an oxidizing ore body. This vertical ascension is rapid in geological time and the ions are “loosely attached” to soil particles. Capillary rise and evaporation processes play an important part in locating an active anomaly just below the soil surface. This produces sharp anomalies in surface soils vertically above an ore body. The ions principally attach on to clays, iron oxides and organic matter. Background noise is reduced by the partial extraction geochemical analysis method which precludes ions that have been bound into soil particles and mechanically dispersed across the surface (Montgomery, 2010a).

MMI soil sampling is conducted at a fixed depth of 10 to 25 cm below the interface of the leaf/twig litter layer and the inorganic soil layer. The sample should be taken as a continuous 15 cm plug. In boreal forest terrain dead organic matter is removed prior to taking the sample. Typically a 300-400 gram sample of either A or B horizon soil is collected at a site (Montgomery, 2010a).

The intellectual property that comprises the MMI technology, developed by WAMTECH Pty Ltd. (Perth, Australia), was purchased by SGS Mineral Services and as such was the only licensed analytical services company that could perform the MMI analyses (Fedikow, 2008). Further information on the MMI technique is available at www.sgs.com/en/mining/exploration-services/geochemistry/mmi-orientation-surveys.

6.2.1 Mobile Metal Ions Geochemical Survey – Orientation (2007)

In mid-2007, a Mobile Metal Ions (“MMI”) soil orientation survey was completed by Golden Chalice personnel over three lines oriented at 325Az and located near drill hole GCL07-06 and the A Zone (within Legacy Mining Claim 4203498). The objective of this 2007 orientation survey was to investigate the effectiveness of MMI surveys for targeting nickel sulphides on the property. The sampling program was co-ordinated and supervised by Kevin Montgomery.

The Central line (line 0) extended from 250N to 200S, the East line (line 50E) from 150N to 100S, and the West line (line 50W) from 150N to 100S. A total of 36 samples were collected on these lines at 25 m spaced stations and submitted to SGS Mineral Services in Toronto, Ontario for analysis using their proprietary MMI analytical techniques. Results from the MMI orientation survey proved positive, identifying the A Zone in a MMI soil profile, which led to larger surveys in 2007 and 2008.

6.2.2 Mobile Metal Ions Geochemical Survey – West/East Grid (2007)

In fall 2007, a Mobile Metal Ions (“MMI”) soil survey was completed by Golden Chalice personnel over the A Zone area of the Langmuir property (within Legacy Mining Claim 4203498 and the western edge of 4202748). This survey incorporated the 36 samples from the earlier 2007 MMI orientation survey. The objective of this 2007 survey was to investigate the effectiveness of MMI surveys for targeting nickel sulphides on the property and specifically to the west and east and over the known A Zone sulphide mineralization. The sampling program was co-ordinated and supervised by Kevin Montgomery and sampling was completed by the field staff of sub-consultants EXSICS, a geophysical consulting company based in Timmins (Fedikow, 2008).

Soil sampling was controlled using two grids referred to as the West Grid and the East Grid. The West grid, comprising largely cut lines but with some flagged lines in the western part of the grid, had survey lines orientated at 325Az that extended 200 m to the northwest and 200 m to the southeast, and extending from line 4+50W to line 2+50E, a total distance of 700 metres. The East Grid, a flagged grid (not cut) which overlapped onto the eastern end of the West Grid (at lines 200E and 250E), extended from line 7800E to line 8200E with survey lines oriented north-south.

Golden Chalice personnel collected a total of 304 soil samples, each weighing approximately 250 grams and collected at 25 m spaced intervals along the grid lines, using steel augers. Ideally, each sample should represent a continuous 15 cm long plug or a continuous vertical channel of sediment. The use of an auger, while rapid in comparison to sampling from a pit, makes the auger approach tenuous due to soil mixing and compression. In addition, sample depth information was not collected during sampling (Fedikow, 2008).

Soil samples were bagged on site without preparation and shipped to SGS Laboratories (Toronto, Ontario) for MMI-M analysis. At the laboratory, the samples were catalogued and inputted into the Laboratory Information Management System (LIMS). A 50 gram portion of the soil sample was saturated with a concentrated MMI-M leach solution which extracts any mobile metal ions present in the sample. The pregnant sample solution is then aspirated into inductively coupled plasma Mass Spectrometer (ICP-MS) where the ions are measured and quantified according to their unique mass. The following elements were analyzed by the ICP-MS (multi-element analysis): Silver(Ag); Gold (Au); Barium (Ba); Bismuth (Bi); Calcium (Ca); Cadmium (Cd); Cerium (Ce); Copper (Cu);Cobalt (Co);Dysprosium (Dy); Erbium (Er); Europium (Eu); Gadolinium (Gd); Lanthanum (La); Magnesium (Mg), Molybdenum (Mo); Niobium (Nb); Neodymium (Nd); Nickel (Ni); Lead (Pb); Palladium (Pd); Praseodymium (Pr);Rubidium (Rb); Antimony (Sb); Samarium (Sm); Tin (Sn); Strontium (Sr); Tellurium (Te); Thorium (Th); Titanium (Ti); Thallium (Tl); Uranium (U); Tungsten (W); Yttrium (Y); Ytterbium (Yb); Zinc (Zn) and Zirconium (Zr). The results were exported via computer and captured into the LIMS. The metal mobile ion elements analyzed are reported in ppb.

SGS Mineral Services employs a rigorous quality control procedure. The ICP-MS is calibrated with each work order. An instrument blank and calibration check is analyzed with each run. One preparation blank and reference material is analyzed every 46 samples, one duplicate every 12 samples. All quality control samples are verified using LIMS. The acceptance criteria are statistically controlled and control charts are used to monitor accuracy and precision. Data that falls outside the control limits is investigated and repeated as necessary.

6.2.2.1 Discussion

The outstanding responses on the east grid and the west grid are a single sample Ni anomaly on the east grid, a multi-sample Ni anomaly and a multi-element (Nb-Li-Fe-Cr-Co+/-As) anomaly on the west grid. The Ni responses on both grids are strongly focused anomalies with coincident Co, Cr, Zn, As, La and Ce on the east grid and Nb-Li-Fe-Cr-Co+/-As on the west grid. The west grid Ni anomaly has a northwest to southeast trend defined by multiple samples. Of particular importance in the MMI-M data is the northwest verging fold structure defined on the west grid by Nb-Li-Fe-Cr-Co+/-As responses. This underscores the ability of MMI-M partial extractions to map subsurface geology and this feature is interpreted as a folded mafic/ultramafic lithology (Fedikow, 2008).

Of some concern in interpreting data from this survey is the apparent sampling error observed in the resultant patterns for the elements Ti-Zn-Sc. Each of these three elements produces north-south trending multi-sample anomalies on the west grid and these patterns are interpreted to represent the effects of varying sample depth during the survey. There are no substantive differences in the nature of the soils sampled for the survey and the Ti-Zn-Sc trends are restricted to two adjacent sampling transects. It appears however that this error has not been problematic on other sampling transects or in the dataset as a whole. Nevertheless, the absence of a substantial Ni anomaly from the east grid (there is a single sample response for Ni) could be worrisome due to inappropriately collected soil samples that depart from MMI sampling protocols (Fedikow, 2008).

In previous MMI-M surveys the use of Ni as an indicator of NiS mineralization has been problematic in that a mafic and/or ultramafic lithology in the subsurface is also capable of producing a Ni anomaly. In the Langmuir study Ni is accompanied by Co and Cr and so it is likely the signature of NiS mineralization. However, the northwest verging fold structure defined by the variation in concentration of multiple elements appears to be the signature of a folded mafic/ultramafic lithology. The elements that define this fold do not include Ni (Fedikow, 2008).

6.2.2.2 Conclusions and Recommendations

The interpreted results of the MMI survey documented the presence of a northwest-trending multi-sample Ni anomaly on the west grid that comprises two moderate-contrast and one low-contrast focused anomalies. This response is a definite exploration follow-up target. In addition, there is a northwest verging feature defined by the element suite Nb-Li-Fe-Cr-Co+/-As and is interpreted to be a folded mafic/ultramafic lithology. The east grid is marked by a single sample Ni anomaly and like all single sample geochemical anomaly should be viewed with caution until further information, such as geophysics, can be reviewed (Fedikow, 2008). The following recommendations were made (Fedikow, 2008):

- 1) Soil sampling with an auger should only be undertaken when deep organic cover is encountered or when the survey area is flooded. Augers tend to compress and mix soils potentially introducing significant sampling errors. Mobile Metal Ions soil samples should be collected from hand-dug pits and the sample collected as a vertical 15 cm plug or channel sample. In the absence of an orientation survey the sample should be collected between 10 and 25 cm below the organic-inorganic soil contact. This protocol will result in a well-constrained dataset.

- 2) Prior to initiating an MMI survey one to two days should be spent on the property with someone familiar with sampling protocols in glaciated terrain. The time spent will more than compensate for the costs involved.
- 3) For future MMI-M surveys directed towards NiS mineralization the analytical request should include “low-level Cr”. This determination is a new feature designed to assist NiS exploration by providing 1 ppb Cr analyses which will assist in the differentiation between a Ni signature from mafic/ultramafic lithologies and one from NiS mineralization.

6.2.3 Mobile Metal Ions Geochemical Survey (2008)

From September to November 2008, an MMI geochemical soil survey was conducted within Legacy Mining Claim 4202748, located east of the Langmuir W4 and bounded to the north by Fork River and to the east by Nighthawk River (Montgomery, 2010a). The objective of the survey was to investigate several VTEM conductors within ultramafic volcanic stratigraphy east of the Langmuir W4. The sampling program was co-ordinated and supervised by Kevin Montgomery and sampling was completed by two, two person crews.

A total of 938 MMI soil samples were collected (861 samples and 77 duplicate samples) over a 1.5 x 1.0 km flagged grid (from line 0+00E to line 30+00E), with 50 m spaced north-south lines (30 lines sampled) and sample sites at every 25 metres. Each sample site was flagged with orange flagging tape; each baseline sample was flagged with blue tape. Samples were not taken on drill roads, drill hole target sites, beaver creeks, or bottomless swamp/bog. In addition all the ends and centres of the lines were surveyed by a hand held GPS unit with +/- 10 m accuracy.

The collected soil samples were shipped to SGS Mineral Services' laboratory in Toronto, Ontario and underwent the same treatment and measurement as is described previously in Section 6.2.2.

6.2.3.1 Conclusions and Recommendations

Laboratory results from the MMI soil survey were reviewed by contractor Mark Fedikow of Mount Morgan Resources (Fedikow, 2009). The results of the fall 2008 MMI soil geochemical survey outlined significant lithologically-related responses and associated base and precious metal anomalies. Based on the association of the element suite Cr-Ti-Nb-V-Fe-Al the southern grid area is marked by an ultramafic lithology whereas the northern portion of the grid is underlain by a lithologies that are either mafic or intermediate with the possibility of felsic intrusions marked by localized high-contrast Ce anomalies. The contact between these two sequences might be indicated by a linear, generally east to west-trending Cu and Zn-Cd anomaly representative of a possible zone of sulphide mineralization that might be found in a sulphide facies iron formation at a break in volcanism (Fedikow, 2009).

In addition to the Cr-Ti-Nb-V-Fe-Al assemblage, the presence of associated Co within this anomaly is suggestive of dispersed pyrite in an ultramafic lithology suggesting an available sulphur source has been acquired by the ultramafic lithology and hence the likelihood of Ni-Cu-PGE mineralization in these rocks is enhanced (Fedikow, 2009; Montgomery, 2010).

The form of the ultramafic response is somewhat variable, with a “tongue” of high Cr-Ti-Nb-V-Fe-Al extending from the southwest corner of the grid to the east but changing from a more massive anomaly

to a more linear feature. This linear tongue also hosts the Pd and Ni responses and is somewhat coincident with Cu and Zn-Cd responses discussed earlier. This may be indicative of an ultramafic flow associated with iron formation in the eastern grid area. The contact area between the more ultramafic lithologies from the south and southwest portions of the grid and the mafic to intermediate lithologies in the north appears to be in the 1+50N northing on the grid although this is almost certain to be variable (Fedikow, 2009; Montgomery, 2010).

The MMI soil results of the survey clearly indicate a strong nickel anomaly on L1600E, 50 N to L1700E, 25 N. This strong Ni anomaly (498854mE 5349491mN) has a coincident weak Co, Cu, Cd, Cr response. It was recommended that this anomaly be considered a diamond drill target (Montgomery, 2010).

6.3 Historical Drilling (2005 to 2011)

Between May 2005 and February 2011, Golden Chalice/Rogue Resources completed 130 drill holes (40,796 m) on the Property and all of the data and information associated with this drilling is available to the Authors and the Issuer. Information regarding the minor drilling conducted on the Project prior to 2005 is not available to the Authors. This pre-2005 data and information is not considered reliable for the purposes of mineral resource estimation.

All drill core assay intercepts described in the following sections represent core intervals or core lengths and are not representative of true widths unless otherwise stated. Procedures relating to what is known about the sample preparation, analyses and security used in the generation of historical drill core data and information is reviewed in Section 11.

All drill holes completed from 205 to 2011 were collared at surface and were land based, employing NQ-size coring tools, excepting six metallurgical drill holes from 2011 which used HQ size. Services from four diamond drilling contractors were employed: Norex Drilling (Timmins, Ontario), Orbit-Garant Drilling (Val-d'Or, Quebec), Major Drilling (Val-d'Or, Quebec), and Bradley Brothers (Timmins, Ontario). A summary of the drilling programs that have taken place on the Property is provided in Table 6-4 and Table 6-5 with drill hole collar locations shown in Figure 6-2.

Table 6-4. Summary of historical diamond drilling programs on the Langmuir Nickel Project.

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCR05-01	499860.00	5348196.00	295.00	120.00	0.0	-45
GCR05-02	499482.00	5348263.00	295.00	122.00	0.0	-45
GCR05-03	499860.00	5348196.00	295.00	155.00	0.0	-70
GCR05-04	499773.00	5348463.00	295.00	148.00	0.0	-45
GCL07-01	500096.00	5348163.00	295.00	251.00	325.0	-55
GCL07-02	500598.00	5347683.00	295.00	305.00	145.0	-55
GCL07-03	499025.00	5349193.00	295.00	326.00	325.0	-55
GCL07-04	498137.50	5349438.96	292.17	623.00	322.7	-56
GCL07-05	497235.37	5349374.10	294.53	260.00	340.0	-50
GCL07-06	497521.32	5349400.85	294.91	226.00	319.8	-52
GCL07-07	500762.00	5348373.00	295.00	302.00	325.0	-55
GCL07-08	500738.00	5349080.00	295.00	326.00	325.0	-55
GCL07-09	500191.00	5349346.00	295.00	302.00	325.0	-55
GCL07-10	497521.08	5349401.14	294.68	413.00	318.7	-45

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL07-11	497567.07	5349340.84	294.77	401.00	323.7	-45
GCL07-12	497539.84	5349418.36	294.45	314.00	324.7	-46
GCL07-13	497540.12	5349417.98	294.48	485.00	323.0	-58
GCL07-14	497500.15	5349386.77	295.04	401.00	315.3	-45
GCL07-15	497522.04	5349363.76	294.90	500.00	318.5	-45
GCL07-16	497478.24	5349421.08	294.65	302.00	328.5	-46
GCL07-17	497479.26	5349373.02	295.24	401.00	322.3	-47
GCL07-18	497507.39	5349335.55	294.94	500.00	323.1	-47
GCL07-19	497455.85	5349404.77	295.17	356.00	323.4	-41
GCL07-20	497457.83	5349358.17	295.10	507.00	325.0	-46
GCL07-21	497612.83	5349317.97	294.66	350.00	322.7	-44
GCL07-22	497489.43	5349317.52	294.89	425.00	322.3	-45
GCL07-23	497637.90	5349367.49	294.28	410.00	328.6	-45
GCL07-24	497429.65	5349398.51	295.39	401.00	321.9	-44
GCL07-25	497613.01	5349317.80	294.60	509.00	326.0	-46
GCL07-26	497427.13	5349356.77	297.53	452.00	324.0	-45
GCL07-27	497585.20	5349355.68	294.92	350.00	322.1	-44
GCL07-28	497394.40	5349400.68	298.41	401.00	322.4	-51
GCL07-29	497633.05	5349333.62	294.68	399.00	323.4	-50
GCL07-30	497451.05	5349325.41	294.99	384.00	322.3	-46
GCL07-31	497664.68	5349290.34	294.52	446.00	321.3	-45
GCL07-32	497397.18	5349372.34	298.80	449.00	323.9	-44
GCL07-33	497605.02	5349369.36	294.57	393.00	324.1	-46
GCL07-34A	497359.42	5349405.95	294.67	392.00	324.9	-45
GCL07-34	497359.42	5349405.95	294.67	63.00	324.9	-45
GCL07-35	497669.17	5349324.33	294.38	500.00	328.1	-56
GCL07-36	497355.68	5349338.46	294.92	464.00	327.2	-45
GCL07-37	497698.84	5349411.19	291.11	500.00	318.7	-44
GCL07-38	497329.57	5349449.18	290.93	350.00	324.1	-48
GCL07-39	497666.63	5349287.66	294.53	542.00	319.4	-55
GCL07-40	497421.28	5349324.25	296.68	503.00	324.2	-50
GCL07-41	497668.63	5349324.65	294.50	551.00	328.4	-50
GCL07-42	497321.44	5349250.46	294.78	412.30	322.2	-45
GCL07-43	497668.68	5349324.42	294.47	551.00	328.4	-62
GCL07-44	497777.50	5349309.52	294.23	497.00	319.9	-47
GCL07-45	497615.34	5349269.30	294.69	575.00	315.1	-49
GCL-08-01E	500000.00	5349265.00	295.00	95.00	310.0	-45
GCL-08-01EA	500000.00	5349260.00	295.00	452.00	310.0	-45
GCL-08-02E	500838.00	5348281.00	295.00	102.00	145.0	-55
GCL-08-02EA	500836.00	5348278.00	295.00	600.00	145.0	-55
GCL-08-03E	499987.00	5349944.00	295.00	338.00	325.0	-55
GCL-08-03EA	499967.00	5349927.00	295.00	550.00	325.0	-55
GCL-08-04E	500826.00	5348972.00	295.00	501.00	325.0	-55
GCL-08-05E	501291.00	5350407.00	295.00	147.00	145.0	-55
GCL-08-05EA	501289.00	5350410.00	295.00	402.00	325.0	-55
GCL-08-06E	500513.00	5350344.00	295.00	426.00	325.0	-55
GCL-08-07E	502227.00	5352279.00	295.00	351.00	85.0	-55

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL-08-08E	503039.00	5353477.00	295.00	276.00	270.0	-55
GCL-08-09E	503028.00	5353401.00	295.00	252.00	270.0	-55
GCL-08-10E	503018.00	5353096.00	295.00	327.00	273.0	-55
GCL-08-11E	503019.00	5353097.00	295.00	276.00	270.0	-45
GCL-08-12E	500980.00	5350365.00	295.00	476.00	360.0	-55
GCL-08-13E	502426.00	5352075.00	295.00	377.00	325.0	-50
GCL-08-14E	503128.00	5353242.00	295.00	402.00	270.0	-50
GCL-08-15E	503133.00	5353244.00	295.00	261.00	90.0	-50
GCL-08-16E	500867.00	5349179.00	295.00	327.00	325.0	-55
GCL-08-01W	500105.00	5348090.00	295.00	326.00	360.0	-45
GCL-08-02W	500105.00	5348090.00	295.00	200.00	180.0	-45
GCL-08-03W	498202.14	5349356.65	292.73	725.00	317.3	-71
GCL-08-04W	497383.98	5349202.12	294.44	723.00	0.0	-90
GCL-08-05W	497157.92	5349474.92	281.06	774.00	334.7	-59
GCL-08-06WA	497272.00	5349314.00	294.00	56.00	325.0	-50
GCL-08-06W	497272.82	5349314.20	293.69	701.00	335.0	-45
GCL-08-07W	497584.00	5348817.00	295.00	801.40	360.0	-55
GCL-08-08W	497150.00	5348817.00	295.00	900.00	352.0	-55
GCL-08-09WA	497400.00	5349000.00	295.00	167.00	355.0	-55
GCL-08-09WB	497398.00	5349003.00	295.00	41.00	355.0	-55
GCL-08-09WC	497396.00	5349006.00	295.00	56.00	355.0	-55
GCL-08-09W	497400.00	5349030.00	295.00	600.00	355.0	-60
GCL08-46	497563.06	5349300.05	295.09	599.00	319.2	-53
GCL08-47A	497489.43	5349321.52	295.00	77.00	334.0	-55
GCL08-47B	497489.43	5349319.50	295.00	38.00	330.0	-55
GCL08-47	497487.57	5349319.32	295.17	602.00	321.3	-55
GCL08-48	497475.00	5349550.00	284.25	212.00	196.0	-45
GCL08-49	497475.00	5349550.00	284.25	242.00	196.0	-58
GCL08-50	497475.00	5349550.00	284.25	218.00	180.0	-45
GCL08-51	497475.00	5349550.00	284.25	218.00	180.0	-54
GCL08-52	497475.00	5349550.00	284.25	239.00	180.0	-61
GCL08-53	497475.00	5349550.00	284.25	244.00	162.0	-63
GCL08-54	497500.00	5349500.00	293.94	197.00	180.0	-62
GCL08-55	497450.00	5349485.00	293.57	134.00	180.0	-45
GCL08-56	497450.00	5349485.00	293.57	188.00	180.0	-70
GCL08-57	497400.00	5349500.00	293.62	134.00	180.0	-45
GCL08-58	497400.00	5349500.00	293.62	185.00	180.0	-69
GCL08-59	497375.00	5349525.00	293.95	176.00	180.0	-48
GCL08-60	497375.00	5349525.00	293.95	251.00	180.0	-66
GCL08-61	497425.00	5349425.00	295.00	152.00	360.0	-45
GCL08-62	497425.00	5349500.00	293.62	158.00	183.0	-52
GCL08-63	497425.00	5349500.00	293.60	191.00	183.0	-69
GCL08-64A	497400.00	5349530.00	293.90	24.00	180.0	-69
GCL08-64	497400.00	5349530.00	293.95	203.00	180.0	-69
GCL08-65	497375.00	5349485.00	293.60	110.00	180.0	-45
GCL08-66	497375.00	5349485.00	293.60	161.00	180.0	-68
GCL08-67	497400.00	5349470.00	293.60	134.00	180.0	-60

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL08-68	497350.00	5349495.00	293.90	110.00	180.0	-45
GCL08-69	497350.00	5349495.00	293.90	161.00	180.0	-67
GCL08-70	497400.00	5349470.00	293.60	104.00	180.0	-45
GCL08-71	497325.00	5349420.00	294.70	221.00	360.0	-45
GCL08-72	497325.00	5349420.00	294.70	194.00	360.0	-60
GCL08-73	497350.00	5349390.00	294.70	200.00	360.0	-50
GCL09-01	499099.03	5349182.93	284.15	434.00	323.9	-55
GCL09-02	500119.69	5348113.78	285.58	351.00	327.3	-54
GCL09-03	499559.82	5348151.29	298.48	402.00	333.3	-55
GCL09-04	499519.37	5348215.42	295.27	252.00	13.6	-44
GCL09-05	498846.82	5349347.69	285.74	399.00	1.7	-70
GCL09-06	498846.84	5349348.65	285.75	285.00	2.0	-44
GCL09-07	499029.89	5349226.59	284.41	342.00	3.5	-55
GCL09-08	499724.00	5349383.00	285.00	352.00	325.0	-65
GCL09-09	498842.29	5348991.86	285.28	251.00	3.9	-52
GCL09-10	499007.75	5349247.41	284.32	377.00	356.3	-65
GCL09-11	497971.00	5349428.00	285.00	494.00	325.0	-68
GCL10-01W	498996.53	5349276.03	282.34	351.00	0.0	-64
GCL10-02W	498998.13	5349217.52	283.68	308.00	0.0	-65
GCL10-03	498945.51	5349239.70	284.17	350.00	1.0	-64
GCL10-04	499007.40	5349237.68	284.48	361.00	2.7	-67
GCL10-05	499009.61	5349307.57	283.38	275.00	354.0	-59
RL11-01	497475.00	5349555.00	284.25	155.00	198.0	-45
RL11-02	497400.00	5349535.00	293.95	176.00	180.0	-68
RL11-03	497375.00	5349490.00	293.60	50.00	180.0	-45
RL11-04	497550.00	5349475.00	293.00	173.00	185.0	-45
RL11-05	497550.00	5349510.00	290.50	215.00	185.0	-62
RL11-06	497400.00	5349470.00	293.60	50.00	180.0	-60
RL11-07	497425.00	5349500.00	293.60	140.00	183.0	-70
RL11-08	497525.00	5349510.00	294.50	278.00	180.0	-63
RL11-09	497480.00	5349490.00	292.00	152.00	185.0	-45
RL11-10	497350.00	5349495.00	293.90	71.00	180.0	-63
RL11-11	497600.00	5349550.00	284.00	221.00	180.0	-50
RL11-12	497735.00	5349525.00	284.00	275.00	170.0	-65
RL11-13	497900.00	5349430.00	294.50	326.00	360.0	-50

Table 6-5. Summary of historical diamond drilling on the Langmuir Nickel Property.

Year	Area of Drilling	No. Holes	Metres
2005	W6 South Central	4	545
2007	W2, W3 Central	8	2,695
2007-08	W4 Nickel Deposit	37	16,262
2007	W4 East	1	413
2008	Eastern area of property	20	6,938
2008	W6 South Central & Central West of W4	31	6,077
2009	W6 South Central & W2, W3 Central	11	3,939
2010	W2 Central	5	1,645
2011	W4 East & Langmuir W4 (metallurgical)	13	2,282
	Total:	130	40,796

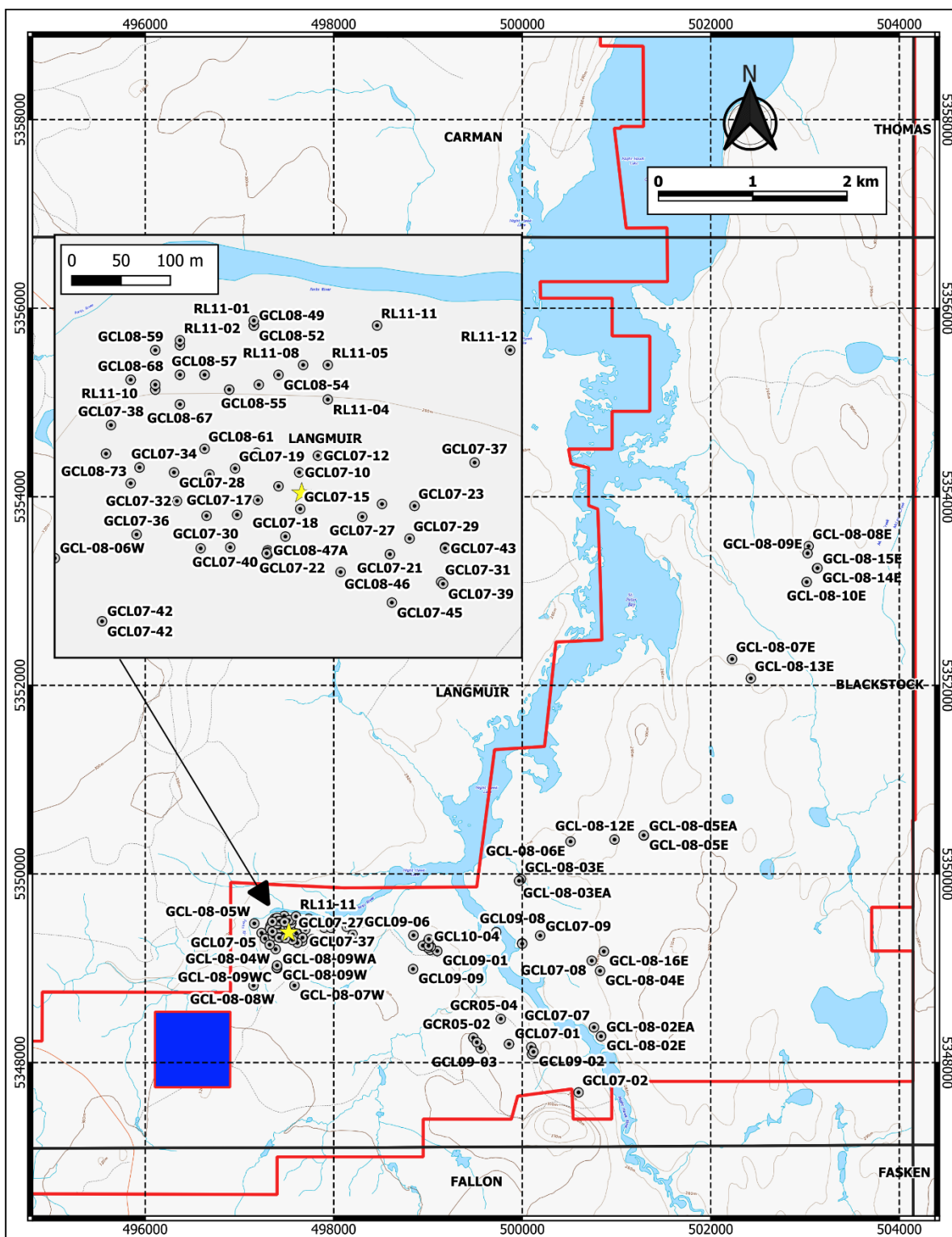


Figure 6-2. Locations of all historical drill hole collars on the Property (red outline). The location of the Langmuir W4 Nickel Deposit is also shown (yellow star). The dark blue square is held by a third party.

6.3.1 Golden Chalice (2005)

In 2005, an initial helicopter supported drilling program comprising four NQ size drill holes (545 m) tested HLEM conductors outlined on Legacy Mining Claim 3017518 (Caldick, 2007). The intent of the program was the targeting of a Kambalda-style komatiite associated nickel sulphide mineralization based on the HLEM geophysical survey. A summary of the parameters for the four drill holes is provided in Table 6-6. A total of 205 core samples were collected at intervals ranging from 0.30 to 1.0 metres.

Table 6-6. Summary of drill hole parameters for 2005 drilling program.

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCR05-01	499860.00	5348196.00	295.00	120.00	0.0	-45
GCR05-02	499482.00	5348263.00	295.00	122.00	0.0	-45
GCR05-03	499860.00	5348196.00	295.00	155.00	0.0	-70
GCR05-04	499773.00	5348463.00	295.00	148.00	0.0	-45

*NAD83 Z17N

Drilling targeted and appeared to intersect an HLEM conductor which proved to be a graphitic argillite, thought to be the source of sulphur for the peridotites. The peridotitic komatiites encountered in the four drill hole program encountered nickel concentrations from background to 1842 ppm (Table 6-7) (Caldick, 2007).

Table 6-7. Drill hole assays (entire hole lengths and ranges) from 2005 drilling program.

Drill Hole	From (m)	To (m)	Int (m)	Ni (ppm)	Ni-Low (ppm)	Ni-High (ppm)
GCR05-01	35	101	66	575	261	1785
GCR05-02	20	114	94	210	56	1333
GCR05-03	13	146	133	507	316	1718
GCR05-04	12	139	127	217	22	1842

GCR05-1: collared at 175E and 125S at -45 degrees encountered serpentinized peridotitic komatiites with localized spinifex and 2 significant graphitic argillites with significant pyrrhotite-bearing clasts and concretions. Anomalous nickel values occurred throughout the peridotitic komatiites generally in the 1100 to 1400 ppm range with some values as high as 1700 ppm. Both graphitic argillites hosted anomalous Ni, Cu and Zn with nickel ranging up to 1400 ppm and Zn exceeding 1% Zn over 0.5 metres.

GCR05-2: collared 375 metres to the west on line 200W, 50S and encountered similar stratigraphy with peridotitic komatiites hosting a graphitic argillite presumed to be the western extension of the graphite encountered in drill hole GCR05-1 and the likely source for the east-west trending HLEM conductor. This hole as well encountered background anomalous nickel mineralization not exceeding 1300 ppm as well as elevated anomalous zinc values within the graphitic argillite.

GCR05-3: collared on the same set-up as GCR05-1 and set at -70 degrees. This drill hole encountered the same stratigraphy in drill hole GCR05-1 with 2 graphitic argillites hosted within peridotitic komatiites and a localized value of 1.6% Zn and 0.034% Cu over 0.5 m within one of the graphitic argillites. As well, similar background anomalous Ni values occurred throughout the peridotitic komatiite sequence. Typical of the anomalous nickel values encountered within this hole were 0.164% Ni over 6.0 m from 105.0 to 111.0 m and 0.126% Ni over 6.0 m from 118.0 to 123.0 metres.

GCR05-4: collared at 100E, 135N and was spotted to test a strong coincident mag-HLEM conductor to the north. This drill hole encountered peridotitic komatiites as well with less strong anomalous Ni values generally occurring within the 100's of ppm although with one localized value of 0.184% Ni over 1.0 m from 61.0 to 62.0 metres.

In general, the drilling was found to be encouraging with elevated sulphide occurrences occurring locally and elevated within proximity to the graphitic argillites which could certainly act as sources of sulphur. Recognition of such subtleties in core as localized spinifex and the presence of serpentinized adcumulate textures within the peridotitic komatiites may be the prelude to deeper seated mineralization. Additional deeper drilling was recommended in this area as well as the pursuance of similar environments occurring within the northeastern trending discontinuous belt of peridotitic komatiites occurring within Langmuir Township (Caldbeck, 2007).

6.3.2 Golden Chalice (2007)

In 2007, a first phase of diamond drilling designed to test the airborne VTEM anomaly clusters was completed. This first phase consisted of nine NQ size drill holes totalling 2,921 m, drilled from March 10 to May 28, 2007. The drilling program tested eight of the 18 outlined 2005 airborne VTEM anomaly clusters (Montgomery, 2008a). Holes 1 to 5 were drilled west of the Night Hawk River while holes 7 to 9 were drilled east of the Night Hawk River, in southern Langmuir Township (Montgomery, 2008a). A summary of the drill hole parameters for the 2007 drilling is provided in Table 6-8. A total of 264 core samples were collected at intervals ranging from 0.30 to 1.1 metres.

Table 6-8. Summary of drill hole parameters for the March-May 2007 drilling program.

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL07-01	500096.00	5348163.00	295.00	251.00	325.0	-55
GCL07-02	500598.00	5347683.00	295.00	305.00	145.0	-55
GCL07-03	499025.00	5349193.00	295.00	326.00	325.0	-55
GCL07-04	498137.50	5349438.96	292.17	623.00	322.7	-56
GCL07-05	497235.37	5349374.10	294.53	260.00	340.0	-50
GCL07-07	500762.00	5348373.00	295.00	302.00	325.0	-55
GCL07-08	500738.00	5349080.00	295.00	326.00	325.0	-55
GCL07-09	500191.00	5349346.00	295.00	302.00	325.0	-55

*NAD83 Z17N

The drill core from the drilling program was stored at the Moneta Porcupine Mines Field office located on Highway 655, in Timmins, Ontario.

Sulphide mineralization encountered in the drill holes was sampled and sent for analysis to Laboratoire Expert Inc. in Rouyn-Noranda, Quebec. The following elements were analyzed Au, Pt, Pd, Ag, Cu, Ni, Zn and Pb by aqua regia digestion with atomic absorption techniques. A rigorous quality assurance program is employed which includes the insertion of standards and blanks for each batch of samples. Drill core from the drilling program was stored at the Moneta Porcupine Mines Field office located on Highway 655, in Timmins, Ontario.

