We are committed to providing accessible customer service.
If you need accessible formats or communications supports, please contact us.

Nous tenons à améliorer l’accessibilité des services à la clientèle.
Si vous avez besoin de formats accessibles ou d’aide à la communication, veuillez nous contacter.

ASSESSMENT REPORT

Nicobat Project, Rainy River Area, Ontario

Prepared for:

Crystal Lake Mining Corp.

Prepared by:

Elisabeth Ronacher, PhD, P.Geo.
Brenda Sharp, MSc, P.Geo.

Ronacher McKenzie Geoscience Inc.

December 21, 2018

HeltemC35 System, CGG Canada Inc.

TABLE OF CONTENTS

1.0 SUMMARY 4

2.0 INTRODUCTION 5

2.1 TERMINOLOGY 5
2.2 UNITS 6
2.3 QUALIFICATIONS 6

3.0 PROPERTY DESCRIPTION AND LOCATION 7

3.1 OWNERSHIP 21
3.1.1 Cells owned by Emerald Lake 21

4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY 21

4.1 ACCESS 22
4.2 CLIMATE 22
4.3 PHYSIOGRAPHY AND VEGETATION 22
4.4 INFRASTRUCTURE AND LOCAL RESOURCES 22

5.0 HISTORY 23

5.1 POTTS TOWNSHIP/NORTHERN MATHER AND KINGSFORD TOWNSHIPS 23
5.1.1 Canadian Nickel Company ("Inco") (1972-73) 24
5.1.2 Walter Cummings (1988-89) 24
5.1.3 Noranda (1995) 25
5.1.4 Puskas & Allen (1997) 25
5.1.5 Rainy River Resources (2007) 25

6.0 GEOLOGICAL SETTING AND MINERALIZATION 26

6.1 REGIONAL GEOLOGY 26
6.2 LOCAL GEOLOGY 28
6.3 STRUCTURE 28
6.4 PROPERTY GEOLOGY 29
6.4.1 Dobie Township Claims 30
6.4.2 Mather Township Claims 30
6.4.3 Potts/Kingsford/northern Mather Township Claims 30
6.5 MINERALIZATION 32

7.0 DEPOSIT TYPES 32

8.0 EXPLORATION 33

8.1 CRYSTAL LAKE PREVIOUS EXPLORATION 33
8.1.1 Ground Geophysics – Magnetic and VLF Survey 33
8.1.2 Drilling 37

8.2 HELITEM AIRBORNE MAGNETIC AND ELECTROMAGNETIC SURVEY 39
8.2.1 Survey Specifications and Quality Control *43*
8.2.2 Calibration *44*
8.2.3 Processing *44*
8.2.1 HeliTEM Results *46*

9.0 FIRST NATION CONSULTATIONS 53

10.0 INTERPRETATION AND CONCLUSIONS 55

11.0 RECOMMENDATIONS 56

12.0 REFERENCES 57

13.0 STATEMENT OF AUTHORSHIP 60

FIGURES

Figure 3-1: Location of the property in northwestern Ontario. 8
Figure 3-2: Overview map showing Crystal Lake's claims. Detailed maps are shown below. 15
Figure 3-3: Map showing Crystal Lake's legacy claims. 16
Figure 3-4: Map showing the northernmost claim group with claim numbers. 17
Figure 3-5: Map showing the eastern claim groups with claim numbers. 18
Figure 3-6: Map showing the southern claim groups with claim numbers. 19
Figure 3-7: Map showing the western claim groups with claim numbers. 20
Figure 6-1: Location of the Wabigoon subprovince (modified from Frieman et al., 2017). 27
Figure 6-2: Local Geology 29
Figure 6-3: Geology of the southern claim group 31
Figure 7-1: Schematic model for the formation of Ni-Cu-PGE deposits (from Begg, et al. 2010) 33
Figure 8-1. Results of the Farm ground magnetic survey 35
Figure 8-2. Results of the Farm ground VLF survey, 24.8 kHz. red = in phase, blue = quadrature, green = total field 36
Figure 8-3: Location of diamond drill hole A-0-15 on legacy claim 4271029 prospect. 38
Figure 8-4: Loop configuration used during the HeliTEM survey. 42
Figure 8-5: Flight lines for the HeliTEM survey. See Appendix 3 for a flight line map with the claim fabric. 47
Figure 8-6: Map showing the analytic signal (colour bar units are nT). See Appendix 3 for an analytic signal map with the claim fabric. 48
Figure 8-7: Map showing dB/dt, selected anomalies and modeled plates (colour bar units are ms/m). See Appendix 3 for a conductivity map with the claim fabric. 49

Figure 8-8: Location of modeled plates in the Potts Township claim group (background magnetic analytic signal; nT)..... 51
Figure 8-9: Location of plates in Carpenter Township claim group (background magnetic analytic signal; nT)..... 52
Figure 8-10: Maxwell plates on the claims in Potts Township. Scale bar is in metres. 53

TABLES

Table 3-1: List of claims of the Nicobat property..... 9
Table 5-1: Overview of historic work completed on Crystal Lake's claim in Potts, Kingsford and northern Mather townships..... 23
Table 5-2: List of drill holes completed by Canadian Nickel Co. in 1972/73..... 24
Table 5-3: List of drill holes completed by Puskas and Allen in 1997. 25
Table 8-1: Details of drill hole A-0-15 drilled on claim 4271029 in 2015..... 37
Table 8-2: List of drill core samples collected from drill hole A-0-15 with assay results..... 37
Table 8-3: HeliTEM survey parameters 39
Table 8-4: Details for each survey block 46
Table 8-5: Details of the plates in Carpenter Township 50
Table 8-6: Details of the plates located in the claim group in Potts, Mather and Kingsford townships. 50
Table 11-1: Cost estimate of the recommended Phase 2 exploration program. 56

APPENDICES

Appendix 1 – Certificates of Authors
Appendix 2 – Summary of Engagement with Indigenous Communities
Appendix 3 – Detailed Maps
Appendix 4 – List of Line Kilometres per Cell Claim

1.0 SUMMARY

Crystal Lake Mining Corp. ("Crystal Lake") retained Ronacher McKenzie Geoscience Inc. ("Ronacher McKenzie") to prepare an Assessment Report for the exploration completed by Crystal Lake and its joint venture partner Emerald Lake Development Corp. ("Emerald Lake") on their Nicobat Project near Fort Frances, Ontario, in 2018.

The property consists of 193 non-contiguous, unpatented mineral claims in five townships. Crystal Lake owns 184 cells; nine cell claims are owned by Emerald Lake. Crystal Lake and Emerald Lake entered into an option agreement regarding these cell claims on May 26, 2015. Crystal Lake holds a 15% interest in these cell claims with the right to increase its interest to 60% by paying $2,000,000 to Emerald Lake Development Corp. ("Emerald Lake"). Crystal Lake has the right to increase its interest to 85% by paying $8,000,000 to Emerald Lake with the option to obtain the remaining 15%.

The area has been explored for Ni-Cu-PGE sulfide mineralization since the early 1950s but no major deposit has been found to date.

The property is located in the Wabigoon subprovince (Superior Province) of the Canadian Shield. The claims in Dobie, Mather, Kingsford, Potts and Tait townships are located in the Rainy River Block, which is characterized by metavolcanic rocks into which large felsic and smaller mafic-ultramafic intrusions were emplaced. Ni-Cu-PGE occurrences in the area are associated with mafic-ultramafic intrusions.

Crystal Lake completed the following work program in 2018:

- HeliTEM electromagnetic survey: preparations for the survey started on February 1, 2018. The survey was flown between March 16 and 22, 2018; the survey was completed by CCG Canada Inc. ("CGG"); CGG's crew spent 7 days in the field
- Interpretation of the HeliTEM results and picking anomalies: completed by Ronacher McKenzie
- Modeling plates of selected anomalies: completed by Ronacher McKenzie
- Interpretation of the modeling results and target selection: completed by Lightfoot Geoscience Inc. and Ronacher McKenzie
- First Nation Consultations: completed by Ronacher McKenzie

The objectives of the work program were to delineate targets that may host Ni-Co mineralization associated with mafic-ultramafic intrusions.

The HeliTEM survey delineated several anomalies. The anomalies were reviewed in a geological context and a subset was selected for plate modeling. The results from the plate modeling were interpreted and several targets were delineated.

Ronacher McKenzie recommends drill testing the targets.

The coordinate system used is NAD 83 UTM Zone 15.

2.0 INTRODUCTION

Crystal Lake Mining Corp. ("Crystal Lake") retained Ronacher McKenzie Geoscience Inc. ("Ronacher McKenzie") to prepare an Assessment Report for the exploration Crystal Lake and its joint venture partner Emerald Lake Development Corp. ("Emerald Lake") completed on their Nicobat Project near Fort Frances, Ontario, in 2018.

Crystal Lake completed a thorough exploration program on the property in 2018. The purpose of the exploration was to delineate magmatic Ni-Cu mineralization associated with mafic and ultramafic rocks. The exploration included an airborne magnetic and electromagnetic survey, a detailed analysis of the results of the survey including selecting anomalies and modeling conductors for the best anomalies. The geophysical information was integrated with the local geology in order to delineate targets.

The exploration program was supported by consultations with all local First Nations and the Métis Nation of Ontario.

2.1 Terminology

EM: electromagnetic; geophysical exploration method based on the measurement of alternating magnetic fields associated with currents artificially or naturally maintained in the subsurface (Bates and Jackson 1980)

MNDM: Ministry of Northern Development and Mines

OGS: Ontario Geological Survey

PGE: Platinum group elements

PGM: Platinum group metals

VLF: Very low frequency; geophysical method that uses radio communication signals to determine the electrical property of bedrock.

2.2 Units

The metric system of measurement is used in this report. Historic data are typically reported in imperial units and were converted for this report using appropriate conversion factors. Ounces per (short) ton are converted to grams per (metric) tonne using the conversion factor of 34.2857. One foot is 0.3048 m. One gamma (unit of magnetic intensity) is $1x10^{-9}$ T or 1 nT. Surface area is given in hectares (ha). 1 ha is 2.47 acres. All dollar values are in Canadian dollars except where noted otherwise.

Universal Transverse Mercator (UTM) coordinates are provided in the datum of NAD83, Zone 15N.

2.3 Qualifications

Ronacher McKenzie Geoscience is an international consulting company with offices in Toronto and Sudbury, Ontario, Canada. Ronacher McKenzie's mission is to use intelligent geoscientific data integration to help mineral explorationists focus on what matters to them. We help a growing number of clients understand the factors that control the location of mineral deposits.

With a variety of professional experience, our team's services include:

- Data Integration, Analysis and Interpretation
- Geophysical Services
- Project Generation and Property Assessment
- Exploration Project Management
- Resource Estimation and Independent Technical Reporting
- Project Promotion
- Lands Management

The author of this report is Elisabeth Ronacher PhD, P.Geo. Dr. Ronacher is co-founder and Principal Geologist to Ronacher McKenzie Geoscience and a geologist in good standing of the Association of Professional Geoscientists of Ontario (APGO #1476). Dr. Ronacher has worked as a geologist since 1997 with academia and industry on a variety of exploration properties such as Au, Cu, bas-metal, Cu-Ni PGE and U.

Another author of this Report is Brenda Sharp, MSc, P.Geo. Ms. Sharp is an Associate with Ronacher McKenzie Geoscience and a geoscientist in good standing with the Association of Professional Geoscientists of Ontario (APGO #2568). Ms. Sharp has worked as a geophysicist since 1989 in the geophysical surveying industry mostly on Time Domain electromagnetic and magnetic surveys, both

processing and interpreting the acquired data, for many deposit types including VMS, copper, Ni-Cu-PGE, and kimberlites..

Statements of Qualifications are provided in Appendix 1.

3.0 PROPERTY DESCRIPTION AND LOCATION

The property held as part of the Nicobat Project is located in the Rainy River area of northwestern Ontario (Figure 3-1). The property consists of 193 non-contiguous l claims in five townships (Table 3-1). All cell claims except nine are held by Emerald Lake Development Corp. ("Emerald Lake") (Table 3-1). The locations of the claims are shown on Figure 3-3, Figure 3-3, Figure 3-4, Figure 3-5, Figure 3-6 and Figure 3-7

Legal access to the properties is via provincial highways and roads (Figure 3-3).

Crystal Lake holds an exploration permit (PR-18-11289) and an exploration plan (PL-18-10873) to complete mechanized drilling, line cutting and geophysical surveys requiring a generator.

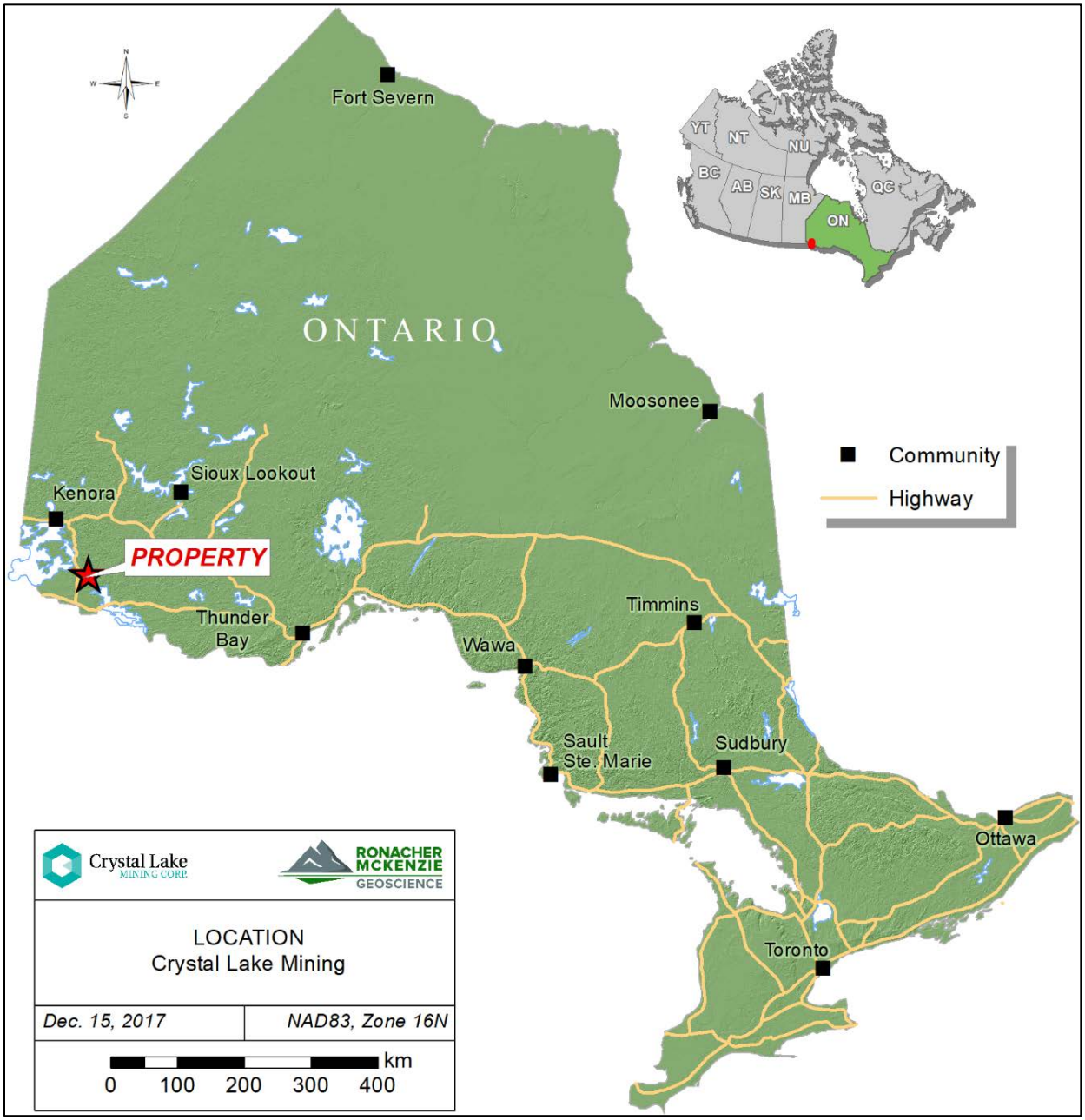


Figure 3-1: Location of the property in northwestern Ontario.

