Technical Report
on the
Bishop Claims Property

For RJK Explorations Ltd.

Gillies Limit & Lorrain Townships,
Larder Lake Mining Division,
Ontario, Canada

Prepared by

Brian Anthony Bishop
Kenogami, Ontario
February 19, 2019

Douglas Robinson, P.Eng. Geo.
Swastika, Ontario
February 19, 2019

Date & Signature Page

This report, titled "Technical Report on the Bishop Claims Property, for RJK Explorations Ltd., Gillies Limit & Lorrain Townships, Larder Lake Mining Division, Ontario, Canada", and dated February 19, 2019, was prepared and signed by the following authors:

Dated February 19, 2019
At Swastika, Ontario, Canada

Brian Anthony (Tony) Bishop, Prospector

Douglas Robinson, P.Eng. Geology

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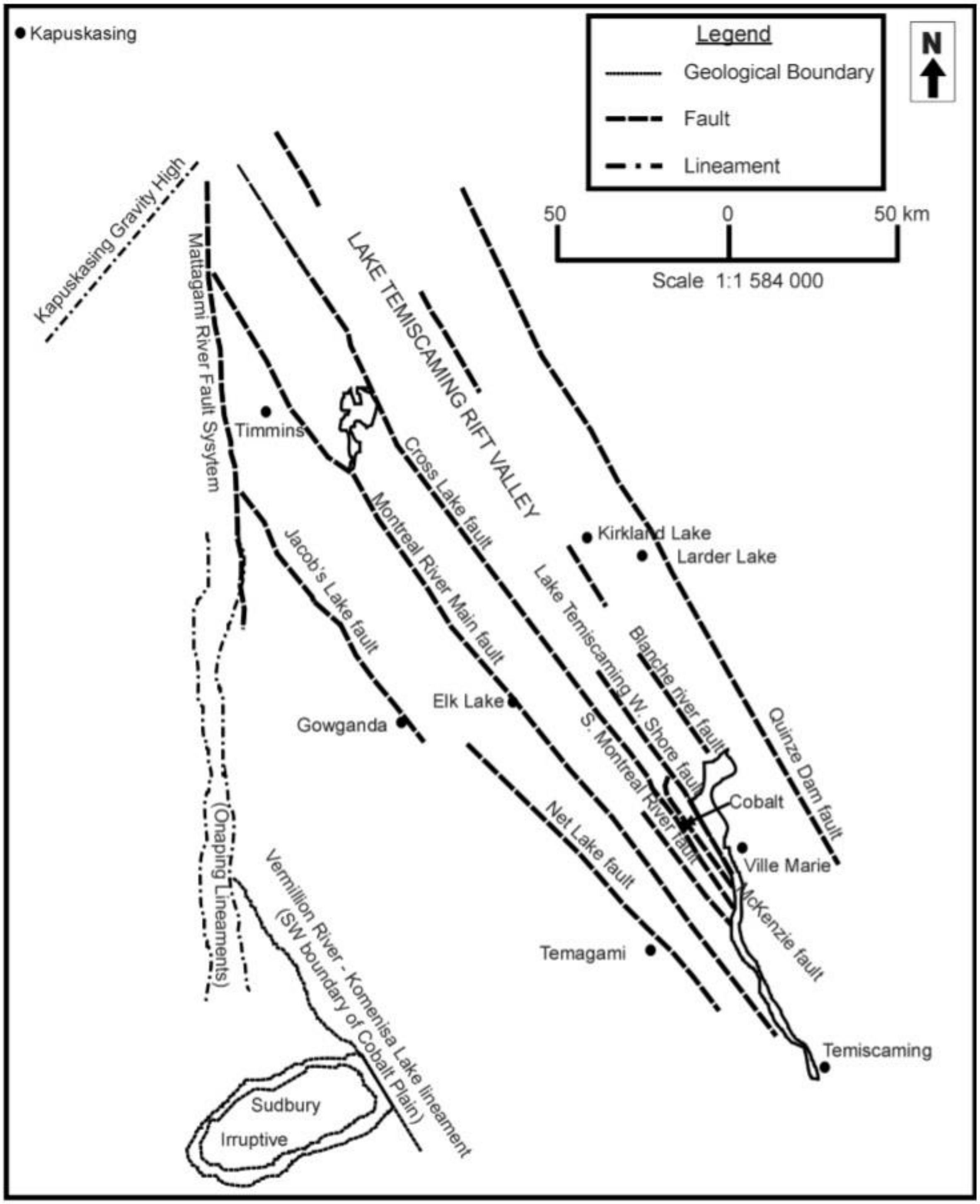

The Lake Temiskaming Rift Valley (also known as the Lake Temiskaming Structural Zone) (after Lovell and Caine 1970).