GCL07-01: this hole intersected predominantly magnetic komatiitic peridotite flows with the upper part (8.8-38.1 m) being komatiitic pyroxenite flows. Sulphide mineralization consisting of 5% brown pyrrhotite disseminations to local blebs and local massive pyrrhotite-pyrite bands was encountered in the peridotite

flows from 125.4 m to 131 m down hole. The massive sulphide bands returned anomalous zinc values of 6387 and 9703 ppm Zn. The later massive sulphide band from 130.15-130.25 m down hole, was also anomalous in copper (598 ppb) and gold (160 ppb). The highest copper value from the hole was 1148 ppm over 1 m (169-170 m) from a chalcopyrite-pyrrhotite stringer within that section. An anomalous nickel zone of 0.19% Ni over 6 m was returned from the hole. This occurs from 90.9 to 96.9 m down hole within a weakly sulphidic adcumulate peridotite flow. Several black to silver aphanitic graphite zones with very fine-grained pyrrhotite disseminations to local blebs were intersected from 147 to 180 metres. The graphite zones and/or the massive sulphide bands are the cause of the VTEM conductor.

GCL07-02: intersected magnetic komatiitic peridotite flows with a pyroxenite flow section at 139.9 to 155 metres. The peridotites are intruded by small granodiorite or felsic intrusive dikes. Three fault zones occur in the hole at 173.3-174.5 m, 236-236.6 m, and 240-242 metres. The latter two lie directly below the axis of the VTEM conductor and could be possibly the cause of the conductor as clay gouge was present in the faults. Only very weak sulphide mineralization was encountered in the hole. Analytical results from the hole were all background metal values.

GCL07-03: intersected weak to moderately magnetic komatiitic peridotite flows that have been weak to moderately silicified. The hole encountered numerous thin spinifex textured horizons (typically 0.5 m core lengths) indicating the sequence consists of several thin flow units. The upper portion of the hole is cut by a diabase dike. Below the peridotites at the end of the hole (295-326m) a komatiitic pyroxenite flow section was intersected. Only four drill core samples were taken from the hole as no significant sulphide mineralization was encountered. These samples returned background metal values.

GCL07-04: intersected weakly magnetic mesocumulate komatiitic peridotite flows down to 238.8 metres. The upper portion is a massive thick flow with the first spinifex textured flows appearing at 167.47 m down hole. A gabbro dike intrudes the peridotite flows from 100.5 to 117.2 m down hole. In addition the peridotite flows are moderately serpentinized below 138.7 metres. The remainder of the hole (below 238.8 m) is large feldspar porphyry intrusive with peridotite flow selvages, up to 3 m in core length. Graphitic sedimentary horizons that are part of the peridotite flow tops occur at 176-179, 201-238 metres. These are the cause of the VTEM conductor. Flow tops are up-hole (southerly). Local sections of 0.5% pyrrhotite or pyrite sometimes up to 2% were intersected by the hole. Analytical results from these sections returned background metal values.

GCL07-05: intersected weakly magnetic spinifex textured komatiitic peridotite flows with numerous graphitic horizons. The flows are intruded by a biotitic mafic intrusive from 57.4 to 67.7 metres. The hole terminated within a mafic dike (253.3 to 260 m) which becomes increasingly feldspar porphyritic with depth. Graphitic sedimentary horizons that are part of the peridotite flow tops occur at 108-111, 146-164 and 173-176 metres. These are the cause of the VTEM conductor. Flow tops are up-hole (southerly). Only one drill core sample was taken from the hole as no significant sulphide mineralization was encountered. This sample returned background metal values.

GCL07-07: intersected magnetic adcumulate komatiitic peridotite flows that are cut by a mafic dike from 238.6 to 241.10 metres. Trace to 0.5% pyrrhotite and chalcopyrite occurs within microfractures from 225.2 to 231 m down hole. Assay results from this mineralization returned background metal values. Fault gouge zones also occur from 267 to 269 metres.

GCL07-08: intersected weakly magnetic adcumulate to mesocumulate komatiitic peridotite flows. The upper portion is a massive thick flow with the first spinifex textured flows appearing at 166.3 m down hole. Graphitic sedimentary horizons that are part of the peridotite flow tops occur at 196.2-197.2 m, 200.1-203.2 m, and 215.8-218.8 metres. These are the cause of the VTEM conductor. The peridotite flows are also cut by narrow intermediate intrusive dikes at 228-229.2 m, 237.1-240.6 m, and 312.5-318.3 metres. Four sulphide mineralized sections consisting of 0.5-3% pyrrhotite or pyrite disseminations occur at 154.4-157.5 m, 195.2-198 m, 200-203.2 m, and 214.8-218.8 metres. Two of these mineralized sections returned anomalous zinc values: 2206 ppm Zn over 2 m (200.1-202.1 m) and 2045 ppm Zn over 2 m (215.8-217.8 m). In addition a third spot in the hole returned 1.1% Zn over 1 m from 68.6 to 69.6 m down hole. All three anomalous zinc sections are a result of sphalerite within sulphide stringers to fracture fillings.

GCL07-09: intersected weakly magnetic komatiitic peridotite flows intruded by numerous narrow granodiorite to granite dikes with a larger granodiorite intrusive body from 151.6 to 227.6 metres. Only very weak sulphide mineralization was encountered in the hole. Analytical results from the hole were all background metal values.

The eight hole diamond drilling program did not intersect significant metallic mineralization (Au, Pt, Pd, Ag, Cu, Ni, Zn and Pb). Hole GCL07-01 did however cut a weakly sulphidic adcumulate peridotite flow that returned an anomalous nickel zone of 0.19% Ni over 6 metres. In addition, this hole intersected 5% brown pyrrhotite disseminations to local blebs and local massive pyrrhotite-pyrite bands in peridotite flows from 125.4 m to 131 m down hole. The massive sulphide bands were anomalous in zinc, copper and gold.

Drilling results showed that four of the VTEM conductors were the result of graphitic sediments and the fifth was likely due to a fault zone containing conductive fault gouge. The geological cause of the other three VTEM conductors could not be adequately resolved by the diamond drilling. Further exploration work was recommended in the area of hole GCL07-01 (Montgomery, 2008a).

6.3.3 Golden Chalice (2007-2008)

From 24 to 27 April 2007 and 29 May 2007 to 30 January 2008, Golden Chalice completed 37 diamond NQ size drill holes totalling 16,262 m on Legacy Mining Claim 4203498 (Table 6-9). A total of 3,767 core samples were collected at intervals ranging from 0.30 to 1.1 metres.

The drilling program was designed to trace the nickel zones found in discovery drill hole GCL07-06 along strike and at depth (Montgomery, 2008b). Drill holes were situated west of the Night Hawk River and south of the Fork River and drilling was contracted to Norex Drilling of Timmins, Ontario.

Table 6-9. Summary of drill hole parameters for April 2007 and May 2007 to January 2008 drilling program.

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL07-06	497521.32	5349400.85	294.91	226.00	319.8	-52
GCL07-10	497521.08	5349401.14	294.68	413.00	318.7	-45
GCL07-11	497567.07	5349340.84	294.77	401.00	323.7	-45
GCL07-12	497539.84	5349418.36	294.45	314.00	324.7	-46
GCL07-13	497540.12	5349417.98	294.48	485.00	323.0	-58
GCL07-14	497500.15	5349386.77	295.04	401.00	315.3	-45
GCL07-15	497522.04	5349363.76	294.90	500.00	318.5	-45
GCL07-16	497478.24	5349421.08	294.65	302.00	328.5	-46

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL07-17	497479.26	5349373.02	295.24	401.00	322.3	-47
GCL07-18	497507.39	5349335.55	294.94	500.00	323.1	-47
GCL07-19	497455.85	5349404.77	295.17	356.00	323.4	-41
GCL07-20	497457.83	5349358.17	295.10	507.00	325.0	-46
GCL07-21	497612.83	5349317.97	294.66	350.00	322.7	-44
GCL07-22	497489.43	5349317.52	294.89	425.00	322.3	-45
GCL07-23	497637.90	5349367.49	294.28	410.00	328.6	-45
GCL07-24	497429.65	5349398.51	295.39	401.00	321.9	-44
GCL07-25	497613.01	5349317.80	294.60	509.00	326.0	-46
GCL07-26	497427.13	5349356.77	297.53	452.00	324.0	-45
GCL07-27	497585.20	5349355.68	294.92	350.00	322.1	-44
GCL07-28	497394.40	5349400.68	298.41	401.00	322.4	-51
GCL07-29	497633.05	5349333.62	294.68	399.00	323.4	-50
GCL07-30	497451.05	5349325.41	294.99	384.00	322.3	-46
GCL07-31	497664.68	5349290.34	294.52	446.00	321.3	-45
GCL07-32	497397.18	5349372.34	298.80	449.00	323.9	-44
GCL07-33	497605.02	5349369.36	294.57	393.00	324.1	-46
GCL07-34A	497359.42	5349405.95	294.67	392.00	324.9	-45
GCL07-34	497359.42	5349405.95	294.67	63.00	324.9	-45
GCL07-35	497669.17	5349324.33	294.38	500.00	328.1	-56
GCL07-36	497355.68	5349338.46	294.92	464.00	327.2	-45
GCL07-37	497698.84	5349411.19	291.11	500.00	318.7	-44
GCL07-38	497329.57	5349449.18	290.93	350.00	324.1	-48
GCL07-39	497666.63	5349287.66	294.53	542.00	319.4	-55
GCL07-40	497421.28	5349324.25	296.68	503.00	324.2	-50
GCL07-41	497668.63	5349324.65	294.50	551.00	328.4	-50
GCL07-43	497668.68	5349324.42	294.47	551.00	328.4	-62
GCL07-44	497777.50	5349309.52	294.23	497.00	319.9	-47
GCL07-45	497615.34	5349269.30	294.69	575.00	315.1	-49

*NAD83 Z17N

The drill core from the drilling program was stored at the Hastings Management core storage facility on Airport Road, in Timmins, Ontario.

Sulphide mineralization encountered in the drill holes was sampled and sent for analysis to Laboratoire Expert Inc. in Rouyn-Noranda, Quebec. A summary of intercepts is provided in Table 6-10.

The drill holes were aligned at a general direction of 320 degrees in order to target the airborne VTEM anomaly conductor axis. All the drill hole casings of the program were left in the ground. As a consequence, GPS surveying of all the drill hole collar locations was completed by Talbot Surveying of Timmins, Ontario. In addition, the casings were surveyed to determine accurately the initial dips and direction of the holes.

On 6 May 2007, Golden Chalice Resources Inc. announced a new nickel discovery on their Langmuir Property. This nickel discovery was the first significant nickel discovery in the Timmins mining camp in over 30 years. Drill hole GCL07-06, the “discovery hole”, returned 1.14% Ni over 72.50 metres (core length), including two separate heavily mineralized intervals of 2.23% Ni, 0.22% Cu, 0.20 g/t Pt, and 0.50 g/t Pd over 17.50 metres, and 1.74 % Ni, 0.12% Cu, 0.20 g/t Pt, and 0.47 g/t Pd over 13.10 metres. The

zone occurs within an altered peridotitic komatiitic flow. Nickel mineralization is associated with disseminated, fracture filling, and blebs of sulphides throughout the 72.50 metre core length. Higher values of up to 5.7% Ni occur when sulphide concentrations increase to 30 or 35% (Montgomery, 2008b).

Table 6-10. Core assay results from selected drill holes, 2007-2008 diamond drilling program.

Drill Hole	Zone	From (m)	To (m)	Int (m)	Ni (%)	Cu (%)	Pt (g/t)	Pd (g/t)	Estimated True Width (m)
GCL07-06	Other	44	50	6	0.59	0.02	0.05	0.07	2.72
	A &B	99.5	172	72.5	1.14	0.08	0.11	0.26	10.5
	A	107.8	130	22.2	1.31	0.08	0.15	0.36	
	B	149.5	167	17.5	2.23	0.22	0.2	0.49	
GCL07-10	A	81	95.9	14.9	2.36	0.26	0.22	0.52	7.67
	Incl.	81	84.7	3.7	2.95	0.14	0.42	0.94	
	Incl.	90	95.9	5.9	3.52	0.48	0.23	0.58	
GCL07-11	A	213	220.8	7.8	0.89	0.06	0.18	0.21	5.61
	B	264.3	270.3	6	1.52	0.21	0.13	0.29	3
	C	314.4	326	11.6	1.11	0.23	0.11	0.23	4.53
GCL07-14	A	149	179.5	30.5	1.26	0.09	0.12	0.3	9.93
	incl.	153	167	14	1.79	0.15	0.14	0.34	
	B	226	253.9	27.9	1.08	0.06	0.16	0.29	11.79
	incl.	226	233.4	7.4	2.06	0.12	0.38	0.67	
	incl.	240.5	243.7	3.2	2.4	0.18	0.18	0.34	
	other	260	261.7	1.7	2.1	0.17	0.02	0.73	1.14
	C	277.5	288	10.5	1.76	0.12	0.09	0.22	7.42
GCL07-15	B	235.7	257.3	21.6	1.34	0.12	0.1	0.22	8.79
	incl.	235.7	247	11.3	2.05	0.17	0.14	0.27	
	C	277	279.2	2.2	0.84	0.02	0.09	0.16	0.86
GCL07-16	A	38.8	49.5	10.7	0.93	0.08	0.08	0.2	5.98
	incl.	38.8	44.1	5.3	1.2	0.08	0.1	0.27	
GCL07-17	A	167.5	186.7	19.2	1.33	0.1	0.12	0.25	11.01
	incl.	171.2	184.8	13.6	1.69	0.13	0.15	0.3	
	C	284.9	297.5	12.6	0.88	0.09	0.06	0.12	8.96
	incl.	284.9	291	6.1	1.23	0.12	0.05	0.1	
GCL07-18	C	325.6	332.3	6.7	1.42	0.1	0.11	0.25	2.83
GCL07-19	A	74	82.7	8.7	0.88	0.1	0.07	0.15	6.18
	incl.	74	78.7	4.7	1.27	0.12	0.09	0.23	
GCL07-20	Other	174.4	175.7	1.3	0.71	0.21	0.06	0.11	0.76
	A	202.8	213.5	10.7	2.37	0.1	0.2	0.38	7.3
	C	290	304.85	14.85	0.45	0.05	0.03	0.06	10.86
GCL07-21	A	245	253.3	8.3	1.2	0.12	0.43	0.17	5.97
	incl.	249	250.3	1.3	2.42	0.14	0.66	0.26	
	B	308.5	325.7	17.2	0.62	0.07	0.06	0.16	10.11
	incl.	308.5	311.7	3.2	0.89	0.13	0.35	0.14	
	incl.	314.7	325.7	11	0.64	0.06	0.06	0.14	
GCL07-22	C	336	339.5	3.5	0.75	0.12	0.06	0.12	2.56
GCL07-24	Other	96	100	4	0.58	0.02	0.03	0.07	2.46
	A	136	144	8	0.82	0.05	0.06	0.13	5.66
	incl.	141.5	144	2.5	1.76	0.09	0.13	0.26	

Drill Hole	Zone	From (m)	To (m)	Int (m)	Ni (%)	Cu (%)	Pt (g/t)	Pd (g/t)	Estimated True Width (m)
GCL07-25	Other	226.6	227.6	1	1.91	0	0.06	0.05	0.63
	C	466.2	478.7	12.5	0.56	0.03	0.04	0.07	4.07
	incl.	476.7	478.7	2	1.16	0.04	0.08	0.15	
GCL07-27	A	203.1	208	4.9	1.62	0.14	0.13	0.3	3.21
	incl.	203.1	205.45	2.35	2.65	0.21	0.21	0.47	
	B	263.4	269	5.6	1.02	0.07	0.14	0.29	2.8
	C	326.75	337	10.25	1.19	0.11	0.11	0.25	3.51
GCL07-28	A	112.3	117.5	5.2	0.33	0.01	0.02	0.04	2.83
GCL07-29	A	217.8	223	5.2	1.99	0.16	0.11	0.23	3.22
	incl.	221.5	222.35	0.85	6.73	0.67	0.26	0.53	
GCL07-31	A	279.9	281.6	1.7	0.86	0.02	0.15	0.08	1.26
	C	411.8	415.8	4	0.95	0.09	0.06	0.12	2.06
GCL07-33	A	121	124.6	3.6	1.4	0.09	0.01	0.02	1.29
GCL07-34A	Other	236	237	1	0.67	0.06	0.02	0.1	
GCL07-35	Other	409.4	410.4	1	1.04	0.02	0.09	0.18	
	Other	438.5	441.8	3.3	0.63	0.04	0.01	0.01	1.24
	C	449.7	456.7	7	0.6	0.02	0.01	0.01	2.62
GCL07-41	B	302	304.8	2.8	1.08	0.06	0.02	0.03	1.61
GCL08-45	A	367.8	372.1	4.3	0.32	0.03	0.07	0.34	2.28

The 2007 drilling program encountered east-west trending peridotite flows with good spinifex flow tops and associated thin graphitic argillite interflow units. The peridotite flows are typically black, fine-grained, soft, weak to moderately serpentinized and typically have adcumulate to mesocumulate textures. Detailed examinations of the spinifex flow top sequences and flow morphologies indicate a southward younging direction. The peridotite flows range from 5 to 50 m thick and are near vertical to steeply dipping 80 degrees to the north. Along the southern margin of the drilling area, a pink medium grained hornblende rich (5-10%) granodiorite intrusive was encountered. It is thought that this intrusive may represent an east-west dike; however more drilling is required for confirmation. The peridotite flows in the vicinity of the granodiorite are strongly brecciated and often contain graphite. These brecciated flows were labelled “komatiitic peridotite breccias” in the logs. Smaller felsic to intermediate, feldspar porphyry, mafic, and gabbro dikes or sills intrude the peridotite flows locally (Montgomery, 2008b).

The nickel zones of the Langmuir Nickel discovery occur within specific peridotitic komatiitic flow units (Figure 6-3). Nickel mineralization consists of disseminated, fracture filling, and blebs of pentlandite with lesser pyrrhotite. Higher values of up to 5.7% Ni occur when sulphide concentrations increase to 30 or 35%.

The 2007 drilling program was successful in tracing the nickel zones from hole GCL07-06 for a strike extent of approximately 200 metres. It also defined the nickel zones to a depth of at least 250 m below surface. In addition, nickel mineralization has been intersected at approximately 375 m vertically below surface on the eastern down plunge extent (Montgomery, 2008b).

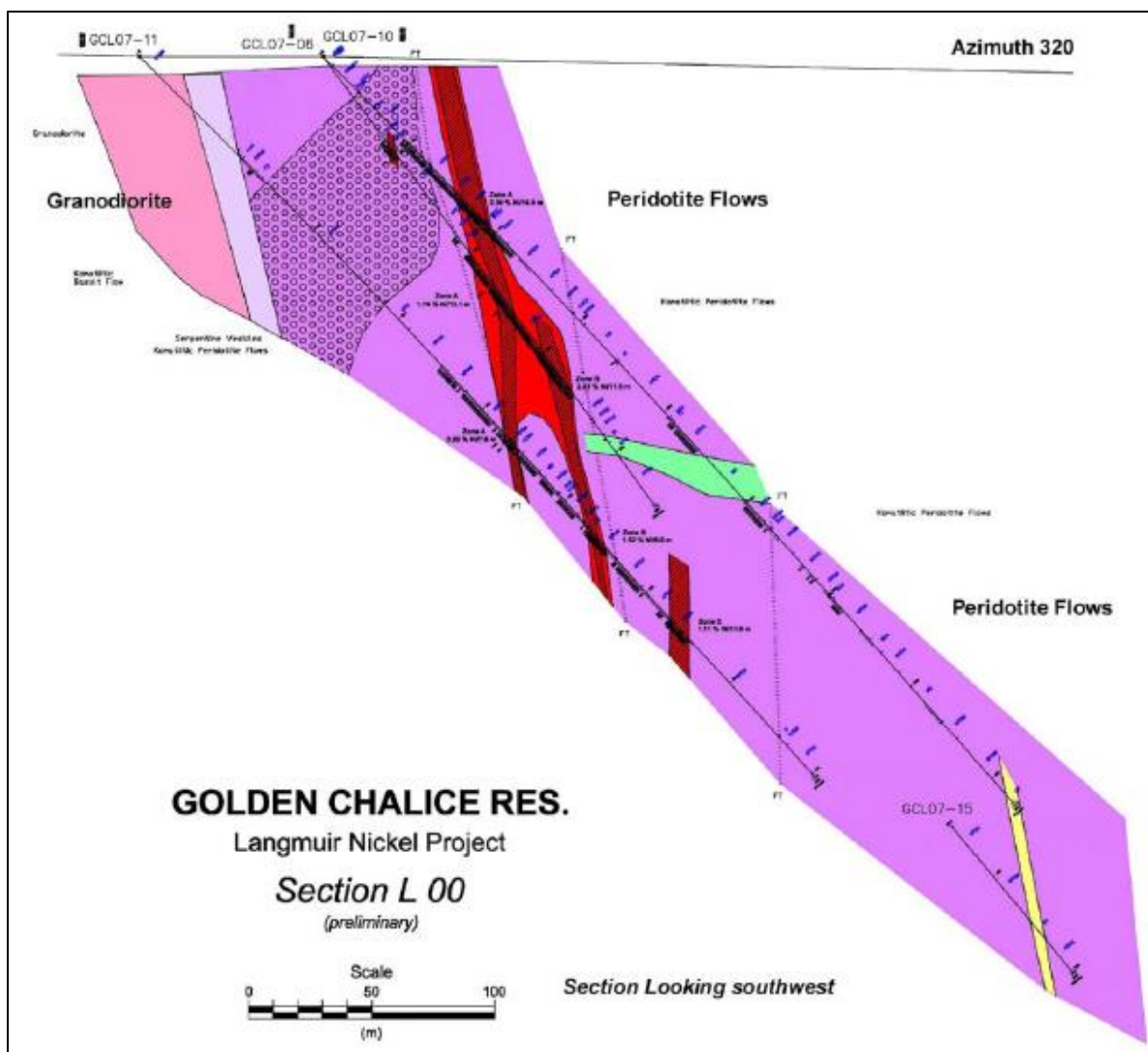


Figure 6-3. Interpreted section from the discovery hole (GCL07-06) area looking northwest (Montgomery, 2008b).

Further exploration work was recommended in the area of the Langmuir Nickel Discovery (GCL07-06) and future drilling should consist of tighter spaced holes to validate continuity between drill intercepts and confirm true widths of the nickel mineralization. Drilling was also recommended to determine the eastern down plunge extension of the nickel zones (Montgomery, 2008b).

6.3.4 Golden Chalice (2007)

A single NQ size drill hole, GCL07-42, was completed on the property from 22 November to 4 December 2007 and had a total length of 412.5 metres (Montgomery, 2008c). The drilling was completed by Norex Drilling out of Timmins, Ontario. A total of 108 core samples were collected at intervals ranging from 0.50 to 1.1 metres. The hole was drilled to investigate the western extension of the nickel zones at the Langmuir W4 nickel discovery (GCL07-06).

Drill core from hole GCL07-42 was stored at the Hastings Management core storage facility on Airport Road, in Timmins, Ontario.

Sulphide mineralization encountered in the drill hole core was sampled and sent for analysis to Laboratoire Expert Inc. in Rouyn-Noranda, Quebec. The core was analyzed for Au, Pt, Pd, Ag, Cu, Ni, Zn and Pb by aqua regia digestion with atomic absorption techniques. A rigorous quality assurance program was employed which included the insertion of standards and blanks for each batch of samples. In hole GCL07-42, sample number 102550 is a blank and sample number 102575 is a standard (Montgomery, 2008c).

Drill hole GCL07-42 intersected predominantly komatiitic peridotite flows having adcumulate to mesocumulate textures and spinifex flow tops. The spinifex textured sections indicate that the younging direction is up-hole. The peridotite flows are intruded by the following small intrusives: granodiorite from 140.5 to 164.9 m and 210.10 to 211.7 m, pyroxenite from 230.05 to 237.85 m, gabbro from 270.5 to 273.9 m, and an intermediate dike from 312.9 to 315.45 m down hole. The peridotite flows are moderately sheared and carbonatized above the granodiorite intrusion, from 122 to 140.5 m down hole.

Sulphide mineralization was encountered in the peridotite flows and locally within the intrusives. It consisted of 1-3% brassy pyrite disseminations to local blebs. The three longest sections of pyrite mineralization were from 168 to 178 m, 188.3 to 193 m, and 224 to 229 m down hole.

Analytical results from drill core sampling of hole GCL07-42 returned for the most part background metal values (Au, Pt, Pd, Ag, Cu, Ni, Zn and Pb). Hole GCL07-42 did however cut peridotite flows that are similar to the flows hosting the Langmuir nickel discovery (hole GCL07-06). Montgomery (200c), recommended further work on the property and in the area of hole GCL07-42.

6.3.5 Golden Chalice (2008)

From 10 January to 15 April 2008, Golden Chalice completed a winter diamond drilling program, consisting of 20 NQ size drill holes totalling 6,938 m and completed on the eastern part of the property (Table 6-11). The diamond drilling program employed two diamond drill rigs, one was provided by Norex Drilling of Timmins and the second was provided by Orbit-Garant Drilling of Val d'Or, Quebec. A total of 1,901 core samples were collected at intervals ranging from 0.20 to 1.6 metres.

The purpose of the drilling program was to test 10 airborne VTEM conductors to determine whether the conductors were caused by sulphide mineralization (Montgomery, 2009a).

Table 6-11. Summary of drill hole parameters for the January-April 2008 drilling program.

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL-08-01E	500000.00	5349265.00	295.00	95.00	310.0	-45
GCL-08-01EA	500000.00	5349260.00	295.00	452.00	310.0	-45
GCL-08-02E	500838.00	5348281.00	295.00	102.00	145.0	-55
GCL-08-02EA	500836.00	5348278.00	295.00	600.00	145.0	-55
GCL-08-03E	499987.00	5349944.00	295.00	338.00	325.0	-55
GCL-08-03EA	499967.00	5349927.00	295.00	550.00	325.0	-55
GCL-08-04E	500826.00	5348972.00	295.00	501.00	325.0	-55
GCL-08-05E	501291.00	5350407.00	295.00	147.00	145.0	-55
GCL-08-05EA	501289.00	5350410.00	295.00	402.00	325.0	-55
GCL-08-06E	500513.00	5350344.00	295.00	426.00	325.0	-55
GCL-08-07E	502227.00	5352279.00	295.00	351.00	85.0	-55
GCL-08-08E	503039.00	5353477.00	295.00	276.00	270.0	-55
GCL-08-09E	503028.00	5353401.00	295.00	252.00	270.0	-55

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL-08-10E	503018.00	5353096.00	295.00	327.00	273.0	-55
GCL-08-11E	503019.00	5353097.00	295.00	276.00	270.0	-45
GCL-08-12E	500980.00	5350365.00	295.00	476.00	360.0	-55
GCL-08-13E	502426.00	5352075.00	295.00	377.00	325.0	-50
GCL-08-14E	503128.00	5353242.00	295.00	402.00	270.0	-50
GCL-08-15E	503133.00	5353244.00	295.00	261.00	90.0	-50
GCL-08-16E	500867.00	5349179.00	295.00	327.00	325.0	-55

*NAD83 Z17N

The drill core from the 2008 winter drilling program was stored at the Hastings Management Core Storage Facility located on Highway 629 (Airport Road), in Timmins, Ontario.

Sulphide mineralization encountered in the drill holes was sampled and sent for analysis to Laboratoire Expert Inc. in Rouyn-Noranda, Quebec. The following elements were analyzed Au, Pt, Pd, Ag, Cu, Ni, Zn and Pb by aqua regia digestion with atomic absorption techniques. A rigorous quality assurance program is employed which includes the insertion of standards and blanks for each batch of samples (Montgomery, 2009a).

GCL08-01E: intersected a komatiitic peridotite flow cut by several feldspar porphyry dikes. The hole was abandoned at 95 m when the drill rods broke.

GCL08-01EA: intersected komatiitic peridotite flows with good spinifex flow tops. The peridotite flows are intruded by several small feldspar porphyry and/or felsic intrusive dikes at the top of the hole. A larger felsic intrusive body occurs from 84 to 121 metres. In the centre of the peridotite flow two breccia units occur at 308.2-317.7 m and 323-331.4 metres. These breccias consist of mesocumulate peridotite and graphite argillite subangular fragments healed by graphite. Below 426 m, greywacke units are interlayered with the peridotite flows. Two graphitic argillite units at 323-331.6 m and 384-389 m down hole are the cause of the VTEM conductor. Analytical results from the hole were all background metal values.

GCL08-02E: intersected komatiitic peridotite and was stopped as it was drilled in the wrong direction.

GCL08-02EA: intersected magnetic komatiitic peridotite flows with a pyroxenite flow section at 49.3 to 52.4 metres. The peridotites are intruded by small mafic dikes and feldspar dikes below 524 metres. Two fault zones occur in the hole at 124.4-124.8 and 290-301.5 metres. The later fault could be possibly the cause of the conductor as clay gouge was present but it does not lie directly below the axis of the VTEM conductor. Only very weak sulphide mineralization was encountered in the hole. Analytical results from the hole were all background metal values.

GCL08-03E: intersected weakly magnetic komatiitic peridotite flows with numerous spinifex textured horizons. A small basalt unit was encountered from 193.5-205 metres. Only very weak sulphide mineralization was encountered in the hole. Analytical results from the hole were all background metal values. The hole was terminated 100 m before the VTEM target depth as the drill rods got stuck when the fault at 50.3-53 m collapsed.

GCL08-03EA: upper part of the hole intersected weakly magnetic komatiitic peridotite flows intruded by intermediate dikes. The komatiitic peridotite sequence ended at 234 m downhole when rhyodacite ash tuffs to agglomerates were intersected for the rest of the hole. This was a significant surprise as hole 03EA

is located 30 m southwest of GCL08-03E and no rhyodacite was encountered in that hole. Only very weak sulphide mineralization was encountered in hole GCL08-03EA. Analytical results from the hole were all background metal values. The hole did not explain the airborne VTEM anomaly.

GCL08-04E: intersected magnetic komatiitic peridotite flows with a pyroxenite flow section at 258 to 272 metres. The peridotites are intruded by small feldspar porphyry dikes and lesser mafic dikes. A graphitic argillite-greywacke unit occurring at 272.7-274.7 m, is the likely cause of the VTEM conductor. Only very weak sulphide mineralization was encountered in the hole. Analytical results from the hole were all background metal values.

GCL08-05E: intersected komatiitic peridotite flows with spinifex flow tops. The hole was stopped as it was drilled in the wrong direction.

GCL08-05EA: intersected weakly magnetic spinifex textured komatiitic peridotite flows with numerous breccia horizons. Graphitic sedimentary horizons that are part of the peridotite flow tops occur at 331.1-339.7, 341-345 and 352.1-354.2 metres. These are the cause of the VTEM conductor. Flow tops are up-hole (southerly). Only very weak sulphide mineralization was encountered in the hole. Analytical results from the hole were all background metal values.

GCL08-06E: intersected weak to moderately magnetic komatiitic peridotite flows. The hole encountered numerous thin spinifex textured horizons (typically 1-3 m core lengths) indicating the sequence consists of several flow units. Granodiorite units intrude the peridotite flows at 275.1-296.8 m, 326.5-336.9 m and 344.5-346.9 m downhole. The komatiitic peridotite sequence ended at 364.1 m downhole when rhyolite massive flows to breccia flow tops were intersected for the rest of the hole. This felsic volcanic sequence was intruded by diorite dikes. A graphite zone (237-242.76 m) at the upper contact of a mafic dike, is the likely cause of the VTEM conductor. Only very weak sulphide mineralization was encountered in the hole. Analytical results from the hole were all background metal values.

GCL08-07E: started within rhyodacite agglomerate/bomb tuffs, this was followed by a massive andesite flow unit from 158 to 230 metres. Below 230 m, the hole intersected weakly magnetic adcumulate to mesocumulate komatiitic peridotite. This is likely one massive flow as no significant spinifex textured was encountered. Several brecciated sections of peridotite occur adjacent to intermediate dikes in the hole. A sheared peridotite unit (233.3-238.8 m) lies directly below the axis of the targeted VTEM conductor and could be possibly the cause of the conductor. Significant sulphide mineralization consisting of 2-5% pyrite disseminations to blebs was encountered from 143 to 194 metres. This occurs straddling the rhyodacite-andesite contact area. Assay results from this mineralization returned background metal values.

GCL08-08E: intersected moderately magnetic adcumulate komatiitic peridotite flows down to 94 m, followed by andesite ash to bomb tuffs down to 172.4 metres. The remainder of the hole encountered rhyodacite ash to bomb tuffs. A wide graphite argillite unit was intersected from 119.2 to 145.1 m and is the probable cause of the targeted VTEM conductor. This graphite argillite was strongly mineralized with 3-5% pyrite blebs and stringers parallel to bedding. In addition a sulphide enriched section consisting of 0.5-2% pyrite and occasionally pyrrhotite was encountered in the rhyodacite stratigraphy at 182-209 metres. Assay results from these mineralized sections returned background metal values.

GCL08-09E: intersected andesitic lapilli to bomb tuffs with graphitic argillite horizons at 32.3-38.4, 59.1-76.50 m, 104.6-111.3 m, and 128-129.5 metres. The andesites are intruded by small feldspar porphyry dikes and lesser intermediate dikes. The graphitic argillite-greywacke unit occurring at 104.6-111.3 m, is the likely cause of the VTEM conductor. Several enriched sulphide sections were encountered in the hole as follows: 104.6-109.4 m 1-6% pyrite disseminations, blebs to local stringers; 129.5-139 m with 2-5% pyrite and pyrrhotite blebs to stringers; 170-180.5 m with 1-3% pyrite and pyrrhotite blebs and wisps with local stringers; and 246.5-250.5 m with 0.5-2% pyrite disseminations to blebs. All these mineralized sections returned background metal values with the exception of anomalous copper from 247.8 to 250.5m (761 ppb Cu over 2.7 m).

GCL08-10E: intersected andesitic massive flows to lapilli tuffs with graphitic argillite horizons at 198-202 m, 203.9-205.2 m, and 212.7-215.5 metres. Below 246 m, the remainder of the hole consists of graphitic argillite and greywacke units. A large feldspar porphyry intrusion occurs from 222-246 metres. A semi-massive pyrite zone at 198 to 202 m is the cause of the VTEM conductor. This zone returned only background metal values.

GCL08-11E: drilled as an upper cut test of the semi-massive pyrite zone encountered in hole 10. It cut the same stratigraphy as hole 10. However, it did not encounter a semi-massive pyrite zone. Analytical results from the hole were all background metal values.

GCL08-12E: intersected weakly magnetic komatiitic peridotite flows with a pyroxenite flow section at 98.2 to 130.7 metres. The peridotites contain good spinifex textured horizons. The peridotites are intruded by small feldspar porphyry dikes, mafic dikes and diorite dikes. Two graphitic argillite units at 329.6-333.1 m and 341.4-344.2 m down hole are the likely cause of the VTEM conductor. Three enriched sulphide sections were encountered in the hole as follows: 298.4-309.8 m with 1-3% finely disseminated pyrite and pyrrhotite; 320-329.6 m with 1-3% finely disseminated pyrite and pyrrhotite; and 341.2-344.2 m with 1-2% pyrite and pyrrhotite disseminations to blebs. The nickel values in the sections 298.4-309.8 m and 320-329.6 m were elevated (1000-1400 ppb Ni). The remaining analytical results from the hole were all background metal values.

GCL08-13E: intersected weak to moderately magnetic komatiitic peridotite flows. The hole encountered numerous sheared peridotite sections with the shearing 15 to 35 degrees to core axis. The komatiitic peridotite sequence ended at 199.9 m downhole when andesite massive flows tops were intersected for the rest of the hole. Several gabbro to mafic intrusive units cut the andesite flows. Only very weak sulphide mineralization was encountered in the hole. Analytical results from the hole were all background metal values. The possible cause of the VTEM anomaly may be the sheared and highly serpentinized peridotite.