Table 3-1: List of claims of the Nicobat property.

Legacy Claim ID	Tenure ID	Cell ID	Claim Holder	Tenure Type	Anniversary Date	Township / Area
4273688	100432	52C13C026	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD,POTTS
4273688	100433	52C13C024	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD,MATHER,POTTS
4273688	100462	52C13C047	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273688	100463	52C13C046	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273688	100464	52C13C064	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD,MATHER
4273688	100465	52C13C106	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273688	100466	52C13C105	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273667	100481	52C13D328	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4271029	101078	52C12L152	ELDC	Single Cell Mining Claim	2020-12-30	DOBIE
4273685	101096	52C13E359	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4283559	101781	52C13D225	CLM	Single Cell Mining Claim	2019-02-10	MATHER
4283559	101782	52C13D224	CLM	Single Cell Mining Claim	2019-02-10	MATHER
4283559	101783	52C13D245	CLM	Single Cell Mining Claim	2019-02-10	MATHER
4273686	101847	52C13C022	CLM	Single Cell Mining Claim	2019-02-16	MATHER,POTTS
4273669	101918	52C13D190	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273669	101919	52C13D189	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273681	101979	52C13D186	CLM	Single Cell Mining Claim	2019-03-11	MATHER
4273671	102502	52D16A320	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4264444	112981	52C12K070	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER,KINGSFORD
4264444	112982	52C12K108	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264444	112983	52C12K129	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	115648	52C12K091	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	115649	52C12K112	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	115650	52C12K111	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	115651	52C12K133	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	115652	52C12K150	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4273688	117095	52C13C085	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273667	117116	52C13D248	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273667	117117	52C13D267	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273667	117118	52C13D308	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273687	117168	52C13C082	CLM	Single Cell Mining Claim	2019-02-12	MATHER
4273669	117237	52C13D209	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273671	117825	52C13D281	CLM	Single Cell Mining Claim	2019-01-11	TAIT

Legacy Claim ID	Tenure ID	Cell ID	Claim Holder	Tenure Type	Anniversary Date	Township / Area
4273671	117826	52D16A319	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4276458	117849	52C12L156	CLM	Single Cell Mining Claim	2019-11-27	DOBIE
4276458	117850	52C12L176	CLM	Single Cell Mining Claim	2019-11-27	DOBIE
4273686	121757	52C13F381	CLM	Single Cell Mining Claim	2019-02-16	POTTS
4271029	123096	52C12L150	ELDC	Single Cell Mining Claim	2020-12-30	DOBIE
4271029	123097	52C12L171	ELDC	Single Cell Mining Claim	2020-12-30	DOBIE
4273685	123101	52C13F342	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4273671	124379	52C13D321	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4273671	124380	52D16A298	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4273671	124381	52D16A359	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4273689	127621	52C12L199	CLM	Single Cell Mining Claim	2019-02-12	DOBIE
4273688	128262	52C13C068	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273688	128263	52C13C067	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273687	128322	52C13D040	CLM	Single Cell Mining Claim	2019-02-12	MATHER,POTTS
4273687	128323	52C13C081	CLM	Single Cell Mining Claim	2019-02-12	MATHER
4264446	135241	52C13C251	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264444	135242	52C12K109	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264446	141198	52C13C212	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	141199	52C13C273	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	141293	52C13C275	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	141294	52C13C315	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264445	141488	52C12K093	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	141997	52C12K113	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	141998	52C12K172	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4273688	143441	52C13C025	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD,POTTS
4273688	143460	52C13C065	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273667	143477	52C13D287	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4271029	151620	52C12L131	ELDC	Single Cell Mining Claim	2020-12-30	DOBIE
4264445	154265	52C12K132	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	154266	52C12K151	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	154267	52C12K170	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264446	154767	52C13C232	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264444	154768	52C12K089	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER

Legacy Claim ID	Tenure ID	Cell ID	Claim Holder	Tenure Type	Anniversary Date	Township / Area
4264444	154769	52C12K088	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264444	154770	52C12K128	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4273667	157570	52C13D266	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273667	157571	52C13D327	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273667	163599	52C13D228	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273687	163634	52C13D080	CLM	Single Cell Mining Claim	2019-02-12	MATHER
4273686	166884	52C13F361	CLM	Single Cell Mining Claim	2019-02-16	POTTS
4273686	166885	52C13C001	CLM	Single Cell Mining Claim	2019-02-16	POTTS
4271029	168212	52C12L170	ELDC	Single Cell Mining Claim	2020-12-30	DOBIE
4273685	168214	52C13F321	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4273671	168985	52C13D341	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4264448	170027	52C13C274	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4273686	179727	52C13F362	CLM	Single Cell Mining Claim	2019-02-16	POTTS
4273685	181044	52C13E380	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4276458	181813	52C12L157	CLM	Single Cell Mining Claim	2019-11-27	DOBIE
4264446	187888	52C13C210	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264446	187889	52C13C252	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264446	187890	52C13C271	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264446	199905	52C13C233	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	199923	52C13C313	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264445	200104	52C12K153	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4273689	202733	52C12L198	CLM	Single Cell Mining Claim	2019-02-12	DOBIE
4283559	203382	52C13D246	CLM	Single Cell Mining Claim	2019-02-10	MATHER
4273667	203383	52C13D288	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273667	203384	52C13D326	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273681	204046	52C13D185	CLM	Single Cell Mining Claim	2019-03-11	MATHER
4283559	204921	52C13D204	CLM	Single Cell Mining Claim	2019-02-10	MATHER
4283559	204941	52C13D244	CLM	Single Cell Mining Claim	2019-02-10	MATHER
4271029	205575	52C12L172	ELDC	Single Cell Mining Claim	2020-12-30	DOBIE
4273685	205580	52C13E339	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4264446	207917	52C13C230	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	208027	52C13C255	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4273689	210793	52C12L177	CLM	Boundary Cell Mining Claim	2019-02-12	DOBIE

Legacy Claim ID	Tenure ID	Cell ID	Claim Holder	Tenure Type	Anniversary Date	Township / Area
4273689	210794	52C12L219	CLM	Single Cell Mining Claim	2019-02-12	DOBIE
4283559	211473	52C13D206	CLM	Single Cell Mining Claim	2019-03-11	MATHER
4273667	211474	52C13D306	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273687	211514	52C13C042	CLM	Single Cell Mining Claim	2019-02-12	MATHER
4273687	211515	52C13C062	CLM	Single Cell Mining Claim	2019-02-12	MATHER
4273681	212148	52C13D187	CLM	Single Cell Mining Claim	2019-03-11	MATHER
4273686	214821	52C13C023	CLM	Single Cell Mining Claim	2019-02-16	MATHER,POTTS
4273671	214927	52C13D301	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4273686	215062	52C13F363	CLM	Single Cell Mining Claim	2019-02-16	POTTS
4273686	215063	52C13C003	CLM	Single Cell Mining Claim	2019-02-16	POTTS
4271029	216396	52C12L151	ELDC	Single Cell Mining Claim	2020-12-30	DOBIE
4273671	217673	52D16A318	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4273689	222852	52C12L218	CLM	Single Cell Mining Claim	2019-02-12	DOBIE
4273688	222975	52C13C028	CLM	Single Cell Mining Claim	2019-02-12	FLEMING,KINGSFORD,POTTS
4273688	222997	52C13C066	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273688	222998	52C13C086	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273667	223519	52C13D268	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273667	223520	52C13D286	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273687	223568	52C13D060	CLM	Single Cell Mining Claim	2019-02-12	MATHER
4264445	227003	52C12K130	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4273689	229610	52C12L217	CLM	Single Cell Mining Claim	2019-02-12	DOBIE
4273688	230284	52C13C084	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD,MATHER
4273687	230322	52C13C041	CLM	Single Cell Mining Claim	2019-02-12	MATHER
4273686	233586	52C13C002	CLM	Single Cell Mining Claim	2019-02-16	POTTS
4273671	235704	52D16A299	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4273671	235705	52D16A339	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4276458	235734	52C12L177	CLM	Boundary Cell Mining Claim	2019-11-27	DOBIE
4264446	236496	52C13C250	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264446	254567	52C13C270	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	254568	52C13C293	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264446	254569	52C13C291	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	255165	52C13C314	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	255166	52C13C335	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD

Legacy Claim ID	Tenure ID	Cell ID	Claim Holder	Tenure Type	Anniversary Date	Township / Area
4273688	258938	52C13C104	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD,MATHER
4273687	259500	52C13C021	CLM	Single Cell Mining Claim	2019-02-16	MATHER,POTTS
4273687	259501	52C13D100	CLM	Single Cell Mining Claim	2019-02-12	MATHER
4273670	262887	52C13D302	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4283559	262957	52C13D203	CLM	Boundary Cell Mining Claim	2019-02-10	MATHER,TAIT
4273685	263611	52C13F343	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4273671	264900	52D16A360	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4264446	266657	52C13C290	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4273685	271570	52C13F322	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4273685	271604	52C13E379	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4264448	273927	52C13C253	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264447	273928	52C13C292	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	274014	52C13C333	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264445	274142	52C12K110	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4273688	277469	52C13C048	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4273688	277470	52C13C045	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD
4283559	277485	52C13D226	CLM	Single Cell Mining Claim	2019-02-10	MATHER
4273667	277486	52C13D307	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273669	278094	52C13D210	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273687	279563	52C13C061	CLM	Single Cell Mining Claim	2019-02-12	MATHER
4273669	279622	52C13D188	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4283559	279680	52C13D205	CLM	Single Cell Mining Claim	2019-03-11	MATHER
4273670	282947	52C13D303	CLM	Single Cell Mining Claim	2019-01-11	MATHER,TAIT
4283559	283033	52C13D223	CLM	Boundary Cell Mining Claim	2019-02-10	MATHER,TAIT
4264445	286278	52C12K090	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	286279	52C12K171	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4283559	290376	52C13D243	CLM	Boundary Cell Mining Claim	2019-02-10	MATHER,TAIT
4271029	291007	52C12L132	ELDC	Single Cell Mining Claim	2020-12-30	DOBIE
4271029	291008	52C12L130	ELDC	Single Cell Mining Claim	2020-12-30	DOBIE
4273685	291011	52C13F341	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4273671	291772	52D16A300	CLM	Single Cell Mining Claim	2019-01-11	TAIT
4273689	295654	52C12L197	CLM	Single Cell Mining Claim	2019-02-12	DOBIE
4273688	296304	52C13C027	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD,POTTS

Legacy Claim ID	Tenure ID	Cell ID	Claim Holder	Tenure Type	Anniversary Date	Township / Area
4264445	302599	52C12K092	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	302600	52C12K131	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264446	303772	52C13C211	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264446	310525	52C13C231	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264444	310526	52C12K068	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER,KINGSFORD
4264448	310613	52C13C294	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	310614	52C13C334	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4273689	313399	52C12L179	CLM	Single Cell Mining Claim	2019-02-12	DOBIE
4273689	313400	52C12L178	CLM	Single Cell Mining Claim	2019-02-12	DOBIE
4273688	314059	52C13C044	CLM	Single Cell Mining Claim	2019-02-12	KINGSFORD,MATHER
4273669	314074	52C13D208	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273667	314075	52C13D247	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4264445	320692	52C12K152	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264445	322858	52C12K173	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER
4264446	323268	52C13C272	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264447	323284	52C13C312	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264448	323361	52C13C295	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4273681	326113	52C13D207	CLM	Single Cell Mining Claim	2019-03-11	MATHER
4273667	326114	52C13D227	CLM	Single Cell Mining Claim	2019-01-06	MATHER
4273685	330256	52C13F323	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4273685	330787	52C13E360	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4264446	334015	52C13C213	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4264444	334016	52C12K069	CLM	Single Cell Mining Claim	2019-12-22	CARPENTER,KINGSFORD
4264448	334098	52C13C254	CLM	Single Cell Mining Claim	2019-12-22	KINGSFORD
4273686	341276	52C13F383	CLM	Single Cell Mining Claim	2019-02-16	POTTS
4273686	341277	52C13F382	CLM	Single Cell Mining Claim	2019-02-16	POTTS
4273685	342621	52C13E340	CLM	Single Cell Mining Claim	2019-02-12	POTTS
4273671	343390	52D16A340	CLM	Single Cell Mining Claim	2019-01-11	TAIT

Figure 3-2: Overview map showing Crystal Lake's claims. Detailed maps are shown below.

Figure 3-3: Map showing Crystal Lake's legacy claims.

Figure 3-4: Map showing the northernmost claim group with claim numbers.

Figure 3-5: Map showing the eastern claim groups with claim numbers.

Figure 3-6: Map showing the southern claim groups with claim numbers.

Figure 3-7: Map showing the western claim groups with claim numbers. The claims in Tait Township are not the subject of this report

3.1 Ownership

3.1.1 Cells owned by Emerald Lake

The cells owned by Emerald Lake are called Nico2 (previously termed EL5) property or Farm Claim. On May 26, 2015, Crystal Lake and Emerald Lake entered into an agreement where Emerald Lake granted Crystal Lake the right to earn up to 92% interest in the mineral claim 4271029. On February 13, 2017, Emerald Lake and Crystal Lake agreed for Crystal Lake to earn 100% interest in the mineral claim 4271029. On December 18, 2017, Emerald Lake and Crystal Lake agreed to replace and supersede all previous agreements regarding claim 4271029 with a new agreement dated December 18, 2017. According to this latest agreement, Crystal Lake has the option to increase Crystal Lake's interest in the claim and in two patents that Emerald Lake holds in the area and that are not a subject of this report to 60% by making a cash payment to Emerald Lake of $2,000,000 in equal installments of $500,000 each over two years with the initial payment to be made after the completion of a financing that exceeds $2,000,000. Crystal Lake will also have the right to increase its interest in the claim and the patents by 25% to a total of 85% by paying $8,000,000 in cash or common shares to Emerald Lake. In addition, Crystal Lake will have the right of first refusal to obtain the remaining 15% interest in the claim. The claim is subject to a 2% Net Smelter Return ("NSR"), of which Crystal Lake can buy back 1% for $1,000,000 USD. During the option period, Crystal Lake is responsible for funding all expenditures on EL5. During the option period, Emerald Lake is the operator and is responsible for carrying out the work program.

The surface rights for these cells are held by Crystal Lake.

4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

The claims are located in Dobie, Kingsford, Mather and Potts townships. Dobie Township is located approximately 40 km northwest of the Town of Fort Francis, Mather Township is ~50 km and Potts Township is ~60 km northwest of Fort Frances. The population of Fort Frances is 7,739 (Statistics Canada 2018). Emo is the closest settlement to the claim groups. The population of Emo is 1,333 ((Statistics Canada 2018).

The claim group in Dogpaw Lake and Heronry Lake areas is located is located ~70 km north of Emo and ~80 km south of Kenora. The closest settlements are Sioux Narrows and Nestor Falls.

4.1 Access

Access to the claims is on provincial highways and roads (Figure 3-3). Claim 4271029 can be access from Emo, Ontario, on Highway 11 and Highway 71. Sturgeon Creek Road off Highway 71 and Angus Road lead directly to this claim.

Legacy claims 4273689 and 4176458 are located 3 km east of claim 4271029 can are also accessed via Highway 11 and Highway 71 from Emo. Wilson Road off Highway 71 leads to these claims.

The claims in Tait and Mather townships (except claim 4273687) can be accessed via Mather Road and Barwick Road off Highway 71.

The claims in Potts and Kingsford townships and claim 4273687 are accessed on via Highway 615 off Highway 71.

The closest airport is located in Fort Frances.

4.2 Climate

The climate in the property are is continental with long, cold winters and short warm summers. The warmest mean temperatures are typically recorded in July (~24° C) and the coldest temperatures in January (-15° C), however maximum temperatures can reach 30° C in June and July and -35° C in January and February (climate.weather.gc.ca). Maximum snow fall occurs in January (~25 cm) and maximum rainfall in June (~100 mm). Total annual precipitation is ~600 mm. Exploration can be completed year-round.