GCL08-14E: upper part of the hole intersected a mesocumulate komatiitic peridotite flow, followed by a granodiorite from 114.9-145 metres. The hole next cut andesite volcanics (145-284.9 m) intruded by a granodiorite dike at 248.2-262.4 metres. A graphitic argillite unit occurs at 284.9-291.9 m and marks the contact between the andesite volcanics and rhyodacite volcanics. This graphitic argillite is the probable cause of the targeted VTEM conductor. The rhyodacite volcanic sequence ends at 327 m downhole and the remainder of the hole consists of graphitic argillite and greywackes. The graphitic argillite units in the hole contain 1-3% pyrite disseminations. A sulphide zone within an andesite volcanic massive flow returned 0.44% Cu over 1.7 m (277.1-278.8 m). The sulphides consisted of 1-2% pyrrhotite, 0.5-1%

chalcopyrite and 0.5% pyrite associated with calcite stringers. Analytical results from the remainder of the hole were all background metal values.

GCL08-15E: drilled to test stratigraphy behind and east of hole 14. The hole intersected mesocumulate komatiitic peridotite flows with spinifex flow tops. The peridotite flows are cut by several reddish purple felsic intrusive dikes. At 179 m downhole, the hole intersected a granite body for the remainder of the hole. Only very weak sulphide mineralization was encountered in the hole. Analytical results from the hole were all background metal values.

GCL08-16E: intersected weakly magnetic adcumulate to mesocumulate komatiitic peridotite flows with spinifex textured horizons. In the lower part of the hole, two intermediate dikes (255.8-260.40 m and 268.4-275.6 m) cut the peridotite flows. No conductive stratigraphy was noted in the hole to explain the targeted VTEM conductor. Only very weak sulphide mineralization was encountered in the hole. Analytical results from the hole were all background metal values.

The January-April 2008 winter diamond drilling program tested 10 of the 18 outlined airborne VTEM anomaly clusters, on the Langmuir Property. Eight of the VTEM conductors were interpreted to the result of graphitic argillite units within peridotite flows and a semi-massive pyrite zone in andesite volcanic rocks. The geological cause of two of the 10 selected VTEM conductors was not explained by the diamond drilling. The diamond drilling program did not intersect significant metallic mineralization (Au, Pt, Pd, Ag, Cu, Ni, Zn and Pb).

There are at least six more VTEM airborne anomaly clusters on the Langmuir Property that cannot be explained by surface geology. It was recommended that the remaining VTEM conductors be drill-tested in light of the 2007 nickel discovery on the property (Montgomery, 2009a).

6.3.6 Golden Chalice (2008)

From 27 January to 30 July 2008, Golden Chalice completed a summer-winter drilling program consisting of a further 31 NQ size drill holes totalling 6,077 m within Legacy Mining Claim 4203498 (Table 6-12). Drilling occurred west of the Night Hawk River and south of the Fork River and was contracted to Norex Drilling of Timmins, Ontario. The drilling was contracted to Norex Drilling of Timmins, Ontario. A total of 1,967 core samples were collected at intervals ranging from 0.30 to 1.5 metres.

The aim of this drilling program was to better define the continuity of the main A Zone at the Langmuir W4 Nickel Deposit (around hole GCL07-06) with tighter spaced infill drilling (Montgomery, 2009b).

Table 6-12. Summary of drill hole parameters for the January-July 2008 drilling program.

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL08-46	497563.06	5349300.05	295.09	599.00	319.2	-53
GCL08-47A	497489.43	5349321.52	295.00	77.00	334.0	-55
GCL08-47B	497489.43	5349319.50	295.00	38.00	330.0	-55
GCL08-47	497487.57	5349319.32	295.17	602.00	321.3	-55
GCL08-48	497475.00	5349550.00	284.25	212.00	196.0	-45
GCL08-49	497475.00	5349550.00	284.25	242.00	196.0	-58
GCL08-50	497475.00	5349550.00	284.25	218.00	180.0	-45
GCL08-51	497475.00	5349550.00	284.25	218.00	180.0	-54
GCL08-52	497475.00	5349550.00	284.25	239.00	180.0	-61

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL08-53	497475.00	5349550.00	284.25	244.00	162.0	-63
GCL08-54	497500.00	5349500.00	293.94	197.00	180.0	-62
GCL08-55	497450.00	5349485.00	293.57	134.00	180.0	-45
GCL08-56	497450.00	5349485.00	293.57	188.00	180.0	-70
GCL08-57	497400.00	5349500.00	293.62	134.00	180.0	-45
GCL08-58	497400.00	5349500.00	293.62	185.00	180.0	-69
GCL08-59	497375.00	5349525.00	293.95	176.00	180.0	-48
GCL08-60	497375.00	5349525.00	293.95	251.00	180.0	-66
GCL08-61	497425.00	5349425.00	295.00	152.00	360.0	-45
GCL08-62	497425.00	5349500.00	293.62	158.00	183.0	-52
GCL08-63	497425.00	5349500.00	293.60	191.00	183.0	-69
GCL08-64A	497400.00	5349530.00	293.90	24.00	180.0	-69
GCL08-64	497400.00	5349530.00	293.95	203.00	180.0	-69
GCL08-65	497375.00	5349485.00	293.60	110.00	180.0	-45
GCL08-66	497375.00	5349485.00	293.60	161.00	180.0	-68
GCL08-67	497400.00	5349470.00	293.60	134.00	180.0	-60
GCL08-68	497350.00	5349495.00	293.90	110.00	180.0	-45
GCL08-69	497350.00	5349495.00	293.90	161.00	180.0	-67
GCL08-70	497400.00	5349470.00	293.60	104.00	180.0	-45
GCL08-71	497325.00	5349420.00	294.70	221.00	360.0	-45
GCL08-72	497325.00	5349420.00	294.70	194.00	360.0	-60
GCL08-73	497350.00	5349390.00	294.70	200.00	360.0	-50

*NAD83 Z17N

The drill core from the drilling program was stored at the Hastings Management core storage facility on Airport Road, in Timmins, Ontario.

The drill holes were aligned in a general direction of 180 and 360 degrees in order to better target the east-west strike of the nickel zones and their host peridotite flows and in general were spaced about 25 metres. The drill hole casings of holes GCL08-46 and 47 were left in the ground. The drill hole collar locations were GPS surveyed by Talbot Surveying of Timmins, Ontario. In addition, the casings were surveyed to determine accurately the initial dips and direction of the holes. The drill hole casings of the remaining holes were removed. Their drill hole collar locations were surveyed by Talbot Surveying prior to drilling.

Sulphide mineralization encountered in the drill cores was sampled and sent for analysis to Laboratoire Expert Inc. in Rouyn-Noranda, Quebec.

The January-July 2008 drilling program encountered east-west trending peridotite flows with good spinifex flow tops and associated thin graphitic argillite interflow units. The peridotite flows are typically black, fine-grained, soft, weak to moderately serpentinized and typically have adcumulate to mesocumulate textures. Detailed examinations of the spinifex flow top sequences and flow morphologies indicate a southward younging direction. The peridotite flows range from 5 to 50 metres thick and are near vertical to steeply dipping 80 degrees to the north. Along the southern margin of the drilling area, a pink medium grained hornblende rich (5-10%) granodiorite intrusive was encountered. It is thought that this intrusive may represent an east-west dike; however more drilling is required for confirmation. The peridotite flows

in the vicinity of the granodiorite are strongly brecciated and often contain graphite. These brecciated flows were labelled “komatiitic peridotite breccias” in the logs. Smaller felsic to intermediate, feldspar porphyry, mafic, and gabbro dikes or sills locally intrude the peridotite flows (Montgomery, 2009b).

The Langmuir W4 Nickel Deposit is interpreted to comprise three sub-parallel nickel zones (A, B, and C) which occur within specific komatiitic peridotite flow units (Table 6-13). The zones are vertical to steeply north dipping at 70-75 degrees. The C Zone, which is the deepest occurring zone, is locally steeply south dipping. The east-west strike extent of the zones has been defined for at least 200 m. the zones are open below the granodiorite dike and/or a vertical depth of 400 metres. The nickel sulphide mineralization consists primarily of pentlandite-pyrrhotite occurring as fine disseminations, fracture fillings, and blebs. Nickel concentrations as high as 5-7% Ni occur where sulphide concentrations increase to 30 or 35% (semi-massive). Locally, massive sulphide sections are present grading up to 17.9% Ni.

Table 6-13. Core assay results from selected drill holes, 2007-2008 diamond drilling program.

Drill Hole	Zone	From (m)	To (m)	Int (m)	Ni (%)	Cu (%)	Pt (g/t)	Pd (g/t)	Estimated True Width (m)
GCL08-48	A	126.00	140.00	14.00	1.70	0.11	0.12	0.29	11.52
	Incl.	126.00	135.90	9.90	2.12	0.14	0.15	0.38	
GCL08-49	A	164.40	185.80	21.40	0.99	0.09	0.10	0.23	11.34
GCL08-50	A	123.10	134.00	10.90	1.13	0.04	0.07	0.17	10.02
GCL08-50	Incl.	123.10	124.10	1.00	9.28	0.27	0.35	0.99	
GCL08-51	A	130.40	141.00	10.60	3.14	0.28	0.34	0.68	7.13
GCL08-52									
GCL08-53	A	190.00	197.00	7.00	1.09	0.09	0.09	0.23	3.39
GCL08-54									
GCL08-55	A	53.00	59.20	6.20	1.14	0.09	0.07	0.17	4.95
GCL08-55	Other	85.00	87.00	2.00	0.88	0.02	0.07	0.10	1.51
GCL08-56	A	91.00	98.20	7.20	1.53	0.09	0.15	0.43	4.51
GCL08-57	A	58.70	66.50	7.80	1.69	0.18	0.09	0.22	5.80
GCL08-59									5.35
GCL08-59	Incl.	84.00	88.00	4.00	0.81	0.04	0.08	0.19	
GCL08-60	A	101.00	105.00	4.00	0.81	0.01	0.11	0.23	3.02
GCL08-61	A	33.40	39.20	5.80	1.24	0.14	0.10	0.24	3.65
GCL08-62	A	74.50	85.00	10.50	1.40	0.13	0.10	0.25	7.21
GCL08-63	A	103.30	119.50	16.20	1.63	0.13	0.12	0.28	9.52
GCL08-64	A	130.00	151.90	21.90	1.48	0.07	0.11	0.28	13.78
	Incl.	145.00	151.90	6.90	2.16	0.19	0.14	0.36	
	Incl.	130.00	139.00	9.00	1.64	0.03	0.15	0.35	
GCL08-65	A	20.00	34.00	14.00	1.18	0.07	0.11	0.22	10.24
	Incl.	20.00	22.90	2.90	1.73	0.07	0.27	0.46	
	Incl.	28.50	34.00	5.50	1.56	0.09	0.10	0.23	
GCL08-66	A	55.00	68.00	13.00	0.36	0.01	0.02	0.03	
	Incl.	55.00	60.00	5.00	0.52	0.02	0.02	0.06	2.65
GCL08-67	A	25.75	35.50	9.75	1.51	0.11	0.15	0.38	5.52
	Incl.	26.50	32.50	6.00	1.94	0.15	0.15	0.38	
GCL08-68	Au	33.60	36.40	2.80	2.90	0.10	0.04	0.14	2.69
	Al	43.40	52.40	9.00	0.84	0.05	0.08	0.19	8.53

Drill Hole	Zone	From (m)	To (m)	Int (m)	Ni (%)	Cu (%)	Pt (g/t)	Pd (g/t)	Estimated True Width (m)
GCL08-69	A	34.60	59.00	24.40	2.75	0.16	0.18	0.51	16.03
	Incl.	41.00	55.00	14.00	3.79	0.21	0.24	0.68	
GCL08-70	A	22.20	28.00	5.80	1.51	0.09	0.06	0.12	4.63
GCL08-73	A	129.30	149.00	19.70	0.65	0.05	0.05	0.10	11.58
	Incl.	129.30	132.10	2.80	1.05	0.02	0.13	0.28	
	Incl.	145.00	149.00	4.00	0.96	0.02	0.05	0.11	

This drilling program validated the continuity of the nickel mineralization in the A Zone and the presence of the A Zone extending to surface. It confirmed that a nickel deposit “Langmuir W4” and consisting of three sub-parallel nickel zones (A, B, C) occurs on Legacy Mining Claim 4203498.

Results such as 3.14% Ni over 10.6 m (hole GCL08-51), 1.70% Ni over 14 m (hole GCL08-48) and 1.63% Ni over 16.2 m (hole GCL08-63) demonstrated the continuity of the nickel mineralization in the A Zone. Near surface (overburden/bedrock) nickel intersections where also encountered that included 2.75 % Ni over 24.4 m (hole GCL08-69), 1.69 % Ni over 7.8 m (hole GCL08-57) and 1.51% Ni over 5.8 m (hole GCL08-70). These near surface high-grade nickel intercepts suggested the possibility that the Langmuir W4 Nickel Deposit could be mined by open pit methods (Montgomery, 2009b).

Based on the encouraging nickel results from the 2008 drilling program, it was recommended that resource estimation be carried out on the Langmuir W4 Nickel Deposit. Additional drilling was also recommended to determine the eastern down plunge extension of the nickel zones and the depth potential (Montgomery, 2009b).

6.3.7 Golden Chalice (2009)

From 1 February to 15 May 2009, Golden Chalice completed a further 11 NQ size diamond drill holes totalling 3,939 m (Table 6-14), focusing on the eastern side of the Langmuir W4 Nickel Deposit, testing several VTEM conductors and a strong MMI nickel anomaly (Montgomery, 2011). The drilling program was located in the area west of the Night Hawk River, in southern Langmuir Township and employed one diamond drill rig provided by Norex Drilling of Timmins, Ontario. A total of 485 core samples were collected at intervals ranging from 0.20 to 1.1 metres.

The object of the drilling program was to test a few VTEM conductors and a strong MMI nickel anomaly in order to discover new nickel mineralization and thus validate the theory of a Kambalda camp setting on the property.

Table 6-14. Summary of drill hole parameters for 2009 drilling program.

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL09-01	499099.03	5349182.93	284.15	434.00	323.9	-55
GCL09-02	500119.69	5348113.78	285.58	351.00	327.3	-54
GCL09-03	499559.82	5348151.29	298.48	402.00	333.3	-55
GCL09-04	499519.37	5348215.42	295.27	252.00	13.6	-44
GCL09-05	498846.82	5349347.69	285.74	399.00	1.7	-70
GCL09-06	498846.84	5349348.65	285.75	285.00	2.0	-44
GCL09-07	499029.89	5349226.59	284.41	342.00	3.5	-55
GCL09-08	499724.00	5349383.00	285.00	352.00	325.0	-65
GCL09-09	498842.29	5348991.86	285.28	251.00	3.9	-52
GCL09-10	499007.75	5349247.41	284.32	377.00	356.3	-65
GCL09-11	497971.00	5349428.00	285.00	494.00	325.0	-68

*NAD83 Z17N

The drill core from the 2009 drilling programs was stored at the Hastings Management Core Storage Facility located on Highway 629 (Airport Road), in Timmins, Ontario.

A total of three drill holes (GCL09-01, 07 and 10) were drilled in the W2 VTEM anomaly cluster 1.5 km east of the W4 nickel deposit. This amounted to 1,153 m of the program. Two holes (GCL09-05 and 06) tested a strong nickel MMI soil anomaly, 150 m northwest of the W2 VTEM anomaly. One hole GCL09-09 tested a moderate nickel MMI anomaly approximately 300m southwest of the collar of GCL09-01.

Three holes (GCL09-02, 03, and 04) were drilled in the W6 VTEM target area that is situated 1 km southeast of the W2 VTEM target on a separate sequence of peridotite flows. Hole GCL09-08 tested the western portion of the W1 VTEM conductor cluster (700 m east of W2) and intersected graphitic argillite within peridotite flows. The final hole GCL09-11 of the drill program tested the western edge of the W3 VTEM conductor cluster, approximately 500 m east of the Langmuir W4 Nickel Deposit.

GCL09-01: tested the Langmuir W2 conductor, located about 1.5 km east of Langmuir W4, and intersected 3.34% Ni over 0.9 metres from 373.50 to 374.40 metres. This interval included a 20 cm massive sulphide section grading 11.35% Ni, 0.6% Cu, and 1.46 g/t Pt+Pd. This intersected nickel mineralization occurs approximately 300 m vertically below surface within a komatiitic peridotite flow. While the intersected sulphide zone is narrow, it is similar in style to the nickel mineralization occurring at the Langmuir W4 Nickel Deposit. This intersection, the first new nickel discovery of nickel sulphide on strike from the discovery hole GCL07-06, validated the theory of a Kambalda-type district with potential for multiple nickel deposits over a relatively small area of the large property.

GCL09-02, 03, 04: drilled in the W6 VTEM target area that is situated 1 km southeast of GCL09-01 on a separate sequence of peridotite flows. No significant nickel values were returned and the VTEM conductors were graphitic argillite units.

GCL07-07: this drill hole intersected similar peridotite flows as in GCL09-01 but did not encounter significant nickel values.

GCL09-08: tested the western portion of the W1 VTEM conductor cluster (700 m west of W2) and intersected graphitic argillite with no significant nickel values.

GCL09-09: tested a moderate nickel MMI anomaly approximately 300 m southwest of the collar of GCL09-01 and intersected peridotite flows with no significant sulphide concentrations.

GCL09-10: completed in the W2 target area and targeting an off-hole TEM anomaly, returned 1.72% nickel over 3.0 m from 303.50 to 306.50 m within a broader mineralized channel flow grading 0.55% nickel over 20.10 m from 287.30 to 307.40 metres. This mineralization was found approximately 25 m east and up-dip of the GCL09-01 nickel intersection grading 3.34% nickel over 0.9 metres. The nickel mineralization within the W2 channel flow horizon consists of blebby, patchy and fracture-filled pyrrhotite and pentlandite, consistent with Kambalda-style nickel mineralization.

GCL09-11: intersected significant elevated nickel mineralization grading up to 0.34% Nickel over 2.4 meters drilled width, from 372.50 to 374.90 metres. This intercept includes 0.5% Nickel over 0.7 metres. The nickel discovery occurs approximately 500 meters east of the Langmuir W4 in the Langmuir W3 area. The host rock is a channel flow horizon similar to the host mineralized zone at the Langmuir W4 Nickel Deposit as well as the W2 Nickel Discovery approximately 1.5 kilometres east of W4 nickel deposit. It unclear as to whether this is a new channel flow horizon hosting nickel sulphides or is the same flow horizon hosting nickel mineralization in either the W4 or W2 discovery areas. The sulphide mineralization consists of disseminated pyrrhotite with a section of focused blebby and fracture-infilled pyrrhotite with minor pentlandite. This intercept occurs approximately 100 meters west of an earlier drill hole GCL08-04 which intersected 0.23% nickel over a drilled width of 4.0 metres.

Further exploration work was recommended along strike of the Langmuir W4 Nickel Deposit, particularly in the W2 and W3 nickel discovery areas, in order to locate additional nickel mineralization (Montgomery, 2011).

6.3.8 Golden Chalice (2010)

From 1 March to 30 April 2010, Golden Chalice completed a five NQ size drill hole program totalling 1,645 metres in the Langmuir W2 target area (Table 6-15). The drilling program was located in the area west of the Night Hawk River, in southern Langmuir Township. The 2010 drilling program employed one diamond drill rig provided by Bradley Bros. Drilling of Timmins, Ontario (Montgomery, 2011). A total of 255 core samples were collected at intervals ranging from 0.30 to 1.1 metres.

This drilling program was designed to test for an extension of the nickel mineralization discovered in the 2009 drilling program.

Table 6-15. Summary of drill hole parameters for 2010 drilling program.

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip
GCL10-01W	498996.53	5349276.03	282.34	351.00	0.0	-64
GCL10-02W	498998.13	5349217.52	283.68	308.00	0.0	-65
GCL10-03	498945.51	5349239.70	284.17	350.00	1.0	-64
GCL10-04	499007.40	5349237.68	284.48	361.00	2.7	-67
GCL10-05	499009.61	5349307.57	283.38	275.00	354.0	-59

*NAD83 Z17N

The drill core from the 2009 drilling programs was stored at the Hastings Management Core Storage Facility located on Highway 629 (Airport Road), in Timmins, Ontario.

The 2010 winter diamond drilling program was not entirely successful as it did not extend the W2 nickel zone significantly along strike and up dip. It however intersected the nickel zone in holes GCL10-03, returning 0.64 % Ni over 2 m and in hole GCL10-02W, returning 0.66% Ni over 0.6 metres. The other 2010

holes intersected the host stratigraphy but did not return significant nickel values. The W2 nickel zone remains open with depth below the 325 m vertical depth and requires significant deep drilling to test its possible depth extension (Montgomery, 2011).

Further exploration work is recommended along strike of the Langmuir W4 Nickel Deposit particularly in the W2 and W3 nickel discovery areas, in order to locate additional nickel mineralization (Montgomery, 2011).

6.3.9 Rogue Iron Ore Corp (2011)

From 10 January to 8 February 2011, Rogue Iron Ore Corp. (previously Golden Chalice) completed 13 drill holes totalling 2,282 m (Table 6-16) of which six HQ size holes (642 m) were drilled for metallurgical testing of the A Zone at the Langmuir W4 Nickel Deposit, and seven NQ drill holes (1,640 m) were drilled east of the nickel deposit (Montgomery, 2012). The drilling program employed one diamond drill rig provided by NPLH Drilling of Timmins, Ontario (Montgomery, 2012). A total of 583 core samples were collected at intervals ranging from 0.20 to 1.7 metres.

Table 6-16. Summary of drill hole parameters for 2011 metallurgical and exploration diamond drilling.

Drill Hole	UTMX	UTMY	Elev (m)	Length (m)	Az	Dip	Core Size
RL11-01	497475.00	5349555.00	284.25	155.00	198.0	-45	HQ
RL11-02	497400.00	5349535.00	293.95	176.00	180.0	-68	HQ
RL11-03	497375.00	5349490.00	293.60	50.00	180.0	-45	HQ
RL11-04	497550.00	5349475.00	293.00	173.00	185.0	-45	NQ
RL11-05	497550.00	5349510.00	290.50	215.00	185.0	-62	NQ
RL11-06	497400.00	5349470.00	293.60	50.00	180.0	-60	HQ
RL11-07	497425.00	5349500.00	293.60	140.00	183.0	-70	HQ
RL11-08	497525.00	5349510.00	294.50	278.00	180.0	-63	NQ
RL11-09	497480.00	5349490.00	292.00	152.00	185.0	-45	NQ
RL11-10	497350.00	5349495.00	293.90	71.00	180.0	-63	HQ
RL11-11	497600.00	5349550.00	284.00	221.00	180.0	-50	NQ
RL11-12	497735.00	5349525.00	284.00	275.00	170.0	-65	NQ
RL11-13	497900.00	5349430.00	294.50	326.00	360.0	-50	NQ

*NAD83 Z17N

The drill core from the 2011 drilling program was stored at the Rogue Iron Ore office/core facility located at 571 Moneta Avenue in Timmins, Ontario.

The six HQ holes of the program were drilled for metallurgical testing of the A zone at the W4 Langmuir nickel deposit, they confirmed the nickel grades of the deposit (Table 6-17). Highlights included 1.73% Ni over 15.5 m (RL11-10), 1.68% Ni over 17.3m (RL11-07), and 1.35% Ni over 7.5 m (RL11-06). The drilling yielded three bulk metallurgical samples: a high grade (>1.4% Ni), a medium grade (0.6-1.4% Ni), and a low grade (>0.3-0.6% Ni).

The seven exploration NQ holes of the 2011 drilling program achieved favourable nickel results. Four holes intersected the eastern margin of the Langmuir W4 Nickel Deposit with hole RL11-09 returning 1.54% Ni over 9.4 m near surface. Hole RL11-11 was drilled 50 m east of the deposit and encountered anomalous nickel mineralization in the host ultramafic flow of the A Zone. Hole RL11-12 150 m east of the deposit unfortunately encountered a diabase dike and only minor ultramafic. Hole RL11-13 intersected ultramafic

rocks, the same type of volcanic flow at the Langmuir W4. However, no significant nickel sulphides were encountered in these ultramafic rocks (Montgomery, 2012).

Table 6-17. Selected intercepts from the 2011 diamond drilling program.

Drill Hole	From (m)	To (m)	Int (m)	Ni (%)	Hole Type	Area
RL11-01	124.00	127.00	3.00	0.96	HQ Met	W4 Deposit
RL11-02	135.00	167.50	32.50	0.87	HQ Met	W4 Deposit
incl.	135.00	144.50	9.50	0.68	HQ Met	W4 Deposit
incl.	162.00	167.50	5.50	1.84	HQ Met	W4 Deposit
RL11-03	24.50	37.00	12.50	0.88	HQ Met	W4 Deposit
RL11-06	18.00	25.50	7.50	1.35	HQ Met	W4 Deposit
RL11-07	16.00	123.30	107.30	1.68	HQ Met	W4 Deposit
incl.	114.50	122.50	8.00	2.03	HQ Met	W4 Deposit
RL11-10	36.50	65.50	29.00	1.21	HQ Met	W4 Deposit
incl.	36.50	43.50	7.00	0.85	HQ Met	W4 Deposit
incl.	50.00	65.50	15.50	1.73	HQ Met	W4 Deposit
RL11-04	82.50	86.00	3.50	0.64	NQ	East W4 Deposit
RL11-05	129.70	131.30	1.60	0.53	NQ	East W4 Deposit
RL11-08	NSV				NQ	East W4 Deposit
RL11-09	54.20	63.60	9.40	1.54	NQ	East W4 Deposit
RL11-11	188.00	189.00	1.00	0.30	NQ	East W4
RL11-12	NSV				NQ	East W4
RL11-13	NSV				NQ	West W3

*NSV = no significant values

Based on the encouraging nickel results from the 2011 drilling program, it was recommended that a full metallurgical study be carried out on the Langmuir W4 Nickel Deposit. Drilling was also recommended to determine the eastern down plunge extension of the nickel zones and the depth potential of the deposit. Further exploration work was also recommended along strike of the Langmuir W4, particularly in the W2 and W3 nickel discovery areas, in order to locate additional nickel mineralization (Montgomery, 2012).

6.4 Historical Drilling Procedures (2005-2011)

The following is a description of the historical drilling procedures as applied to the drilling programs completed from 2005 to 2011 (*e.g.*, Montgomery, 2009a, 2009b, 2010a, 2011, 2012). It is the opinion of the Principal Author that the procedures followed in completing this historical drilling have produced data and information that is of sound quality and adequate enough to be used in support of future geological modelling, mineral exploration, and mineral resource estimation.

6.4.1 Drill Hole Surveying

All drill holes were spotted in the field using a WAAS-enabled, hand-held Garmin GPS unit. After the Langmuir W4 discovery hole GCL07-06, a small field grid was cut about the collar of the discovery hole for better control on the location of future holes. The field grid consisted of a 1.2 km base line and twelve 450 m long cross lines spaced 50 metres apart (6.6 line-km). The drilling grid base line is oriented at 55 degrees.

Subsequently, every 2007 drill hole in the Langmuir W4 area was spotted using a field measuring tape and a compass. After the 2007 drill holes were completed, the top of the collar casing location ((NAD83 datum, Zone 17N), was surveyed by Talbot Surveys Ltd. of Timmins Ontario, using a Differential GPS ("DGPS") unit to sub-centimetre accuracy. The elevation, azimuth, and dip of all the drill collar casings were also surveyed.

All 2008 drill holes were spotted with the DGPS. After drill hole GCL08-47, the holes were not resurveyed as the casings were pulled after the top 15 m of bedrock penetration were cemented.

During drilling operations, the down hole orientations of all drill holes were surveyed using a Reflex EZ-Shot instrument which is an electronic, solid-state, single-shot drill hole orientation tool. Readings were taken 15 m below the casing, then nominal 50 m intervals for the remaining length of the hole and finally at the end of the hole. As verification of the Reflex EZ-Shot instrument readings, two drill holes (GCL07-14 and GCL08-46) were surveyed by a Reflex Maxibor II instrument, which is a non-magnetic multishot tool designed to be used in areas of magnetic rock. A comparison of the down-hole Reflex EZ-Shot instrument readings to the Reflex Maxibor II instrument readings in both holes showed very little variation indicating that any magnetism of the rocks was not affecting the Reflex EZ-Shot instrument readings.

6.4.2 Drilling Pattern and Density

The drill holes outside of the Langmuir W4 area were not systematic designed and were directly targeting specific airborne VTEM conductors. After the discovery hole GCL07-06, step out drill holes were drilled in the W4 area to ascertain the strike and continuity of the nickel mineralization. Drilling was conducted on a tight pattern of approximately 25 m spacing with one, two, or three drill holes per setup.

The 2007 drilling program holes were all drilled at an azimuth of 320 to 325 degrees and with dip angles of 45 to 60 degrees. Their orientation was based on targeting the Langmuir W4 VTEM conductor cluster which was then interpreted to be trending 055 degrees. After hole GCL08-47, it was established that the nickel zones were trending approximately east-west and dipping steeply north. So in order to cut the nickel zones closer to their true thickness width, the subsequent 2008 drill holes were drilled southward at azimuths varying from 195 to 176 degrees or northward (dependent on topography) and with dip angles of 45 to 70 degrees. Drilling thus achieved a drill spacing of approximately 25 m for the upper part of the Langmuir W4 (above 200 m below surface), and 50 m or more, below 200 metres.

It is the opinion of the Principal Author that the drilling strategy and pattern have produced an adequate drill density to support mineral resource estimation.

6.4.3 Field Procedures

At all surface drill locations in the Langmuir W4 area, collar pickets were installed. Each collar picket was planted at each drill hole casing and marked with a clear aluminum tag that was inscribed with the borehole name, azimuth, dip and length of the hole.

All the Golden Chalice Langmuir Property drill holes were routinely logged by geologists directly onto laptop computers using a standardized Microsoft Excel template. This template recorded the collection of lithological, structural, sulphide mineralization, alteration, core recovery, and Rock Quality Determination (“RQD”) data observed by the geologist. The template “diamond drill log record” also included drill hole location details, the downhole Reflex EZ-Shot instrument readings and core sampling details (see Section 11). The Excel-based drill logs were imported into a geological software computer program LOG II and paper drill logs produced. The following information from the Excel-based drill logs; collar location and elevation, down-hole azimuth and dips, geology, sampled intervals and assays were merged into an Excel database. This Excel database which forms the basis of the Langmuir W4 Nickel Deposit resource estimation was imported into Oasis Montaj Geosoft to produce sections and plan maps during the drilling programs.

Overall the RQD was good for all holes with some local blocky ground particularly in the graphitic argillite units. Core recovery was excellent with rare core loss recorded.

6.5 Historical Mineral Resource Estimates

In 2009, Golden Chalice commissioned two internal mineral resource estimates for the Langmuir W4 Nickel Deposit. Using a polygonal methodology on vertical sections, Montgomery (2009c) estimated that the deposit contained 785,300 tonnes grading 1.27% Ni (0.5% Ni cut-off grade).

Burt (2009), produced kriged and inverse distance squared block model resource estimates. Using a 0.5% Ni cut-off grade, Burt (2009) kriged estimation was reported as 539,990 tonnes grading 1.03% Ni and the inverse distance squared estimation was 57,201 tonnes grading 1.03% Ni. Montgomery (2009c) and Burt (2009) both used a specific gravity of 2.87 g/cc in their tonnage calculations.

These mineral resource estimates were calculated for internal use only, do not conform to NI 43-101 Standards of Disclosure for Mineral Projects and should not be relied upon. Neither the Principal Author or a Qualified Person have done sufficient work to classify any of the historical estimates as current mineral resources and as such the Principal Author and the Issuer are treating the tonnages and grades reported as historical mineral resources. Investors are cautioned that the historical mineral resource estimates do not mean or imply that economic deposits exist on the Property.

6.5.1 Historical Mineral Resource Estimate (2010)

This section describes the resource estimation data, information, methodology, parameters and key assumptions used by SRK Consulting Canada Inc. (“SRK”) in 2010 (Cole *et al.*, 2010) to complete a mineral resource estimation on the Langmuir W4 Nickel Deposit.

In January 2010, SRK was engaged by Golden Chalice to prepare an initial mineral resource estimate for the Langmuir W4 (Cole *et al.*, 2010). The mineral resource estimation work was completed by Sebastien Bernier, P.Ge (OGQ#1034) and Glen Cole, P.Ge (APGO #1416), both independent qualified persons as defined in National Instrument 43-101. The resource estimation and accompanying technical report were reviewed by Dr Jean-Francois Couture, P.Ge of SRK. The effective date of the historical mineral resource estimate was 28 April 2010 and the technical report was finalized in June 2010 (see Golden Chalice news release dated 19 May 2010).

Langmuir W4 contains magmatic polymetallic sulphide mineralization. Nickel, copper, platinum, palladium and cobalt were estimated in the SRK study but mineral resources were tabulated on the basis of nickel and copper content only, due to the generally low grades reported for the other metals.

Leapfrog and Gemcom (version 6.2) software was used to construct the geological solids. Datamine Studio Version 3 was used to build composites, the block model, to run the grade interpolation and to estimate and tabulate mineral resources. Isatis (version 9.05) was used to undertake geostatistical analyses of the dataset and to generate variograms for the sulphide metals.

Nickel grades were estimated in a block model constrained by modelled nickel mineralization wireframe models, using a geostatistical approach. The mineral resources are reported at two cut-off grades to reflect the “reasonable prospects” for economic extraction. Conceptual pit optimization work to test the “reasonable prospects” for economic extraction was completed with Whittle software (Cole *et al.*, 2010).

The historical mineral resource estimate that follows used categories that conformed to CIM Definition Standards on Mineral Resources and Mineral Reserves (CIM, 2005) at the time of completion of the estimate, as outlined in NI 43-101, Standards of Disclosure for Mineral Projects. However, neither the Principal Author nor a qualified person have done sufficient work to classify any of the historical estimates as current mineral resources and as such, the Principal Author and the Issuer are treating the tonnages and grades reported as historical mineral resources. Investors are cautioned that the historical mineral resource estimates do not mean or imply that economic deposits exist on the Property.

6.5.1.1 Resource Estimation Procedures

The evaluation of mineral resources for Langmuir W4 involved the following procedures:

- Database compilation and verification;
- Construction of wireframe models for major lithological units and nickel mineralization, using borehole data, structural trends and sectional interpretations provided by Golden Chalice;
- Definition of geostatistical resource domains within the geological models;
- Data conditioning (compositing and capping) for statistical and geostatistical analysis;
- Variography;
- Block modelling and grade interpolation;
- Resource classification and validation;
- Assessment of “reasonable prospects for economic extraction” and selection of appropriate cut-off grades; and
- Preparation of Mineral Resource Statement.

6.5.1.2 Resource Database

Exploration data used to evaluate the mineral resources for Langmuir W4 was provided to SRK by Golden Chalice as a drill hole database in Excel format. The database includes 69 core boreholes (22,152 m) drilled by Golden Chalice in 2007 and 2008.

All exploration information is located using a UTM grid (NAD83, Zone 17N). Resource modelling and grade estimation was conducted in this UTM coordinate space. The drill hole database includes:

- Collar file (located using UTM, Nad83) for 69 drill holes;
- Survey file containing 663 records, with survey measurements taken at irregular intervals;
- Assay file for 5,788 sample intervals with analyses for gold, platinum and palladium (in parts per billion, “ppb”) as well as for silver, copper, nickel, zinc, lead and cobalt (in parts per million, “ppm”); and
- Geology file with 1,664 lithology intervals.