4.3 Physiography and Vegetation

The area is characterized by very low relief with an average elevation of ~350-400 m above sea level (asl) for all claim groups. The northern claim group is characterized by numerous lakes.

The southern claim groups consist of farm land or forest with birch being the dominant type of tree. Overburden is locally up to 60 m thick. The northern claim group is forested with birch, spruce, pine and aspen. Here, the overburden is thinner, between 1 and 10 m, with local bedrock exposures.

4.4 Infrastructure and Local Resources

Power exists in the area of the southern claim group. The main power line is located approximately 15 km west of the northern claim group. Water for exploration is available from streams and lakes. Mining personnel, skilled and unskilled labor are available due to recent exploration and mining

activities in the area. A CN rail line runs parallel to Highway 11 connecting to Thunder Bay and Winnipeg.

Services such as stores, banks, gas stations and hotels are available in Fort Frances and Kenora.

The sufficiency of surface rights for mining operations, tailings storage areas, waste disposal areas, heap leach pad areas, and processing plant sites are not relevant to the project at this stage.

5.0 HISTORY

Fletcher and Irvine (1954) reported that the Rainy River area started receiveing attention in terms of exploration in 1953 when base metal occurrences were found in southern Dobie Township. The historic exploration summarized below is from assessment reports that are publicly available from the MNDM. The QP did not have access to any historic information for the claims in Dobie Township. The claims are surrounded by patented ground for which no assessment reports exist.

5.1 Potts Township/northern Mather and Kingsford Townships

Table 5-1: Overview of historic work completed on Crystal Lake's claim in Potts, Kingsford and northern Mather townships.

Township	Year	Company	Exploration Type	Results	Source
Potts/northern Mather	1973	Canadian Nickel Co. Ltd	diamond drilling: 3 holes	up to 5% pyrite/pyrrhotite	Assessment report: 20007411
Potts/northern Mather	1988	Walter Cummings	descriptions of the 1973 Canadian Nickel Co. drill holes	Zn and Cu sulfides in gabbro	Assessment report: 52C13SW0003 (Ogden, 1988a)
Potts/northern Mather	1988	Walter Cummings	magnetometer, self-potential, biogeochemistry	southwest dipping magnetic high delineated	Assessment report: 52C13SW0002 (Ogden, 1988b)
Potts/northern Mather	1989	Walter Cummings	mag-EM	EM anomaly delineated, no coincident magnetic anomaly	Assessment report: 52C13SW0001 (Ogden, MacEachern and Paterson)
Potts/northern Mather/Kingsford	1995	Noranda	mag-HLEM; 23.45 line km	linear magnetic and EM anomaly delineated	Assessment report: 52C13SW0004 (Smith & Petrie, 1995a)
Potts/northern Mather	1997	Puskas & Allen	diamond drilling:	no assay results available; logs indicated up to 17% sulfide	Assessment report: 52C13SW2001

Township	Year	Company	Exploration Type	Results	Source
Potts/northern Mather	2007	Rainy River Resources	mapping	(pyrite; minor pyrrhotite, chalcopyrite) mostly volcanic rocks, some gabbro and pyroxenite mapped	Assessment report: 20003413 (Ayres and Tims, 2007)

5.1.1 Canadian Nickel Company ("Inco") (1972-73)

The Canadian Nickel Company followed up on an airborne EM conductor (MacEachern and Paterson, 1989); no information is available about the airborne survey. Inco drilled two Winkie and one diamond drill holes in northern Mather Township at the border with Potts Township (Table 5-2; Assessment report 20007411).

5.1.2 Walter Cummings (1988-89)

No detailed descriptions or assay data are available in the Canadian Nickel Co. drill logs but Ogden (1988a) reports in Assessment Report 52C13SW0003 that zinc and copper sulfides "associated with gabbro" overlying felsic rocks were intersected in the holes. He provided descriptions of the drill holes for the 1973 drill holes (Table 5-2). In 1988, Ogden (1988b) completed a geophysical survey (magnetometer and self-potential) on the claims drilled by the Canadian Nickel Company 1973 (Assessment Report 52C13SW0002) to determine whether any geophysical anomalies related to the sulfide mineralization in the historic drill holes could be delineated. Ogden (1988b) concluded that southwest dipping magnetic zones existed in the area. In addition to the geophysical surveys, poplar bark was analyzed for trace elements without success.

In 1989, Cummings commissioned a magnetic and electromagnetic survey on the property (Assessment Report 52C13SW0001: MacEachern and Paterson, 1989). A strong EM anomaly was delineated; however, the magnetic survey did not provide any conclusive results and no relationship between the magnetic signature and the EM anomalies was established.

Table 5-2: List of drill holes completed by Canadian Nickel Co. in 1972/73.

Hold ID	Year	Depth (ft)	Depth (m)	Azimuth	Dip	Comment
48577	1972	226	68.66	180	-50	Zn and Cu in upper portions in gabbro; 189 ft (56.61 m of fine-grained rhyolitic tuff and quartz breccia with 25% pyrrhotite and blebs of pyrite/chalcopyrite/sphalerite; 20% massive sphalerite over 15 cm at 205 ft (62.48 m)
48578	1972	190	57.72	360	-45	up to 1% cpy and 5% po/py; gabbro, dacite
48595	1973	360	109.37	360	-45	granitic rocks and gabbro, up to 30% sulfide; bottom of the hole intersected amphibolite with scattered pyrite and magnetite

5.1.3 Noranda (1995)

Noranda completed a magnetic and horizontal loop EM survey on the same claims that were previously held by Inco and W. Cummings in northern Potts Township in 1994. Smith and Petrie (1995, Assessment Report 52C13SW0004) claimed that several untested airborne EM anomalies exist in the northern part of the claim group and north of the previously drill tested anomalies (Section 6.2.1). Noranda surveyed a total of 23.45 line km and delineated a north-south trending magnetic anomaly and an EM anomaly that is parallel to the western edge of the magnetic anomaly.

5.1.4 Puskas & Allen (1997)

Puskas and Allen drilled four diamond drill holes totalling 309.57 m on the same claims in 1997 (Assessment report: 52C13SW2001). No mafic or ultramafic rocks were intersected, however, the granitic and sedimentary rocks hosted pyrite, pyrrhotite, chalcopyrite and sphalerite (Table 5-3)

Table 5-3: List of drill holes completed by Puskas and Allen in 1997.

Hold ID	Year	Depth (ft)	Depth (m)	Azimuth	Dip	Comment
PW-01-97	1997	267	81.11	NE	-45	minor pyrite, pyrrhotite, chalcopyrite and sphalerite in granitoids
PW-02-97	1997	303	92.05	270	-50	minor pyrite in granitoids
PW-03-97	1997	303	92.05	90	-90	minor pyrite, pyrrhotite, chalcopyrite and sphalerite in granitoids
PW-04-97	1997	146	44.35	90	-50	minor pyrite, pyrrhotite, chalcopyrite and sphalerite in sedimentary rocks
TOTAL		**1019**	**309.57**			

5.1.5 Rainy River Resources (2007)

Rainy River Resources ("Rainy River") mapped the area around Off Lake in Potts Township (Assessment Report 20003413: Ayres and Tims, 2007). Metagabbro and pyroxenite intrusions were mapped in a set of felsic dikes called the Off Lake felsic dike complex, in the volcanic sequence near Pinewood Lake and the Mather metasedimentary sequence. Ayres and Tims (2007) also mentioned the linear magnetic high west of Pinewood Lake where the 1972/73 Inco drill holes are located. These authors interpreted the "distinctive, irregular, aeromagnetic expression" in the Off Lake felsic dike complex to indicate that mafic-ultramafic "megablocks and large septa" exist in the subsurface and are covered by overburden.

6.0 GEOLOGICAL SETTING AND MINERALIZATION

6.1 Regional Geology

The claims are located in the Wabigoon subprovince (Superior Province) of the Canadian Shield (Figure 6-1; Blackburn et al., 1991) and in a wedge that forms the boundary between the southern Wabigoon and the Quetico subprovinces (Hendrickson 2016; Poulsen 2000). This wedge, called Rainy River Block by Hendrickson (2016) is bounded by the Quetico Fault in the north and by the Sein River and Vermillion Faults in the south. The Wabigoon subprovince consists of volcanic rocks with a central axis of plutonic rocks; the eastern and western domains of the Wabigoon subprovince exhibit different tectonic characteristics (Percival, et al. 2006). The western domain, where the property is located, is dominated by a range of volcanic rocks from tholeiitic to calc-alkalic that were deposited between 2.745 and 2.720 (Percival, et al. 2006). The plutonic rocks are synvolcanic and consist mainly of tonalite, diorite and gabbro. Younger meta-sedimentary rocks form narrow belts within the volcanic sequences.

The eastern Wabigoon domain consists of greenstone belts and granitic plutons.

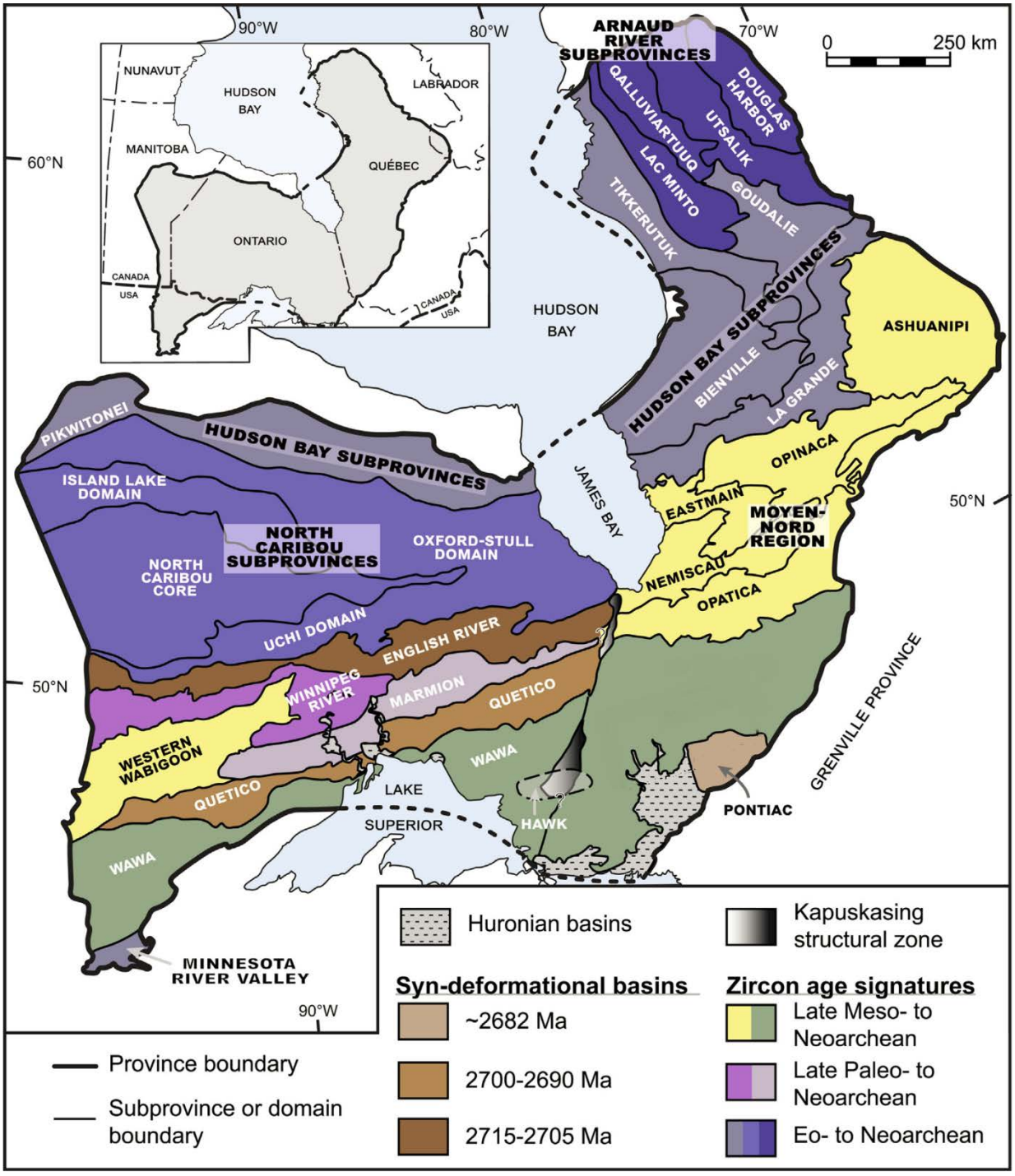


Figure 6-1: Location of the Wabigoon subprovince (modified from Frieman et al., 2017).

6.2 Local Geology

The bedrock geology of the southern claim group is dominated by thick sections of metasedimentary and metavolcanic rocks of the Keewatin Series. The sedimentary rocks are dominantly greywacke, iron formation and hornblenditic sedimentary rocks; the volcanic rocks range from felsic to intermediate to mafic (Fletcher and Irvine 1954). Granitic intrusions were emplaced into the sedimentary-volcanic sequence. Some mafic intrusives also occur in the area including norite and gabbro (Fletcher and Irvine 1954). Quartz diabase dikes cut all other rocks.

Fletcher and Irvine (1954) described two major folds in the area. One is located in Carpenter Township and extends west to Emo, with the fold axis trending northeast. The second fold axis trends in a similar northeast direction was mapped in Pinewood Lake and Potts townships.

Two mafic intrusions exist in the area: the Dobie intrusion and the Carpenter-Lash intrusion. The Dobie intrusion located in Dobie Township was defined based on aeromagnetic maps, some outcrop and drill core. The intrusion consists of medium-grained hypersthene gabbro and norite, coarse-grained pyroxenite and anorthosite (Fletcher and Irvine 1954). The feldspar content increases towards the contact with the volcanic rocks into which the intrusion was emplaced. Fletcher and Irwin (1954) noted the minerals appear fresh and unaltered and that the intrusion did not exhibit any gneissic texture; therefore, they concluded that the Dobie intrusion was not strongly metamorphosed or sheared.

The second mafic intrusion, the Carpenter-Lash Intrusion, is located ~10 km east of the Dobie Intrusion. It was also defined primarily by interpretation of airborne magnetic data. Contrary to the Dobie intrusion, which consists of several phases, the Carpenter-Lash intrusion is homogeneous consisting of labradorite (50-60%) and augite/hypersthene (Fletcher and Irvine 1954).

In addition to the Dobie and Carpenter-Lash intrusions, smaller bodies of mafic rocks are reported to exist in the area (Fletcher and Irvine 1954).

The area is covered by till, fluviolacustrine and lacustrine sand, silt and clay.

6.3 Structure

The east-west trending Quetico fault is the most prominent structure in the area. The fault zone is over 200 km long (Blackburn et al., 1991), up to 1 km wide and includes evidence of strong shearing in the form of mylonites and pseudotachylites (Poulsen 2000); the most recent movement along the fault was dextral. It cuts across lithologic boundaries and is a major and long-lived crustal feature (Blackburn et al., 1991).

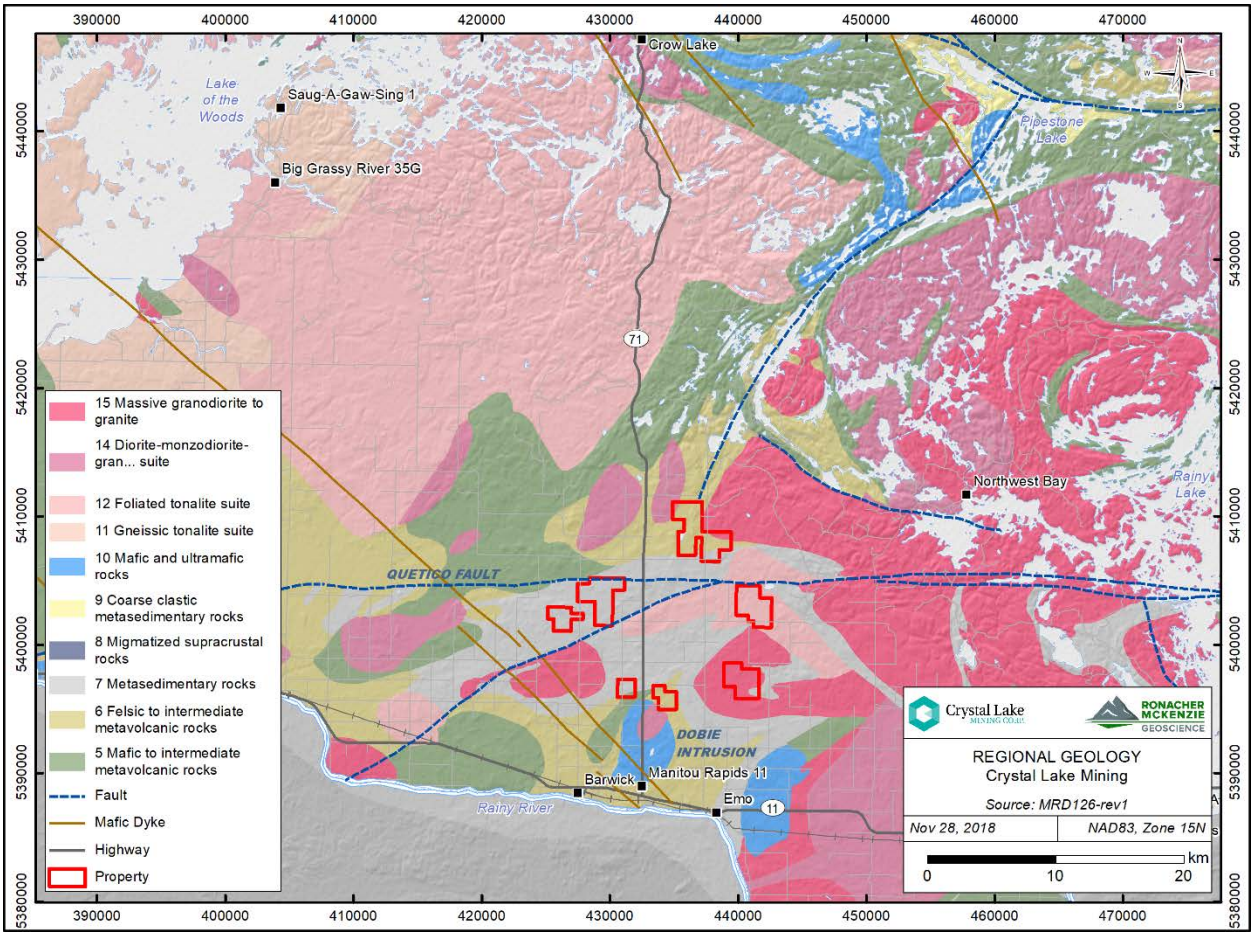


Figure 6-2: Local Geology

6.4 Property Geology

Outcrop is very sparse in the southern claim group. The area is covered by up to 60 m of glacial drift, with 25 to 35 m being the average thickness in the area between Emo and Lake of the Woods (Bajc 1991, 2001).

The descriptions below are based on OGS maps M1954 (Fletcher and Irvine 1954) and Ontario Geological Survey map M2443 (OGS, 1997).

6.4.1 Dobie Township Claims

The dominant rock types on the claims in Dobie Township are clastic sedimentary rocks (sandstone, siltstone, argillite) on claim 4271029 and felsic to intermediate volcanic rocks (tuff, agglomerate and breccia) on claims 4276458 and 4273689.

6.4.2 Mather Township Claims

The dominant rock types on the claims in Mather Townships are also clastic sedimentary rocks, mainly pebble and boulder conglomerate and sandstone, siltstone and argillite. This claim group is located between the Quetico fault and a splay of the Quetico fault.

6.4.3 Potts/Kingsford/northern Mather Township Claims

The claim group in Potts, Kingsford and northern Mather townships fall within a sequence of felsic to intermediate metavolcanic rocks (tuff, agglomerate, breccia and flows) and a sliver of mafic metavolcanic rocks. Drilling by Inco in 1972/73 appeared to intersect mafic intrusive rocks (gabbro; Assessment Report 52C13SW0003: Ogden, 1988a) but no such rocks appear on M2443 (OGS 1997).

A northeast trending structure may extend from Off Lake ~7 km north of the claim group to Pinewood Lake, which is partly within the claim group.

Figure 6-3: Geology of the southern claim group.

6.5 Mineralization

Mineralization has only been encountered on claim 4271029. The mineralization consists of semi-massive breccia sulfide veins and stringers in pyroxenite containing disseminated sulfides. The sulfide breccias contain sub-rounded 1-10 cm fragments of pyroxenite, and they form an anastomosing network within a larger domain of pyroxenite with disseminated sulfide mineralization. The sulfides comprise dominantly pyrrhotite (60-70%) with some pentlandite (10%) and minor chalcopyrite. The chalcopyrite is locally segregated and forms either remobilized veins or wraps around inclusions. The host rocks of the Dobie Intrusion are pyroxenites.

The geological controls, length, width, depth and continuity of the mineralization has not been determined to date.

Outside the Crystal Lake claims, Ni-Cu-PGE occurrences associated with mafic-ultramafic intrusions were documented by the OGS, including the Dobie Prospect, ~7 km south of claim 4271029.

7.0 Deposit Types

Orthomagmatic Ni-Cu-PGE deposits are associated with mafic-ultramafic intrusions and occur in a variety of tectonic settings, such as continental rifts and large igneous provinces. The magma is mantle derived and has undergone a high degree of partial melting, which enriches the magma in Ni and PGE (Barnes and Lightfoot 2005). In order for a Ni-Cu-PGE deposit to form, the magma must ascend to crustal levels fast so that Ni is not incorporated into olivine during cooling. Once the magma has reached the crust, an external source of sulfur is required to form sulfide melt droplets. If these droplets interact with a large volume of magma they will scavenge metals to form a Ni-, Cu- and PGE-rich melt. This melt either segregates to the base of the intrusion because it is denser than the silicate melt, or it migrates into open spaces because it solidifies at lower temperatures (~900° C) than the silicate melt (~1000° C). The morphology of these open spaces is typically controlled by regional structures (Lightfoot and Evans-Lambswood 2015).

The geophysical expression of these deposit is in the form of a magnetic anomaly caused by the often magnetite-rich mafic and ultramafic rocks. The mineralization, specifically the massive portion, may cause an EM conductivity anomaly, depending on its size and geometry. The typical geophysical footprint of the deposits together with a favorable geological and structural setting can be the basis for an exploration program.

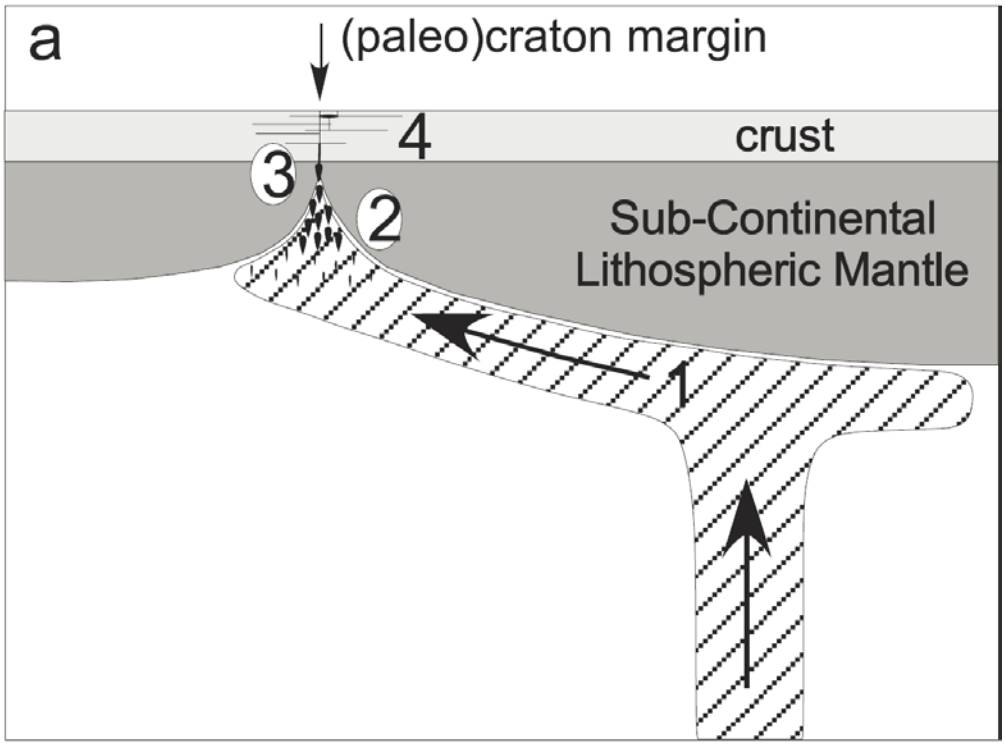


Figure 7-1: Schematic model for the formation of Ni-Cu-PGE deposits (from Begg, et al. 2010)
1 – melting and rising of mantle magma; 2 – decompression melting at shallow levels; 3 – melts migrating into upper crust; 4 – interaction of melt with crust, including sources of sulfur.

8.0 EXPLORATION

8.1 Crystal Lake Previous Exploration

8.1.1 Ground Geophysics – Magnetic and VLF Survey

Emerald Lake commissioned Geosig Inc. ("Geosig") to conduct a ground magnetic ("mag") and very low frequency ("VLF") survey on claim 4271029. The survey was run from August 20th – 25th, 2015 (Simoneau 2015).

The total magnetic field was collected using a GSM-19WMV magnetometer operated in "mobile mag" mode. Samples were collected every 25 ft (7.62 m). A GSM-19W magnetometer was used to measure the magnetic diurnal at the base station and was sampled every 15 s. The magnetic data was diurnally corrected during the data download process. A base datum value of 56,400 nT was removed from the dataset prior to data processing. The precision of the GSM-19 units is noted to be ± 0.1 nT (Simoneau 2015). A map of the ground magnetic results can be found in Figure 8-1.

The VLF survey was collected using the GSM-19WMV instrument. Readings were recorded every 25 ft (7.62 m). The survey utilized station NAA broadcasting at 24.0 kHz from Cutler, Maine and station NLK broadcasting at 24.8 kHz from Jim Creek, Seattle, Washington. The results of the VLF survey were presented in profile format (Simoneau 2015). A map of the ground VLF profile results can be found in Figure 8-2. The figure denotes the 24.8 kHz results, with in-phase response displayed as red profiles, the quadrature response displayed as blue profiles and the total field response displayed as green profiles.

A total of 20 lines were surveyed east-west, using GPS. Each line was 1,320 ft (402.34 m) long and the line spacing was set to 100 ft (30.48 m). The overall survey consisted of 8.63 line-km and covered an area of 0.23 km^2. Samples of both magnetic and VLF were recorded every 25 ft (7.62 m). This sample method and quality is considered representative of a typical mag and VLF survey. Apart from the powerline, no significant magnetic or electromagnetic features were noted.

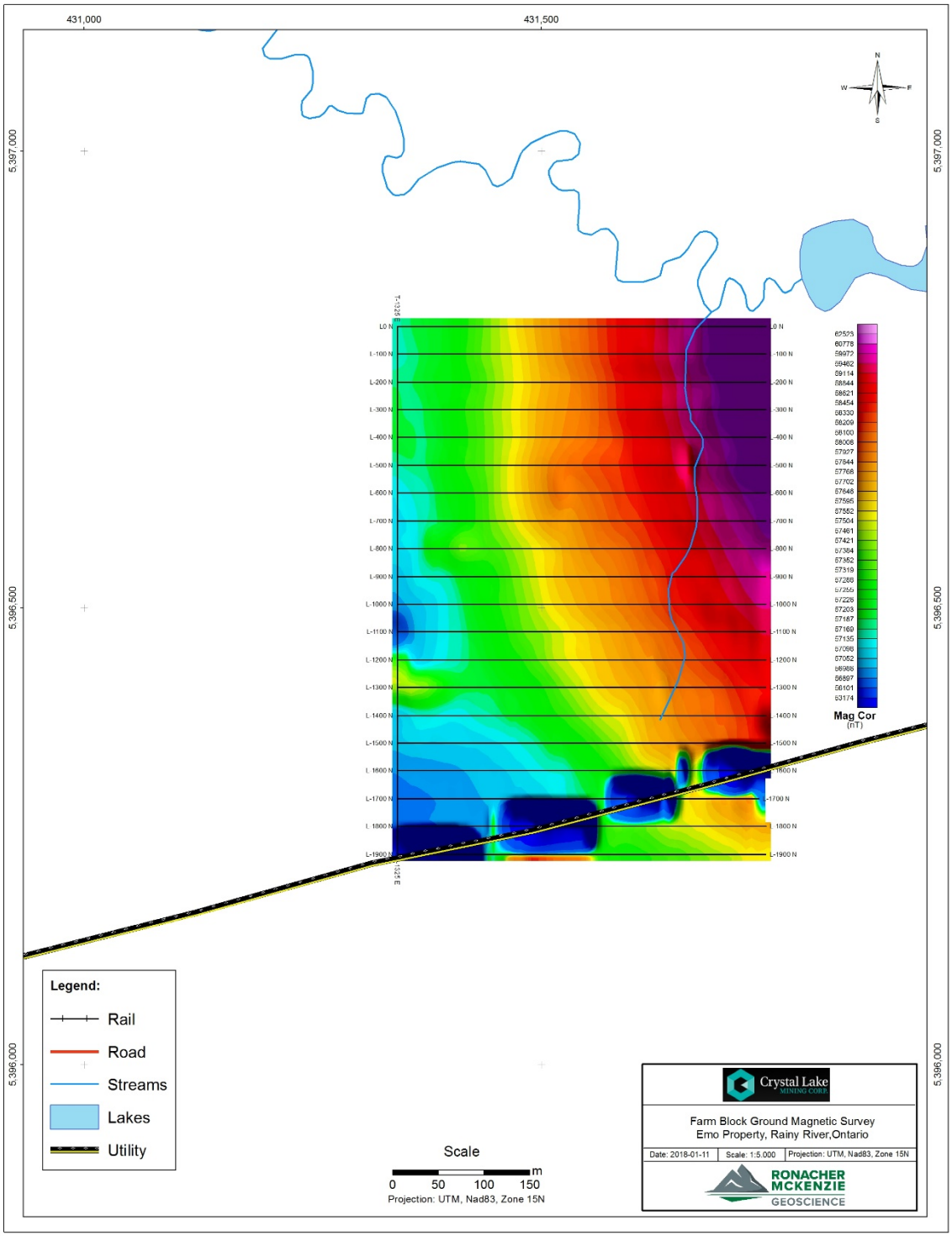


Figure 8-1. Results of the Farm ground magnetic survey

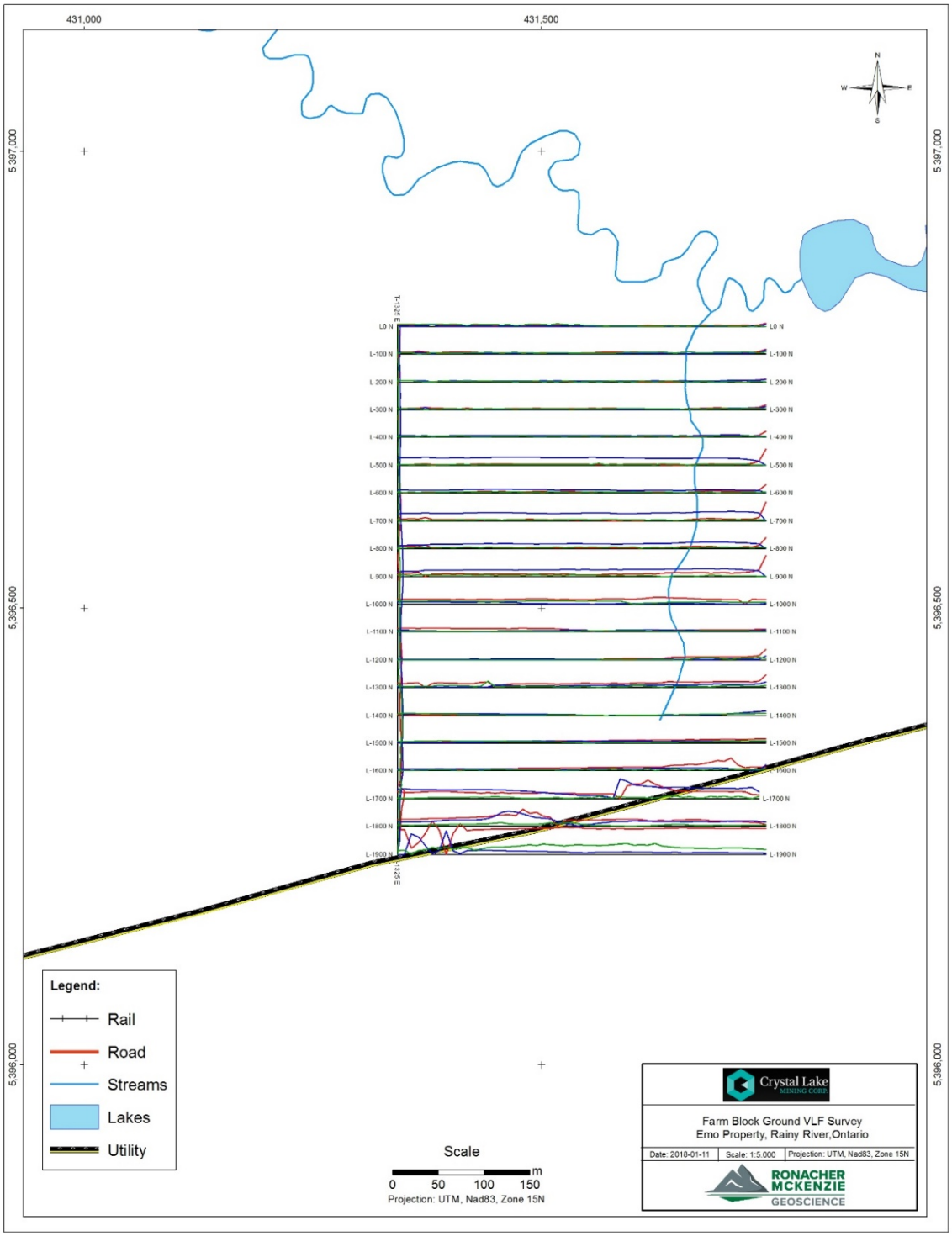


Figure 8-2. Results of the Farm ground VLF survey, 24.8 kHz. red = in phase, blue = quadrature, green = total field