The database represents the Langmuir W4 exploration dataset as at February 5, 2010. In addition to borehole data, Golden Chalice provided SRK with electronic 2D scans (PDF format) of the geological interpretation depicting key geology indicators and mineralization along vertical sections at a spacing of 25 m and plan across the entire strike length of the deposit.

A 3D model of the Langmuir W4 mineralized zones, based on information provided by Golden Chalice produced by Burt (2009) using Surpac software, was also provided to SRK. SRK was also provided with a specific gravity dataset comprising 90 records. Upon receipt of the drill data, SRK performed the following validation steps:

- Routine validation of interval for overlap, gap, or values outside of expected ranges;
- Checking for inconsistency in lithological unit terminology and/or gaps in the lithological table;
- Checking for gaps, overlaps and out of sequence intervals for both assays and lithology tables; and
- Reviewing of analytical quality control data.

On completion of the validation procedure, SRK considers the quality of the exploration database is suitable for resource estimation with no obvious discrepancies that could materially impact the Mineral Resource Statement.

SRK was of the opinion that the current drilling information is sufficiently reliable to interpret the outlines of the lithologies and sulphide mineralization with reasonable confidence and that the assay data is sufficiently reliable to support the mineral resource estimation (Cole *et al.*, 2010).

6.5.1.3 Verification by SRK

In accordance with National Instrument 43-101 guidelines, SRK visited Langmuir W4 during 18 to 19 March 2010. The site visit was conducted to ascertain the geological setting of the Langmuir W4 nickel mineralization and to witness the extent of exploration work carried out on the property. During the site visit, SRK was given full access to all project data.

During the site visit SRK examined core from selected holes drilled during 2007 and 2008 and found the logging information to accurately reflect actual drill core. The lithology and sulphide mineralization contacts checked by SRK match the information reported in the drill logs. Generally, the boundaries of the sulphide mineralization zones examined in core match the boundaries determined from assay results.

Golden Chalice made available to SRK the complete electronic database accumulated on Langmuir W4 which includes spreadsheets and scanned cross sections depicting the interpreted geology. This database contains a complete record of the electronic data produced for Langmuir W4.

SRK conducted a series of routine verifications to ensure the reliability of the electronic data provided by Golden Chalice. These verifications include auditing the selected electronic data against original paper assay certificate records. No significant data entry errors were noted. In the opinion of SRK, the electronic data are reliable, appropriately documented and exhaustive.

SRK also collected 10 core samples for independent verification analyses. Care was taken to replicate sampled intervals for various types of sulphide mineralization (low and high grade nickel mineralization). The verification samples were specifically collected to attest to the existence of nickel and copper mineralization on Langmuir W4.

The SRK samples were submitted to SGS Minerals Services in Toronto for independent analyses using a 'near total' sodium peroxide fusion followed by an ICP-AES finish (analytical code ICP90A). The management system of the SGS Toronto laboratory is accredited ISO 9001 and that laboratory is also accredited ISO/IEC 17025 by the Standards Council of Canada for certain testing procedures including analytical code ICO90A. By comparison, Langmuir W4 assays were derived using an aqua regia digestion followed by atomic absorption finish. The comparative results are summarized in Table 6-18 and graphically in Figure 6-4. SRK regard the small variance in nickel and copper grades in Figure 6-4 to be acceptable and typical for deposits of this nature.

Table 6-18. Comparative analyses from the SRK (2010) assay verification study (Cole *et al.*, 2010).

Sample	Lab Expert Ni%	SGS Minerals Ni%	Lab Expert Cu%	SGS Minerals Cu%
104365	3.44	2.96	0.25	0.23
104366	11.09	11.00	0.45	0.5
104364	1.15	1.34	0.09	0.03
104362	1.66	1.78	0.13	0.12
104363	0.14	0.22	0	0.02
104368	0.64	0.77	0.03	0.04
104307	0.89	0.97	0.14	0.07
104369	2.74	3.17	0.08	0.09
104370	5.85	5.00	0.81	0.73
104371	0.14	0.19	0.01	0.02
Average	2.77	2.74	0.20	0.19

Golden Chalice made available to SRK internal and external analytical quality control data in the form of MS Excel spreadsheets aggregating the assay results for the quality control samples.

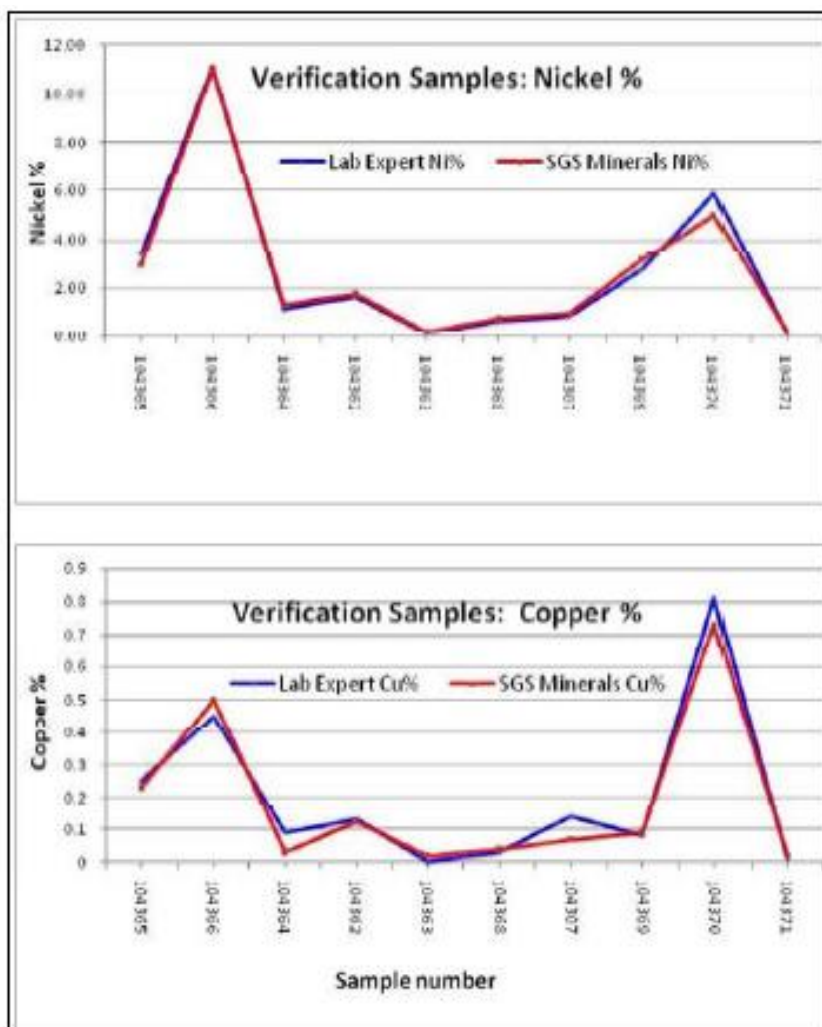


Figure 6-4. Graph showing comparative nickel and copper percent assays for Laboratoire Expert Inc. and SGS Minerals Laboratories (Cole *et al.*, 2010).

SRK compiled the assay results for the internal and external quality control samples for further analysis. Sample blanks, certified field standards data were summarized on time series plots to highlight the performance of the control samples. Paired data (laboratory aware pulp duplicates and check assays) were analyzed using bias charts, quantile-quantile and relative precision plots (Cole *et al.*, 2010).

The analytical quality control data produced by Golden Chalice for Langmuir W4 between 2007 and 2008 are summarized in Table 6-19.

Although, the overall performance of the control samples inserted into the sampling stream submitted for assaying is generally acceptable, a few comments regards the performance of the blanks and standards are warranted.

Blank grades are generally acceptably low, but occasional higher grades (up to 0.12% Ni) question the homogeneity of the Matachewan diabase and/or crushed marble used as blank material.

Table 6-19. Summary of Analytical Quality Control Data Produced By Golden Chalice on the Langmuir W4 Project (Cole *et al.*, 2010).

	Core Samples	Total (%)	Comment
Sample Count	5,788		
Blanks	107	1.85%	
Certified QC standards:	112	1.94%	
Ni 111	21		WCM Minerals (0.42% Ni; 0.24% Cu)
Ni 112	14		WCM Minerals (0.61% Ni; 0.30% Cu)
Ni 113	41		WCM Minerals (1.24% Ni; 0.25% Cu)
Ni 115	33		WCM Minerals (1.90% Ni; 0.17% Cu)
Ni 117	3		WCM Minerals (0.27% Ni; 0.35% Cu)
Check Assays	75	1.30%	Laboratoire Expert and SGS Labs
Total QC Samples	294	5.08%	
Lab Aware Pulp Samples	715		Laboratoire Expert internal duplicates

The performance of the certified WCM Minerals reference materials yield variable outcomes with no consistent trends emerging. The performance of control sample Ni 112 is good, with a single outlier suggesting a mislabelled standard. Laboratoire Experts, the primary laboratory, had difficulty assaying control samples Ni 111, Ni 113 and Ni 115 to within two standard deviations of the expected value . For low grade standard Ni 111, 67 percent of the assayed grades plotted outside of two standard deviations of the expected value, with the majority of these biased low. For the medium grade standard Ni 113, 76 percent of the assayed grades plotted outside of two standard deviations of the expected value, with the majority of these biased high. For high grade standard Ni 115, 73 percent of the assayed grades plotted outside of two standard deviations of the expected value, with the majority of these biased high. This limited dataset analyses suggests that higher grade standard assays tend to be biased high, whereas low grade standard assays tend to be biased low.

Laboratory pulp duplicate sample pairs show good reproducibility for 715 pairs. For laboratory pulp duplicate samples, rank half absolute difference ("HARD") plots suggest that more than 99 percent of samples have HARD below 10 percent for nickel and copper values.

On SRK's recommendation, total of 75 pulp reject samples from drill samples taken throughout the exploration program were selected by Golden Chalice for check assaying by SGS Mineral Laboratories in Toronto during March 2010.

Check assay paired data suggests that the umpire laboratory (SGS) had some difficulty reproducing the assay results from the primary laboratory Laboratoire Experts (Figure 6-5). Most discrepancies appear at higher grades, with 74.7% of samples having HARD below 10% Ni grades.

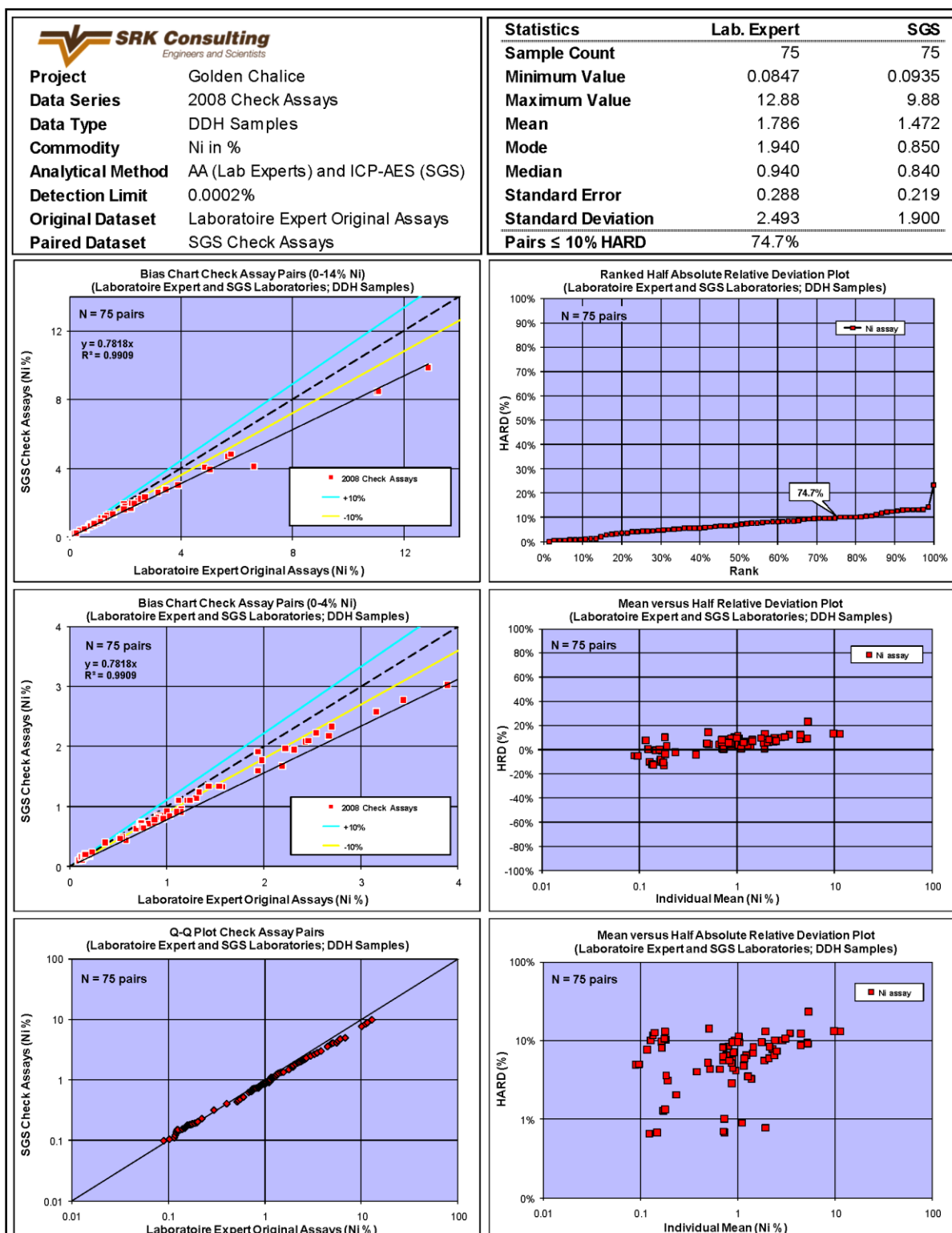


Figure 6-5. Bias Charts and Precision Plots for Pulp Duplicate Sample Pairs assayed by Laboratoire Expert and SGS Minerals (Cole *et al.*, 2010).

SRK noted that comparative Laboratoire Experts assays for nickel are slightly higher than that of SGS Mineral Laboratories (1.78 vs. 1.47% Ni respectively). The specific reason for this discrepancy is unknown

and may be partially attributed to the condition of the pulp reject samples retrieved for check assaying purposes. Evidence from the analyzed standard reference material and from the check assay exercise suggests that higher grade samples are slightly over-estimated by the primary laboratory. SRK propose that Golden Chalice further investigate these in future drilling programs by proactively forwarding pulps for check assaying during the exploration programs. SRK also recommend that Golden Chalice increase the proportion of quality control samples from the current 5% (see Table 6-19) to 10% of total samples assayed. It was also recommended that field duplicate samples be taken during future drilling programs.

It is the opinion of the Principal Author that the analytical results delivered by Laboratoire Experts for the SRK 2010 mineral resource estimate are sufficiently reliable for the purpose of future mineral resource estimations.

6.5.1.4 Solid Body Modelling and Sub-Domain Definition

SRK constructed a series of 3D wireframes for the major lithological units at Langmuir W4 including the komatiitic host rocks which are cross-cut and surrounded by various intrusive rocks (including mafic, felsic, diabase and granodiorite units), based on information from drill data and from local geology maps.

Mineralization domain wireframes were constructed partially from digital 2D sectional interpretations received from Golden Chalice and from composited drill data. These sectional interpretations (spaced at 25 m) were georeferenced and digitized prior to being linked in 3D. The definition of the mineralized domains at Langmuir W4 involved detailed discussions between Golden Chalice and SRK. Sulphide mineralization at Langmuir W4 has been interpreted and modelled by Golden Chalice as three sub-parallel nickel sulphide zones hosted by komatiitic peridotite flows. East-west trending komatiite flow units are vertical to steeply north dipping at 70 to 75 degrees and display well developed spinifex tops and are separated by thin graphitic argillite interflow units. The nickel sulphide mineralization consists of primarily pentlandite-pyrrhotite occurring as fine disseminations, fracture fillings, and blebs. Immediately south of the peridotite flows in the Langmuir W4 area, a pink medium grained hornblende rich granodiorite intrusion is present.

SRK used composited drill hole data, the 2D sectional interpretations from Golden Chalice as well as local knowledge of neighbouring nickel deposits to define 3D mineralization domains. 3D nickel grade shells were generated by manual interpretation guided by Leapfrog software derived grade shells. Three nickel grade thresholds: low grade: 0.3 to 0.5% Ni, medium grade: 0.5 to 1.0% Ni, and high grade: >1.0% Ni, were used to subdivide the sulphide mineralization into resource domains and these were used as hard boundaries for mineral resource estimation. The final shape and extent of the sulphide mineralization wireframes was a collaborative effort between Golden Chalice and SRK staff (Figure 6-6).

SRK also constructed an overburden surface from drill data. Resource domains were cut to this surface. In the absence of a reliable topographic surface, SRK created a topographic surface from drill collar information. This is not ideal and SRK recommended that the surface area surrounding the Langmuir W4 area be surveyed by a land surveyor.

The historical mineral resource estimate was based on 69 holes (22,152 m), drilled to test the sulphide mineralization in the area of the Langmuir W4 Nickel Deposit. This drilling was conducted in two programs; one in 2007 consisting of 37 drill holes totalling 16,262 m and the second in 2008 consisting of 32 drill

holes totalling 5,890 metres. All the holes aimed at outlining the Langmuir W4 Nickel Deposit were completed by Norex Drilling of Timmins, Ontario (Cole *et al.*, 2010).

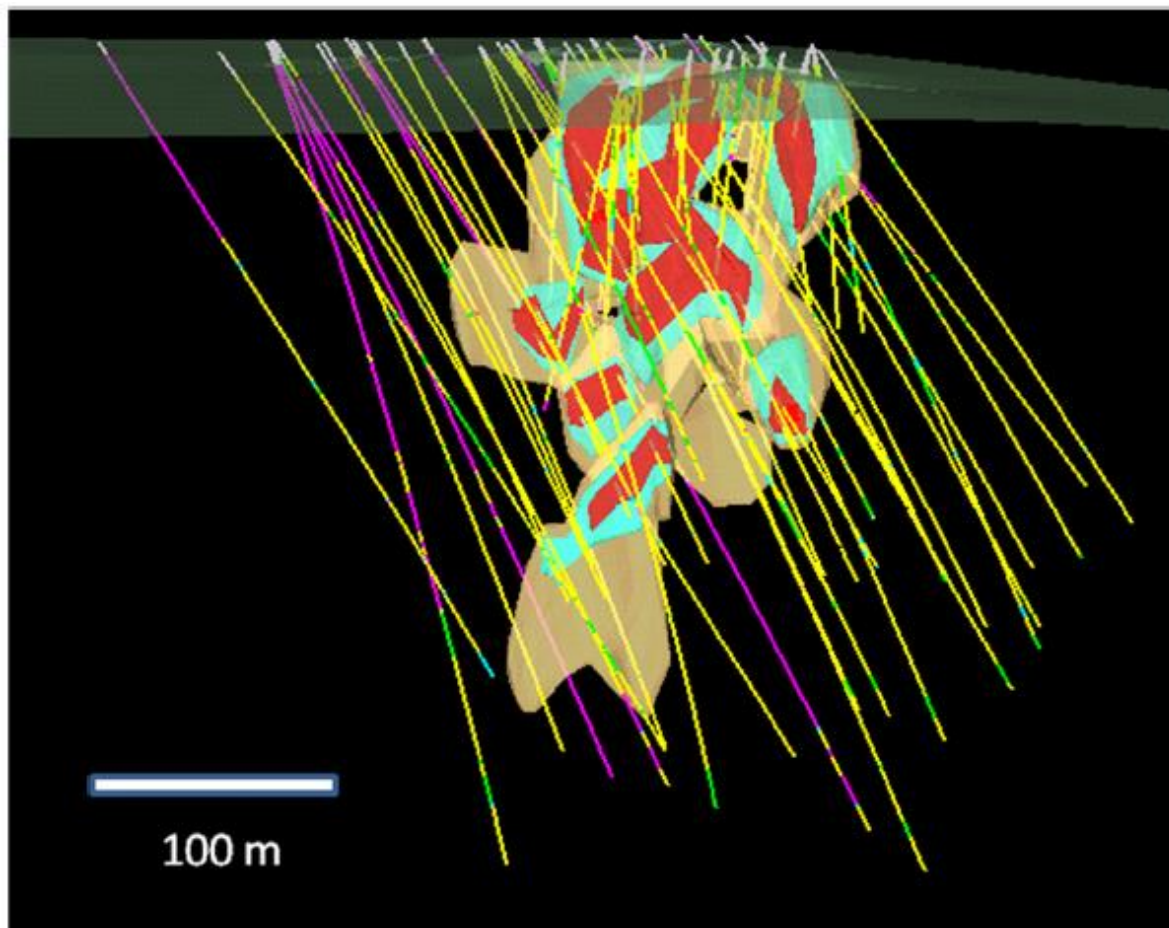


Figure 6-6. Model of modelled sulphide domains (high grade=red, medium grade=blue and low grade=yellow) in relation to litho-coded drill holes and overburden surface. View looking south (Cole *et al.*, 2010).

6.5.1.5 Compositing

The Langmuir W4 drilling data contains an assay file for 5,788 sample intervals with analyses for gold, platinum and palladium (in ppb) as well as for silver, copper, nickel, zinc, lead and cobalt (ppm). Sample lengths range from 0.2 to 2.0 metres, averaging 0.94 metres, and a histogram of sampled lengths for Langmuir W4 core is shown in Figure 6-7.

SRK notes that for un-sampled intervals as well as for intervals where analyses are below the detection limit, a constant value equal to half the detection limit was inserted in the database. The assay data within each of the three domains were extracted for statistical analysis.

For geostatistical analysis, variography and grade estimation, raw assay data were composited to equal one metre lengths. Ninety eight percent of assay data were sampled at lengths of one metre or less (Figure 6-7).

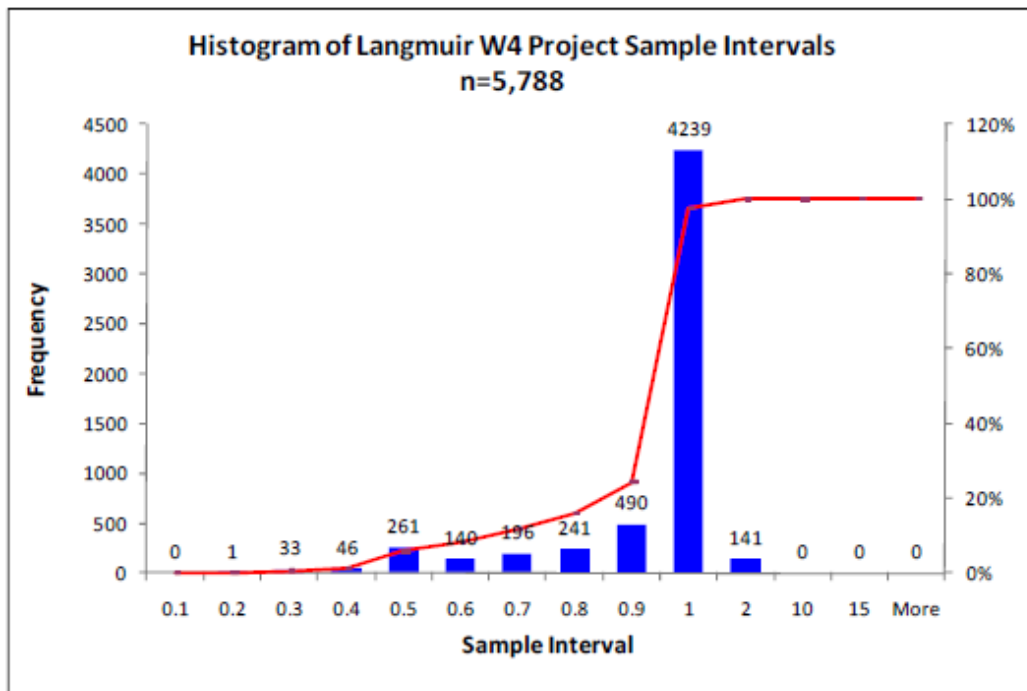


Figure 6-7. Histogram of sampled core lengths for samples used in historical mineral resource estimate (Cole *et al.*, 2010).

6.5.1.6 Evaluation of Outlier Assays

SRK constructed cumulative probability curves for nickel, copper, cobalt, platinum and palladium composites within each resource domain. Considering the nature of the statistical distributions, SRK is of the opinion that it is necessary to cap high-grade values to limit their influence during grade estimation. The impact of capping was analyzed and capping levels were adjusted for each resource domain and each metal separately. Capping was applied to the composited data. A very low percentage of the database has been capped. Capping levels applied to domainal composited data are summarized in Table 6-20.

Table 6-20. Capping levels for each metal applied in each domain (Cole *et al.*, 2010).

Element	Domain 0.3		Domain 0.5		Domain 1.0	
	Value	Percentile	Value	Percentile	Value	Percentile
Ni (ppm)	23,000	97.00%	23,000	98.00%	60,000	98.50%
Cu (ppm)	1,700	97.00%	2,100	98.50%	4,500	98.30%
Co (ppm)	290	98.00%	290	98.50%	450	95.00%
Pt (ppb)	180	98.30%	180	98.00%	325	93.00%
Pd (ppb)	380	98.30%	380	98.80%	950	97.00%

6.5.1.7 Statistics

The nickel basic statistics for the original, composited and capped composited data within the three resource domains are tabulated in Table 6-21, Table 6-22, and Table 6-23.

Table 6-21. Basic Statistics of the Original Assays in Domains 0.3, 0.5 and 1.0 (Cole *et al.*, 2010).

Element	Domain	Number of Samples	Maximum	Minimum	Mean	Variance	Standard Deviation
Ni (ppm)	0.3	540	120,300	3	3,649	44,365,857	6,661
	0.5	349	66,100	3	4,281	40,277,808	6,346
	1.0	405	179,000	900	16,472	230,787,445	15,192
Cu (ppm)	0.3	540	14,700	3	249	328,696	573
	0.5	349	13,700	3	361	943,540	971
	1.0	405	15,300	50	1,274	1,970,177	1,404
Co (ppm)	0.3	540	922	3	78	6,125	78
	0.5	349	995	3	92	11,078	105
	1.0	405	6,551	27	217	84,652	291
Pt (ppb)	0.3	540	2,856	3	34	10,237	101
	0.5	349	536	3	36	3,070	55
	1.0	405	670	3	139	14,383	120
Pd (ppb)	0.3	540	7,171	3	66	46,794	216
	0.5	349	781	3	72	10,727	104
	1.0	405	2,252	3	327	81,282	285

Table 6-22. Basic Statistics of the Composite Data in Domains 0.3, 0.5 and 1.0 (Cole *et al.*, 2010).

Element	Domain	Number of Samples	Maximum	Minimum	Mean	Variance	Standard Deviation
Ni (ppm)	0.3	491	52,431	3	3,642	34,893,712	5,907
	0.5	316	58,521	3	4,281	35,521,600	5,960
	1.0	343	106,344	1,568	16,472	182,343,972	13,503
Cu (ppm)	0.3	491	5,797	3	247	216,467	465
	0.5	316	10,600	3	361	818,573	905
	1.0	343	13,341	51	1,274	1,806,847	1,344
Co (ppm)	0.3	491	619	3	78	49,773,025	7,055
	0.5	316	995	3	92	9,924	100
	1.0	343	3,574	57	217	50,037	224
Pt (ppb)	0.3	491	1,572	3	34	7,641	87
	0.5	316	512	3	36	2,593	51
	1.0	343	670	3	139	12,232	111
Pd (ppb)	0.3	491	2,545	3	66	24,561	157
	0.5	316	564	3	72	9,249	96
	1.0	343	1,544	3	327	67,122	259

Table 6-23. Basic Statistics of the Capped Composite Data in Domains 0.3, 0.5 and 1.0 (Cole *et al.*, 2010).

Element	Domain	Number of Samples	Maximum	Minimum	Mean	Variance	Standard Deviation
Ni (ppm)	0.3	491	23,000	3	3,414	21,957,659	4,686
	0.5	316	23,000	3	4,078	23,145,721	4,811
	1.0	343	60,000	1,568	16,103	136,869,877	11,699
Cu (ppm)	0.3	491	1,700	3	226	111,309	334
	0.5	316	2,100	3	302	196,719	444
	1.0	343	4,500	51	1,194	837,701	915
Co (ppm)	0.3	491	290	3	76	3,582	60
	0.5	316	290	3	87	5,264	73
	1.0	343	450	57	199	8,947	95
Pt (ppb)	0.3	491	180	3	29	1,675	41
	0.5	316	180	3	35	1,707	41
	1.0	343	325	3	130	7,417	86
Pd (ppb)	0.3	491	380	3	57	7,744	88
	0.5	316	380	3	70	7,873	89
	1.0	343	950	3	318	51,938	228

6.5.1.8 Resource Estimation Methodology

The Langmuir W4 resource block model was generated using Datamine Studio Version 3 software. The block model was created to adequately cater for the full extent of all modeled sulphide mineralization. Criteria used in the selection of block size include the borehole spacing, composite assay length, consideration of the potential size of smallest mining unit and the geometry of the modelled sulphide mineralized zones. Parent block size was set at five by five by five metres, with the parent blocks split up to three times to ensure that wireframe volumetrics were honoured. The characteristics of the un-rotated block model are summarized in Table 6-24.

Wireframes were used to constrain interpolation of block metal grades. Metal grades were estimated generally using ordinary kriging (“OK”) as the principal estimator. Metal grades were estimated separately in each domain from capped composite data from within that domain. Platinum and palladium grades in all three domains were estimated using an inverse distance algorithm using the nickel search distances and orientations as there are not sufficient composites to derive reliable variograms for these metals.

Table 6-24. Langmuir W4 Nickel Deposit block model parameters (Cole *et al.*, 2010).

Axis	Block Size (m)	Origin	Number of Cells	Rotation Angle
X	5	497,250	80	-
Y	5	5,349,350	70	-
Z	5	-150	100	-

6.5.1.9 Variography

Variography was completed using Isatis (version 9.05) to characterize the spatial continuity of one metre capped composites within the 0.3, 0.5 and 1.0 domains.

Prior to modelling, spatial trends within the data were noted in order to rotate the search ellipse into the data plane. Variogram maps were employed to investigate geometric anisotropy within the X-Y plane. Variography was also conducted in the Z plane normal to the X-Y plane. The Z plane lag length was one metre which is equivalent to the composite length whereas the X-Y plane lag was 25 m which approximates the average drill spacing.

Variography was performed for nickel, copper and cobalt data. Scatter plots of the variables were investigated for correlation. Variograms were modelled individually with original capped composite data for each resource domain. SRK found that it is not necessary to transform the data to a Gaussian distribution to achieve stable variograms.

With the exception of nickel and copper within the 1.0 domain, all variograms are isotropic within the X-Y plane. The range is shorter in the Z direction, resulting in an overall anisotropic disc-like search ellipsoid. The lower grade domain is characterized by slightly longer ranges than the high grade domain. All the variances were normalized to one and the variogram rotations were checked prior to grade interpolation. In all cases two structure spherical variograms models were modelled (Cole *et al.*, 2010).

6.5.1.10 Grade Interpolation

Nickel, copper and cobalt grades were estimated using ordinary kriging as the principal estimator. Metal grades were estimated separately in each domain from capped composite data within that domain. Platinum and palladium grades in all three domains were estimated using an inverse distance algorithm using the nickel search distances and orientations as there are not sufficient composites to derive reliable variograms for these metals. Kriging parameters were derived from variogram models.

Grade estimation was completed in two successive passes considering estimation parameters summarized in Table 6-25 and search neighbourhood sizing summarized in Table 6-26.

The first estimation pass generally considers search neighbourhood adjusted to full variogram ranges. The size of the search ellipse is doubled for the second estimation pass (Cole *et al.*, 2010).

Table 6-25. Langmuir W4 Nickel Deposit resource estimation parameters (Cole *et al.*, 2010).

Axis	1 st Pass	2 nd Pass
Interpolation Method	OK / ID2	OK / ID2
Octant Search	Yes	Yes
Minimum number of Octants	2	2
Minimum number of Composites per Octant	1	1
Maximum number of Composites per Octant	4	4
Minimum number of Composites	3	3
Maximum number of Composites	20	20
Maximum number of Composites per Hole	2	2

Table 6-26. First pass search parameters used for grade estimation (Cole *et al.*, 2010).

Domain	Element	Rotation*			Distance		
		X'	Z'	Z'	X (m)	Y (m)	Z (m)
0.3	Ni	3	0	71	60	60	10
	Cu	3	0	71	75	75	10
	Co	3	0	71	85	85	10
	Pt	3	0	71	60	60	10
	Pd	3	0	71	60	60	10
0.5	Ni	3	0	71	50	25	10
	Cu	3	0	71	75	75	10
	Co	3	0	71	45	45	10
	Pt	3	0	71	50	25	10
	Pd	3	0	71	50	25	10
1.0	Ni	3	-45	71	50	25	10
	Cu	3	-45	71	50	25	10
	Co	3	-45	71	50	50	10
	Pt	3	-45	71	50	25	10
	Pd	3	-45	71	50	25	10

* Variogram rotation axis in Isatis convention

6.5.1.11 Specific Gravity

The Langmuir W4 specific gravity database includes 75 measurements conducted by SGS Laboratory by pycnometry in 2010 on pulverized core samples selected as representative of each grade domain. This database also includes 15 measurements on split core acquired by JVX Ltd. using a water immersion technique. Based on this database of 90 records, SRK assigned an average specific gravity value of 2.82 to all resource domains, illustrated in Figure 6-8.

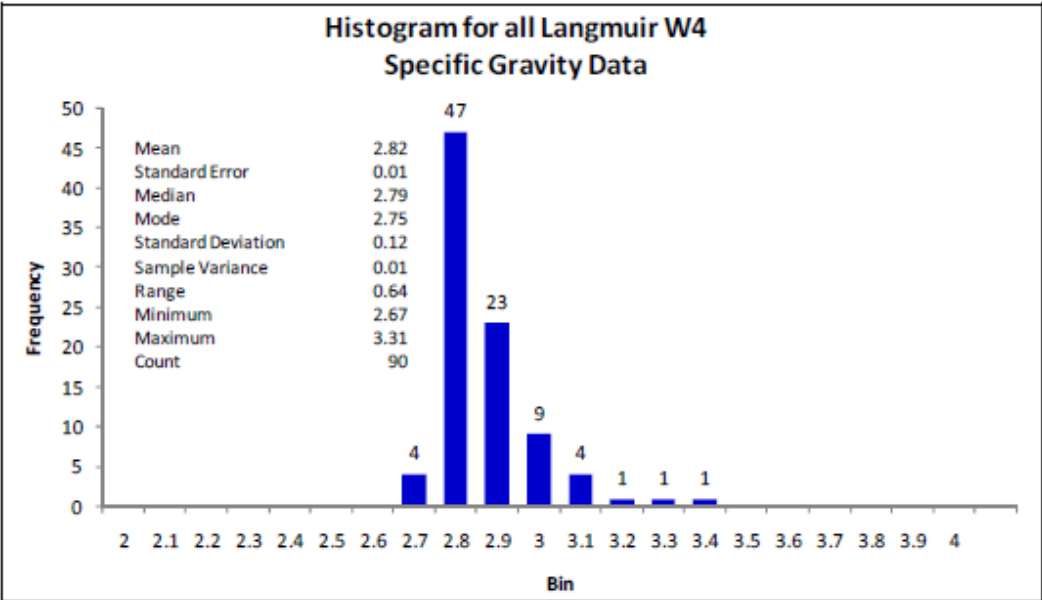


Figure 6-8. Histogram and Basic Statistics of the Combined Specific Gravity Dataset for Langmuir W4 Nickel Deposit (Cole *et al.*, 2010).