8.1.2 Drilling

Crystal Lake completed one diamond drill hole on legacy claim 4271029 between September 26 and 28, 2015 (Figure 8-3). Drill hole details are listed in Table 8-1**Error! Reference source not found.**. The core diameter was NQ (47.6 mm) and the drilling contractor was Full Force drilling of Peachland, BC.

Table 8-1: Details of drill hole A-0-15 drilled on claim 4271029 in 2015.

Drill Hole ID	Easting*	Northing*	Azimuth (°)	Dip (°)	Final Length
A-0-15	431715	5396626	262	-45	91.44

**NAD 83, Zone 15N*

Drill hole collar locations were recorded with a hand-held GPS. Downhole deviation was recorded using a Reflex EZ-Shot instrument. However, this instrument is not suitable for determining downhole deviation in strongly magnetic rocks such as the ones on this property. No other details of drilling procedures were available to the QPs.

Mafic and ultramafic rocks with disseminated sulfides were logged. Disseminated, vein and globby sulfide was described in the drill logs; locally 10% sulfide content was recorded. A total of 12 samples were collected and submitted for assaying (Table 8-2).

Table 8-2: List of drill core samples collected from drill hole A-0-15 with assay results.

SAMPLE #	From (m)	To (m)	Interval (m)	Au (ppb)	Pd (ppb)	Pt (ppb)	Cu (%)	Ni (%)
187064	20.12	21.34	1.22	3	< 5	10	0.107	0.148
187065	21.34	22.86	1.52	10	< 5	< 5	0.107	0.100
187066	22.86	23.77	0.91	6	7	6	0.219	0.226
187067	23.77	24.69	0.91	8	6	< 5	0.253	0.157
187068	24.69	25.04	0.35	34	10	< 5	0.377	0.277
187069	26.00	26.18	0.18	14	21	13	0.150	0.146
187070	28.04	28.96	0.91	15	48	29	0.080	0.064
187071	30.94	31.09	0.15	32	27	14	0.356	0.172
187072	40.90	41.76	0.86	13	32	13	0.143	0.198
187073	44.20	44.62	0.42	48	19	11	0.218	0.547
187074	57.79	57.92	0.13	17	64	19	0.108	0.272
187075	57.92	58.83	0.91	7	20	8	0.042	0.050

The results indicate that low-grade Ni mineralization is present in the drill core.

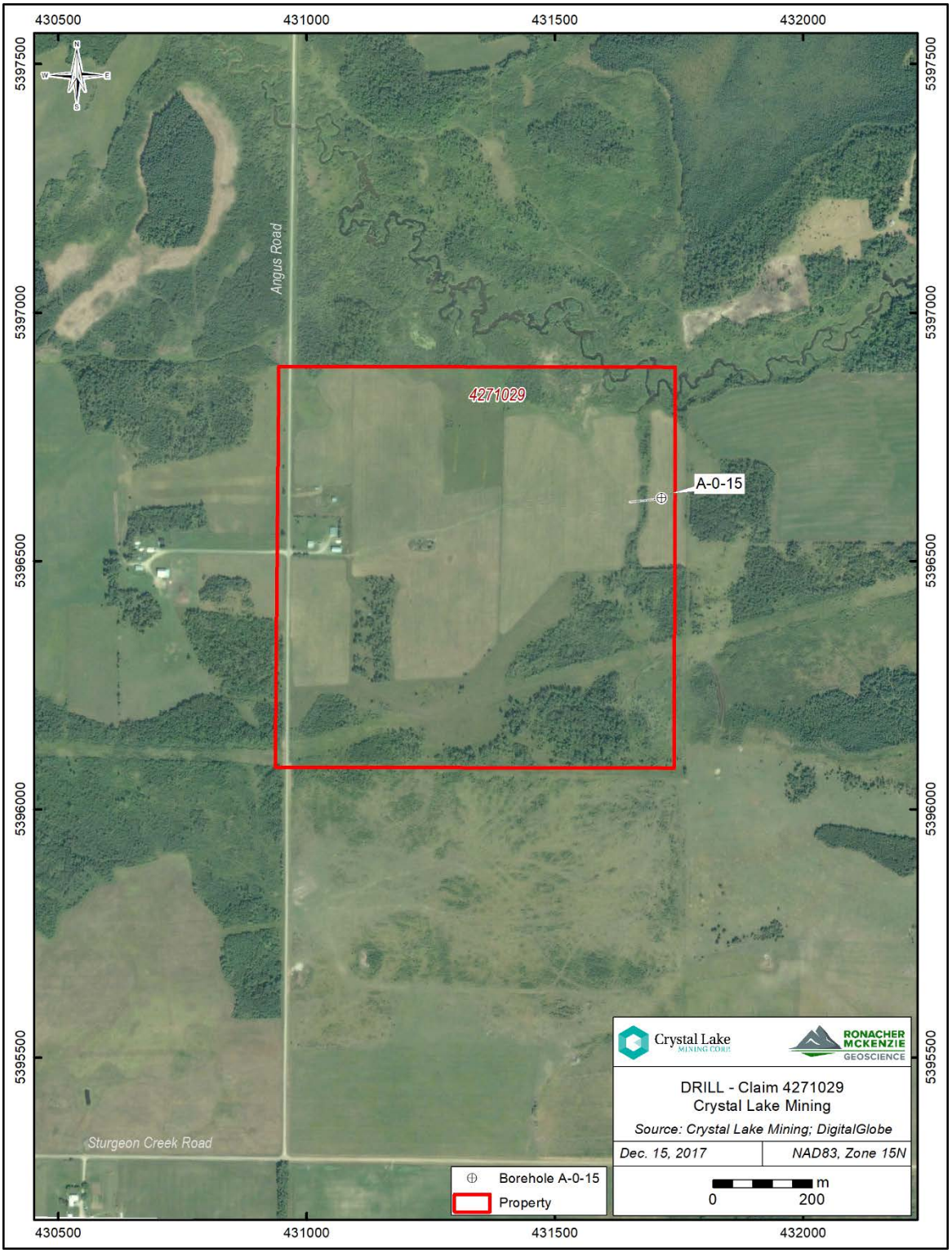


Figure 8-3: Location of diamond drill hole A-0-15 on legacy claim 4271029 prospect.

A petrographic examination of one sample from drill core A-0-15 at 25 m depth indicates an assemblage of pyrrhotite, chalcopyrite, and granular pentlandite in a strongly recrystallized amphibolite. Microprobe analyses completed at the University of Western Ontario using a Joel system was used to establish the compositions of pyrrhotite and pentlandite in a sub-sample from this sample. Pyrrhotite from this sample has a Ni abundance of <0.021 wt% and 1.14-1.91% Co. Analysis of granular pentlandite from the same polished thin section was undertaken and 37.2-39.2 wt% Ni in pentlandite and <0.2 wt% Co in pentlandite were recorded.Insufficient information about the orientation of the mineralization is known at this stage; the sample intervals do not reflect the true thickness of the mineralization. Some sample intervals are short and these samples may not be representative. The QPs did not determine any drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the results other than the ones mentioned above.

8.2 HeliTEM Airborne Magnetic and Electromagnetic Survey

In 2018, Crystal Lake completed an airborne magnetic and electromagnetic survey (HeliTEM35C electromagnetic system supplemented by a high-sensitivity cesium magnetometer). The survey was planned by Ronacher McKenzie and executed by CGG Canada Services Ltd. The field portion of the survey took place from March 16 to 22, 2018. A total of 857 like kilometers were flown; 185.68 line kilometers were flown over the properties that are the subject of this report (see Appendix 4). The line spacing was variable between 150 and 200 m and the line direction was either E-W or N-S dependent on the geological fabric. Tie-lines were flown on all survey areas apart from A2-Dobie, and were flown perpendicular to the flight lines. The tie-line spacing was variable for each survey block. The flight path is shown in Figure 8-5.

The survey parameters are listed in Table 8-3. The system consists of a 40 m long cable to which the transmitter loop is attached. The cable is attached to a helicopter and the transmitter coil is approximately 34 m below the helicopter. The nominal height of the loop above the ground was 35 m. The loop configuration is shown in Figure 8-4.The receiver was a multi-coil system (X, Y, Z) with a final recording rate of 10 samples per second of X, Y and Z component data.

Table 8-3: HeliTEM survey parameters

Parameter	Specification
Helicopter	AS350 B3e
Operator	Questal
Transmitter	vertical loop slung below helicopter
Loop area	961 m^2
Number of turns	4
Diameter	35 m
nominal height above ground	35 m

Parameter	Specification
Receiver	multi-coil system (x, y, z); 10 samples per second; 30 channels of half sine
Inflight Vertical Rx-Tx separation	0.1m
Base frequency	15 Hz
Pulse width	7.78 ms half sine pulse
Off-time	25.55 ms
Transmitter current	274 A
Dipole moment	1.06 x 10^6 Am^2
Transmitter waveform repetition rate	15 Hz
Magnetometer	CS-3 Scintrex Cesium Vapour, mounted in plane of transmitter loop
Operating range	15,000 to 100,000 nT
Operating limit	-40° to 50° C
Accuracy	±0.002 nT
Measurement precision	0.001 nT
Sample rate	10.0 Hz
Radar Altimeter	Honeywell Sperry Altimeter; radar antennas mounted to exterior bottom of the helicopter between the forward skid tubes
Operating range	0-2500 ft
Operating limit	- 55° to 70° C; 0-55,000 ft
Accuracy	±3% (100-500 ft above obstacle) ±4% (500-2500 ft above obstacle)
Measurement precision	1 ft
Sample rate	10.0 Hz
Laser Altimeter	Optech ADMGPA100; mounted to exterior bottom of the helicopter between the forward skid tubes
Operating range	0-450 m
Operating limit	-30° to 60° C
Accuracy	±2 cm
Sample rate	10.0 Hz
Transmitter loop attitude	VN-300 mounted on the front of the transmitter loop
Operating range (Heading, Roll)	±180°
Operating rang (pitch)	±90°
Dynamic accuracy (heading)	0.3° RMS
dynamic accuracy (pitch/roll)	0.1° RMS
Operating limit	-40° to 85° C
Sample rate	10 Hz
Transmitter Loop Position Data	NovAtel OEM4 with Aero Antenna mounted on the EM bird

Parameter	Specification
Operating limit	-40° to 85° C
Real-time accuracy	1.8 m CEP (L1)
Real-time measurement precision	6 cm RMS
Sample rate	2.0 Hz
Barometric Altimeter	Motorola MPX4115AP analog pressure sensor mounted in the helicopter
Operating range	55 kPa to 108 kPa
Operating limit	-40° to 125° C
Accuracy	±1.5 kPa (0° C to 85° C) ±3.0 kPa (-20° C to 0° C, 85° C to 105° C) ±4.5 kPa (-40° C to -20° C, 105° C to 125° C)
Measurement precision	0.01 kPa
Sampling rate	10.0 Hz

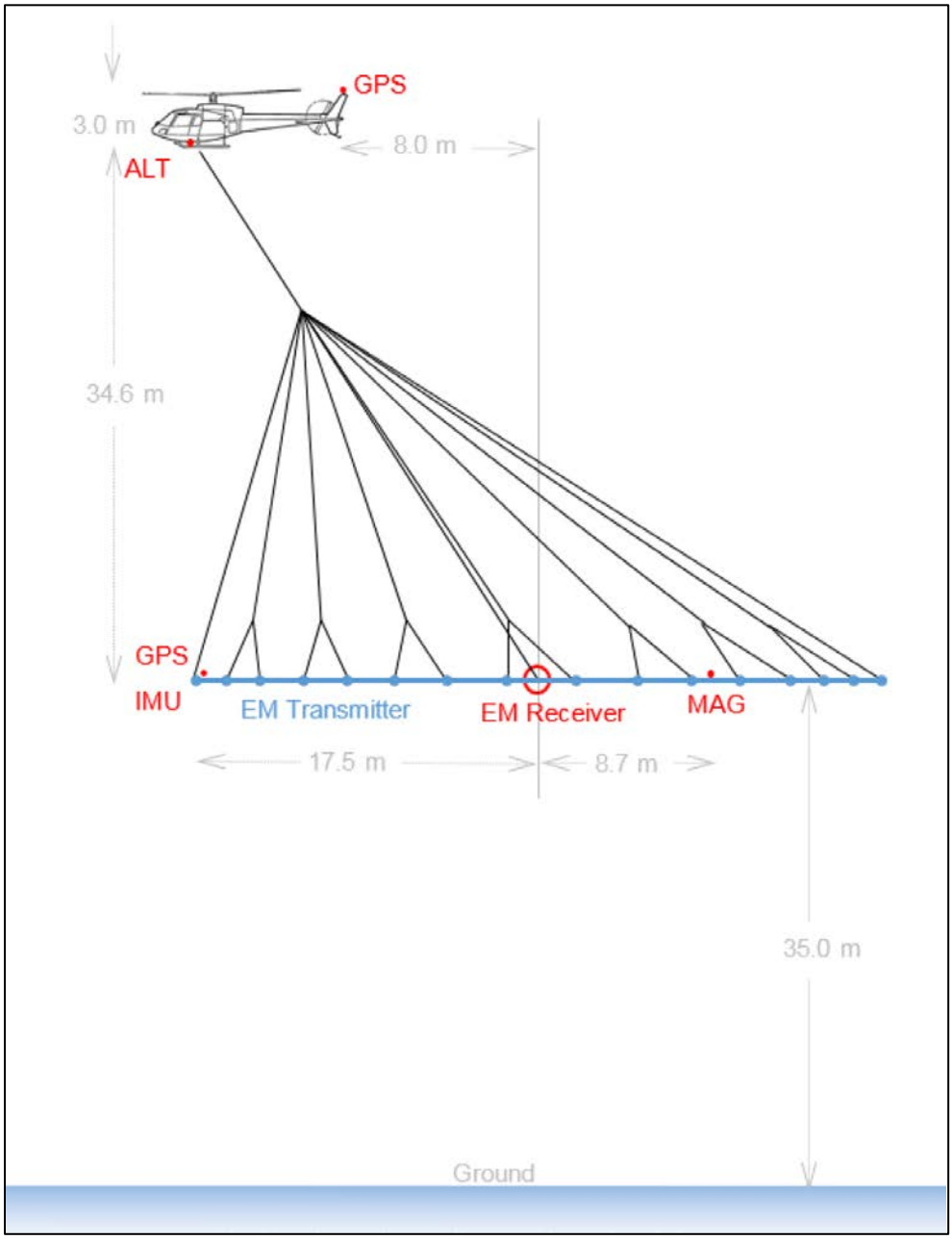


Figure 8-4: Loop configuration used during the HeliTEM survey.

8.2.1 Survey Specifications and Quality Control

According to CGG's final report for this project (CGG, 2018) transferred the digital data for each flight to the field workstation, in order to verify data quality and completeness. A database was created and updated using Geosoft Oasis Montaj and proprietary CGG Atlas software. This allowed CGG to calculate, display and verify both the positional (flight path) and geophysical data. The initial database was examined as a preliminary assessment of the data acquired for each flight.

Daily processing of CGG survey data consisted of differential corrections to the airborne GPS data, verification of EM calibrations, drift correction of the raw airborne EM data, spike rejection and filtering of all geophysical and ancillary data, verification of the digital video, calculation of preliminary data, and diurnal correction of magnetic data.

All data, including base station records, were checked on a daily basis to ensure compliance with the survey contract specifications. Re-flights were required if any of the following specifications were not met.

A specialized GPS system provided in-flight navigation control. The system determined the absolute position of the helicopter by monitoring the range information of twelve channels (satellites). The Novatel OEM4 receiver was used for this application. In North America, the OEM4 receiver is WAAS-enabled (Wide Area Augmentation System) providing better real-time positioning.

A Novatel OEM4 GPS base station was used to record pseudo-range, carrier phase, ephemeris, and timing information of all available GPS satellites in view at a one second interval. These data are used to improve the conversion of aircraft raw ranges to differentially corrected aircraft position. The GPS antenna was set- up in a location that allowed for clear sight of the satellites above. The set-up of the antenna also considered surfaces that could cause signal reflection around the antenna that could be a source of error to the received data measurements.

Flight lines did not deviate from the intended flight path by more than 25% of the planned flight path over a distance of more than 1 km.

The contracted specification for the collected airborne magnetic data was that the non-normalized 4th difference would not exceed 0.1 nT over a continuous distance of 1 km excluding areas where this specification was exceeded due to natural anomalies.

The contracted specifications for the collected ground magnetic data was the non-linear variations in the magnetic data were not to exceed 10 nT per minute.

The noise envelops of the EM data, as calculated from the last off-time channel shall not exceed the following tolerances under normal survey conditions: dB/dt Z < 0.25 nT/s.

8.2.2 Calibration

Electromagnetics

The in-flight calibration consisted of measuring the system characteristics out of ground effect and compensation of the electromagnetic data for these measured effects. The reference waveforms recorded during the pre-flight calibration form an important part of the delivered data and are critical to accurate inversion of the data. During the pre-flight calibration, a minimum of 30 seconds of data is collected out-of-ground-effect to monitor the effectiveness of the calibration and the accuracy to the base levels. During any post-flight calibration, a minimum of 30 seconds of data is collected out-of-ground-effect; these data are compared with the pre-flight calibration data to quantify drift.

Measurements of in-flight noise levels, out of ground effect, are made at the high altitude portions of each flight. Static or hover noise levels are not directly related to those seen in flight due to geometry and compensation considerations that are only addressed in a dynamic situation.

8.2.3 Processing

Electromagnetics

dB/dt Data

Lag correction: 0 samples

Data correction: The X, Y and Z component data are re-processed from the raw stream to produce the 30 raw channels at 10 samples per second from the half sine pulse.

The following processing steps are applied to the dB/dt data from all coil sets:

- The raw stream data is stacked and re-processed post-flight using start-of-flight and end-of-flight calibrations to remove spheric spikes, system drift, and to filter VLF noise;
- Noise filtering is done using an adaptive filter technique based on time domain triangular operators. Using a second difference value to identify changes in gradient along each channel, minimal filtering (21 points) is applied over the peaks of the anomalies, ranging in set increments up to a maximum amount of filtering in the resistive background areas (35 points for both the X and the Z component data);

- Incoherent noise is removed using an exponential decomposition that calculates apparent rates of decay to identify incoherent noise. Incoherent areas in the decay which are below the specified amplitude constraint, set on the order of the system noise level, are then filtered down decay to improve coherency.

- The filtered X, Y and Z component data are then levelled in flight form for any residual and nonlinear drift that was not adequately corrected during the initial drift corrections;

- Line-based levelling

B-field Data

For delivery, mapping and generation of derived products, the final B-field channels are derived from the final levelled dB/dt data.

Apparent Conductivity from Z Data

The apparent conductivity is calculated by fitting all channels of the Z-coil response of the dB/dt component to the homogeneous-half-space model.

Magnetics

Magnetic Base Station Diurnal

The raw diurnal data are sampled at 1 Hz and imported into a database. The data are filtered with a 51 second median filter and then a 51 second Hanning filter to remove spikes and smooth short wavelength variations. A non-linear variation is then calculated and a flag channel is created to indicate where the variation exceeds the survey tolerance. Acceptable diurnal data are interpolated to a 10 Hz sample rate and the local regional field value of 56800, calculated from the average of the first day's diurnal data, was removed to leave the diurnal variation. This diurnal variation is then ready to be used in the processing of the airborne magnetic data.

Residual Magnetic Intensity

The Total Magnetic Field (TMF) data collected in flight were profiled on screen along with a fourth difference channel calculated from the TMF. Spikes were removed manually where indicated by the fourth difference. The despiked data were then corrected for lag by 2.1 seconds. The diurnal variation that was extracted from the filtered ground station data was then removed from the despiked and lagged TMF. The IGRF was calculated using the 2015 IGRF model for the specific survey location, date and altitude of the sensor and removed from the TMF to obtain the Residual Magnetic Intensity (RMI). The results were then levelled using tie and traverse line intercepts.

Manual adjustments were applied to any lines that required levelling, as indicated by shadowed images of the gridded magnetic data. The manually levelled data were then subjected to a microlevelling filter.

Table 8-4: Details for each survey block

Block #	Flight Direction	Line Spacing	Township
1	90°	200	Potts, Mather, Kingsford
2	1°	150	Mather
3	0°	200	Kingsford
4	0°	200	Carpenter
5	90°	150	Dobie

8.2.1 HeliTEM Results

The HeliTEM survey provided detailed magnetic data for the property. Ronacher McKenzie produced magnetic filter products to better interpret the data (e.g., Figure 8-6); several magnetic anomalies are evident. Figure 8-7 is a map showing dB/dt of channel 16 of the property. Ronacher McKenzie used this information to pick anomalies for further processing and detailed analysis (Figure 8-7). Selected anomalies were modeled using the Maxwell plate modeling software to determine the depth and geometry of the conductors. Plates were modeled for the anomalies in the Carpenter Township claim group and the Potts Township claim group. Details of the plates are listed in Table 8-5 and Table 8-6.

CGG did not provide vertical sections along flight lines of calculated apparent resistivity or conductivity.

Figure 8-5: Flight lines for the HeliTEM survey. See Appendix 3 for a flight line map with the claim fabric.

Figure 8-6: Map showing the analytic signal (colour bar units are nT). See Appendix 3 for an analytic signal map with the claim fabric.

Figure 8-7: Map showing dB/dt, selected anomalies and modeled plates (colour bar units are ms/m). See Appendix 3 for a conductivity map with the claim fabric.

Table 8-5: Details of the plates in Carpenter Township

ID	Claim ID	X	Y	Z	Depth to top (m)	Dip (°)	Dip Dir. (°)	Length (m)	Depth Extent (m)	Conductivity (Siemens)	Thickness (m)
172	112983	439485	5397078	296	-71	46	138	41	100	55.4	9
173	227003	439929	5396900	279	-87	72	13	89	85	8.7	31
174	227003	440077	5396948	261	-106	61	195	138	87	10.5	23

Table 8-6: Details of the plates located in the claim group in Potts, Mather and Kingsford townships.

ID	Claim ID	X	Y	Z	Depth to top (m)	Dip (°)	Dip Dir. (°)	Length (m)	Depth Extent (m)	Conductivity (Siemens)	Thickness (m)
200	233586 /341277	436265	5409266	324	-62	90	276	90	158	21.9	8
201	233586	436304	5408988	299	-90	89	79	561	90	5.2	25
204	233586 /101847	436312	5408831	349	-46	85	266	200	475	11.8	6
205	101847	436399	5408614	360	-40	80	79	116	130	17.1	12
206	101847	436388	5408457	378	-13	71	102	97	297	44.7	4
207	211514	436538	5408259	376	-8	72	271	157	266	27.8	5
208	211514	436684	5408046	370	-11	83	228	119	133	52.3	6
209	211514	436684	5408046	370	-11	83	228	119	133	52.3	6
212	128262	439037	5407466	178	-200	82	89	200	193	1.8	73

Figure 8-8: Location of modeled plates in the Potts Township claim group (background magnetic analytic signal; nT).

Figure 8-9: Location of plates in Carpenter Township claim group (background magnetic analytic signal; nT).

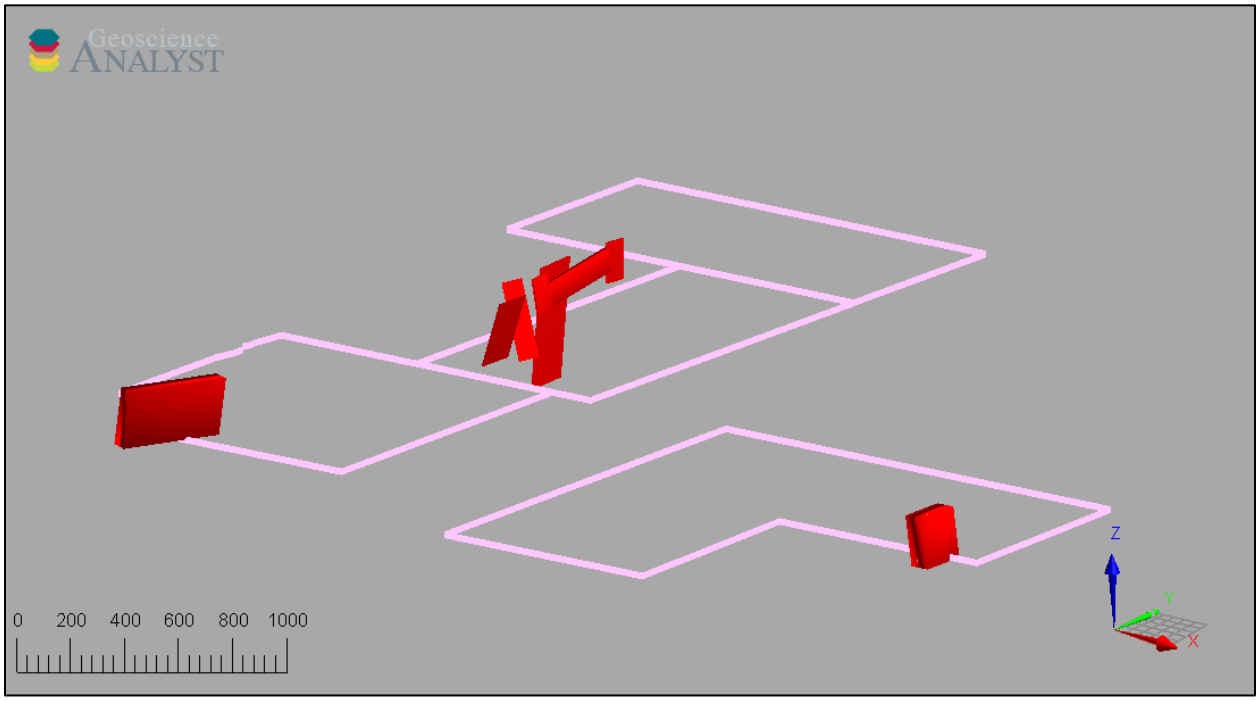


Figure 8-10: Maxwell plates on the claims in Potts Township. Scale bar is in metres.

9.0 First Nation Consultations

In preparation for exploration on the mineral claims and for the exploration permit application, Crystal Lake engaged in consultations with all First Nations in the region. Crystal Lake retained J.A. Fowler & Associates Inc ("JAFAAI") to undertake community engagement for a proposed exploration program to be undertaken in the spring and early summer 2018, over the mining claims held by Crystal Lake in the Rainy River area of northwestern Ontario. This work was to have commenced once results from a helicopter-borne geophysical survey were available, and once community consultation and engagement for exploration licences and permits had been completed. A letter was sent to those Indigenous communities identified by the Ministry of Northern Development and Mines ("MNDM") as possibly being interested or affected parties by the proposed exploration program, and these communities were identified in the covering letter for exploration licences by MNDM. The letter was then followed up by telephone calls to each community. The following Indigenous communities are interested and affected parties, and were thus engaged.

Big Grassy First Nation
Naicatchewenin First Nation

Ojibways of Onigaming
Rainy River First Nation
Métis Nation of Ontario
Sunset Country Métis Council

In addition, the Pwi-Di-Goo-Zing Ne-Yaa-Zhing Advisory Services and the Anishinabeg of Kabapikatawangay Resource Council also were engaged because these organization advise some of the above First Nations about mineral exploration. And mining.

A summary of the communications with these Indigenous groups is shown in Appendix 1.

The engagement was in connection with the following mining claims:

4271029, 4276458, 4264444, 4264445, 4264447, 4264448, 4273685, 4273686 4273687, 4273670, 4273671, 4273667, 4273669, 4273681, 4283559.

Initial contact was made with each of these organizations by means of a letter sent by e-mail and Canada Post, and then in subsequent telephone conversations. In each case, the caller introduced himself, explained that he was representing CLMC who had undertaken a helicopter-borne combined magnetic and electro-magnetic geophysical survey. The objective of the survey was to locate geophysical targets that might be caused by metal ores, particularly nickel. The company had now filed applications for exploration licences or permits for follow-up work on the ground to examine any anomalous features shown by the airborne survey. The prosed program ground work was currently in the form of a draft plan, and this would be finalised once comments and concerns have been received from communities in the area. The proposed work would consist of a visit to the site of each anomaly too see if there is any visible source that might explain the feature (i.e. a cultural feature such as a metal silo or similar). If the anomaly was unexplained, then it was proposed that each anomaly be further explored using one or more ground geophysical surveys, probably using magnetic or electro-magnetic methods. If the anomalies remained unexplained and results warranted this, each would be tested by a small diameter core drill hole to identify its cause.

The aim of the call was to inform the community, provide information on the proposed work, answer any questions and address any concerns from the leadership and community, and where issues were raised, seek to resolve these, modifying the draft work if necessary, and obtain community support for the planned work. If, after the proposed work is completed, further work is warranted, this would be subject to a separate, new work program, and the community would be engaged about this. If the community wished, one or more community meetings could be held to discuss the

proposed work. Furthermore, CLMC was prepared to enter into an early stage exploration agreement such as a memorandum of understanding ("MOU").

Some of the communities were prepared to discuss moving forward, while others would not engage in any discussions until CLMC committed to paying for the community's expenses to meet, engage and review any documentation. Several communities insisted all communications be undertaken entirely through their legal counsel (Northwest Angle 33, Animakwee Wa Zhing 37). Note that these latter two First Nations are only included because they are part of Anishinabeg of Kabapikatawangay Resource Council. The mining claims that they speak about are part of a separate block subject to a different application. The deepest engagement was with the Rainy River First Nation, where a presentation was made to them and to MNDM jointly by a teleconference on April 4, 2018. Drafting for an MOU was well advanced for one community (Big Grassy FN) when work was slowed down. No response, comments or issues were raised by the Sunset Country Metis Council or the Metis Nation of Ontario. Both the Pwi-Di-Goo-zing Ne-Yaa-Zhing Advisory Services and the Anishinabeg of Kabapikatawangay Resource Council were prepared to hold discussions and move forward. A common complaint from many of the interested and affected communities was that they are being inundated with exploration and mining related applications and approvals and these are threatening to overwhelm their limited capacity and resources.