6.5.1.12 Mineral Resource Classification

Mineral resources for the Langmuir W4 Nickel Deposit were classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (December 2005) by Sebastien Bernier, P.Geo (OGQ#1034) and Glen Cole, P.Geo (APGO#1416), appropriate independent qualified persons for the purpose of National Instrument 43-101.

The mineral resources are classified as Indicated and Inferred, primarily based on block distance from the nearest informing composites and on variography results. Classification is based on nickel data alone. Generally, an Indicated classification is assigned to blocks estimated during the first estimation pass using full variogram ranges, whereas an Inferred classification is assigned to all other blocks estimated during the second estimation pass. Block model classification was assigned in a two stage process. The first stage is the automatic classification assigned during the two estimation passes. The resource category outlines were smoothed manually in a second stage to remove isolated blocks. The result of the two stage classification process is illustrated in Figure 6-9.

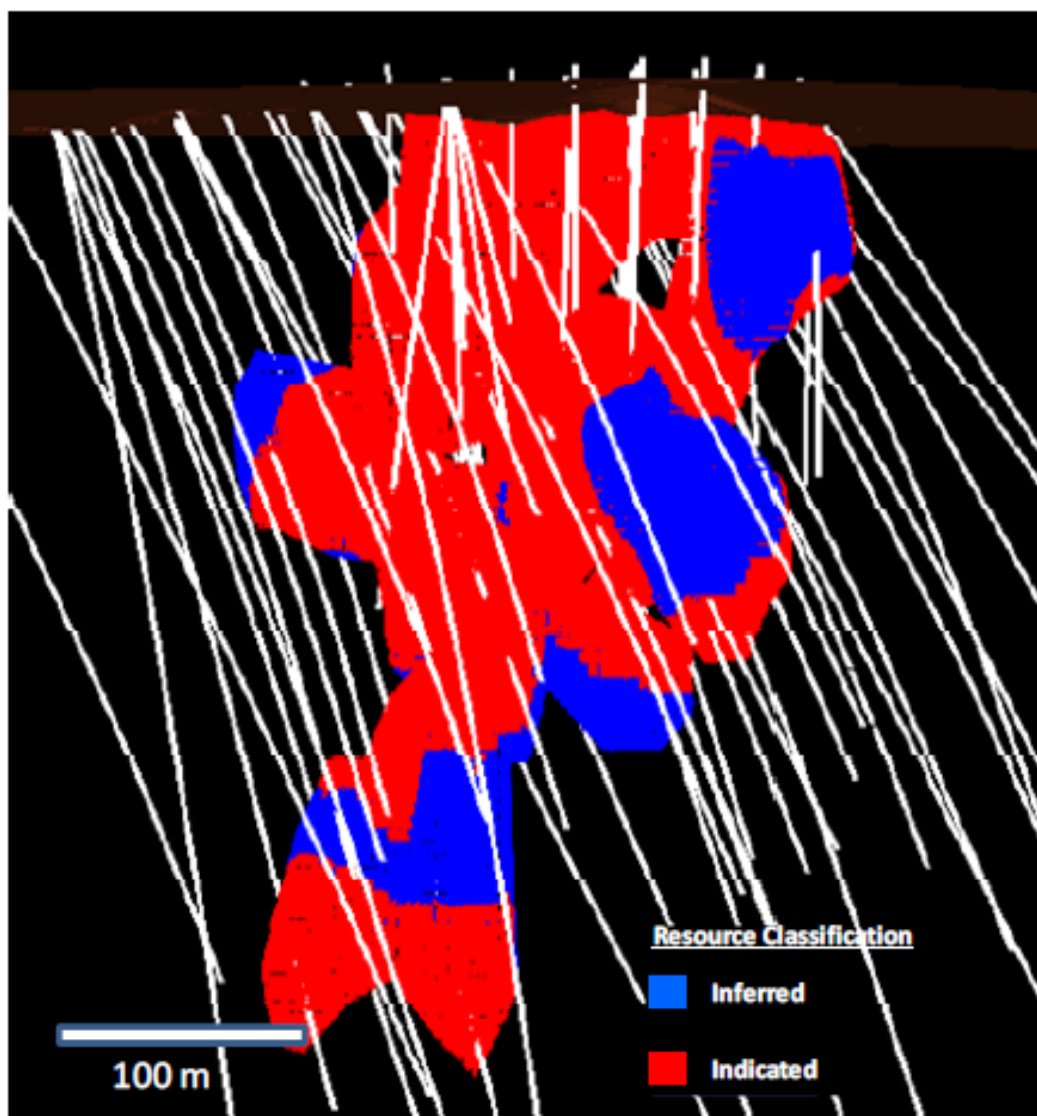


Figure 6-9. Schematic Vertical Section Illustrating Langmuir W4 Nickel Deposit block model classification. View looking south (Cole *et al.*, 2010).

In 2010, the CIM Definition Standards for Mineral Resources and Mineral Reserves (December 2005) defined a mineral resource as:

“... concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth’s crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge”.

The “reasonable prospects for economic extraction” requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. To meet this

requirement, SRK considers that major portions of the Langmuir W4 nickel mineralization are amenable for open pit extraction, while deeper portions could be extracted using an underground mining method.

In order to determine the quantities of material offering reasonable prospects for economic extraction by an open pit, SRK used Whittle software, which evaluates the profitability of each resource block based on its value.

Optimization parameters were selected based on discussions with Golden Chalice and benchmarking with similar projects (Table 6-27). The reader is cautioned that the results from the pit optimization are used solely for the purpose of reporting mineral resources that have “reasonable prospects for economic extraction” by an open pit and do not represent an attempt to estimate mineral reserves. This requires a thorough economic study at prefeasibility level. No mineral reserves are estimated for Langmuir W4. The block model quantities and grade estimates were also reviewed to determine the portions of the Langmuir W4 deposit having “reasonable prospects for economic extraction” from an underground mine.

Table 6-27. Conceptual Pit Optimization assumptions considered for Open Pit Resource reporting (Cole *et al.*, 2010).

Parameter	Assumption
Inter-ramp wall angle	50 all walls (degrees)
Mining cost (ore and waste)	CN\$2.00 per tonne of rock
G & A costs	CN\$3.25 per tonne of feed
Milling cost:	CN\$10.00 per tonne
Process recovery	87 percent
Nickel price:	US\$8 per pound
Mining dilution and losses	5.0 percent
Exchange rate (CN\$/US\$)	1.0

The mineral resources for the Langmuir W4 deposit are reported at two nickel cut-off grades (0.4 and 0.7% Ni) based on open pit and underground mining scenarios, respectively. SRK considers that the material within the conceptual pit shell offers reasonable prospects for economic extraction from an open pit whereas material below the conceptual pit shell offer reasonable prospects for economic extraction by underground mining methods. The conceptual pit shell drives to a maximum depth of 170 m below the surface (Figure 6-10 and Figure 6-11).

Resource blocks above this depth were considered by SRK to be amenable to open pit extraction and blocks below this depth amenable to underground mining methods and are reported as such.

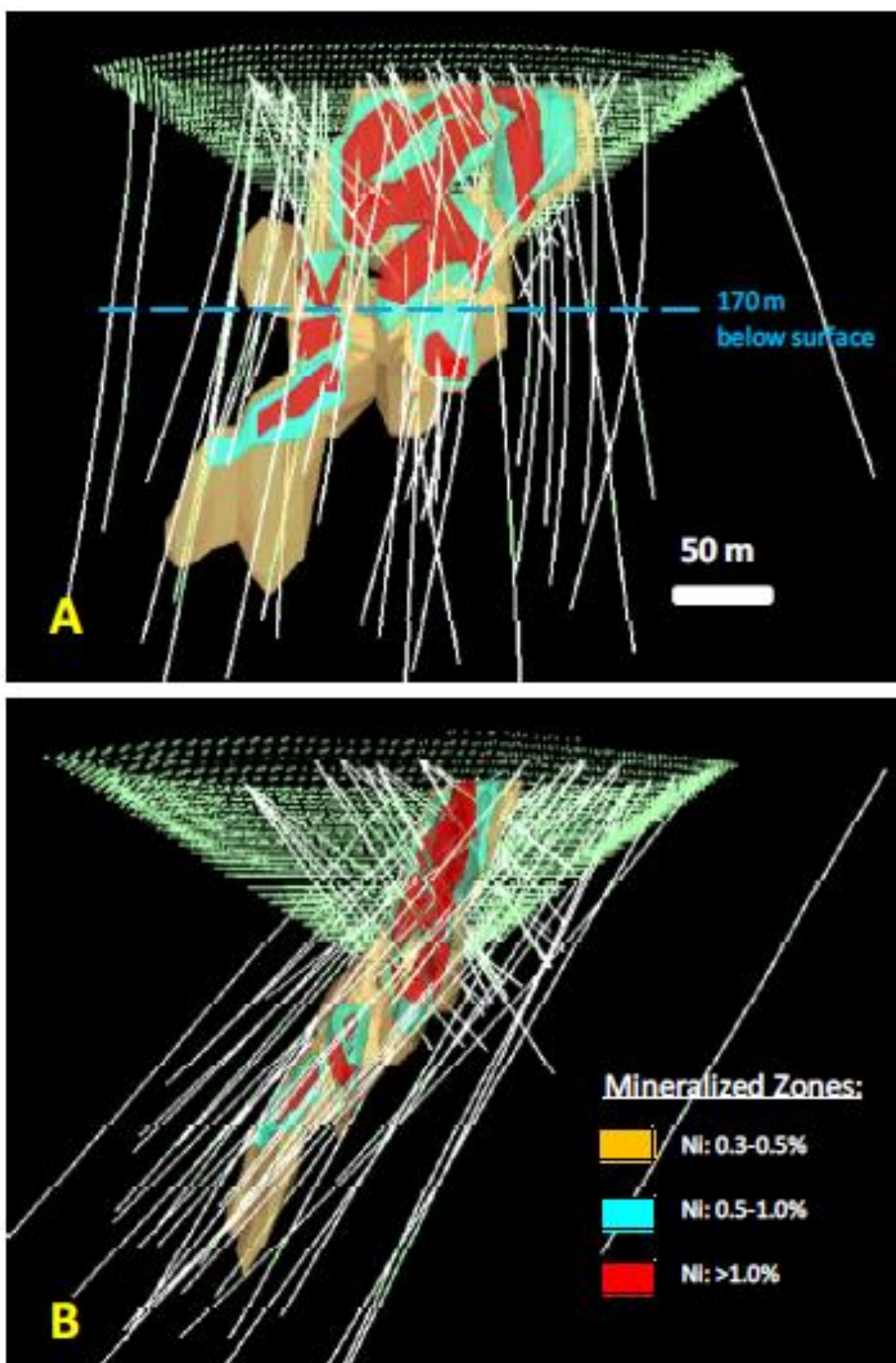


Figure 6-10. Longitudinal sections showing the modelled nickel domains in relation to the Conceptual Pit Shell. A=view looking south, B=view looking east (Cole *et al.*, 2010).

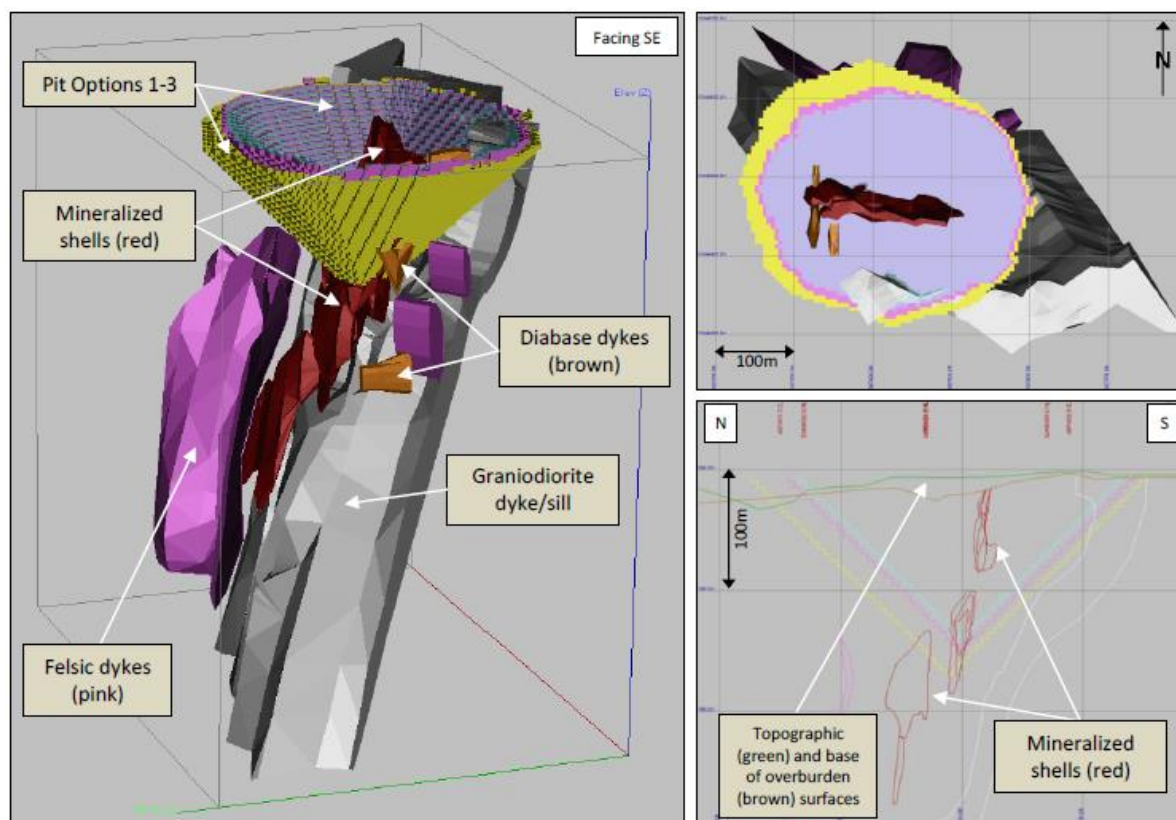


Figure 6-11. Geological model with mineral resource pit shells (Campbell, 2011). The mineralized wireframe (left panel) shows a composite of three grade shells that contain grade ranges of 0.3-0.5% Ni, 0.5-1.0% Ni, and >1.0% Ni, looking east (Campbell, 2011).

6.5.1.13 Estimation Validation

The mineral resource model prepared by SRK was validated by visually comparing block and drill hole grades on section by section and elevation by elevation basis. A parallel resource estimate run using an inverse distance estimator was found to produce very similar results to the primary ordinary kriging estimator. Quantile-quantile plots comparing resource block and the informing capped composite data were also constructed for nickel in each domain. These plots show the usual smoothing effect of kriging particularly at higher grades, but confirm that the block model is representative of the informing data (Cole *et al.*, 2010).

6.5.1.14 Mineral Resource Statement

The mineral resources statement was prepared on the basis of nickel content only. Copper, cobalt and platinum and palladium grades were estimated in the block model however cobalt and platinum and palladium do not contribute significantly to the value of the nickel sulphide mineralization. Accordingly, the mineral resource statement for Langmuir W4 is reported on the basis of nickel and copper only.

A Consolidated Mineral Resources Statement for the Langmuir W4 Nickel Deposit is presented in Table 6-28. The mineral resources for each modelled resource domain are presented in Table 6-29.

Table 6-28. Consolidated Mineral Resource Statement*, Langmuir Nickel Project, Ontario, 27 April 2010 (Cole *et al.*, 2010).

Category	Quantity Tonnes	Grade Ni %	Cu %	Metal	
				Ni lbs 000's	Cu lbs 000's
Open Pit**					
Indicated	590,000	0.99	0.06	12,816	840
Inferred	125,000	0.88	0.06	2,437	157
Underground **					
Indicated	87,000	1.04	0.08	1,997	149
Inferred	46,000	0.91	0.05	923	53
Combined					
Indicated	677,000	1.00	0.06	14,813	989
Inferred	171,000	0.89	0.06	3,360	210

* Mineral resources are reported in relation to optimized pit shells. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. All assays have been capped where appropriate.

** Open pit mineral resources are reported at a cut-off of 0.40 percent nickel inside a conceptual pit shell. Underground mineral resources are reported at 0.70 percent nickel and include resource blocks above cut-off outside the conceptual pit shell. Cut-off grades are based on a nickel price of US\$8 per pound and a metallurgical recovery of eighty-seven percent, without considering revenues from other metals..

Table 6-29. Mineral Resource Statement*, Langmuir Nickel Project, Ontario, 27 April 2010 (Cole *et al.*, 2010).

Category	Domain	Quantity Tonnes 000't	Grade Ni %	Cu %	Metal	
					Ni lbs 000's	Cu lbs 000's
Open Pit**						
Indicated	Low Grade	244,000	0.75	0.04	4,016	218
	Medium Grade	192,000	0.69	0.05	2,903	198
	High Grade	154,000	1.73	0.12	5,897	424
	Sub-Total	590,000	0.99	0.06	12,816	840
Inferred	Low Grade	84,000	0.70	0.04	1,294	81
	Medium Grade	27,000	0.71	0.05	429	32
	High Grade	14,000	2.24	0.14	714	45
	Sub-Total	125,000	0.88	0.06	2,437	157
Underground **						
Indicated	Low Grade	49,000	0.90	0.06	976	67
	Medium Grade	23,000	1.01	0.08	511	41
	High Grade	15,000	1.52	0.12	510	42
	Sub-Total	87,000	1.04	0.08	1,997	149
Inferred	Low Grade	22,000	0.89	0.06	435	27
	Medium Grade	23,000	0.89	0.05	444	23
	High Grade	1,000	1.73	0.15	44	4
	Sub-Total	46,000	0.91	0.05	923	53
Combined						
Indicated	Low Grade	293,000	0.78	0.04	4,992	285
	Medium Grade	215,000	0.72	0.05	3,414	239
	High Grade	169,000	1.71	0.12	6,407	466
	Sub-Total	677,000	1.00	0.06	14,813	989
Inferred	Low Grade	106,000	0.74	0.04	1,729	108
	Medium Grade	50,000	0.79	0.05	873	55
	High Grade	15,000	2.21	0.14	758	49
	Sub-Total	171,000	0.89	0.06	3,360	210

* Mineral resources are reported in relation to optimized pit shells. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. All assays have been capped where appropriate.

** Open pit mineral resources are reported at a cut-off of 0.40 percent nickel. Underground mineral resources are reported at 0.70 percent nickel. Cut-off grades are based on a nickel price of US\$8/lb and a metallurgical recovery of eighty-seven percent, without considering revenues from other metals.

The Mineral Resources Statement (see Table 6-29) for the Langmuir W4 Nickel Deposit prepared by SRK (2010) contains 677,000 tonnes grading an average of 1.00% Ni and 0.06% Cu in the Indicated category; with an additional 171,000 tonnes grading an average of 0.89% Ni and 0.06% Cu in the Inferred category, comprising both open pit and underground resources (Cole *et al.*, 2010).

The Langmuir W4 Nickel deposit mineral resources are highly sensitive to reporting cut-off grade. This sensitivity is shown for the classified block model quantities and grade estimates for the potential open pit and underground material in Table 6-30 and Table 6-31.

Table 6-30. Block model quantities and grade estimates* for potential open pit and underground material (Cole *et al.*, 2010).

Open Pit Material (inside conceptual pit shell):

Ni % Cut-off	Indicated		Inferred	
	Quantity (Tonnes)	Grade (Ni %)	Quantity (Tonnes)	Grade (Ni %)
0.0	1,047,936	0.65	221,570	0.59
0.1	993,593	0.69	200,830	0.65
0.2	891,394	0.75	178,075	0.71
0.3	698,636	0.89	152,157	0.79
0.4	590,134	0.99	125,246	0.88
0.5	484,296	1.10	102,826	0.98
0.6	392,884	1.23	76,996	1.12
0.7	328,589	1.34	54,272	1.32
0.8	276,195	1.46	44,197	1.44
0.9	244,897	1.53	36,108	1.58
1.0	211,882	1.63	28,667	1.74
1.1	186,664	1.71	21,797	1.96
1.2	163,646	1.78	18,866	2.09
1.3	163,646	1.78	18,866	2.09
1.4	138,632	1.88	16,866	2.19
1.5	118,619	1.95	15,554	2.25

* The reader is cautioned that the figures in this table should not be misconstrued with a Mineral Resource Statement. The figures are only presented to show the sensitivity of the block model estimates to the selection of cut-off grade.

Underground Material (below conceptual pit shell):

Ni % Cut-off	Indicated		Inferred	
	Quantity (Tonnes)	Grade (Ni %)	Quantity (Tonnes)	Grade (Ni %)
0.0	457,400	0.53	322,364	0.49
0.1	457,400	0.53	322,364	0.49
0.2	452,495	0.53	320,256	0.49
0.3	360,114	0.60	269,888	0.53
0.4	271,312	0.69	188,204	0.61
0.5	187,503	0.80	118,018	0.71
0.6	125,057	0.92	74,749	0.81
0.7	87,199	1.04	46,098	0.91
0.8	63,015	1.15	29,519	1.00
0.9	48,850	1.24	18,051	1.09
1.0	34,924	1.36	8,248	1.27
1.1	26,104	1.47	5,505	1.38
1.2	20,792	1.55	3,934	1.47
1.3	20,792	1.55	3,934	1.47
1.4	16,106	1.63	2,215	1.66
1.5	13,076	1.68	2,174	1.67

* The reader is cautioned that the figures in this table should not be misconstrued with a Mineral Resource Statement. The figures are only presented to show the sensitivity of the block model estimates to the selection of cut-off grade.

Table 6-31. Block model quantities and grade estimates* for combined potential open pit and underground material (Cole *et al.*, 2010).

Ni % Cut-off	Indicated		Inferred	
	Quantity (Tonnes)	Grade (Ni %)	Quantity (Tonnes)	Grade (Ni %)
0.0	1,505,335	0.62	543,934	0.53
0.1	1,450,992	0.64	523,193	0.55
0.2	1,343,889	0.68	498,330	0.57
0.3	1,058,749	0.79	422,045	0.62
0.4	861,447	0.89	313,450	0.72
0.5	671,799	1.02	220,845	0.83
0.6	517,942	1.16	151,744	0.97
0.7	415,788	1.28	100,371	1.13
0.8	339,210	1.40	73,716	1.27
0.9	293,747	1.49	54,159	1.42
1.0	246,807	1.59	36,915	1.64
1.1	212,768	1.68	27,302	1.84
1.2	184,438	1.76	22,800	1.98
1.3	184,438	1.76	22,800	1.98
1.4	154,738	1.85	19,081	2.13
1.5	131,694	1.93	17,728	2.18

* The reader is cautioned that the figures in this table should not be misconstrued with a Mineral Resource Statement. The figures are only presented to show the sensitivity of the block model estimates to the selection of cut-off grade.

Comparative grade tonnage curves for Indicated and Inferred material for potential open pit and underground material is presented in Figure 6-12. The reader is cautioned that the figures in Table 6-30 and Table 6-31 should not be confused with a Mineral Resource Statement. The figures are only presented to show the sensitivity of the block model estimates to the selection of cut-off grade (Cole *et al.*, 2010).

The mineral resource estimates presented in Table 28 and Table 6-29 used categories that conformed to CIM Definition Standards on Mineral Resources and Mineral Reserves (CIM, 2005) at the time of completion of the estimate, as outlined in NI 43-101, Standards of Disclosure for Mineral Projects. However, neither the Principal Author nor a qualified person have done sufficient work to classify any of the historical estimates as current mineral resources and as such, the Principal Author and the Issuer are treating the tonnages and grades reported as historical mineral resources. Investors are cautioned that the historical mineral resource estimates do not mean or imply that economic deposits exist on the Property.

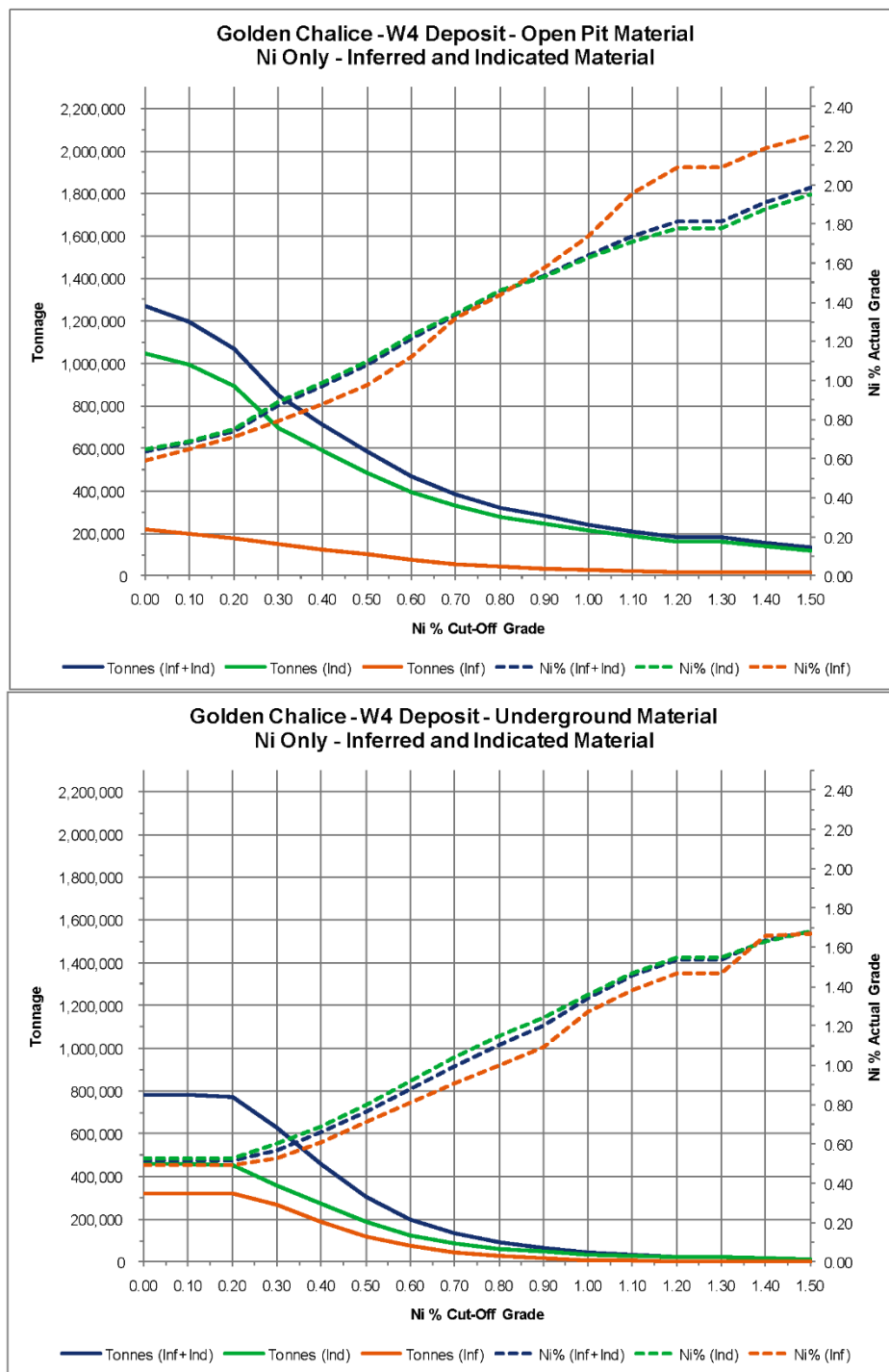


Figure 6-12. Comparative Grade Tonnage Curves for Indicated and Inferred material: Top = Open pit material and Below = Underground mining material (Cole *et al.*, 2010).

6.6 Desktop Study - Geotechnical Evaluation (2011)

In December 2010, SRK was commissioned by Rogue Resources to complete a desktop study - geotechnical evaluation of the Langmuir Nickel Project, considering both open pit and underground mining options (Campbell, 2011). The agreed upon scope of work was to include:

- Conduct a desktop study of all relevant reports and documentation which includes a review of the drill hole database and current geology model.
- Conduct a site visit to review pre-selected drill holes for the purpose of evaluating rock mass quality proximal to proposed pit walls and underground excavations.
- Conduct technical discussions with project staff.
- Prepare a report to document findings of the desktop study and site visit.

The desktop study focused on the review of existing documents and pre-visit discussions with SRK technical staff. As little outcrop exists onsite, data collected during the site visit was limited to review of drill core and discussions with Rogue Resources technical staff.

The following components were reported on by Campbell (2011):

- Geotechnical Assessment - outlines the major factors controlling open pit and underground engineering design and offers design recommendations (geological context; structural geology; geotechnical domains; hydrogeological considerations).
- Design Recommendations – based on the geotechnical assessment, pit geometry determinations and underground excavation design parameters and support recommendations were presented.

6.6.1 Recommendations for Further Work

Several recommendations were provided by Campbell (2011):

- Drill core should be systematically photographed going forward. If possible, older drill core lacking photographs should also be photographed as this is an extremely important resource (specifically in areas proximal to future pit walls and underground excavations).
- Resolution of the various geological domains (*i.e.*, dikes, major contact zones) within the 3D model should be improved. From a geotechnical standpoint, the identification of the graphitic argillites and graphite-bearing volcanics is most relevant for both open pit and underground excavations.
- A 2D structural model should be completed (by an experienced structural geologist) and extended into 3D wireframes. A lineament analysis, combined with a geophysical and drill hole interpretation could produce a strong first pass structural model. Major structures should be clearly recorded in all future drilling to aid in this interpretation.
- The understanding of alteration, particularly the serpentine-talc assemblages, should be improved to aid in the geotechnical characterization. It is recommended that alteration “type” and “intensity” be systematically recorded along with other geological data.
- Interval-based geotechnical logging should commence immediately on all new drilling proximal to future mining excavations. Logging should include, but may not be limited to, the collection of RQD, fracture frequency, intact rock strength and joint conditions. Where possible, core orientation should be conducted.
- For future study phases, a laboratory testing program should be conducted on the various overburden and bedrock domains so that material properties can be confidently determined.

- Testing should focus on material strength (*i.e.*, direct shear (overburden), UCS, TCS (bedrock) and defect characterization (*i.e.*, shear testing on joints and fault gouge).
- Numerical modelling (*i.e.*, limit equilibrium) should be conducted in future study stages to ensure geotechnical risks are properly handled in terms of design geometry (both open pit and underground).
- Future geotechnical drilling should focus on delineating risks raised in this memo. Specifically, geotechnical drilling should focus on the north, west and eastern proposed pit wall (also extending through the underground hangingwall and footwall where possible). The overburden sequence will also require careful delineation through a program of shallow drilling and, ideally, test pitting.

6.7 Historical Mineral Processing and Metallurgical Testing

6.7.1 Historical Mineralogical Study (2010)

Three drill core sample thin sections were submitted to GeoLabs Geoscience Laboratories in Sudbury, Ontario (Hechler, 2010). The samples were collected from drill core GCL-7-10 (94.24 m), GCL-7-10 (94.7 m), and GCL-7-10 (94.84 m). After carbon coating the sections underwent electron backscatter imaging and semi-quantitative mineral identification using SEM-EDS (Scanning Electron Microscopy).

GCL-7-10-94.24

Sulfide mineralogy consisted primarily of pyrrhotite, pentlandite, minor chalcopyrite, and trace pyrite. The pyrrhotite often displayed slight variations in the Fe:S ratio. A few small (generally < 5 µm) arsenic iron sulfides were noted, often bearing a trace of Co. A few small PGM grains (generally < 1.5 µm) were noted, either as a Rh-arsenic sulfide or Os-arsenic sulfide. Iron oxide was noted in both the silicates and sulfides. The silicate matrix appears to be dominantly serpentine.

GCL-7-10-94.7

Sulfide mineralogy consisted primarily of pyrrhotite, pentlandite, and minor pyrite. The pyrrhotite often displayed slight variations in the Fe:S ratio, and the pentlandite often displayed a “blotchy” texture due to slight variations in the Fe:Ni ratio. A few small (generally < 5 µm) arsenic iron sulfides were noted. A few small PGM grains (generally < 1 µm) were noted, usually as an Os-arsenic sulfide, though a single Ir-Pt-arsenic sulfide grain was also located. A few iron oxide blebs were noted.

GCL-7-10-94.84

Sulfide mineralogy consisted primarily of pyrrhotite, pentlandite, and chalcopyrite. The pyrrhotite often displayed slight variations in the Fe:S ratio and the pentlandite often displayed a “blotchy” texture due to slight variations in the Fe:Ni ratio. Several large chromite grains were noted, all displaying an iron oxide rim. The non-sulfide matrix consisted primarily of serpentine and an iron carbonate. A few small PGM grains (generally < 1 µm) were noted, usually as an Os-arsenic sulfide, Pt-arsenic sulfide, or Rh-arsenic sulfide grains.

6.7.2 Historical Metallurgical Testing (2011)

In 2011, Rogue Resources contracted the Metallurgical Division of Inspectorate Exploration and Mining Services Ltd. (“Inspectorate”) of Richmond, B.C. (A Bureau Veritas Group Company) to conduct a scoping

study level of metallurgical tests on the recovery of base and precious metals using flotation methods (Shi and Redfearn, 2011). This work was overseen by Mr. John Starkey of Starkey & Associates Inc.

The objective of this program was to investigate mineral recovery by flotation using tests that included:

- head sample analysis.
- optical mineralogical analysis to identify minerals, association and liberation characteristics.
- test grinds to determine a grind time versus size curve.
- flotation to determine flotability of the sulphides at three different grinds.
- optimization and cleaner stage flotation.
- confirmatory tests on other ore types.
- concentrate analysis to study precious metal and minor element deportment.
- tailings analysis to determine size x assay losses.

A total of 127 drill core samples were submitted to Inspectorate and composited into average grade (RA), low grade (RB), and high grade (RC) samples (Table 6-31). Preliminary and scoping flotation tests were performed on the average grade (RA) composite, with confirmatory tests subsequently performed on each of the low (RB) and high (RC) grade composites (Shi and Redfearn, 2011).

Table 6-31. Analyses of three composite samples used in 2011 metallurgical test work.

Inspectorate Analysis			Composite Analyses		
Element		Unit	RA	RB	RC
Nickel	Ni	%	0.95	0.42	2.33
Copper	Cu	%	0.067	0.033	0.203
Iron	Fe	%	6.40	5.59	8.91
Cobalt	Co	ppm	175.7	93.8	329.9
Platinum	Pt	ppm	0.112	0.050	0.247
Palladium	Pd	ppm	0.316	0.128	0.618

6.7.2.1 Mineralogical Study

Head samples from each of the three composites (RA, RB and RC) were subjected to an optical mineralogical examination by means of transmitted and reflected light microscopy (Lehne, 2011). All samples have a number of observations that are common. The mineralization is characterized by an association of pentlandite with subordinate pyrrhotite and bravoite that occur along with minor amounts of chromite, ilmenite and chalcopyrite. In some areas, the pentlandite is replaced by the bravoite, a common replacement that leads to a relative enrichment in nickel due to removal of iron in the form of a sulphate (Lehne, 2011; Shi and Redfearn, 2011).

Based on preliminary optical microscopy, there did not appear to be a significant mineralogical difference between the three composites other than the grain locking textures. However, following the testing program, there are a number of unanswered mineralogical questions that can only be answered by performing a comprehensive QEMSCAN study on a number of products.

The sulphides appear to be intensely intergrown with fibro-lamellar antigorite resulting in complex and partly fine-grained locking textures with interlocking sulphide grains observed below 25 microns in sample

RA, interlocking sulphide grains observed below 10 microns in sample RB, and interlocking sulphide grains observed below 25 microns in sample RC (Shi and Redfearn, 2011).