Towards the end of May, Crystal Lake directed Ronacher McKenzie to advise JAFAAI that engagement be slowed down, and in late August, Crystal Lake directed Ronacher McKenzie to advise JAFAAI that all engagement and consultation be halted. At the time the engagement was undertaken, there was only a provisional date for the airborne geophysical survey, and provisional results were becoming available for some test drill holes completed on patented land immediately west of the Manitou Rapids 11 Reserve. This drilling was to provide orientation information for the regional exploration work by Crystal Lake. Full results for this drilling were anticipated by the end of May or thereabouts.

10.0 Interpretation and Conclusions

The property area is characterized by metavolcanic and metasedimentary rocks that were intruded by granitic and mafic-ultramafic intrusions. Historic exploration on the Emo property consisted of mapping, sampling, ground magnetic and VLF surveys and limited drilling but no significant Ni-Cu-PGE mineralization has been found to date.

The purpose of the HeliTEM survey was to identify magnetic and conductive anomalies that may represent undiscovered magmatic Ni-Cu-Co sulfide mineralization associated with mafic-ultramafic intrusions. The program also included further analysis and integration of the airborne data with

geological data. The additional analysis consisted of selecting the best anomalies based on the electromagnetic, magnetic and geological data and modelling plates using the Maxwell software. The plates define the depth and geometry of the conductor.

The airborne survey was successful in that it delineated numerous anomalies. Ten of the anomalies were selected for plate modeling. The modeling was successful in determining the geometry of the conductors. The plates are interpreted to be drill targets. The program was thus successful and met its objectives.

11.0 RECOMMENDATIONS

Based on the detailed analysis of the airborne magnetic and electromagnetic data, it is recommended to drill test the modeled conductors on the claim groups in Potts and Carpenter Townships to determine whether the geophysical anomalies are caused by Ni-Cu-PGE sulfide mineralization. It is recommended that an appropriate, carefully constructed and thorough QA/QC program be implemented during the drilling program to maintain chain of custody and quality control on every aspect of the work to comply with best practices. A downhole deviation survey tool that is unaffected by magnetic interference from highly magnetic rocks should be used. The drilling program would be a reconnaissance program to test the modeled plates. An estimate of the anticipated cost is provided in Table 11-1. Depending on the outcome of the reconnaissance program, a follow-up drilling program may be warranted to determine the extent of the mineralization should mineralization be intersected during the reconnaissance program.

Table 11-1: Cost estimate of the recommended Phase 2 exploration program.

Item	Unit	No of Units	Cost/Unit	Total Cost
Drilling	m	1100	$110	$121,000
Drilling program execution (geologist, vehicle, accommodation, meals, etc.)				$45,000
Assaying	sample	500	$50	$25,000
Reporting	hour	40	$130	$5,200
TOTAL				**$196,200**

12.0 REFERENCES

Bajc, A.F. 1991. *Quaternary Geology, Fort Frances-Rainy River Area.* Open File Report 5794, 170 p., Ontario Geological Survey.

Bajc, A.F. 2001. *Quaternary Geology, Fort Frances--Rainy River Area.* Report 286, , 52 p.: Ontario Geological Survey.

Barnes, S-J., and P. C. Lightfoot. 2005. "Formation of Magmatic Nickel Sulfide Deposits and Processes Affecting Their Copper and Platinum Group Contents." *Economic Geology 100th Anniversary Volume* p. 179-213.

Bates, R.L., and J. A. Jackson. 1980. *Glossary of Geology.* Falls Church, Virginia: American Geological Institute.

Begg, G.C., J. A.M. Hronsky, N. T. Arndt, W. L. Griffin, S. Y. O'Reilly, and N. Hayward. 2010. "Lithospheric, Cratonic and Geodynamic Setting of Ni-Cu-PGE Sulfide Deposits." *Economic Geology, v. 105* p. 1057-1070.

Blackburn, C.E., G. W. Johns, J. Ayer, and D. W. Davis. 1991. "Wabigoon Subprovince." In *Geology of Ontario*, by P.C. Thurston, H. R. Williams, R. H. Sutcliff and G. M. Stott, p. 303-381. Ontario Geological Survey, Special Volume 4, Part 1.

Davies, J.C., and J. A. Morin. 1976. *Geology of the Cedartree Lake Area, District of Kenora.* Geoscience Report 134, 75 p., Toronto: Ontario Division of Mines.

Drabble, M. J.., and K. Cervoj. 2017. *Technical Report on the Cameron Gold Deposit, Ontario, Canada.* Optiro Pty. Ltd., 177 p.

Fletcher, G.L., and T. N. Irvine. 1954. *Geology of the Emo Area.* Sixty-Third Annual Report, Part 5, 37 p., Ontarion Department of Mines.

Frieman, B.D., Y. D. Kuiper, N. M. Kelly, T. Monecke, and A. Kylander-Clark. 2017. "Constraints on the geodynamic evolution of the southern Superior Province: U-Pb LA-ICP-MS analysis of detrital zirconin successor basins of the Archean Abitibi and Pontiac subprovinces of Ontario and Quebec, Canada." *Precambrian Research, v. 292* p. 398-416.

Hendrickson, M.D. 2016. "Structural analysis of aeromagnetic data from teh Rainy River Block, Wabigoon subprovince, Minnesota, USA and Ontario, Canada: Strain partitioning along a

Neoarchean terrane boundary and implications for mineral exploration." *Precambrian Research, v. 286* p. 20-34.

Lightfoot, P.C., and D. Evans-Lambswood. 2015. "Structural controls on the primary distribution of mafic-ultramafic intrusions containing Ni-Cu-Co-(PGE) sulfide mineralization in the roots of large igneous provinces." *Ore Geology Reviews, v. 64* p. 354-386.

Ltd, CGG Canada Services. 2018. *Geophysical Survey Report, Airborne Magnetic and HeliTEM 35C Survey, Rainy River Area, Crystal Lake Mining.* CGG Canada Services Ltd.

OGS. 1997. *Kenora-Fort Frances, Geological Compilation Series, Kenora and Rainy River Districts.* 2000 Series Map, 1:253,440 scale, Ontario Geological Survey.

Percival, J.A., M. Sanborn-Barrie, T. Skulski, and D. J. White. 2006. "Tectonic evolution of the western Superior Province from NATMAP and Lithoprobe studies." *Canadian Journal of Earth Sciences, v. 43, p. 1085-1117.*

Poulsen, K.H. 2000. *Archean metallogeny of the Mine Centre--Fort Frances area.* Ontario Geological Survey Report R266, 139 p.

Simoneau, Pierre. 2015. *Emerald Lake Development Corp: VLF and Magnetometric Surveys on Allen and Farm Property, Dobie Township, Emo Area, Knora Mining District, Northwestern Ontario, 52C/12.* Geophysical Survey Report, Quebec City: Geosig Inc.

2018. *Statistics Canada.* Accessed January 2018. statcan.gc.ca.

List of Assessment Reports

20007411, 1973, Diamond Drilling, Canadian Nickel Co. Limited, 24 p.

52C13SW0002: Ogden, M., 1988a, Finland magnetometer profile, self potential lines and biogeochemical check of an old Inco aero-electromagnetic anomaly in Mather and Potts Townships, Ontario, 18 p.

52C13SW0003: Ogden, M., 1988b, Geological survey of a group of 20 claims, near Finland, Ontario (between Kenora and Fort Frances), 21 p.

52C13SW0001: MacEachern, D.J. and Paterson, N. (Ogden, M., ed.), 1989, Electromagnetic and magnetic studies of a small portion of a property of 20 claims near Finland, Ontario (between Fort Francis and Kenora), 6 p.

52C13SW0004: Smith, A. and Petrie, L., 1995, Report on 1994 Geophysical Surveys, Potts Twp Property, NTS 52 C/13, Western Canada Region (Noranda Mining and Exploration Inc.), 6 p.

52C13SW2001: Puskas, F.P., 1997, Diamond Drilling Logs, 68 p.

2003413: Ayres, L.D. and Tims, A., 2007, Geology and economic potential of felsic metavolcanic and subvolcanic intrusive rocks, Off Lake-Pinewood Lake Area, Northwestern Ontario (Rainy River Resources Ltd.), 114 p.

53F04NW0135: Canadian Nickel Co. Ltd., 1969, Diamond Drilling, Heronry Lake, 6 p.

53F04NW0126: MacGibbon, A.T., 1984, Geological – Geophysical Report, Canico-Martin & Lafleche Agreement, Claims K 696286 – 91 (incl.) Are of Heronry Lake, Kenora Mining Division, NTS 52 F/4 (Canadian Nickel Company Ltd.), 5 p.

53F04NW0137: MacTavish, R.O., 1975, Electromagnetic survey of Group “N”, Eagle Project, Kakagi Block, Kenora Mining Division, Ontario (Hudson Bay Exploration and Development Company Ltd.), 3 p.

52F05SE2005: Stephenson, C.D., 2000, Geological Report, Kakagi Lake Property, Hornby Bay Exploration Limited, 16 p.

2000824: Raoul, A.J., 2008, Pipestone property airborne geophysical assessment report, NTS sheets 52F/4 and 52F/5 (Western Warrior Resources), 32 p.

13.0 STATEMENT OF AUTHORSHIP

This report, titled "Assessment Report, Nicobat Project, Rainy River Area, Ontario", dated December 21, 2018, and prepared for Crystal Lake Mining Corp., was completed and signed by the following authors:

"Signed and Sealed"

Elisabeth Ronacher, PhD, P.Geo.
December 21, 2018
Sudbury, ON

"Signed and Sealed"

Brenda Sharp, MSc. P.Geo.
December 21, 2018
Ottawa, ON

Appendix 1 – Certificates of Qualifications

CERTIFICATE OF QUALIFICATIONS

Elisabeth Ronacher
Ronacher McKenzie Geoscience
935 Ramsey Lake Road
Willet Green Miller Centre, 4th Floor
Mailstop: CEMI
Sudbury, ON, Canada
elisabeth.ronacher@rmgeoscience.com
☎ 705-419-1508

I, Elisabeth Ronacher, do hereby certify that:

1. I am the Principal Geologist at Ronacher McKenzie Geoscience.
2. I am responsible for the report titled "Assessment Report, Nicobat Project, Rainy River Area, Ontario" dated December 21, 2018, and prepared for Crystal Lake Mining Corp. for submission to the Ontario Ministry of Northern Development and Mines.
3. I hold the following academic qualifications: M.Sc. Geology (1997), University of Vienna, Vienna, Austria; Ph.D. Geology (2002), University of Alberta, Edmonton, Canada.
4. I am a member in good standing of the Association of Professional Geologists of Ontario (APGO, member # 1476), the Society of Economic Geologists (SEG) and the Society for Geology Applied to Mineral Deposits (SGA).
5. I have worked on exploration projects worldwide (including Canada, Mongolia, China, Austria) and on a variety of commodities including Au, Cu, base-metal, Cu-Ni PGE and U deposits since 1997.
6. I visited the Property from June 6-8, 2017 and from April 9-11, 2018.
7. I do not hold any interest in Crystal Lake Mining Company Limited, nor in the property discussed in this report, nor in any other property held by this company, nor do I expect to receive any interest as a result of writing this report.

Dated this 21st Day of December, 2018

E. Ronacher

Elisabeth Ronacher, Ph.D., P.Geo.
Ronacher McKenzie Geoscience

PROFESSIONAL GEOSCIENTIST
ELISABETH RONACHER
PRACTISING MEMBER
1476
ONTARIO

CERTIFICATE OF QUALIFICATIONS

Brenda Sharp
Ronacher McKenzie Geoscience
935 Ramsey Lake Road
Willet Green Miller Centre, 4th Floor
Mailstop: CEMI
brenda.sharp@rmgeoscience.com
☎ 613-286-8141

I, Brenda Sharp, do hereby certify that:

1. I am an Associate Senior Geophysicist at Ronacher McKenzie Geoscience.
2. I am responsible for the geophysical sections of the report titled "Assessment Report, Nicobat Project, Rainy River Area, Ontario" dated December 21, 2018, and prepared for Crystal Lake Mining Corp. for submission to the Ontario Ministry of Northern Development Mines.
3. I hold the following academic qualifications: M.Sc. Geology (1987), University of Auckland, Auckland, New Zealand
4. I am a member in good standing of the Association of Professional Geologists of Ontario (APGO, member # 2568).
5. I have worked on exploration projects worldwide (including Canada, Australia, Botswana, Namibia, Brazil, Chile, Argentina, Sweden) and on a variety of commodities including Au, Cu, base-metal, Cu-Ni PGE and U deposits since 1989.
6. I did not visit the property.
7. I do not hold any interest in Crystal Lake Mining Company Limited, nor in the property discussed in this report, nor in any other property held by this company, nor do I expect to receive any interest as a result of writing this report.

Dated this 21st Day of December, 2018

B M Sharp

Brenda Sharp, MSc, P.Geo.
Ronacher McKenzie Geoscience

Appendix – Summary of Engagement with Indigenous Communities

Date dd/mm/yy	Activity	Issues/concern raised	Accommodation /mitigation	Remarks
Anishinabeg of Kabapikotawangag Resource Council ("AKRC")				
	Letter addressed to individual constituent members of council, i.e. Animakee Wa Zhing 37 FN, Big Grassy FN, Anishinaabeg Naongashig FN, NW Angle 33, Ojibways of Onigaming FN			Engagement with the Anishinaabeg of Kabapikotawangag was halted until more information was obtained from those communities that it represented.
Animakee Wa Zhing 37 FN				
12Apr18	Letter to Chief & Council	Advised Crystal Lake Mining Corp had a draft proposed work program for an airborne geophysical survey		This FN is not part of PR-18-11289, but is part of AKRC. The claims they speak to are subject to a separate Exploration Licence application.
04May18	Letter from Chief NW Angle 37 to MNDM (R Therriault) Letter to JA Fowler	FN does not support application for an exploration permit because the area is close to their Regina Bay 34A Reserve. Requests all contact to be through their legal Counsel Mr H. Akerlund.		
18May18	Phone call with Chief	Appeared distracted and would not talk.		