6.7.2.2 Bond Ball Mill Work Index

A single Bond ball mill work index hardness test was conducted on an equal blended mixture of the three(3) composites RA, RB and RC at a closing size of 105 micrometres. The result was $W = 18.1$ kWh/ton or 19.9 kWh/tonne.

6.7.2.3 Grinding

Three 2 kg samples of composite RA were ground at 65% solids in a #4 stainless steel mill for varying times from 28 to 40 minutes in order to establish a grind size versus time curve. A 43 minute grind was selected for composites RB and RC as confirmation (Table 6-32).

Table 6-32. Test grind data from the three composite samples (Shi and Redfearn, 2011).

Test	Composite	(min)	P80 = (μ)
TG 1-1	RA	28.0	124
TG 1-2	RA	34.0	80
TG 1-3	RA	40.0	65
F4	RB	43.0	62
F5	RC	43.0	41

Composites RA and RB appear to have a similar hardness, while RC when ground for the same time appears to be somewhat softer. This is confirmed in samples for tests F17 and F19 which produced a product with a P80 of 42 μ m when ground for the same time (Shi and Redfearn, 2011).

6.7.2.4 Flotation

A flotation program consisting of rougher and cleaner stages was designed, to study the parameters for nickel recovery and the associated base and precious metals.

A total of 12 rougher kinetics tests were run studying floatability of the ore. This was followed by another 8 tests in which the rougher concentrate was subsequently processed in a cleaner circuit. The bulk of the testing was performed on medium grade composite, RA, with numerous operating parameters being tested as listed in Table 6-32. Optimum conditions appear to be with a grind no coarser than a P80 of 62-64 microns and a weight pull of 25 –30% into the full rougher – scavenger concentrate.

At these levels nickel recovery was found to be in the range of 80-82% with a rougher concentrate grade of 2.6 to 3.6% Ni. Cobalt recovery for all tests, regardless of composite, tends to follow that of the nickel very closely. Copper recovery appears to be relatively independent of the Ni – Co recovery trends.

A natural pH of 8.8 with a xanthate and aeropromoter collector in combination with clay slimes depressant CMC appear to give the better results. Further testing will be required to more closely optimize the low grade composite RB and higher grade RC, which despite a much finer grind (P80=42 μ), recovery was poor (Shi and Redfearn, 2011).

A total of 7 cleaner circuit tests were conducted. The 5 tests on the RA composite studied the regrind, effect of rougher concentrate feed grades, and frother dosage to affect the weight percent pulled. Concentrate grades of 16-18% Ni were achieved in a cleaner circuit recovery range of 60-66%. Significantly more testing will be required to optimize operating conditions, particularly for the RB and RC composites. The following tables list the operating conditions and metallurgy.

6.7.2.5 Concentrate Analysis

A complete major and minor element analysis was conducted on the final concentrates for tests F11, F18 and F19, representing all three composites tested. Further testing will be required to specifically address the Cu and Mg content for smelter acceptance (Shi and Redfearn, 2011).

6.7.2.6 Final Tailings Analysis

The final tailing for tests F11, F18, and F19, covering all three composites were screened and assayed to determine at what size ranges the losses were occurring.

In test F11 (composite RA), the primary grind of P80 = 62 μ resulted in 35% of the Ni losses in the +53 μ range and 55% in the minus 37 μ fraction. It is possible a finer grind will be required to improve liberation in both the coarse and very fine material recovery.

The low grade composite, RB, indicated a similar loss distribution. Both the Cu and Co loss distributions were similar to that of the Ni in composites RA and RB. The metal loss distribution for high grade composite, RC, was quite different from the other two with the high majority of losses in the minus 37 μ fraction. Losses in this fraction was in the 62-80% range for all three metals.

QEMSCAN mineralogical analysis will be required to determine the reason for the loss distributions, whether it be due to lack of liberation or flotation kinetics (Shi and Redfearn, 2011).

6.7.2.7 Conclusions and Recommendations

The scoping study metallurgical testing program produced mixed results across the three composites which will require further testing in order to optimize metallurgy. Results indicative of the preliminary metallurgy are provided in Table 6-33.

Table 6-33. Summary of results from preliminary metallurgical test work (Shi and Redfearn, 2011).

Feed			Rougher Concentrate			Pct Rougher Recovery		
Comp	% Ni	Test	% Ni	% Cu	Co(ppm)	Ni	Cu	Co
RA	0.95	F20	3.14	0.20	521	81.6	78.3	82.9
RB	0.42	F16	1.79	0.17	339	66.0	72.7	67.7
RC	2.33	F5	6.15	0.71	785	59.8	75.2	60.0
		Cleaner Concentrate			Pct Cleaner Recovery			
Comp	Test	% Ni	% Cu	Co(ppm)	Ni	Cu	Co	
RA	F11	16.8	1.21	2689	66.3	71.8	64.8	

Nickel recovery for the RA composite in the roughers is reasonable at 81.6%, which can probably be increased with further optimization. However, performance in the cleaner circuit is significantly lower and will require additional testing.

Cobalt recovery appears to mirror the recovery trends of the nickel very closely. Whereas, copper recovery appears to be relatively independent of the Ni-Co trends.

Nickel recovery for the low grade composite, RB, is slightly lower than that of the mid-grade composite, RA, which is expected, considering the feed grade is less than half that of RA.

High grade composite, RC, appears to have quite different mineralogical and metallurgical characteristics compared to composites RA and RB. At a significantly higher feed grade (2.5 times RA) and a finer grind, recovery is much lower.

Shi and Redfearn (2011), determined that there were a number of unknowns with respect to the mineralogy, particle sizing, and mineral associations that must be clarified prior to further testing. They recommended a full QEMSCAN mineralogical study be completed to assist the metallurgical testing. This should be performed on all three composites, including the rougher concentrates (Shi and Redfearn, 2011).

6.7.3 Metallurgical Testwork Review (2012)

In 2012, Starkey & Associates Inc. (Starkey, 2012) completed a review of the metallurgical testwork reported on by Shi and Redfearn (2011). Starkey (2012), made the following comments:

- The mineralogy was found to be difficult. All three samples were similar in the grain locking textures except that the low grade sample showed interlocking sulphide grains below 10 microns. For the other two samples, there were interlocking grains below 25 microns. The sulphides appeared to intensely intergrown with fibrolamellar antigorite resulting in complex and fine-grained locking textures.
- Flotation testing on average ore was done to recover sulphides at a grind F80 of about 65 microns. This method succeeded in recovering 88% of the sulphur, 82% of the nickel and 78% of the copper in about 26% by weight from the sample. Although regrinding to about 20 microns is required, the efforts to regrind and clean the nickel values to commercial grades were unsuccessful in the laboratory tests done. In fact the best test used no regrinding to produce a cleaned concentrate grading 16.8% Ni with a recovery of 50% in 3.2% of the feed weight.
- The reason for the poor cleaning performance at the fine regrind sizes was not determined. However since rougher recoveries of nickel were 82%, it was predicted that about 66% of the nickel should be recoverable at 16% Ni based on the usual rule of 50% of middlings being recovered at grade. Since 32% of the nickel values were recovered as middlings this rule cannot be relied upon in this circumstance because of the magnitude of middling particles recovered.
- One Bond ball mill work index (BWi) test was done on a blended composite of the three samples and showed the ore to be quite hard to grind in a ball mill. The measured BWi was 19.9 kwh/t.

Starkey (2012), made the following conclusions and recommendations:

- To advance the metallurgical recovery to more acceptable economic levels, more testwork will be required. The flotation of the ultrafine nickel bearing mineral particles may require different frothers and collectors to be used. It is also possible that column flotation may be required to upgrade the nickel values and achieve higher recoveries than have been achieved to date.
- In the event that flotation is not successful, it may then be necessary to look at a hydrometallurgical recovery process since 82% of the nickel is recoverable in the bulk sulphide concentrate at a weight recovery of 26% as noted above. This in-house process would target overall nickel recovery approaching 80%, eliminate smelting charges and allow Rogue

Resources to recover and be paid for nearly all of the nickel and copper values contained in the concentrate.

6.7.4 Historical Mineralogical Study (2015)

In June 2015, Rod Johnson & Associates, Inc., reported on a mineralogical study they had completed on six samples of drill core, provided by Kevin Montgomery of Rogue Resources (Johnson, 2015). The purpose of the petrographic study was to identify the minerals and textures in the samples and to make recommendations for improving the metallurgical recovery of nickel sulphide and improving the quality of the nickel concentrate. The six samples of drill core that were analyzed in this study are provided in Table 6-34.

Table 6-34. List of drill core samples used in the petrographic study of Johnson (2015).

Sample	Hole	From	To	Rogue Resource Sample Description	Ni Grade
8952	GCL08-64	133.90	134.00	Black aphanitic massive homogenous slightly magnetic KPdA 3% pyrrhotite/pentlandite blebs	2.22
8954	GCL08-64	150.00	150.20	Same as above, 5% Po/Pentlandite disseminations and local blebs	1.03
8955	GCL08-69	51.00	51.25	Same as above, 5-7% Po/Pentlandite disseminations, blebs and local stringers	6.61
8956	GCL08-69	52.35	52.55	Same as above.	5.86
8957	GCL08-69	53.00	53.15	Same as above, 3% Po/Pentlandite disseminations.	2.70
8958	GCL08-69	41.80	41.95	Same as above, 2% Po/Pentlandite disseminations.	1.99

Digital images were acquired for each sample and two polished mounts of each sample were prepared at Rod Johnson and Associates, Inc. in Negaunee, Michigan. Polished mounts were selected from an area of the drill core sample that was thought to be most representative of the sample. The polished mounts were analyzed with transmitted and reflected light respectively, using an Olympus BX60 petrographic microscope. Images were acquired using a Canon 5D digital SLR camera and processed using Adobe Photoshop C3 Extended. Cursors image analysis was also performed using Adobe Photoshop CS5 Extended. Minerals were identified using a combination of optical properties in reflected light and x-ray diffraction (XRD).

The sample for XRD was prepared by cutting a lengthwise slice of core for each sample. The slices of core were pulverized and the samples loaded in glass well mount holders. Scans were collected from 5° to 45° 2θ, 0.02° step size, 2 second dwell time, at 35 mA, and 45 kV. XRD scans were collected of each sample using a Rigaku Miniflex 600 theta:2-theta diffractometer, in the offices of Rod Johnson and Associates, Inc. The scans were processed by Rod Johnson and Associates, Inc. Background was removed and phases matched using Match! software (Crystal Impact) and the American Mineralogist Crystal Structure Database (R.T. Downes and M. Hall-Wallace, 2003). XRD can identify most minerals at concentrations greater than about 2 wt.%; however, some minerals, like pyroxenes, have low relative intensity ratios that result in their detection limit being much higher, about 5-7 wt%.

6.7.4.1 Results, Conclusions and Recommendations

The samples contain mineral assemblages typical of serpentinized ultramafic rocks, composed of antigorite and pentlandite with lesser and varying amounts of talc, dolomite, and siderite. The samples also contain minor amounts of chromite, chalcopyrite, pyrrhotite, and cubanite. Pentlandite occurs as disseminated

blebs, semi-net textured aggregates, and as disseminated grains. Johnson (2015), noted that all magmatic mineral assemblages have been modified by subsequent metamorphism. The metamorphism produced complex textures through the intergrowth of antigorite plates and pentlandite.

The majority of pentlandite observed in this study is intergrown with antigorite. The resulting texture of thin tabular pentlandite domains alternating with thin antigorite plates creates problems for flotation and liberation.

With respect to Shi and Redfearn (2011) and Starkey 92012), Johnson (2015) recommends that flotation tests on finer grinds should be considered to optimize flotation recovery and concentrate grade. Alternatives to ball grinding (*e.g.*, Vertimill grinding) should be considered to reduce the generation of ultra-fine particles (slimes). Alternative recovery methods should also be considered. In this case, given the complexity of the textures, hydrometallurgical methods should also be evaluated.

6.8 Metal Leaching and Acid Rock Drainage Potential Studies

In 2011, SRK was commissioned to complete an initial characterization study of the metal leaching and acid rock drainage (ML/ARD) potential for selected samples from the Langmuir W4 Nickel Deposit, as selected from drill core by SRK (Kennedy, 2011).

The majority of samples (21 out of 26) from the Langmuir W4 deposit were classified as non-potentially acid generating (NP/AP>3) when using carbonate NP. Two samples were classified as uncertain and three were classified as potentially acid generating (NP/AP<1). The classification based on the average for all samples was non-PAG with a NP/AP ratio of 6.4, ranging from 0.5 to 34. While the potential was determined to be low, trace element leaching may be a concern for nickel, arsenic, cadmium, chromium, and selenium. A strong correlation was observed for total sulphur measured by ICP and Leco methods in addition to calcium measured by ICP and carbonates, indicating that an ICP database containing sulphur and calcium could be used to block model ARD potential (Kennedy, 2011).

6.8.1 Sample Selection and Analysis

Twenty-six (26) composite samples were prepared from drill core chosen by SRK to represent waste rock. Drill holes were chosen to spatially cover the conceptualized open pit, both on surface and at depth. For each sample, a minimum of three metres of drill core was selected to minimize sampling anomalous features (*e.g.*, a small but intense stringer of pyrite). The rock types tested for this study included basalt/komatiite flows (BAS), felsic and mafic intrusives (INT), graphitic sediments (SED), and granodiorites (GD). Based on the number of samples tested in this characterization program, the relative proportions of each sample was 77% BAS, 8% INT, 8% SED, and 8% GD, which approximates the relative proportions in the deposit based on drill core intercepts (Kennedy, 2011).

The samples were shipped to Maxxam Analytics in Burnaby, BC for testing. Acid-base accounting (ABA) tests were completed on the composite samples using the modified neutralization potential (NP) method (MEND, 1991: Mine Environment Neutral Drainage program), paste pH, paste conductivity, total sulphur, sulphur as sulphate (sodium carbonate and hydrochloric acid methods), total carbonate analysis, total barium, and fluoride. Elemental analyses of the samples were completed by aqua regia digestion and analysed by ICP-MS (Kennedy, 2011).

6.8.2 Quality Assurance for Analytical Data

The following quality assurance checks with their associated outcomes are outlined below (Kennedy, 2011):

- Sulphur balance: Total sulphur was always greater than sulphate sulphur when detected at concentrations greater than ten times the limit of detection (LOD);
- Paste electrical conductivity (EC) consistent with sulphate sulphur: The majority of samples had paste EC values consistent with the low amounts of sulphate sulphur detected. One sample had a paste EC that was too low for the amount of sulphate detected. After sample re-check, the same result was produced for EC and sulphate;
- Neutralization potential was consistent with the fizz test: All but two samples produced fizz ratings consistent with NP values. These samples were re-checked and produced the same result;
- NP consistent with carbonate content: Carbonates were detected in all samples. Modified NP correlated well with carbonate content ($r = 0.93$; 99% confidence = 0.5) when carbonate was expressed in units of kg CaCO₃/tonne;
- Internal Laboratory Duplicates: Duplicates were assessed with respect to a relative percent difference (RPD) target of 15%. All duplicates had excellent reproducibility at concentrations greater than ten times the LOD. At concentrations near the LOD, RPD is assumed to be much greater than 15%.

6.8.3 Conclusions

The majority of samples tested from the Langmuir W4 deposit have low potential for ARD based on the average of all samples tested in this study. Two composites had uncertain potential and three composite samples were classified as PAG. The elevated concentration of nickel, arsenic, bismuth, cadmium, chromium and selenium relative to global basalt averages are an indication of potential leaching concern. Further work is required to refine the interpretations of from this initial characterization program. There is potential for block modelling ARD potential using ICP sulphur and calcium values. While the relative proportions of rock types tested in this study are similar to the proportions in the deposit, the sample size is small and will need to be increased. More accurately determining the relative proportion of waste rock types and increasing the spatial coverage will help resolve the overall reactivity of potential waste rock at Langmuir W4 (Kennedy, 2011).

6.9 Historical Baseline Environmental Studies

In September 2010, Golden Chalice contracted Blue Heron Solutions for Environmental Management Inc. ("Blue Heron") to begin a Phase 1 site investigation of the property. This initial baseline study was to be considered in the subsequent and more extensive Baseline Environmental Assessment Study ("BEA"). The site investigation study included surface water sampling (from September 2010 to May 2012), flow monitoring, and aquatic habitat assessment (Blue Heron, 2010 and 2014).

In November 2014, Blue Heron Solutions for Environmental Management Inc. ("Blue Heron") were contracted to begin Phase 2 Baseline Environmental Studies on the Langmuir property. No reports or data were found to suggest that this phase of the BEA studies was carried out or completed.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Langmuir Nickel Project lies within the southwestern part of the Abitibi Subprovince of the Archean Superior Province, proximal to the Shaw Dome (Figure 7-1). The Abitibi Subprovince or "greenstone belt" is the world's largest and best preserved example of an Archean supracrustal sequence. The Abitibi Greenstone Belt ("AGB") is an assemblage of volcanic, sedimentary, and intrusive rocks deformed into a roughly east-trending, 200 km wide belt exposed from the Kapuskasing Structure in Ontario to the Grenville Orogen in Quebec, a distance of 400 kilometres (Ayer *et al.*, 1999).

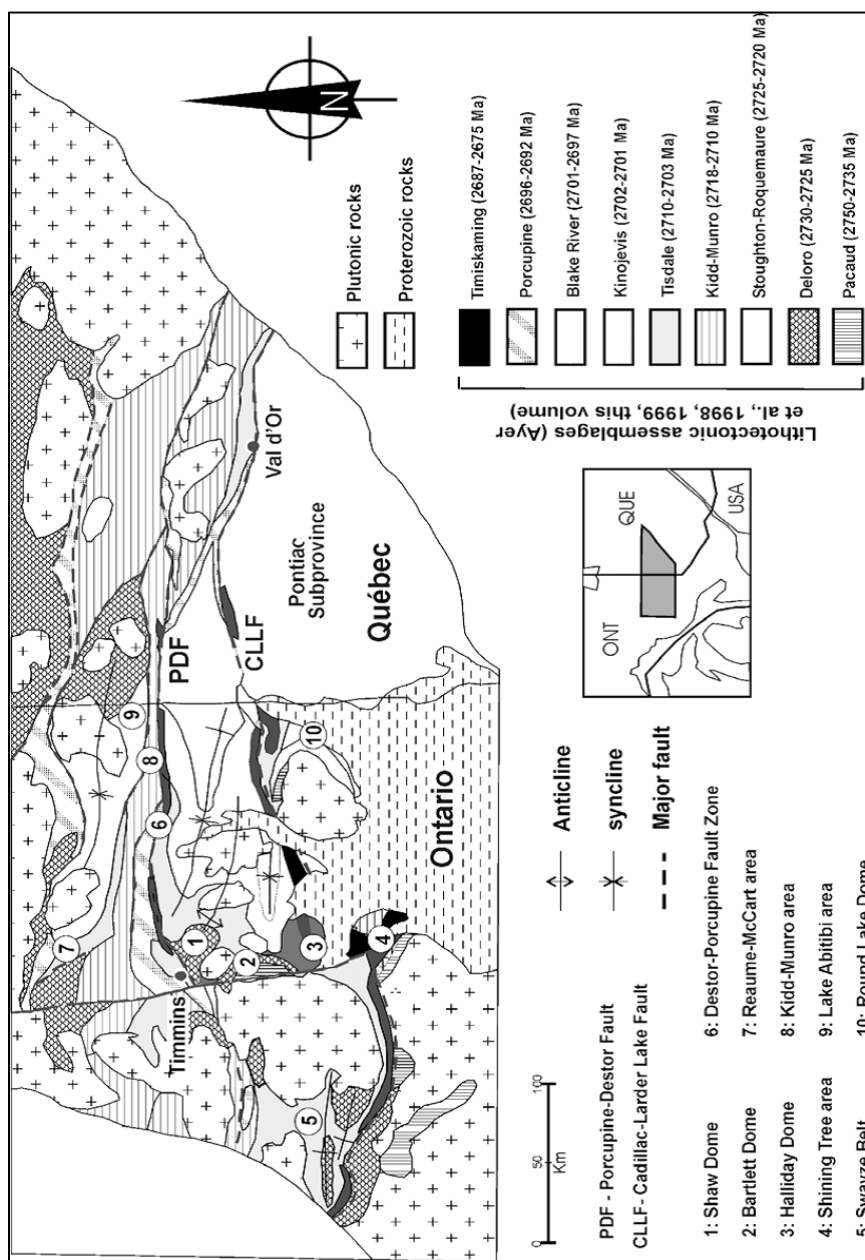


Figure 7-1. Location of the Langmuir Nickel Project, near the Shaw Dome (#1), within the Abitibi Greenstone Belt (Ayer *et al.*, 1999).

The AGB developed between 2.8 to 2.6 Ga (Jackson and Fyon, 1991) and compared to all other Archean Subprovinces of the Superior Province, is uniquely well endowed with metallic mineral deposits including the mining areas of Timmins (base metals and gold), Kirkland Lake (gold), Val d'Or (gold and base metals), and Noranda (base metals and gold). These mining areas are situated along major east and northeast trending deformation zones (Destor Porcupine Deformation Zone, Cadillac-Larder Lake Deformation Zone). These were active throughout the main periods of Archean volcanism and became the focus of a late period of alkaline volcanism and sedimentation between 2680 and 2677 Ma.

Several cycles of volcanism and sedimentation are known in the southern Abitibi Subprovince (see Figure 7-1). These sequences usually begin with the deposition of ultramafic flows and intrusions and tholeiitic basalts which have interflow argillaceous sediments. The cycles then typically evolve into calc-alkaline flows, pyroclastic rocks and epiclastic sedimentary rocks deposited in marine to fluvial basins. The layered stratigraphy is intruded by gabbroic to granitic plutons during and after deformation and metamorphism. Metamorphic grade varies from greenschist to lower amphibolite facies. The basal komatiitic parts of the volcanic cycles are of most interest for nickel exploration.

Within the Timmins mining camp, the early Precambrian metavolcanic rocks consist of two groups known as the Deloro and Tisdale Groups. The Deloro Group is older than the Tisdale Group and the two groups are separated from one another in Whitney and Tisdale townships by the Destor Porcupine Fault Zone ("DPFZ"). Here the Tisdale Group lies to the north of the DPFZ while the Deloro Group occurs to the south. The Deloro Group is a calc-alkaline volcanic sequence of andesite to basalt flows in the lower portion and dacite flows and felsic pyroclastic units in the upper portion. The Tisdale Group is composed of komatiitic ultramafic and basalt rocks in the lower portion and overlain by a thick sequence of tholeiitic basalt rocks.

The AGB has been subdivided into nine lithotectonic assemblages (Ayer *et al.*, 2002; Sproule *et al.*, 2002). Only four of these nine assemblages are generally accepted to contain komatiitic rocks and therefore considered prospective for komatiite-hosted Ni-Cu-(PGE) sulphide deposits. These four assemblages have distinct and well defined ages as well as spatial distribution (see Figure 7-1): the Pacaud assemblage (2750-2735Ma), the Stoughton-Roquemaure assemblage (2723-2720 Ma), the Kidd-Munro assemblage (2719-2711 Ma), and the Tisdale assemblage (2710-2703Ma). These four assemblages differ considerably in the physical volcanology and geochemistry of the komatiitic flows. It is important to note that the latter two of these assemblages contain larger volumes of high magnesium, Al-undepleted komatiite (>5% Al), while the Tisdale assemblage contains more andesitic rocks and sulphide facies iron formation (Sproule *et al.*, 2003).

7.1.1 The Shaw Dome

The Shaw Dome is a major northwest trending anticline centred approximately 20 km southeast of Timmins (Muir, 1979; Green and Naldrett, 1981) (see Figure 7-1; Figure 7-2; Figure 7-3). The anticlinal structure may be a result of regional folding that affected rocks north of the Shaw Dome or, more probably, due to the diapiric action of a large granitic body which partially outcrops in the central south-east portion of the dome.

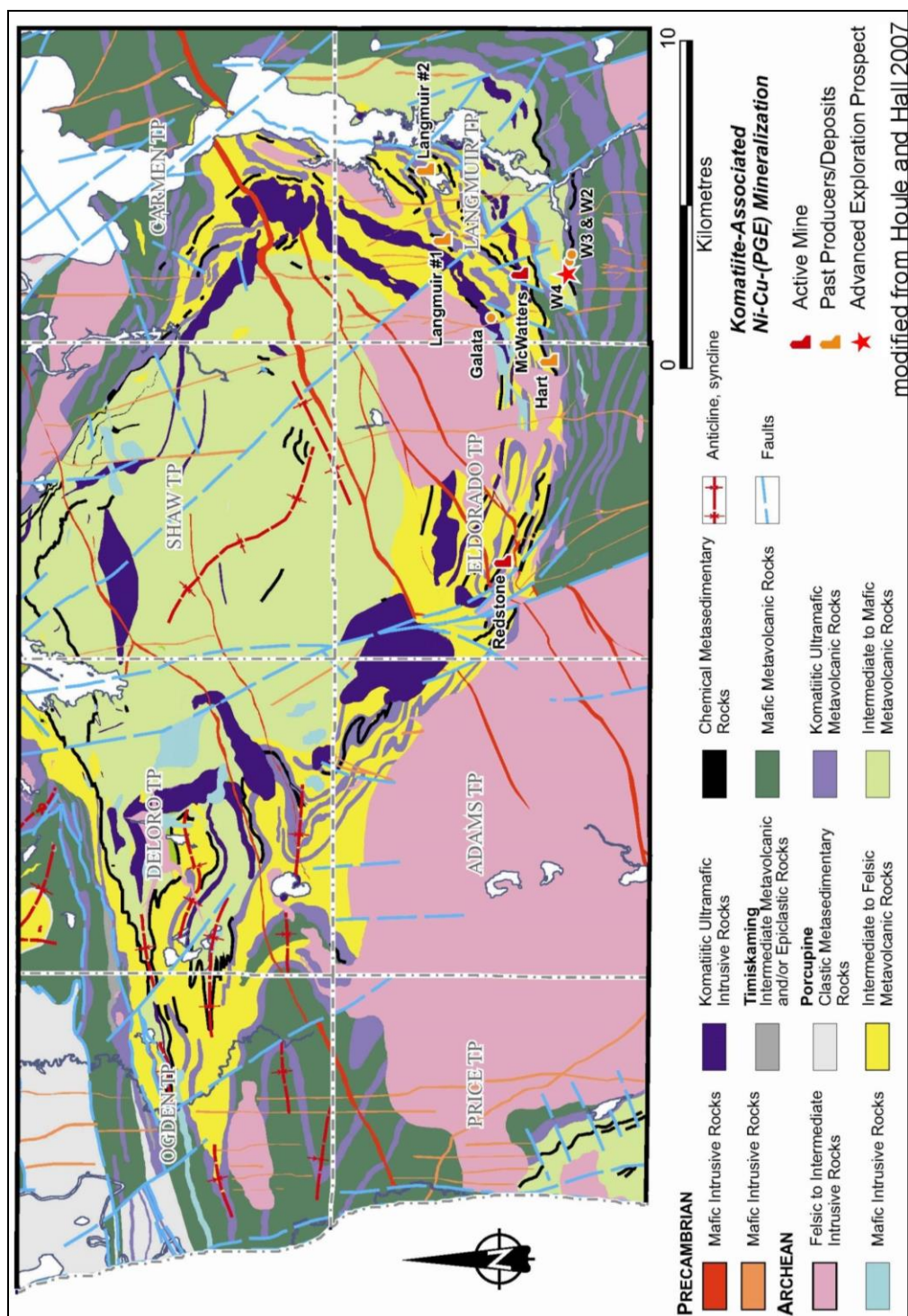


Figure 7-2. Regional geology and location of the Langmuir Nickel Project ("W4" red star) relative to the Shaw Dome (after Houle and Hall, 2007).

Volcanic rocks associated with the Shaw Dome have been interpreted to be a part of the Deloro Assemblage (2730 to 2725 Ma: Ayer *et al.*, 1999) and the younger Tisdale Assemblage. Pyke (1982) further sub-divided these assemblages into three volcanic formations: lower, middle, and upper volcanic formations. The lower formation of the Deloro Assemblage is not exposed in the Shaw Dome, while the

middle formation occupies the central part of the dome north of the Redstone mine. The upper volcanic formation of the Deloro was described by Pyke (1982) to contain a relative abundance of sulphide facies iron formations and a predominance of intermediate to felsic volcanic rocks of dacitic to andesitic composition. Pyke (1982) does not mention the presence of extrusive komatiitic rock in this assemblage having mapped all of the ultramafic rocks contained within this supracrustal package as intrusive in nature (*e.g.*, Pyke, 1970a, 1970b and 1975). Pyke (1982) does, however note that there is some intercalation of the komatiite (of the Tisdale assemblage) with the Deloro Group volcanic rocks. Since, both intrusive and extrusive ultramafic rocks have been identified within the Deloro volcanic package (Hall and Houlé, 2003; Houlé *et al.*, 2004; Houlé & Guilmette, 2005) outlined by Pyke (1982). Therefore, either the assumption that the Deloro assemblage is devoid of komatiitic flows needs to be revised or the unconformity that delineates the contact between Deloro and Tisdale rocks modified (Cole *et al.*, 2010).

Stone and Stone (2000), divided the komatiitic rocks into two horizons making no reference to stratigraphy: the lower komatiitic horizon (“LKH”) and the upper komatiitic horizon (“UKH”). The UKH consists of extrusive komatiitic rocks intercalated with calc-alkalic volcanic rocks and sulphide facies iron formations, while the LKH consists of komatiitic rocks that intrude the underlying felsic to intermediate volcanic flows and interbedded iron formations. The rocks that form the LKH are mostly dunites, whelrlites, pyroxenites, and gabbros that intruded sometime between 2725Ma and 2707Ma (Stone and Stone, 2000). The UKH rocks are cumulate, spinifex textured and aphyric komatiite that extruded sometime before 2703Ma (Corfu *et al.*, 1989). The UKH komatiitic intrusions are interpreted to represent part of the feeder system that resulted in the eruption of channelized komatiitic flows that are, at least initially, cogenetic and form what is now a large dike-sill-lava complex. Observations and interpretations by Stone and Stone (2000) are supported by later mapping of the Adams, Shaw, Langmuir, and Carman townships by Houlé *et al.* (2004) and Houlé and Guilmette (2005).

Six Ni-Cu-(PGE) deposits have been documented in the Shaw Dome (Table 7-1; *see* Figure 7-2; Figure 7-3) and numerous showings have been identified. These nickel deposits occur in komatiitic rocks found within the Deloro assemblage near the base of the Tisdale assemblage (*see* Section 23).

Table 7-1. Current and past producing nickel mines in the Timmins area (after Atkinson *et al.*, 2010).

Mine	Years of Production	Ore milled	% Ni	% Cu
Alexo	1912-1919	51,857 tons	4.5	0.55
	1943-1944	4,923 tons		
Alexo / Kelex	2004-2005	17 398 tonnes	2.3	0.23
Langmuir No. 1	1990-1991	111,502 tons	1.74	
Langmuir No. 2	1972-1978	1.1 M tons	1.47	
McWatters	2008	15 361 tonnes	0.55	
	2009	7 664 tonnes	0.41	
Montcalm	2004-2008	3 722 929 tonnes	1.26	0.67
Redstone	1989-1992	294,895 tons	2.4	
	1995-1996	10,228 tons	1.7	
	2006-2008	133 295 tonnes	1.92	
	2009	36,668 tonnes	1.16	
Texmont	1971-1972	unknown		

7.2 Property Geology and Mineralization

The Langmuir Property is predominantly underlain by the middle and lower formations of the Tisdale Group which consist of linear sequences of mafic volcanic units or ultramafic units (Figure 7-4). These linear sequences trend east-west in the southern portion of Eldorado and Langmuir Township and then swing north-south along the eastern halves of Langmuir and Carman Townships.

The ultramafic sequences consist of mesocumulate to adcumulate peridotite flows with distinct spinifex textured flow tops. The flow tops indicate younging to the south. Graphitic argillite units are locally present between the peridotite flows. The mafic sequences consist of massive to pillowed basalt-andesite flows. The mafic-ultramafic sequences are locally intruded by north trending Matachewan diabase dikes and north-east trending Abitibi diabase dikes. Felsic intrusive bodies also intrude the sequences with the largest being a monzonite body in the southeast corner of Langmuir Township. The volcanic stratigraphy is cross cut by a major regional northwest trending fault “Montreal River Fault”, just east of the Nighthawk River (Cole *et al.*, 2010).

Overburden around the Langmuir W4 Nickel Deposit ranges between 0 and 20 m in depth and is known to thicken to the west. Overburden is composed of lacustrine and shallow marine sediments with occasional boulders; no till sequences are reported (Campbell, 2011).

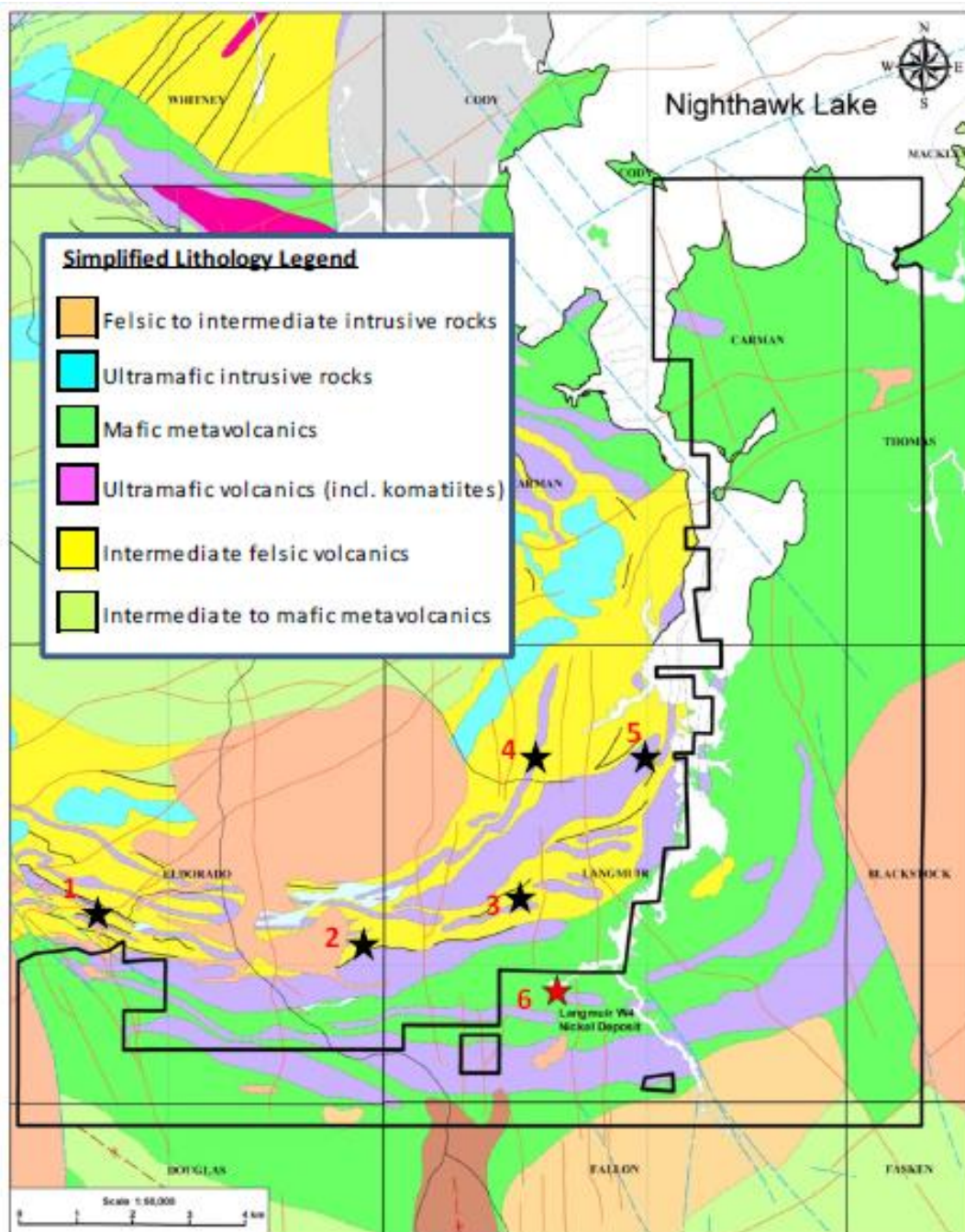


Figure 7-3. Generalized geology within and around the historical claim boundary (black outline) of the Langmuir Nickel Project (red star) and the locations of nickel deposits associated with the Shaw Dome (after Houlié and Hall, 2007). 1=Redstone Mine; 2=Hart Deposit; 3=McWatters Mine; 4=Langmuir Mine #1; 5=Langmuir Mine #2; 6=Langmuir W4. The historical claim boundary approximates the current Property boundary.