Date dd/mm/yy	Activity	Issues/concern raised	Accommodation /mitigation	Remarks
22May18	Phone call from Legal Counsel from AWZ 37	Mr Akerlund advised that the FN to review the proposed work. There are many other companies exploring in the area. The FN cannot undertake its own review without assistance: it does not have the resources. He undertook to find out if the FN had a consultation protocol.		JAFAAI advised he is unable to travel for meetings while his wife is in hospital.
31May18	Letter from Legal Counsel for AWZ 37			
5Jun18	Letter from Legal Counsel for AWZ 37	Letter from JAF dated 31May18 does not address concerns raised. Requires Crystal lake to pay for participation in reviewing and evaluating project. Refers to MAC's TSM for Aboriginal and Community Outreach Protocol for AAA assessment criteria. Unless Crystal Lake commits to pay for participation by FN, cannot agree to any form of engagement.		
Anishnabeg Naongashig FN				
				Not contacted

Date dd/mm/yy	Activity	Issues/concern raised	Accommodation /mitigation	Remarks
Big Grassy First Nation				
23Mar18	Letter to Chief and Council	Advised Crystal Lake Mining Corp had a draft proposed work program for an airborne geophysical survey		
26Mar18	Unsuccessful phone call to Chief Copenace	Left voice mail message		
28Mar18	Phone call to Chief Phone call to Jazz Comegan (Land Coordinator)	Chief asked contact to be made with Jazz Comegan Advised that BGFN had a consultation protocol. Should discuss with J Duguay.	Called Jazz Comegan. Requested a copy of the consultation protocol	
19Apr18	Phone call to R Duguay	Discussed proposed work	Requested copy of consultation protocol	
20Apr04	Phone call to R Duguay	Discussed proposed work & whether FN would like an agreement	Advised airborne work OK but wanted a MoU for any other work	
23Apr18	e-mail from Big Grassy FN – J Duguay	Provided copy of BGFN draft consultation protocol.		
24Apr04	Phone call to R Duguay	Discussed draft protocol, its shortcomings, and what should be in any agreement	Start preparing a Rough ToC for a MoU	

Date dd/mm/yy	Activity	Issues/concern raised	Accommodation /mitigation	Remarks
28Apr04	Phone call to R Duguay	Further discussions on what should be in any agreement	Continued drafting a MoU	Slowed down work on drafting at early May at direction of Crystal Lake Mining Corp. Work stopped at end of May.
Metis Nation of Ontario				
11Mar18	Copied on correspondence to Sunset Country Metis Council	Advised Crystal Lake Mining Corp had a draft proposed work program for an airborne geophysical survey		
Naicatchewenin First Nation				
2Mar18	Letter to chief and council	Advised Crystal Lake Mining Corp had a draft proposed work program for an airborne geophysical survey		
23Mar18	Unsuccessful phone call	Chief is out of town until next Monday. Morriseau also out of town.		
26Mar18	Phone call to Chief Wayne Smith.	Left voice mail message		
03Apr18	Phone call with CEO Dale Morriseau	Left voice mail message		
NW Angle 33 FN				

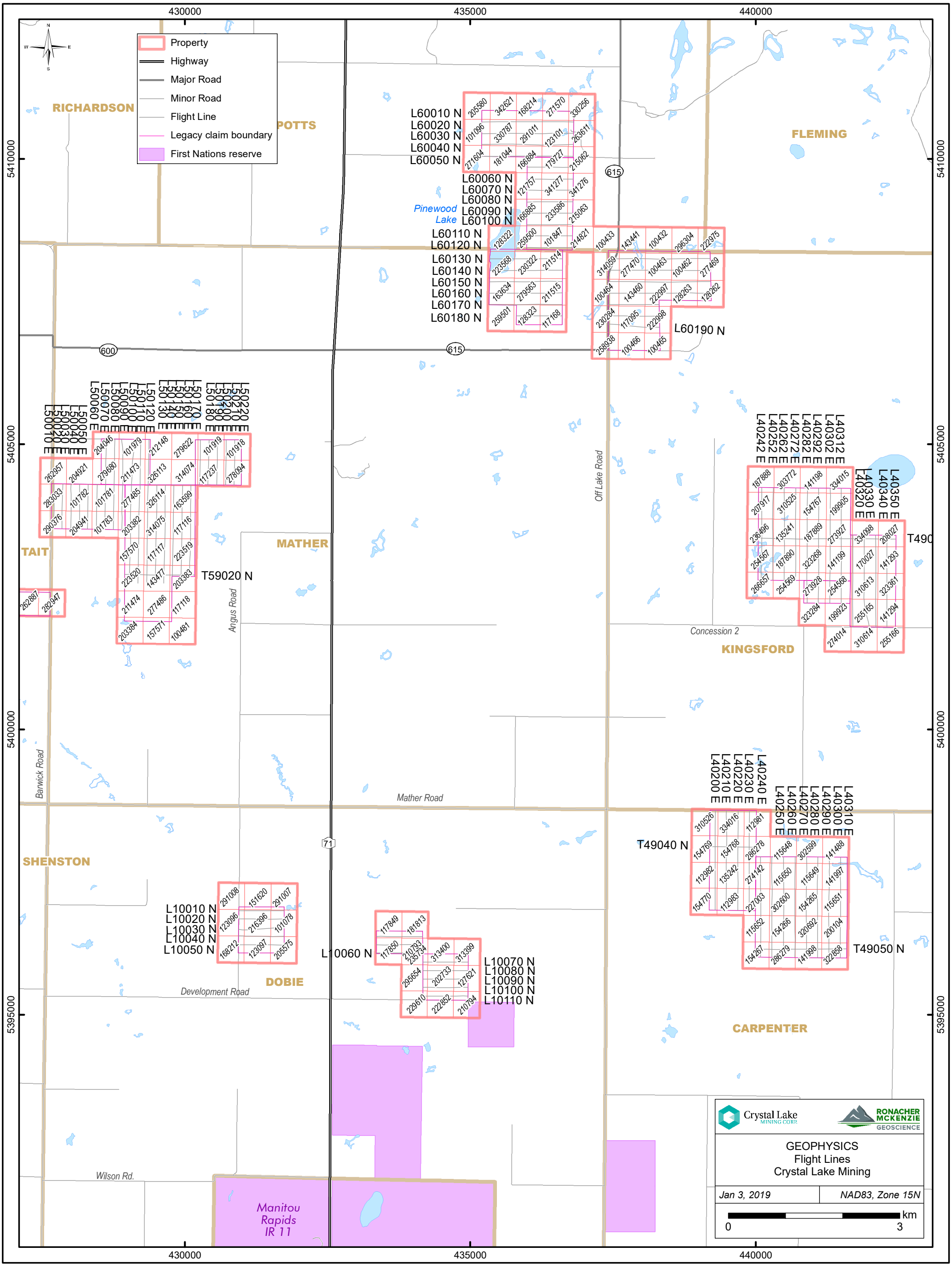
Date dd/mm/yy	Activity	Issues/concern raised	Accommodation /mitigation	Remarks
12Apr18	Letter to Chief & Council	Advised Crystal Lake Mining Corp had a draft proposed work program for an airborne geophysical survey		This FN is not part of PR-18-11289, but is part of AKRC. The claims they speak to are subject to a different Exploration Licence application.
4May18	Letter to MNDM (R Therriault)	FN does not support application for an exploration permit because the area is close to their Dog Paw Lake and Heronry Lake areas. Requires reimbursements of any and all costs incurred to meet and discuss proposed work plan. Requests all contact to be through their legal Counsel Mr H. Akerlund.		
Ojibways of Onigaming				
02Mar18	Letter to Chief and Council	Advised Crystal Lake Mining Corp had a draft proposed work program for an airborne geophysical survey		
18Mar18	Phone call to Chief Kishiqueb	Need to speak to Daniel Kelly (New Relationships) or Don Kavanaugh (AKRC)	Sent e-mail to Daniel Kelly	
	Phone call w Don Kavanaugh (AKRC) on behalf of Ojibways of Onigaming.	Advised AKRC represents certain FNs wrt exploration and mining consultation.		AKRC = Anishinabeg of Kabapikatawangay Resource Council

Date dd/mm/yy	Activity	Issues/concern raised	Accommodation /mitigation	Remarks
Rainy River FN				
2Mar18	Letter to Chief & Council	Advised Crystal Lake Mining Corp had a draft proposed work program for an airborne geophysical survey		
15Mar18	Attempted to call Chief McGinnis unsuccessfully			
16Mar18	Attempted to call Chief McGinnis unsuccessfully			
19Mar18	1.Attempted to call Chief McGinnis unsuccessfully 2.Phoned Tammy Ryall left message 3.Tammy Ryall returned call	Chief is away unit 22nd.		
21Mar18	Phone call w Alex Bruyere (PDGZ)	AB explained his role. Advised not to mention Metis with the FNs.		
22Mar03	Phone call #1 w Chief McGinnis. Asked if Chief had an opportunity to read letter sent on 22 Mar. He said he had not seen it. Phone call #2 w Chief McGinnis.	1.Chief had not seen letter 2. Chief noted map inaccurate: some areas on map with letter were withdrawn from staking.	1.E-mail second copy of letter to Chief 2. Gave undertaking to have map updated. Discussed prosed	

Date dd/mm/yy	Activity	Issues/concern raised	Accommodation /mitigation	Remarks
			exploration in outline. No issues at this stage. Discussed TEK and if FN had a consultation protocol	
11Apr04	Phone call w RRFN Chief and reps and MNDM. Delivered PowerPoint presentation on work on Patented leases adjacent to Manitou Rapids 11 Reserve, and on the proposed exploration programme that are the subject of PR-18-11289	Voiced concerns about Crystal Lake Mining Corp. Voiced concerns about heli-survey disturbing animals Concerned about exploration on patented land next to reserve.	Undertook to find history of Crystal Lake Mining Corp. Apologized for survey being flown. Unaware notification required for to flying on leases Discussed work on leases and proposed work on claims.	Info provided in separate phone call
Sunset Country Metis Council				
2Mar18	Letter to Council president	Advised Crystal Lake Mining Corp had a draft proposed work program for an airborne geophysical survey		
11Mar18	Letter to Council	Advised Crystal Lake Mining Corp had a draft proposed work program for an airborne geophysical survey		

Date dd/mm/yy	Activity	Issues/concern raised	Accommodation /mitigation	Remarks
26Mar18	Unsuccessful phone call to Carol Koski	Left voice mail message		
4Apr18	Msg from Sunset Country Metis Council	Carol Koski out of Office until 14 April		
16Apr18	Phone call to C Kosci	She would advise if Sunset Country has any issues or concerns		
Pwi-Di-Goo-zing Ne-Yaa-Zhing Advisory Services				
	Phone call to Alex Bruyere			No concerns for the airborne work. Advised to contact individual FNs
	PDGZ provides advice on mineral exploration and development to Anishnabeg of Kabapikotawangag Resource Council.			

Appendix 3 – Detailed Maps


430000
435000
440000
5410000
5405000
5400000
5395000
Property
Highway
Major Road
Minor Road
Flight Line
Legacy claim boundary
First Nations reserve
RICHARDSON
POTTS
FLEMING
MATHER
TAIT
SHENSTON
DOBIE
CARPENTER
KINGSFORD
Pinewood Lake
Off Lake Road
Angus Road
Barwick Road
Mather Road
Concession 2
Development Road
Wilson Rd.
Manitou Rapids IR 11
600
615
71
L60010 N
L60020 N
L60030 N
L60040 N
L60050 N
L60060 N
L60070 N
L60080 N
L60090 N
L60100 N
L60110 N
L60120 N
L60130 N
L60140 N
L60150 N
L60160 N
L60170 N
L60180 N
L60190 N
T59020 N
T49040 N
T49050 N
L10010 N
L10020 N
L10030 N
L10040 N
L10050 N
L10060 N
L10070 N
L10080 N
L10090 N
L10100 N
L10110 N
Crystal Lake MINING CORP.
RONACHER MCKENZIE GEOSCIENCE
GEOPHYSICS
Flight Lines
Crystal Lake Mining
Jan 3, 2019
NAD83, Zone 15N
km
0
3

430000
435000
440000
5410000
5405000
5400000
5395000

Property
Highway
Major Road
Minor Road
First Nations reserve

nT
11.5
6.4
4.4
3.4
2.8
2.4
2.1
1.8
1.6
1.5
1.3
1.2
1.1
1.0
1.0
0.9
0.8
0.8
0.7
0.7
0.7
0.6
0.6
0.6
0.5
0.5
0.5
0.4
0.4
0.4
0.4
0.3
0.3
0.3
0.2
0.2
0.2

RICHARDSON
POTTS
FLEMING
SHENSTON
TAIT
MATHER
DOBIE
CARPENTER
KINGSFORD

Pinewood Lake
Off Lake Road
Angus Road
Barwick Road
Mather Road
Development Road
Concession 2
Wilson Rd.
Manitou Rapids IR 11

600
615
71

205580 342621 168214 271570 330256
101096 330787 291011 123101 263611
271604 181044 166884 179727 215062
121757 341277 341276
166885 233586 215063
128322 259500 101847 214821
223568 230322 211514
163634 279563 211515
259501 128323 117168
100433 143441 100432 296304 222975
314059 277470 100463 100462 277469
100464 143460 222997 128263 128262
230284 117095 222998
258938 100466 100465

204046 101979 212148 279622 101919 101918
262957 204921 279680 211473 326113 314074 117237 278094
283033 101782 101781 277485 326114 163599
290376 204941 101783 203382 314075 117716
157570 117117 223519
223520 143477 203383
262887 282947
211474 277486 117718
203384 157571 100481

187888 303772 141198 334015
207917 310525 154767 199905
236496 135241 187889 273927 334098 208027
254567 187890 323268 141199 170027 141293
266657 254569 273928 254568 310613 323361
323284 199923 255165 141294
274014 310614 255166

291008 151620 291007
123096 216396 101078
168212 123097 205575

117849 181813
117850 210793 235734 313400 313399
295654 202733 127621
229610 222852 210794

310526 334016 112981
154769 154768 286278 115648 302599 141488
112982 135242 274142 115650 115649 141997
154770 112983 227003 302600 154265 115651
115652 154266 320692 200104
154267 286279 141998 322858

Crystal Lake MINING CORP.
RONACHER MCKENZIE GEOSCIENCE

GEOPHYSICS
Magnetic Analytical Signal
Crystal Lake Mining

Nov 28, 2018 | NAD83, Zone 15N

km
0 3

430000
435000
440000
5410000
5405000
5400000
5395000

Anomaly Rank 2
Anomaly Rank 3
Conductor Plates
Property
Highway
Major Road
Minor Road
First Nations reserve

dB/dt
71
63
56
48
40
33
25
17
10
2

RICHARDSON
POTTS
FLEMING
MATHER
TAIT
KINGSFORD
SHENSTON
DOBIE
CARPENTER

Pinewood Lake

600
615
71

Off Lake Road
Angus Road
Concession 2
Barwick Road
Mather Road
Development Road
Wilson Rd.

Manitou Rapids IR 11

Crystal Lake MINING CORP.
RONACHER MCKENZIE GEOSCIENCE

GEOPHYSICS
Conductivity (dB/dt Z Ch16)
& Picked Anomalies
Crystal Lake Mining

Jan 3, 2019 | NAD83, Zone 15N

0 3 km

Appendix 4 – Flight Lines per Cell Claim

Claim ID	Line Kilometers
100462	0.92
100463	0.92
100464	1.75
101078	1.94
101096	1.62
101781	1.39
101782	2.59
101783	2.16
101847	0.92
101918	1.50
101919	2.24
101979	2.22
112981	0.85
112982	0.46
112983	1.56
115648	1.51
115649	0.93
115650	1.39
115651	0.93
115652	0.46
117095	0.92
117116	1.39
117117	1.39
117168	0.79
117237	2.54
117849	0.85
117850	1.69
121757	1.31
123096	1.50
123097	0.92
123101	1.38
127621	1.95
128262	1.27
128263	1.12
128323	0.90
135241	1.39
135242	0.93
141198	0.17
141199	0.93
141293	0.46
141294	0.46
141488	1.02
141997	0.93
141998	1.79

143460	1.38
143477	2.64
154265	0.93
154266	1.39
154267	1.31
154767	0.93
154768	1.39
154769	1.00
154770	0.78
157570	0.93
163599	1.39
163634	2.06
166884	0.71
166885	1.55
168212	1.00
170027	1.39
179727	0.92
181044	0.46
181813	0.77
187888	0.97
187889	1.39
187890	0.93
199905	0.93
199923	0.15
200104	0.93
202733	1.38
203382	1.65
203383	2.62
204046	1.48
204921	0.01
204941	2.16
205575	1.24
207917	0.93
208027	1.31
210793	2.02
210794	0.65
211473	1.39
211514	1.56
211515	2.36
212148	0.74
214821	0.99
215062	0.99
215063	1.49
216396	1.38
222852	0.46

222997	1.37
222998	1.32
223519	1.39
223520	2.20
223568	1.67
227003	1.24
229610	0.48
230284	1.16
230322	0.92
233586	1.38
236496	1.59
254567	0.93
254568	0.93
254569	1.09
255165	1.40
255166	0.42
259500	1.30
259501	0.43
262957	0.01
263611	1.48
266657	1.10
271604	0.54
273927	1.39
273928	0.93
274142	0.93
277469	1.24
277470	0.92
277485	1.39
278094	1.69
279563	1.29
279680	1.33
283033	1.73
286278	1.58
286279	2.46
290376	1.43
291011	1.38
295654	1.44
302599	1.02
302600	1.39
303772	0.97
310525	0.93
310526	0.85
310613	1.39
310614	1.26
313399	0.65

313400	0.46
314059	1.18
314074	1.24
314075	1.39
320692	0.93
322858	2.17
323268	0.93
323284	0.95
323361	0.46
326113	1.28
326114	1.39
330787	1.38
334015	0.97
334016	1.69
334098	2.25
341276	0.99
341277	0.92
TOTAL	**185.69**