7.2.1 Property Mineralization

There are seven (7) primary target areas, W1 to W7, defined mainly from helicopter VTEM Mag-EM surveys (2005 and 2007) and shown in Figure 7-4. These airborne anomalies were interpreted to be the result of sulphide mineralization (Orta, 2005 and 2007).

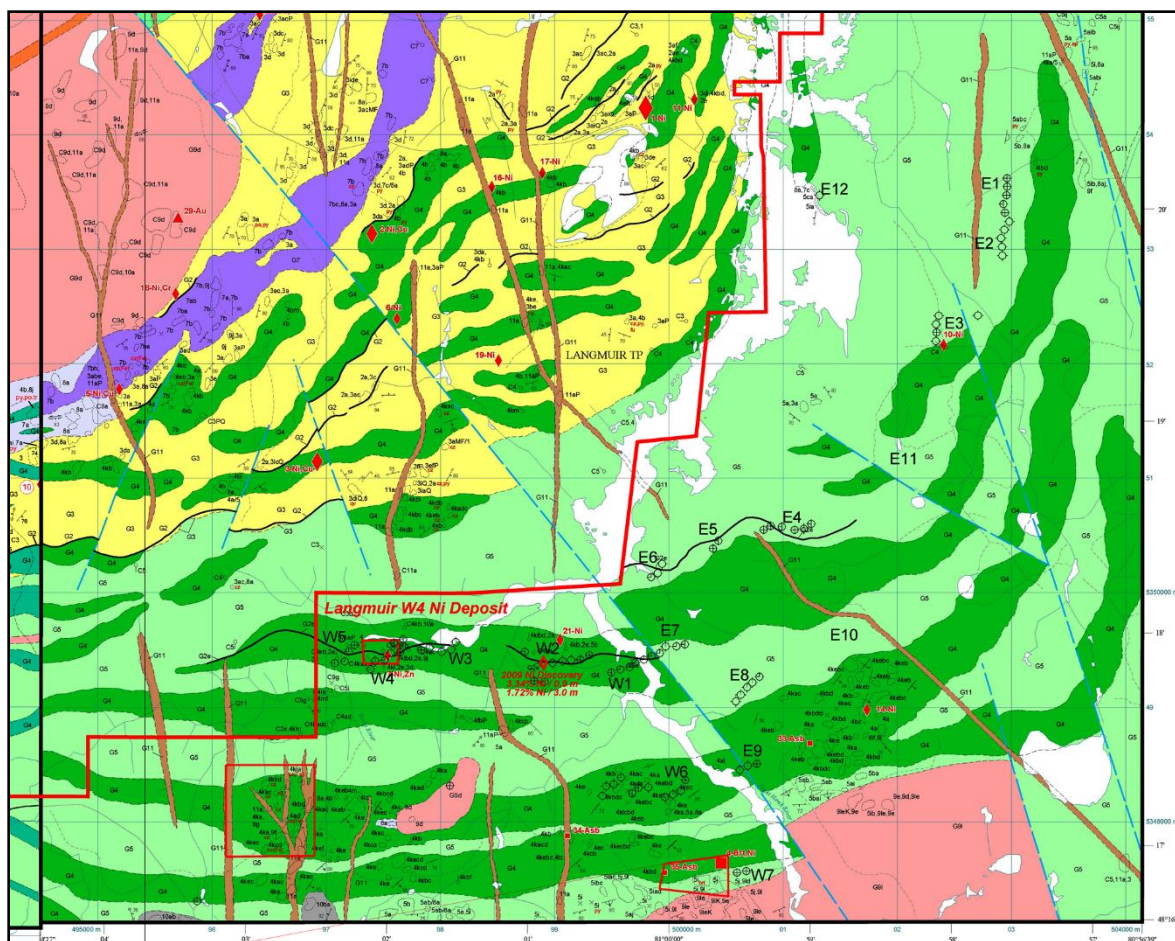


Figure 7-4. Locations of target (W1 to W7) areas on the Property as defined mainly from airborne VTEM mag-EM surveys (2005 and 2007). Geological base map P3268 (Houlé and Guilmette, 2005).

7.2.2 Geology of Langmuir W4 Nickel Deposit

The Langmuir W4 Nickel Deposit was interpreted to consist of three sub-parallel nickel zones (A to C) hosted by komatiitic peridotite flows (Cole *et al.*, 2010). These east-west trending peridotite flows have good spinifex flow tops and associated thin graphitic argillite interflow units. The peridotite flows are typically black, fine-grained, soft, weak to moderately serpentinized and typically have adcumulate to mesocumulate textures. Detailed examinations of the spinifex flow top sequences and flow morphologies indicate the flows have a southward younging direction. The peridotite flows range from 5 to 50 metres thick and are near vertical to steeply dipping 80 degrees to the north (Cole *et al.*, 2010).

Immediately south of the peridotite flows in the Langmuir W4 area, a pink medium grained hornblende rich (5-10%) granodiorite intrusive is present. It is thought that this intrusive may represent an east-west dike. This dike appears to have a shallow north dip of 50 degrees and appears to cut off the vertical dipping, south facing peridotite flows. The peridotite flows in the vicinity of the granodiorite are strongly brecciated and often contain graphite. Smaller felsic to intermediate, feldspar porphyry, mafic, and gabbro dikes or sills intrude the peridotite flows locally (Cole *et al.*, 2010).

The A, B, and C zones occur within specific komatiitic peridotite flow unit at the location of the W4 airborne anomaly. They are vertical to steeply north dipping at 70-75 degrees. The C Zone, which is the deepest occurring zone, is also locally steeply south dipping (Figure 7-5). The east-west strike extent of the zones has been defined for at least 200 metres. They are open below the granodiorite dike and/or a vertical depth of 400 metres. The nickel zones have an average true thickness of 5.5 to 7.0 metres (Cole *et al.*, 2010).

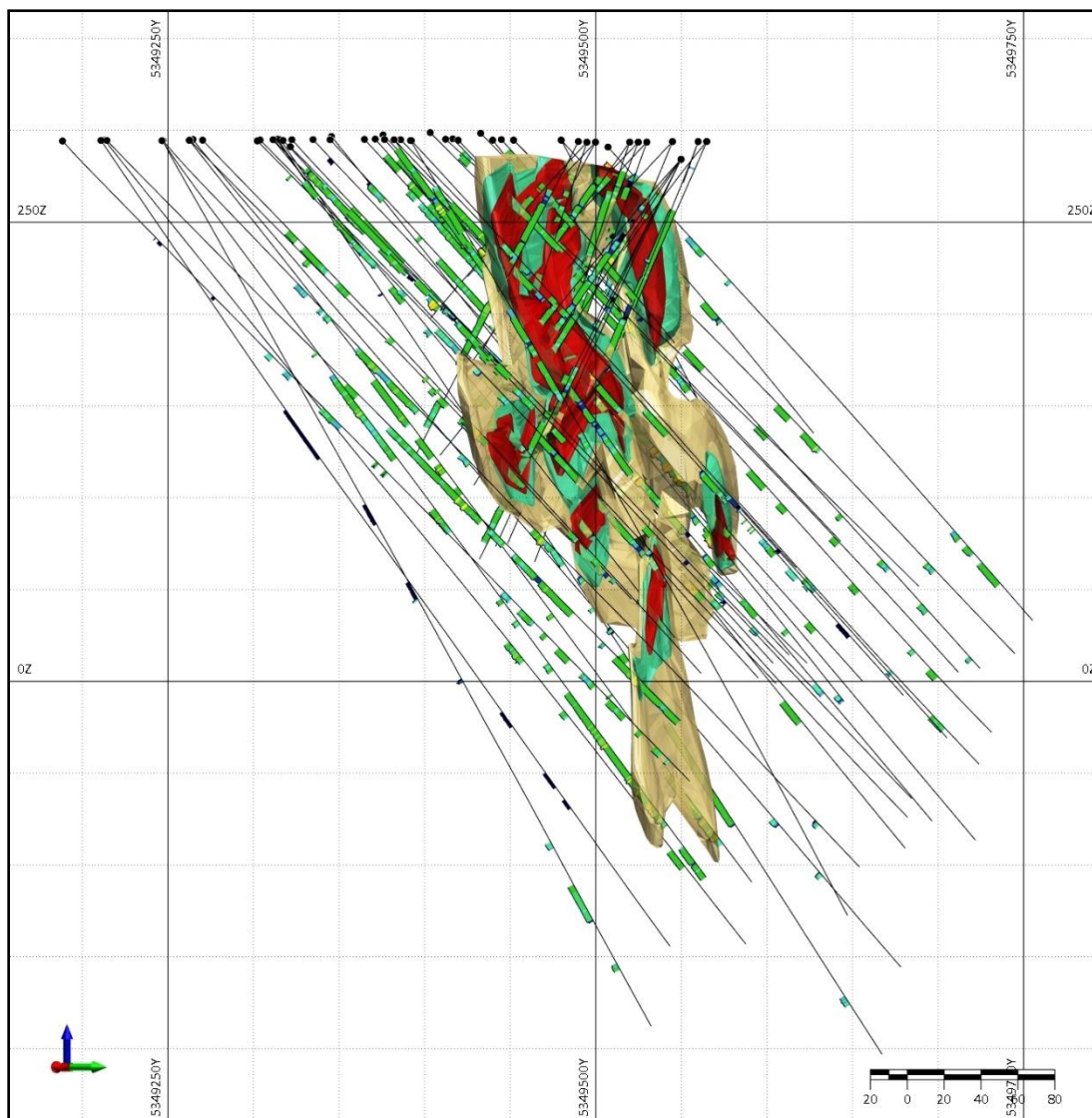


Figure 7-5. Isometric view looking south-southwest, showing historical drill hole traces and the three nickel grade domains (tan = 0.3-0.5% Ni; aquamarine = 0.5-1.0% Ni; red = >1.0% Ni), modelled in the SRK 2010 historical mineral resource estimate (data from Cole *et al.*, 2010).

7.2.3 Mineralization in the Langmuir W4 Nickel Deposit

The Langmuir W4 Nickel Deposit consists of three sub-parallel nickel zones (A, B, and C) hosted by komatiitic peridotite flows. The A, B and C zones occur within specific komatiitic peridotite flow units. The sulphide assemblage consists of primarily pyrrhotite, pentlandite, and minor pyrite and chalcopyrite within

the nickel zones. The pentlandite occurs intergrown with pyrrhotite as irregular grains that are generally relatively coarse grained.

The A Zone, the principal and discovery zone, consists of a basal lower horizon of stringer/fracture filling sulphides to semi-massive-massive sulphides and a stratigraphically overlying upper disseminated to blebby sulphide horizon (Figure 7-6, A to E). Locally, massive sulphide veinlets occur mainly in the basal lower horizon (Figure 7-6, F).

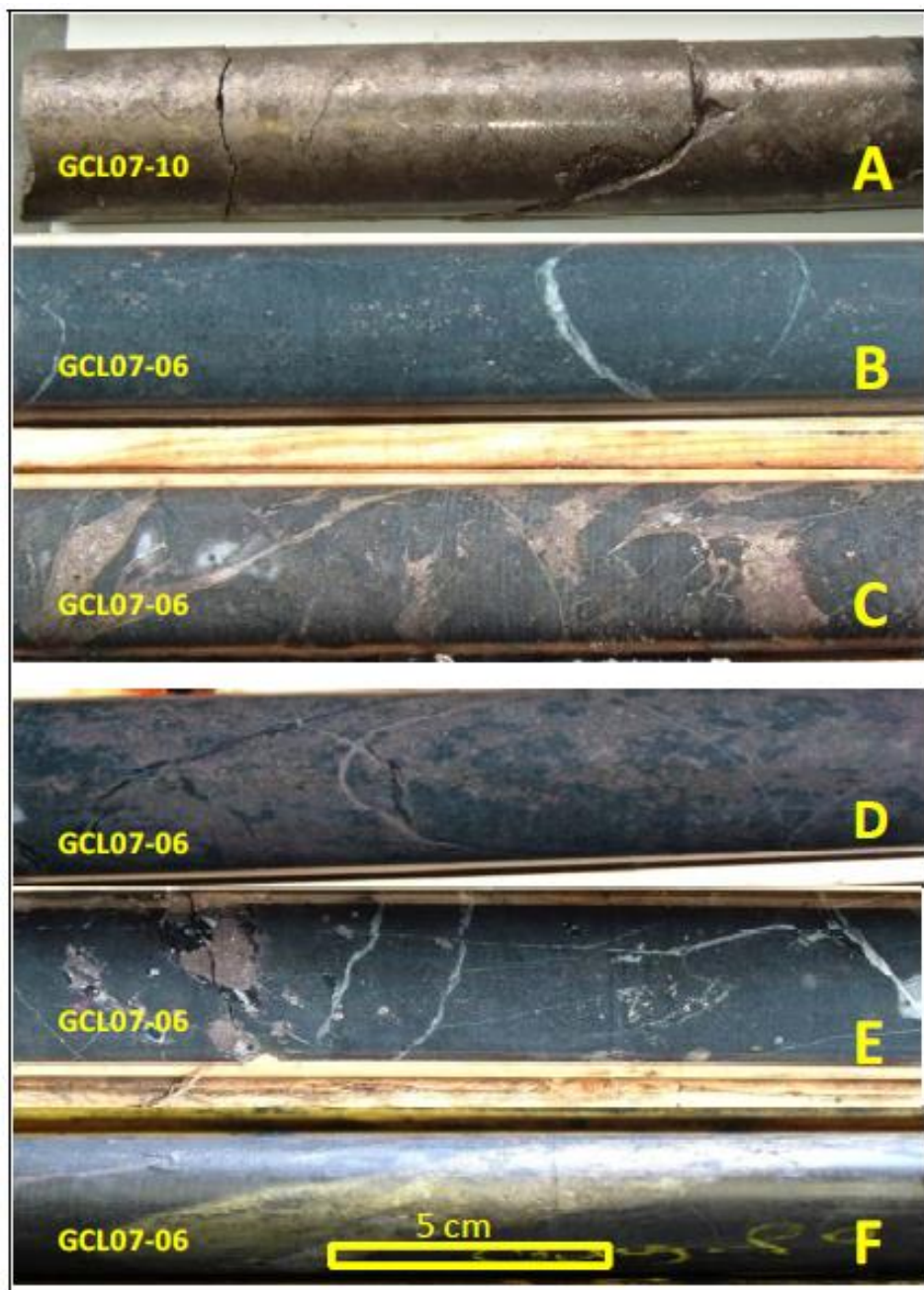


Figure 7-6. Typical Langmuir W4 Nickel Deposit sulphide mineralization styles (after Cole *et al.*, 2010). Panels are, A=massive sulphide; B=disseminated sulphide; C=fracture-filling sulphide; D=semi-massive sulphide; E=blebby sulphide; F=local massive sulphide veinlet.

The basal lower horizon sulphide modal abundance is over 15% and the upper horizon sulphide modal abundance varies from 3% to 15%. Nickel grades are typically 0.5% to 3.0% Ni within the upper disseminated sulphide horizon. Higher nickel concentrations of 5% to 7% Ni occur where sulphide concentrations increase to 30% or 35% (semi-massive sulphides). Locally, massive sulphide sections are present grading in some cases up to 17.9% Ni; these higher nickel concentrations generally occur in the lower basal horizon (Cole *et al.*, 2010).

8.0 DEPOSIT TYPES

The distribution of magmatic nickel-copper-platinum group metal sulphide deposits within Canada, with a resource size greater than 100,000 tonnes is shown in Figure 8-1. The Langmuir W4 Nickel Deposit consists of nickel sulphides hosted by komatiitic rocks.

Considerable research by various writers over the years indicates that komatiite hosted nickel deposits in the Timmins area are similar to the Achaean age nickel deposits of the Kambalda and Windarra areas in Western Australia. Komatiite-hosted Ni-Cu-PGE deposits are one of several lithological associations within the broader group of magmatic Ni-Cu-PGE deposits. Mineralization occurs in both extrusive and intrusive settings and experimental studies indicate that komatiitic magmas/lavas were emplaced at very high temperatures. Deposits of this association are mined primarily for their nickel contents, but they contain economically-significant amounts of Cu, Co, and PGE (Lesher and Keays, 2002; Sproule *et al.*, 2005).

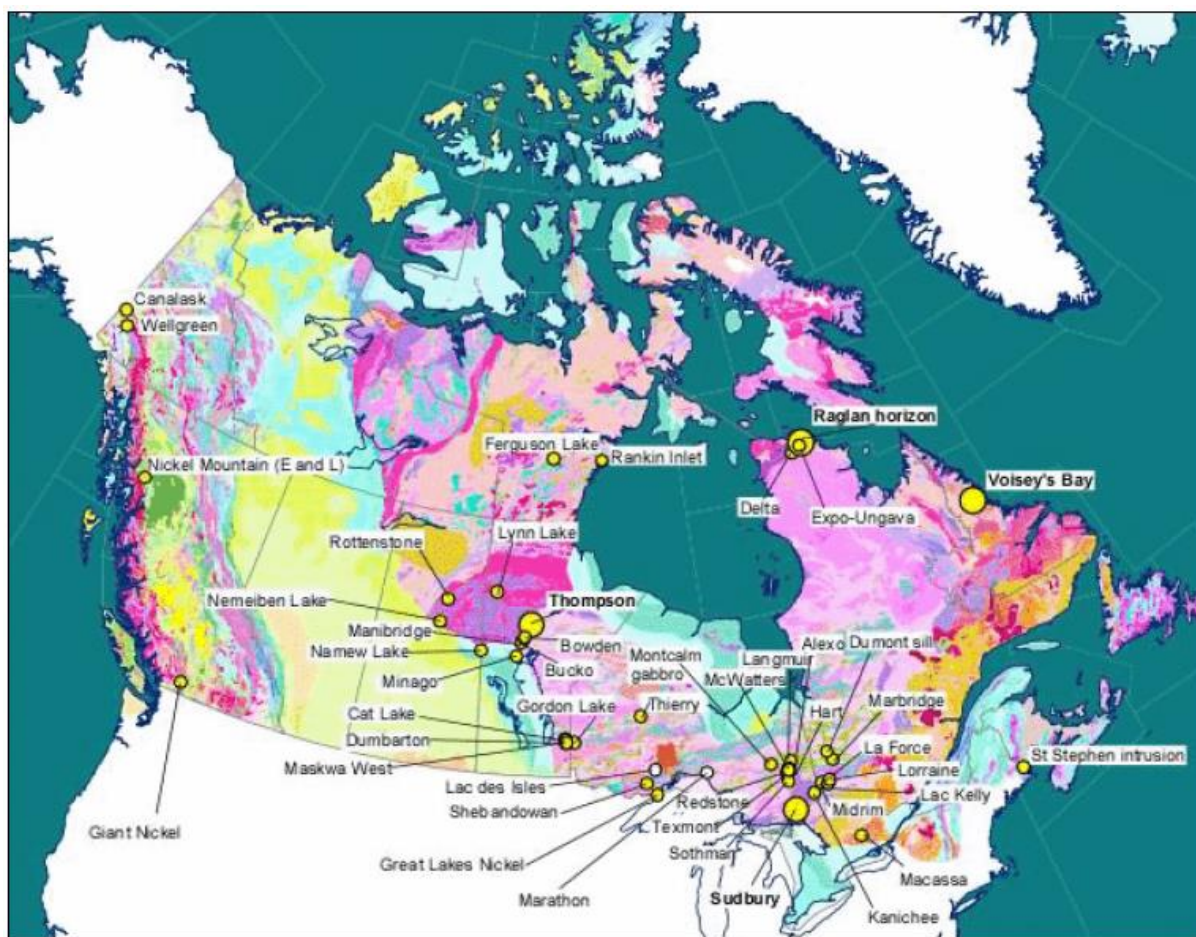


Figure 8-1. Map of Canada showing the distribution of magmatic Ni-Cu-PGE sulphide deposits in Canada with resources greater than 100,000 tonnes (after Wheeler *et al.*, 1996).

Within the AGB four of the assemblages contain komatiites. Komatiite-associated Ni-Cu-(PGE) deposits have only been identified within the Kidd-Munro and Tisdale (including Langmuir W4 and the other Shaw Dome deposits) assemblages. This is consistent with the interpretation that komatiite associated Ni-Cu-

(PGE) deposits form within lava channels of channelized sheet flows, but not within sheet flows or lava lobes.

Tisdale assemblage ultramafic volcanic rocks with high MgO content (up to 32%) are defined as aluminum undepleted komatiite ("AUK"). Individual flows are usually less than 100 m thick and typically occur at or near the base of ultramafic sequences. The flow units can be recognized by the presence of chilled contacts, the distribution of spinifex textures, marked compositional or mineralogical changes at unit boundaries and the presence of ultramafic breccia or sulphidic sediments at contacts. Intrusive counterparts have also been recognized in the Tisdale assemblage.

Komatiite-associated nickel sulphide deposits are part of a continuum of lithotectonic associations in the family of magmatic Ni-Cu-PGE deposits, which contains a variety of mineralization types (Leshner and Keays, 2002). Mineralization discovered to date on the Langmuir Nickel Project can be characterized as ultramafic extrusive komatiite-hosted Ni-Cu-Co-(PGE) deposit type, which recognizes two sub-types or styles (Leshner and Keays, 2002):

- 4) Type I Kambalda-style: komatiite-hosted; channelized flow theory; dominated by net-textured and massive sulphides situated at or near the basal ultramafic/footwall contact with deposits commonly found in footwall embayments up to 200 m in strike length, 10s to 100s of metres in down-dip extent, and metres to 10s of metres in thickness; generally on the order of a million tonnes (usually <1Mt) with nickel grades that are typically much greater than 1% Ni; tend to occur in clusters (*e.g.*, Alexo-Dundonald, Ontario; Langmuir, Ontario; Redstone, Ontario; Thompson, Manitoba; Raglan, Quebec).
- 5) Type II Mt. Keith-style: thick olivine adcumulate-hosted; sheet flow theory; disseminated and bleb sulphides, hosted primarily in a central core of a thick, differentiated, dunite-peridotite dominated, ultramafic body; more common nickel sulphides such as pyrrhotite and pentlandite but also sulphur-poor mineral heazlewoodite (Ni₃S₂) and nickel-iron alloys such as awaruite (Ni₃-Fe); generally on the order of 10s to 100s of million tonnes with nickel grades of less than 1% Ni (*e.g.*, Mt. Keith, Australia; Dumont Deposit, Quebec).

Like other nickel deposits in the Shaw Dome and the Timmins area, the Langmuir can be classified as Type I Kambalda-style (*stratiform basal*) in the classification of Leshner and Keays (2002).

The genesis of the Shaw Dome and the Australian deposits is attributed to the combined effect of lava channels (or channelized sheet flows) and intrusions, that provide the heat and metal sources and sulphide bearing iron formation in the footwall that, provide an external sulphur source. Thermal erosion of the underlying rocks by the komatiite flows is considered to be the dominant mechanism for adding sulphur to the magma and to the creating a depositional 'trough' for sulphide minerals.

Characteristics of this deposit type which should be considered in exploration methodologies include:

- Geological mapping of komatiite flow units.
- Presence of sulphidic footwall rocks.
- Lithogeochemical surveys can detect AUK komatiite.

- Airborne and ground electromagnetic surveys to detect the location of massive sulphide mineralization.
- Airborne and ground magnetic geophysical surveys to detect pyrrhotite-rich sulphide mineralization.

8.1 Komatiite Geological Models

After the discovery of the Kambalda and Mt. Keith Ni-Cu-Co-(PGE) deposits in Australia (*ca.* 1971), geological models were developed for these ultramafic extrusive komatiite-hosted deposits (*e.g.*, Leshar and Keays, 2002; Butt and Brand, 2003; Barnes *et al.*, 2004).

Komatiitic rocks are derived from high degree partial melts of the Earth's mantle. Due to the high degree of partial melting the komatiitic melt is enriched in elements such as nickel and magnesium. When erupted, the melts have a low viscosity and tend to flow turbulently over the substrate eroding the footwall lithologies through a combination of physical and chemical processes.

Due to the low viscosity of the komatiitic melts, the lavas tended to concentrate in topographic lows. Komatiitic eruptions have been envisaged to have a high effusion rate and large volumes of lava and/or magma. The Mt. Keith-style of deposits are no exception, interpreted to be large volume sheet flows several hundreds of metres thick by several kilometres to tens of kilometres long and are composed primarily of olivine adcumulate to mesocumulate.

Further downstream, more distal from the eruptive source, the komatiitic flows become channelized, similar to a river channel today, and begin to erode the substrate forming more defined channel features. This channelization is the cornerstone of the komatiite-hosted deposit model. Denser sulphides would tend to accumulate in the bottom of the channel-like features under the influence of gravity. As the eruption continued the channel would fill with olivine mesocumulate to adcumulate because of the constantly replenished magnesium-rich komatiitic melt.

As the eruption waned the channel would be capped by a sequence of regressive komatiitic flows composed of komatiitic pyroxenite and basalts. In order to develop Ni-Cu sulphides, the komatiitic melt must become sulphide saturated. A komatiitic melt will become sulphur saturated when an external source of sulphur is introduced to the melt by assimilation of a sulphide-rich lithology or by differentiation or contamination of a komatiitic melt until the sulphur content exceeds the saturation point. A strong relationship exists between the presence of footwall lithologies rich in sulphide and the development of Ni-Cu sulphide deposits in the overlying komatiitic flows. This association is strongest in the Kambalda-style Ni-Cu sulphide deposits. Differentiation or the assimilation of rocks rich in certain elements may result in the oversaturation of the komatiitic melt in sulphur. This is the mechanism related to the development of the Mt. Keith-style of deposits.

Komatiite-hosted Ni sulphide deposits, whether they are Archean (*e.g.*, Kambalda, Australia) or Proterozoic (*e.g.*, Thompson, Manitoba; Raglan, Quebec) occur in clusters of small sulphide bodies generally less than 1 million tonnes in size. At 1:25 000 scale, these deposits usually occur at a pronounced thickening of ultramafic stratigraphy, and at 1:5 000 scale, these deposits occur as net-textured to massive sulphide in small embayments up to 200 m in strike length, tens to hundreds of metres in down-dip length and metres to tens of metres thick. The shape can be cylindrical, podiform, or in rare instances tabular.

8.1.1 Komatiite Volcanic Facies

The five major volcanic facies that are common constituents of komatiitic flow fields include (Barnes *et al.*, 2004) (Table 8-1):

- Thin differentiated flows (TDF).
- Compound sheet flows with internal pathways (CSF).
- Dunitic compound sheet flows (DCSF).
- Dunitic sheet flows (DSF).
- Layered lava lakes or sills (LLLS).

DCFS and CSF facies represent high-flow magma pathways characterized by olivine cumulates and can be identified by their elevated Ni/Ti and Ni/Cr ratios and low Cr contents (Barnes *et al.*, 2004). Although only DCFS and CSF facies are known to host economic nickel sulfide mineralization (Burley and Barnes, 2019), it does not discount the prospectivity of the other facies, particularly the thick sheets and/or sills associated with the DSF and LLLS types.

Table 8-1. Features of komatiite volcanic facies (Barnes *et al.*, 2004).

Facies	Description	Type Examples
Thin Differentiated Flows (TDF)	Multiple compound spinifex-textured flows; generally less than 10 m thick, with internal differentiation into spinifex and cumulate zones	Munro Township (Pyke <i>et al.</i> , 1973)
Compound Sheet Flows with Internal Pathways (CSF)	Compound sheet flows with internal pathways (CSF) Compound thick cumulate-rich flows, with central olivine-rich lava pathways flanked by multiple thin differentiated units, from tens of metres to ~200 m maximum thickness	Silver Lake Member at Kambalda (Leshner <i>et al.</i> , 1984)
Dunitic Compound Sheet Flowws (DCSF)	Thick olivine-rich sheeted units with central lenticular bodies of olivine adcumulates, up to several hundred metres thick and 2 km wide, flanked by laterally extensive thinner orthocumulate-dominated sequences with minor spinifex. CSF and DCSF correspond to 'Flood Flow Facies' of Hill <i>et al.</i> (1995).	Perseverance and Mount Keith (Hill <i>et al.</i> , 1995)
Dunitic Sheet Flows (DSF)	Thick, laterally extensive, unfractionated sheet-like bodies of olivine adcumulates and mesocumulates, in some cases laterally equivalent to layered lava lake bodies	Southern section of the Walter Williams Formation (Gole and Hill, 1990; Hill <i>et al.</i> , 1995)
Layered Lava Lakes and/or Sills (LLLS)	Thick, sheeted bodies of olivine mesocumulates and adcumulates with lateral extents of tens of kilometres, with fractionated upper zones including pyroxenites and gabbros, up to several hundred metres in total thickness	Kurrajong Formation (Gole and Hill, 1990; Hill <i>et al.</i> , 1995)

9.0 EXPLORATION

No exploration work has taken place on the Property since 2014; all exploration work is historical in nature.

10.0 DRILLING

No drilling has been completed by the Issuer on the Property. All historical drilling is reviewed in Section 6.

11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

Industry standard core sampling protocols were used by Golden Chalice and Rogue Resources on all drill holes completed from 2005 to 2011. These protocols are well documented in hard copy Golden Chalice and Rogue Resources sampling procedures, which are described in this section. The database held by the Issuer and made available to the Authors contains what is thought to be all of the assay certificates reported from the laboratories from 2005 to 2011.

On the basis of information and data available to the Principal Author, it is the opinion of the Principal Author that Golden Chalice and Rogue Resources applied industry best practices in the collection, handling, and management of drill core assay samples. There is no evidence that the sampling approach and methodology used by Golden Chalice and Rogue Resources introduced any sampling bias or contamination.

11.1 Historical Diamond Drilling (2005-2008)

The following description addresses the core sample preparation, analyses and security for diamond drilling programs completed from 2005 to 2008. These diamond drilling programs were completed by Golden Chalice under the supervision of Kevin Montgomery.

11.1.1 Sample Preparation and Analysis

At the drill site, the drilling contractor places drill core into wooden tray boxes along with ‘marker blocks’ to indicate measured distances down the drill hole from the collar. During drilling programs, drill core is collected by exploration technicians at the drill sites or the drill access trail every drilling day and moved to a secure logging facility. Initially, the secure logging facility was Moneta Porcupine Mine’s logging facility on Highway 655 in Timmins, whereas after August 2007 it was moved to the Hastings Management office/core facility in Timmins, Ontario.

At the logging facility, the length of drill core recovered was compared to the position of depth markers in the core boxes by a senior technician in order to check for misplaced markers and to calculate the amount of core loss, if any. The core was logged and sampled by qualified geologists. Geological descriptions of the core and sampling intervals with corresponding identifier numbers were entered onto a “diamond drill log record” captured on a laptop computer. Sampling of the core was based on visual observations of sulphide mineralization and samples were collected within lithologically homogeneous intervals with due regard for varying mineralogy and textures. Sample intervals did not cross geological boundaries. Generally, the sample length within mineralized zones was on the order of 0.5 to 1.0 metres or less.

The NQ or HQ core selected for sampling was sawn in half and a half bagged with the first part of a three-part assay tag bearing a unique identifier number. The other half of the core was stored at the logging facility with the second part of the three part assay tag bearing an identical unique identifier number placed in the core box at the beginning of the sample interval. Records of the sampled intervals and sample numbers are recorded in the computerized drill logs, and the third part of the assay tag is filed.

During 2007 and 2008 all samples were sent to the Laboratoire Expert Inc. of Rouyn-Noranda, Quebec. This laboratory is not accredited according to ISO/IEC Guideline 17025 by the Standards Council of Canada

("SCC"). SRK is uncertain if Laboratoire Experts Inc. participates in round robin proficiency tests. Golden Chalice used an umpire laboratory to verify the analytical results delivered by Laboratoire Expert Inc.

Upon receipt of samples at the Laboratoire Expert Inc., a bar code label is attached to the original sample bag. This label is then scanned into the laboratory database and the weight of the sample recorded together with information such as date, time, equipment used, and operator name. The scanning process is repeated for each subsequent activity performed on the sample from sample preparation to analysis through to the storage or disposal of the pulp and reject material. This system provides a complete chain of custody records for every stage in the sample preparation and analytical process from the moment that a sample arrives at the laboratory

Sample preparation involves drying, crushing, splitting, and pulverizing. Samples were dried prior to crushing the entire sample to 90 percent passing a -10 mesh screen. From the crushed coarse fraction, a sub-sample of approximately 300 grams was collected using a Jones riffle splitter. This 300 gram portion was completely pulverized to 90 percent passing a -200 mesh screen in a ring and puck pulverizer. A 0.5 gram aliquot was collected, from each pulp.

All drill core samples from the property were analyzed for nickel, copper, cobalt, lead, and zinc by aqua regia digestion followed by atomic absorption analyses. The detection limit was two ppm for each element. If the nickel, copper or cobalt result exceeded 5,000 ppm then the pulp was re-analyzed by total digestion followed by atomic absorption analyses. The concentrations are reported as a percent and the detection limit is 0.01% for nickel and copper with the total digestion method. All the drill core samples were also analyzed for gold, platinum and palladium by lead fire assay with an atomic absorption finish on a 30 gram sample pulp. The detection limit for the lead fire assay atomic absorption method is two parts per billion ("ppb") for gold, five ppb for platinum and four ppb for palladium. If the sample result exceeded 1,000 ppb for any precious metal, then the sample pulp was re-analyzed by using a lead fire assay collector and a gravimetric finish. The precious metal concentrations were reported as grams per tonne.

11.1.2 Quality Assurance/Quality Control Programs

Quality control measures are typically set in place to ensure the reliability and trustworthiness of exploration data. This includes written field procedures and independent verifications of aspects such as drilling, surveying, sampling and assaying, data management and database integrity. Appropriate documentation of quality control measures and regular analysis of quality control data are important as a safeguard for project data and form the basis for the quality assurance program implemented during exploration.

Golden Chalice have implemented formal analytical quality control measures since the inception of Langmuir W4, by inserting a single Matachewan diabase drill core sample blank or a single standard reference sample into the sample stream for every 25 samples. A standard pulp was inserted for every drill core sample ending in "-25 and -75" sent to the laboratory, whereas a blank sample was inserted drill core sample ending in "-00 and -50". During mid 2008 the blank was changed to crushed marble, when the supply of Matachewan diabase drill core was exhausted.

Five nickel standards ranging from a high nickel standard of 1.900 percent nickel to a low nickel standard of 0.265 percent nickel obtained from WCM Minerals of Vancouver have been inserted into the sample

stream (Table 11-1). These standards adequately represent the range of nickel grades found at the Langmuir W4 Nickel Deposit.

Table 11-1. Assaying specifications for QA/QC control samples.

Standard	Source	Nickel Assays				Copper Assays			
		Mean	Stdv	+2 Stdv	-2 Stdv	Mean	Stdv	+2 Stdv	-2 Stdv
Ni111	WCM Minerals	0.420	0.013	0.446	0.394	0.240	0.009	0.258	0.222
Ni112	WCM Minerals	0.610	0.026	0.661	0.559	0.300	0.014	0.329	0.271
Ni113	WCM Minerals	1.240	0.038	1.315	1.165	0.250	0.120	0.274	0.226
Ni115	WCM Minerals	1.900	0.062	2.025	1.775	0.170	0.008	0.186	0.154
Ni117	WCM Minerals	0.265	0.011	0.287	0.243	0.345	0.009	0.364	0.326

* Expected values and standard deviation values for nickel and copper can be found in Appendix C alongside the analytical quality control assay results.

Laboratoire Expert Inc. implements a stringent internal check assay analysis procedure, which includes a repeat pulp analysis every 12th sample for every element analyzed. Each sample shipment batch (certificate of analysis) includes a standard for the nickel, copper, and cobalt analysis. Each furnace batch of 28 samples analyzed for gold, platinum and palladium includes a reagent blank and a standard sample (Cole *et al.*, 2010).

11.1.3 Specific Gravity Database

The Langmuir W4 specific gravity database includes 75 measurements conducted by SGS Laboratory by pycnometry in 2010 on pulverized core samples selected as representative of each grade domain. This database also includes 15 measurements on split core acquired by JVX Consultants using a water immersion technique. Based on this database of 90 records, SRK assigned an average specific gravity value of 2.82 to all resource domains, as illustrated in Figure 11-1.

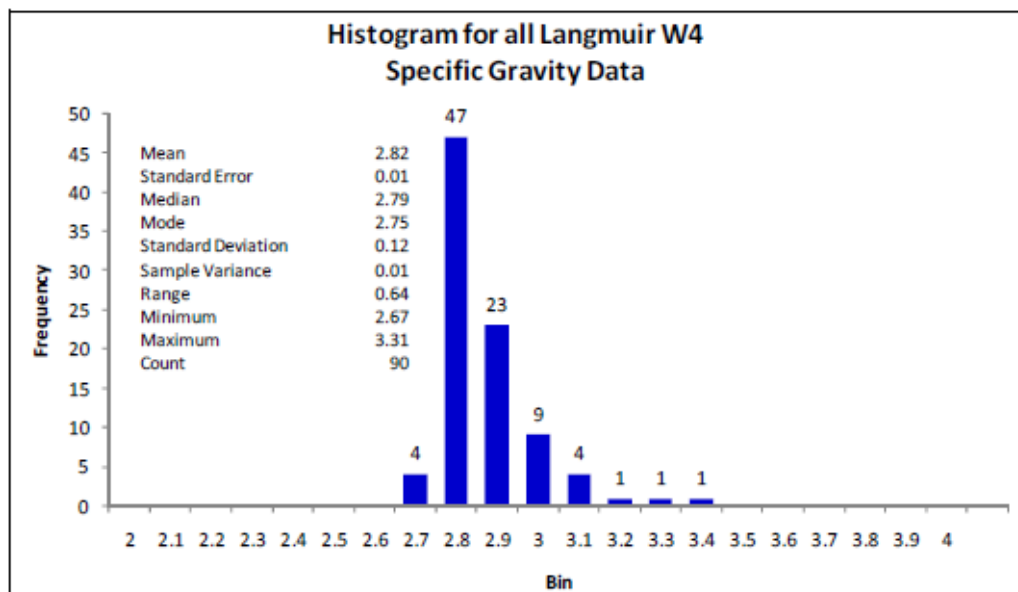


Figure 11-1. Histogram and basic statistics of the combined (2007-2010) specific gravity dataset for Langmuir Nickel Project (Cole *et al.*, 2010).

11.1.4 Sample Security

Drill core is logged at Golden Chalice's secure core logging and sampling facility in Timmins by Golden Chalice geologists. Core is transported to the Timmins core logging and sampling facility by Golden Chalice personnel using a company vehicle. Security of samples prior to dispatch to the analytical laboratory was maintained by limiting access of un-authorized persons to the secure core handling facility. Detailed records of sample numbers and sample descriptions provide integrity to the sampling process. Labelled samples are packed in sealed bags robust enough to survive transport to the assay laboratory and also to provide sample integrity. All drilling assay samples are collected by Manitoulin Transport at the company's secure Timmins core sampling facility and transported securely to Laboratoire Expert Inc. in Rouyn-Noranda, Quebec. Laboratoire Expert Inc. has returned the majority of the drill core sample pulps and rejects to Golden Chalice. The returned pulps and rejects are currently securely stored at the Hastings Management core storage facility in Timmins.

11.2 Historical Diamond Drilling (2009-2010)

The following description is taken from Montgomery (2011) and addresses the core sample preparation, analyses and security for work completed in the 2009 and 2010 diamond drilling programs. The 2009 and 2010 diamond drilling programs were completed by Golden Chalice/Rogue Resources under the supervision of Kevin Montgomery (Montgomery, 2011).

At the drill site, core was placed in wooden tray boxes along with 'marker blocks' indicating measured distances down the drill hole from the collar by the drill contractor's personnel. During the drilling programs, the core was collected by exploration technicians at the drill sites or the drill access trail every drilling day and moved to a secure logging facility. The secure logging facility was the Hastings Management office/core facility at 571 Moneta Avenue, Timmins Ontario (Montgomery, 2011).

At the facility, the length of drill core recovered was compared to the position of depth markers in the core boxes by a geological technician in order to check for misplaced markers and to calculate the amount of core loss, if any. The core was logged and sampled by either of the following geologists George Sparling and Jillian Craig. Geological descriptions of the core and sampling intervals with corresponding identifier numbers were entered onto a "diamond drill log record" installed on a laptop computer. Sampling of the core was based on visual observations of sulphide mineralization and samples were collected within lithologically homogeneous intervals with due regard for varying mineralogy and textures. Sample intervals did not cross geological boundaries. In general, the sample length within mineralized zones was on the order of 0.5 to 1.0 metres or less (Montgomery, 2011).

The NQ core selected for sampling was sawn in half and a half bagged with the first part of a three-part assay tag bearing a unique identifier number. The other half of the core was stored at the logging facility with the second part of the three part assay tag bearing an identical unique identifier number placed in the core box at the beginning of the sample interval. Records of the sampled intervals and sample numbers were recorded in the computerized drill logs, and on the third part of a three part assay tag bearing an identical identifier number as the other two parts of the assay tag. The third part of the assay tag was kept with the geologist's records (Montgomery, 2011).

Security of samples prior to dispatch to the analytical laboratory was maintained by limiting access of un-authorized persons to the secure core handling facility. The drill core sampler completed an assay

requisition sheet describing the sample numbers and requested assay and preparation procedures for inclusion with each batch of samples shipped to the laboratory. Labeled samples packed in sealed bags robust enough to survive the journey to the assay laboratory also provide sample integrity. For the 2009 and 2010 drilling programs, core samples were shipped directly by Manitoulin transport truck to the assay laboratory (Montgomery, 2011).

The NQ Sample preparation and assaying was contracted to Laboratoire Expert Inc. of Rouyn-Noranda, Quebec. Each sample was logged in at Laboratoire Expert Inc using "bar codes." Samples were dried prior to crushing the entire sample to 90% passing a -10 mesh screen. From the crushed coarse reject a sub-sample of approximately 300 grams was collected using a Jones riffle splitter. This 300 gram portion was completely pulverized to 90% passing a -200 mesh screen in a ring and puck pulverizer. A 0.5 g aliquot was collected, from each pulp (Montgomery, 2011).

All NQ drill core samples from the Langmuir Property were analyzed for nickel, copper, cobalt, lead, and zinc by aqua regia digestion followed by atomic absorption analyses. The detection limit was 2 ppm for each element. If the nickel, copper or cobalt result was over 5,000 ppm then the pulp was re-analyzed by total digestion followed by atomic absorption analyses. The concentrations are reported as a percent and the detection limit is 0.01% for Ni and Cu with the total digestion method. All the drill core samples were also analyzed for gold, platinum and palladium by lead fire assay atomic absorption finish on a 30 gram sample pulp. The detection limit for the lead fire assay atomic absorption method is 2 ppb for Au, 5 ppb for Pt and 4 ppb for Pd. If the sample result was greater than 1,000 ppb for any element then the sample pulp was re-analyzed by using a lead fire assay collector and a gravimetric finish. The concentrations were reported as grams per tonne (Montgomery, 2011).

Golden Chalice Resources employed a rigorous external QA/QC program for the Langmuir Property drilling programs. Five nickel standards were inserted as checks on the accuracy of the assaying conducted by Laboratoire Expert Inc. (Table 11-2). A standard pulp was inserted every 50th drill core sample (sample numbers ending in "-25 and -75") sent to the laboratory. The five nickel standards range from a high nickel standard of 1.9 % Ni to a low standard of 2650 ppm Ni and were obtained from WCM Minerals of Vancouver, Canada. They represent well the range of nickel grades found on the Langmuir Property.

Table 11-2. Langmuir W4 drilling program sample standards (Cole *et al.*, 2010).

Standard No.	Ni (%)	Cu (%)	Co (%)
Nickel 111	0.42	0.24	0.018
Nickel 112	0.61	0.30	0.040
Nickel 113	1.24	0.25	0.030
Nickel 115	1.90	0.17	0.059
Nickel 117	0.26	0.34	0.009

The external quality assurance program also consisted of inserting blank samples to detect any possible laboratory contamination. A sterile crushed marble sample was inserted every 50th drill core sample (sample numbers ending in "-00 and -50") sent to the laboratory Laboratoire Expert Inc. has an internal check analysis procedure which includes a repeat pulp analysis every 12th sample for every element

analyzed. Each sample shipment batch (certificate of analysis) included a standard for the nickel, copper, and cobalt analysis.

Each furnace batch of 28 samples analyzed for gold, platinum and palladium included a reagent blank and a standard sample. Laboratoire Expert Inc. returned the drill core sample pulps and rejects to the company. The returned pulps and rejects were securely stored at the Hastings Management core storage facility in Timmins, Ontario (Montgomery, 2011).

11.3 Historical Diamond Drilling (2011)

The following description is taken from Montgomery (2012) and addresses the core sample preparation, analyses and security for work completed in the 2011 diamond drilling program. The 2011 diamond drilling program was completed by Golden Chalice/Rogue Resources under the supervision of Kevin Montgomery (Montgomery, 2012).

At the drill site, core was placed in wooden tray boxes along with 'marker blocks' indicating measured distances down the drill hole from the collar by the drill contractor's personnel. During the drilling program, the core was collected by exploration technicians at the drill sites or the drill access trail every drilling day and moved to a secure logging facility. The secure logging facility was the Rogue Iron Ore office/core facility.

At the facility, the length of drill core recovered was compared to the position of depth markers in the core boxes by a geological technician in order to check for misplaced markers and to calculate the amount of core loss, if any. The core was logged and sampled by either of the following geologists; Kevin Montgomery and George Sparling on evenings and weekends. Geological descriptions of the core and sampling intervals with corresponding identifier numbers were entered onto a "diamond drill log record" installed on a laptop computer. Sampling of the core was based on visual observations of sulphide mineralization and samples were collected within lithologically homogeneous intervals with due regard for varying mineralogy and textures. Sample intervals did not cross geological boundaries. In general the sample length within mineralized zones was on the order of 0.5 to 1.0 metres, sometimes more and sometimes less, depending on mineralization and lithology.

The NQ or HQ core selected for sampling was sawn in half and a half bagged with the first part of a three-part assay tag bearing a unique identifier number. The other half of the core was stored at the logging facility with the second part of the three part assay tag bearing an identical unique identifier number placed in the core box at the beginning of the sample interval. Records of the sampled intervals and sample numbers were recorded in the computerized drill logs, and on the third part of a three part assay tag bearing an identical identifier number as the other two parts of the assay tag. The third part of the assay tag was kept with the geologist's records.

Security of samples prior to dispatch to the analytical laboratory was maintained by limiting access of unauthorized persons to the secure core handling facility. The drill core sampler completed an assay requisition sheet describing the sample numbers, and requested assay and preparation procedures for inclusion with each batch of samples shipped to the laboratory. Labeled samples packed in sealed bags robust enough to survive the journey to the assay laboratory and also provide sample integrity. For the drilling program, core samples were shipped directly by Manitoulin transport truck to the assay laboratory.

The exploration NQ core sample preparation and assaying was contracted to Laboratoire Expert Inc. of Rouyn-Noranda, Quebec. A total of 350 drill core samples were shipped to the laboratory. Each sample was logged in at Laboratoire Expert Inc. using "bar codes."

Samples were dried prior to crushing the entire sample to 90% passing a -10 mesh screen. From the crushed coarse reject a sub-sample of approximately 300 grams was collected using a Jones riffle splitter. This 300 gram portion was completely pulverized to 90% passing a -200 mesh screen in a ring and puck pulverizer. A 0.5 g aliquot was collected, from each pulp.

All NQ drill core samples from the Langmuir Property were analyzed for nickel, copper, cobalt, lead, and zinc by aqua regia digestion followed by atomic absorption analyses. The detection limit was 2 ppm for each element. If the nickel, copper or cobalt result was over 5,000 ppm then the pulp was re-analyzed by total digestion followed by atomic absorption analyses. The concentrations are reported as a percent and the detection limit is 0.01% for Ni and Cu with the total digestion method. All the drill core samples were also analyzed for gold, platinum and palladium by lead fire assay atomic absorption finish on a 30 gram sample pulp. The detection limit for the lead fire assay atomic absorption method is 2 ppb for Au, 5 ppb for Pt and 4 ppb for Pd. If the sample result was greater than 1,000 ppb for any element then the sample pulp was re-analyzed by using a lead fire assay collector and a gravimetric finish. The concentrations were reported as grams per tonne.

Laboratoire Expert Inc. has an internal check analysis procedure which includes a repeat pulp analysis every 12th sample for every element analyzed. Each sample shipment batch (certificate of analysis) included a standard for the nickel, copper, and cobalt analysis. Each furnace batch of 28 samples analyzed for gold, platinum and palladium included a reagent blank and a standard sample.

The metallurgical HQ core sample preparation and as-saying was contracted to Activation Laboratories of Ancaster, Ontario. A total of 260 drill core samples were shipped to the laboratory. Each sample was logged in at Laboratoire Expert Inc. using "bar codes." Samples were dried prior to crushing the entire sample to passing a -10 mesh screen.

From the crushed coarse reject a sub-sample of approximately 300 grams was collected using a Jones riffle splitter. This 300 gram portion was completely pulverized to 95% passing a -150 mesh screen in a ring and puck pulverizer. A 0.5 g aliquot was collected, from each pulp.

All HQ drill core samples from the W4 Langmuir nickel deposit were analyzed for multiple elements by aqua regia digestion followed by Inductively Coupled Plasma Mass Spectrometry analysis (AR/ICPMS). A 0.5 g sample is digested in aqua regia at 90°C in a microprocessor controlled digestion block for 2 hours. The solution is diluted and analyzed by ICP/MS using a Perkin Elmer SCIEX ELAN 6000, 6100 or 9000 ICP/MS. One blank is run for every 68 samples. An in-house control is run every 33 samples. Digested standards are run every 68 samples. After every 15 samples, a digestion duplicate is analyzed. Instrument is recalibrated every 68 samples. Nickel and certain elements (Ti, P and S) are analyzed by Inductively Coupled Plasma/ Optical Emission Spectroscopy (ICP/OES) using a Varian 735 ES. This extends the dynamic range for a number of elements as well.

International certified reference materials USGS GXR-1, GXR-2, GXR-4 and GXR-6 are analyzed at the beginning and end of each batch of samples. Internal control standards are analyzed every 10 samples and

a duplicate is run for every 10 samples. This digestion is not total and will not dissolve silicates some oxides and resistate minerals (*e.g.*, zircon, monazite, sphene, etc.).

Rogue Iron Ore employed a rigorous external QA/QC program for the 2011 Langmuir drilling program. Four nickel standards were inserted as checks on the accuracy of the assaying conducted by Laboratoire Expert Inc. and Activation Laboratories.

A standard pulp was inserted every 50th drill core sample (sample numbers ending in “-25 and -75”) sent to the laboratory. The four nickel standards range from a high nickel standard of 1.9 % Ni to a low standard of 2650 ppm Ni and were obtained from WCM Minerals of Vancouver, Canada. They represent well the range of nickel grades found in the W4 Langmuir nickel deposit (Table 11-3).

Table 11-3. Langmuir W4 drilling program sample standards (Cole *et al.*, 2010).

Standard No.	Ni (%)	Cu (%)	Co (%)
Nickel 112	0.61	0.30	0.040
Nickel 113	1.24	0.25	0.030
Nickel 115	1.90	0.17	0.059
Nickel 117	0.26	0.34	0.009

The external quality assurance program also consisted of inserting blank samples to detect any possible laboratory contamination. A sterile crushed marble sample was inserted every 50th drill core sample (sample numbers ending in “-00 and -50”) sent to the laboratory.

Laboratoire Expert Inc. and Activation Laboratories returned the sample pulps and rejects to the company. The returned pulps and rejects were securely stored at the Hastings Management core storage facility on Airport Road in Timmins, Ontario.

12.0 DATA VERIFICATION

The Principal Author has reviewed the historical data and information regarding past exploration work on the Project as provided by the Issuer. The Principal Author has no reason to doubt the adequacy of historical sample preparation, security and analytical procedures for the exploration work completed by past operator Golden Chalice and has a high level of confidence in this historical information and data. The drill core data and information is of sufficient quality that it can be used for future exploration program planning, geological modelling and mineral resource estimation.

Ms. Jennifer Gignac (P.Geo.) visited the Langmuir Nickel Project for two days on 17 and 18 April 2021. A number of historical (Golden Chalice/Rogue Resources) drill hole collar locations were visited and the coordinates measured. Historical drill core was examined and re-logged in order to compare with historical drill core logs. The Authors determined that it was not necessary to re-sample the drill core.

In April 2021, the Issuer engaged Caracle to complete an independent review of the 2010 Mineral Resource Estimate completed by SRK. The review was completed by Miguel Vera (B.Sc., Geology, Atticus Chile SA) (the "Reviewer") and supervised by Dr. Scott Jobin-Bevans (P.Geo.), Principal Author of the Report.

12.1 2010 Mineral Resource Estimate Review

The reviewer had access to most of the information used and generated for the previous NI 43-101 report, including: drilling database with assays and lithology, density samples, lithological and grade shell models and a preliminary version of the block model. Further references were sourced or inferred from the report itself.

In summary, despite some moderate to minor issues, the estimation process from sampling to resource seems to have been carried out appropriately, and the results can be considered reliable. Detailed observations and recommendations to further improve the reliability of the resource estimate in future stages will be elaborated next.

12.1.1 Sampling

Only intercepts with visible mineralization were sampled, and though this practice has succeeded in identifying high-grade zones, some of the sampling gaps left in the process (considered waste for mining purposes) have caused breaks in the continuity of known mineralized structures. To verify if these gaps are truly barren, a selection of them were reviewed in the field by a QP, as stated in Section 2.4, who recommended some infill sampling in order to close such gaps. Efforts should be made in the future to complete sampling within the mineralized structure continuity at the least, and new drilling should consider more systematic sampling procedures.

12.1.2 Specific Gravity (Density)

The distribution of density samples is adequate though not systematic, with specific focus in the shallower southern half of the deposit containing the main mineralization, which means a sizeable portion of the deposit at depth has not been sampled. However, considering that ultramafic lithologies are rather uniform across the deposit, it is likely that this omission is not critical, as density seems to be determined by lithological or textural changes and does not respond to the presence of mineralization.

Density is usually at or below 2.80 g/cm³ within regular komatiitic peridotites, and commonly increases around and within spinifex textured zones, which tend to be short in length and irregularly distributed. This means that the calculated average of 2.82 g/cm³ for the deposit could be slightly high, and is probably closer to the dataset median at 2.79 g/cm³, which is not a significant difference in any case.

It is important to note that two types of density measurements comprising samples of different average lengths are being combined for this calculation, pycnometry (~0.9 m) and water immersion (~0.15 m), meaning that they are not equally representative in the strict sense. A comparison of 5 sample pairs taken at the same location (with their corresponding length difference) and tested with both methods shows slightly higher densities for four (4) of the water immersion samples, but it is not possible to draw any hard conclusions from such a small pair set.

The average density value used in the resource estimate is nonetheless acceptable at this stage, though going forward density should be measured preferably at regular intervals and lengths, and under a single method with well-established protocols.

12.1.3 Interpretation and Modelling

The lithological model lacks complexity, representing only the most notable and larger features within the project area, thus providing no value for grade and mineralization analysis. It is the arrangement of high Ni-Co-Cu-PGE grades across the deposit which strongly suggests the existence of three sub-vertical vein-like structures or horizons, supporting the decision to model them using either interval selections, as in the original GC “vein” model, or grade shells, as in the current SRK model. Besides geochemistry, however, efforts should be made from a geological standpoint to understand and discriminate the ultramafic flows that are interpreted as the source environment of the deposit.

The two higher grade shell cut-offs (0.5% and 1.0% Ni) were appropriately chosen as they match grade declines between peaks in the statistical distribution, thus avoiding multimodality. Conversely, the 0.3% Ni cut-off seems mostly referential, given that a good amount of samples with grades between 0.02-0.29% Ni were included (about a third of the total), in some cases to ensure the continuity and coherency of the envelope, but in other cases with no clear purpose other than increasing its volume (and apparently affecting grade averages, as will be explained in the following section). To reduce such discrepancies, a lower base cut-off should be evaluated, along with a more consistent sample selection criteria.

The final grade shells are acceptable from a modelling standpoint, though they could be considerably improved using modern tools that allow for higher resolution models and better extrapolation management, something that should be considered in a future resource update.

12.1.4 Compositing, Capping and Statistics

The selected composite length of 1.0 m seems reasonable when considering the number of samples falling within each grade shell. Although a composite length of 2.0 m would be more appropriate for grade variability control, reducing the number of composites in half would leave less than ideal sample numbers for variography, especially in the higher-grade envelopes. As more drill holes are added in future campaigns, the composite length should be re-evaluated.

Capping values are appropriate, showing limited effect in the dataset averages and moderate to appreciable reductions in the coefficients of variation, taking them to values within acceptable ranges for interpolation.

The basic statistics and distribution of the final capped composites show that they are suitable for estimation, though in the case of the 0.5% grade shell, which displays an average grade of 0.41% Ni, they do not correctly represent the selected cut-off due to the inclusion of low to very low grades within the envelope. A comparison of the 0.3% and 0.5% Ni grade shells composite averages for Ni (0.34% vs 0.4% Ni) and other elements such as Cu (226 vs 302 ppm Cu), Co (76 vs 87 ppm Co) and Pt (29 vs 35 ppb Pt) further proves this point, as they do not seem to differ enough from each other to justify the middle envelope. Even though this does not invalidate the use of these composites for estimation or the grade shell model approach, it is an indication that a portion of the resource could have been underestimated and/or include some waste volume.

As stated in the previous section, a more consistent sample selection criteria would improve this issue, at the cost of some envelope volume. However, it is also possible that the anomalous averages included in the report resulted from software or human error, given that the database made available for review did not display such low averages when the same statistical analyses were carried out.

12.1.5 Block Size and Variography

The 5 x 5 x 5 m block size is appropriate considering the drill hole spacing and envelope dimensions, as is the sub-blocking condition, well adapted to the composite length.

Based only on the report, the steps taken and parameters used for anisotropy analysis and variography seem correct, with expected results such as a mostly isotropic behavior in the X-Y plane and variogram ranges of 50 to 60 m for Ni, close to the average distance between mineralized intercepts. That the data allowed for stable variograms with no need for transformations, despite the composite length, indicates that grade variability is probably not a significant issue in the deposit.

12.1.6 Grade Interpolation and Classification

Sample numbers included within each grade shell support ordinary kriging (OK) estimation for Ni, Cu and Co. In the case of Pt and Pd, over a third of the samples contain grades below the detection limit, which can pose an issue during variography, justifying the decision to use an inverse distance algorithm (IDW) to estimate them.

The use of two estimation passes, with search distances corresponding to full and double variogram ranges for the first and second pass respectively, is acceptable due to the limited dimensions of the envelopes and the few relevant mineralized intercepts within each of them.

The estimation parameters for each pass are exactly the same, the only difference is in their search ellipsoid ranges, which is uncommon because parameters tend to lessen their restrictions with each successive pass, though not necessarily an issue. The maximum number of composites seems somewhat high at 20 composites, but considering the composite length and other parameters such as the use of octants and the maximum number of composites per drill hole, it can be deemed acceptable.

Given that the classification is directly dependent on the estimation passes, the decision to use only two passes could also respond to the fact that the requirements for measured resources, typically reserved for blocks estimated in a first pass with 50% to 66% of the variogram ranges, are not met at this stage. Thus the model contains only two resource classes, indicated and inferred, assigned from the first and second passes, respectively.

The final resource classification displays an 80/20 ratio of indicated to inferred blocks, which appears excessive at first glance. It could be that, should more restrictive parameters had been used in the first pass (such as increasing the minimum number of octants and/or composites per octant), this ratio would be a bit more reasonable. This will not be considered a critical issue as the envelope is sufficiently constrained and seems to have good grade continuity, however, future resource updates should re-evaluate the estimation pass parameters and the classification criteria.

12.1.7 Estimation Validation

The report lacks appropriate validation information, besides two unclear section images and brief comments. The block model available for review, though not the final version, allowed for some validation testing such as swath plots and visual/statistical comparisons.

Swath plots generated for Ni grades within each envelope show fairly good correlation between all estimation methods (OK, IDW, NN) and the original sample database, while global average comparisons of the same datasets are not as consistent, possibly due to the preliminary version of the block model, but acceptable in most cases. Finally, visual validation further confirms a good coincidence between Ni grades from samples and estimated blocks.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical test work has been completed on the Property by the Issuer.

14.0 MINERAL RESOURCE ESTIMATES

The Project has no current NI 43-101 Mineral Resources.

15.0 MINERAL RESERVES

This section is not applicable to the Project at its current stage.

16.0 MINING METHODS

This section is not applicable to the Project at its current stage.

17.0 RECOVERY METHODS

This section is not applicable to the Project at its current stage.

18.0 PROJECT INFRASTRUCTURE

This section is not applicable to the Project at its current stage.

19.0 MARKET STUDIES AND CONTRACTS

This section is not applicable to the Project at its current stage.

20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This section is not applicable to the Project at its current stage.

21.0 CAPITAL AND OPERATING COSTS

This section is not applicable to the Project at its current stage.

22.0 ECONOMIC ANALYSIS

This section is not applicable to the Project at its current stage.

23.0 ADJACENT PROPERTIES

The Langmuir W4 Nickel Deposit, located within the EVNi Property claims, bears similarities to various past production and current production deposits within the Shaw Dome (see Figure 7-4). Most of the Shaw Dome nickel deposits are hosted by ultramafic rocks, which have generally been interpreted as extrusive komatiitic flows (*e.g.*, Sproule *et al.*, 2005; Houlé and Guilmette, 2005).

The Langmuir W4 Nickel Deposit is located just south of five known deposits in the Shaw Dome. Three of these deposits, McWatters, Redstone and Hart, were owned by Liberty Mines Inc. (now Northern Sun Mining Corp.). Ownership of Langmuir No. 2 nickel zones is divided between Northern Sun Mining Corp. and Silk Energy Limited (previously Inspiration Mining Corp.), with Langmuir No. 1 solely belonging to Silk Energy Limited. A summary of the past producing nickel mines adjacent to the Property is provided in Table 23-1.

In 2010, the Redstone deposit contained reported Measured and Indicated mineral resources of 599,000 tonnes at an average grade of 1.47% Ni and Inferred Mineral Resources of 737,000 tonnes at 1.57% Ni (SRK, 2010a).

The McWatters deposit is hosted by steeply dipping serpentinite. The sulphide mineralization is divided into an upper irregular disseminated zone and a lower massive sulphide zone. In 2010, the McWatters mineral resources were estimated at 792,500 tonnes grading an average of 0.81% Ni in the Indicated category (SRK, 2009). As of 2010, the Hart nickel deposit had reported Indicated resources of 1,546,000 tonnes at 1.40% Ni and Inferred resources of 322,000 tonnes at 1.27% Ni (SRK, 2010b).

Both Langmuir No. 1 and Langmuir No. 2 are past producing mines with total reported production of 111,502 tonnes at an average grade of 1.74% Ni, and 1,133,750 tonnes at an average grade of 1.50% Ni, respectively (*e.g.*, Atkinson *et al.*, 2010). The Langmuir No. 1 deposit is estimated to contain an NI 43-101 compliant Indicated Mineral Resource of 1,733,000 tonnes grading 0.51% Ni (Pressacco *et al.*, 2010). The Indicated Mineral Resources for the Langmuir North deposit (Langmuir No. 2 North zone) are estimated at 8,324,000 tonnes grading 0.40% Ni (Pressacco *et al.*, 2010).

Table 23-1. Reported nickel production from mines adjacent to the Property, to 2010 (after Atkinson *et al.*, 2010).

Mine	Years of Production	Ore milled	% Ni
Langmuir No. 1	1990-1991	111,502 tons	1.74
Langmuir No. 2	1972-1978	1.1 M tons	1.47
McWatters	2008	15 361 tonnes	0.55
	2009	7 664 tonnes	0.41
Redstone	1989-1992	294,895 tons	2.4
	1995-1996	10,228 tons	1.7
	2006-2008	133 295 tonnes	1.92
	2009	36 668 tonnes	1.16

The Principal Author and Qualified Person has been unable to verify the information presented above and this information is not necessarily indicative of the mineralization on the Property that is the subject of the Report.

24.0 OTHER RELEVANT DATA AND INFORMATION

The Principal Author is not aware of any additional information or explanations necessary to make the Report understandable and not misleading.

25.0 INTERPRETATION AND CONCLUSIONS

The objective of the Report was to prepare an independent NI 43-101 Technical Report, capturing historical information and data available about the current Property that comprises the Langmuir Nickel Project, and making recommendations for future work.

The Langmuir Property comprises 9,079 hectares of unpatented mining claims which contain komatiite-hosted nickel-copper-platinum group metals sulphide mineralization, similar to other mined nickel deposits within the Shaw Dome region.

The historical work completed on the Property between 2005 and 2014 has generated a comprehensive body of exploration data and information from which EVNi will be able to move the Project forward. The historical search for Kambalda-style nickel sulphide mineralization resulted in the discovery of the Langmuir W4 Nickel Deposit in May 2007 (drill hole CGL07-06).

In 2010, SRK published an initial historical mineral resource estimate containing 677,000 tonnes grading an average of 1.00% Ni and 0.06% Cu in the Indicated category; with an additional 171,000 tonnes grading an average of 0.89% Ni and 0.06% Cu in the Inferred category, comprising both open pit and underground resources (Cole *et al.*, 2010). Neither the Principal Author nor a qualified person have done sufficient work to classify any of the historical estimates as current mineral resources and as such, the Principal Author and the Issuer are treating the tonnages and grades reported as historical mineral resources. Investors are cautioned that the historical mineral resource estimates do not mean or imply that economic deposits exist on the Property.

The sulphide-bearing komatiitic flows that host the Langmuir W4 Nickel Deposit have been shown to continue at depth, below 375 m vertical and toward the east. Future exploration in the immediate area of the Langmuir W4 Nickel Deposit should focus on drill testing the depth and eastern extension.

The overall strike length of the target ultramafic (komatiitic) flow package on the Property is at least 20 km long and up to four kilometres wide. Given the large property size and prospective geology, with several known and untested exploration targets, there is ample opportunity for future discovery.

Based on the Property's favourable location within a prolific Kambalda-style nickel belt, the high quality historical systematic exploration work completed from 2005 to 2014, the availability of all of this historical data and information and that from public (government) sources, and the requirement for dedicated and systematic exploration programs which are required to be successful in making discoveries for this particular deposit type, the Project presents excellent potential for the discovery of additional nickel sulphide deposits, and is worthy of further evaluation.

The characteristics of Langmuir W4 Nickel Deposit are of sufficient merit to justify the undertaking of preliminary engineering, environmental, and metallurgical studies aimed at completing the characterization of the nickel sulphide mineralization and offering economic guidelines for future exploration strategies.

In addition, the close proximity of the Langmuir W4 Nickel Deposit to the nickel processing facility at Northern Sun Mining's Redstone Mill Facility, located south of Timmins, approximately 5 km northwest of

the Project, could favourably impact future economic studies relating to the potential mining of the deposit.

26.1 Risks and Uncertainties

Risks and uncertainties which may reasonably affect reliability or confidence in future work on the Project relate mainly to the reproducibility of exploration results (*i.e.*, exploration risk) in a future production environment. Exploration risk is inherently high when exploring for Kambalda-type nickel sulphide deposits, however these risks are mitigated by applying the latest geophysical techniques to develop high confidence targets for future drilling programs.

The Principal Author is not aware of any other significant risks or uncertainties that would impact the Issuer's ability to perform the recommended work program (see Section 26) and other future exploration work programs on the Property.

26.0 RECOMMENDATIONS

It is the opinion of the Authors that the geological setting and character of the nickel sulphide mineralization delineated to date on the Langmuir Property are of sufficient merit to justify additional exploration and development expenditures on the Langmuir Nickel Project. A recommended work program, arising through the preparation of the Report and consultation with the Company, is provided below.

A one year, two-phase exploration program, which considers geophysical surveys, diamond drilling, environmental studies and reporting, is outlined in Table 26-1.

Phase 1 is proposed to begin with borehole TEM surveys on a selected number of prioritized holes, continuing on from the eight boreholes surveyed by Quantec Geoscience in 2009 (Coulson, 2009) and focused in the areas of the VTEM W4 and W2 anomalies. According to historical reports, all of the borehole casings remained in the ground except GCL08-48 to 73 and RL11-01, which were reportedly pulled. The results of the borehole TEM surveys will determine the locations of the Phase 1 diamond drill holes. The total cost for the recommended Phase 1 component of exploration work is estimated at approximately C\$929,260.

Implementation of Phase 2, also outlined in general in Table 26-1, is contingent on the results and success of Phase 1. Locations of Phase 2 drill holes and other components of this phase are contingent on the results from Phase 1.

Table 26-1. Budget estimate, recommended two-phase exploration program, Langmuir Nickel Project.

PHASE 1 (7 months)		
Fixed Costs	salaries, room & board, core storage/core shack, vehicle rentals	\$210,100
Geophysics	borehole TEM surveys (~20 holes)	\$85,000
Diamond Drilling	3,000 m; ~10 holes	\$533,000
Analytical Work	core assays	\$67,500
Environmental Studies		\$3,600
NI 43-101 Reports	reporting	\$30,060
	Total (P1):	\$929,260
PHASE 2 (5 months) - contingent on Phase 1 results		
Fixed Costs	salaries, room & board, core storage/core shack, vehicle rentals	\$309,500
Geophysics	follow-up borehole TEM surveys (~15 holes)	\$75,000
Diamond Drilling	2,500 m; 8 holes	\$445,500
Analytical Work	core assays	\$81,000
Metallurgical Testwork/PEA		\$249,000
Environmental Studies		\$4,000
NI 43-101 Reports	reporting	\$150,000
	Total (P2):	\$1,314,000

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USGS – Nickel Statistics and Information:

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APPENDIX 1 - Certificates of Authors
[2 pages]

APPENDIX 2 – Photographs: Langmuir Nickel Project Site Visit
[3 Pages]

APPENDIX 3 – Land Tenure
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