Used courtesy of
Ontario Geological Survey
Open File Report 6088

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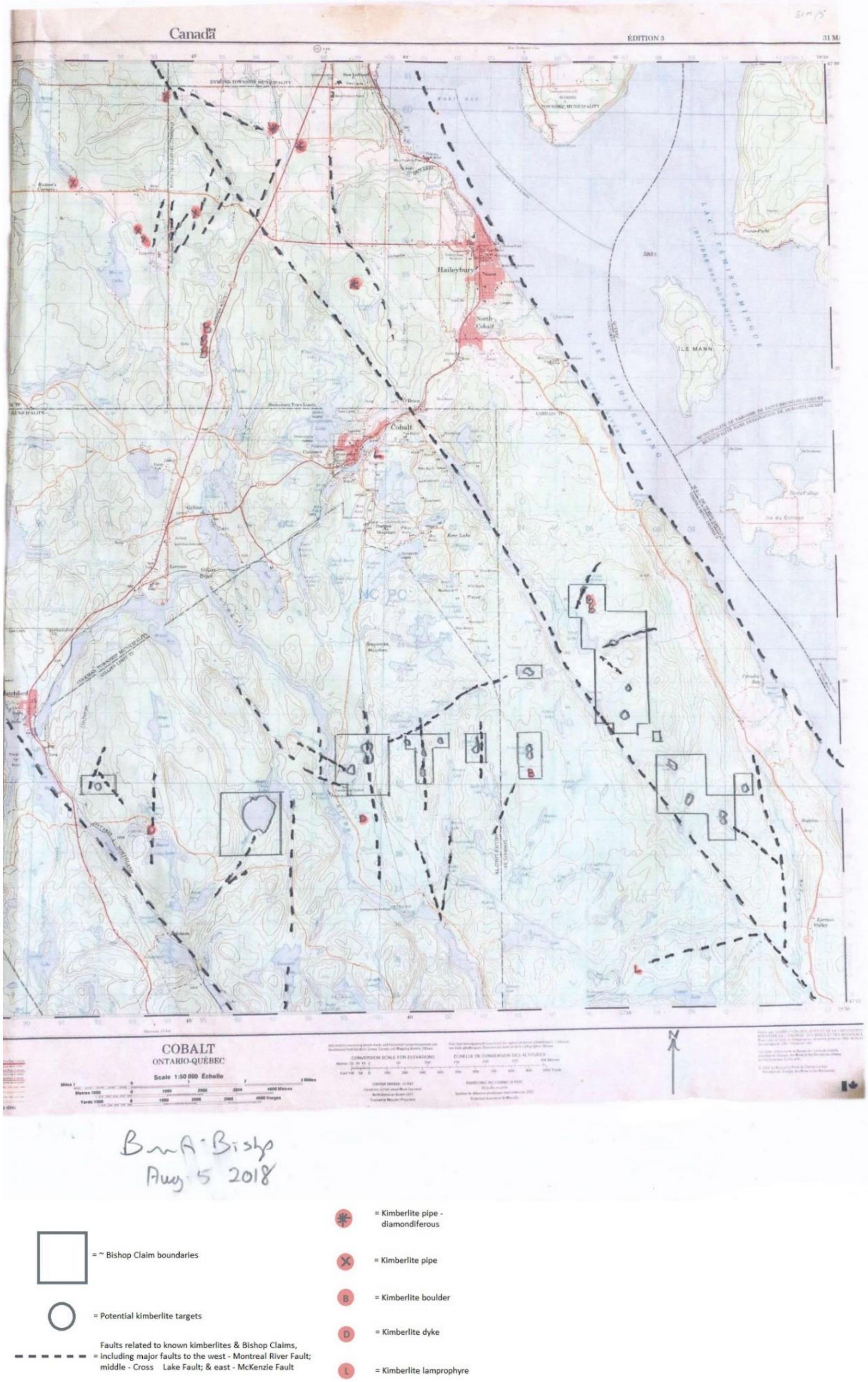

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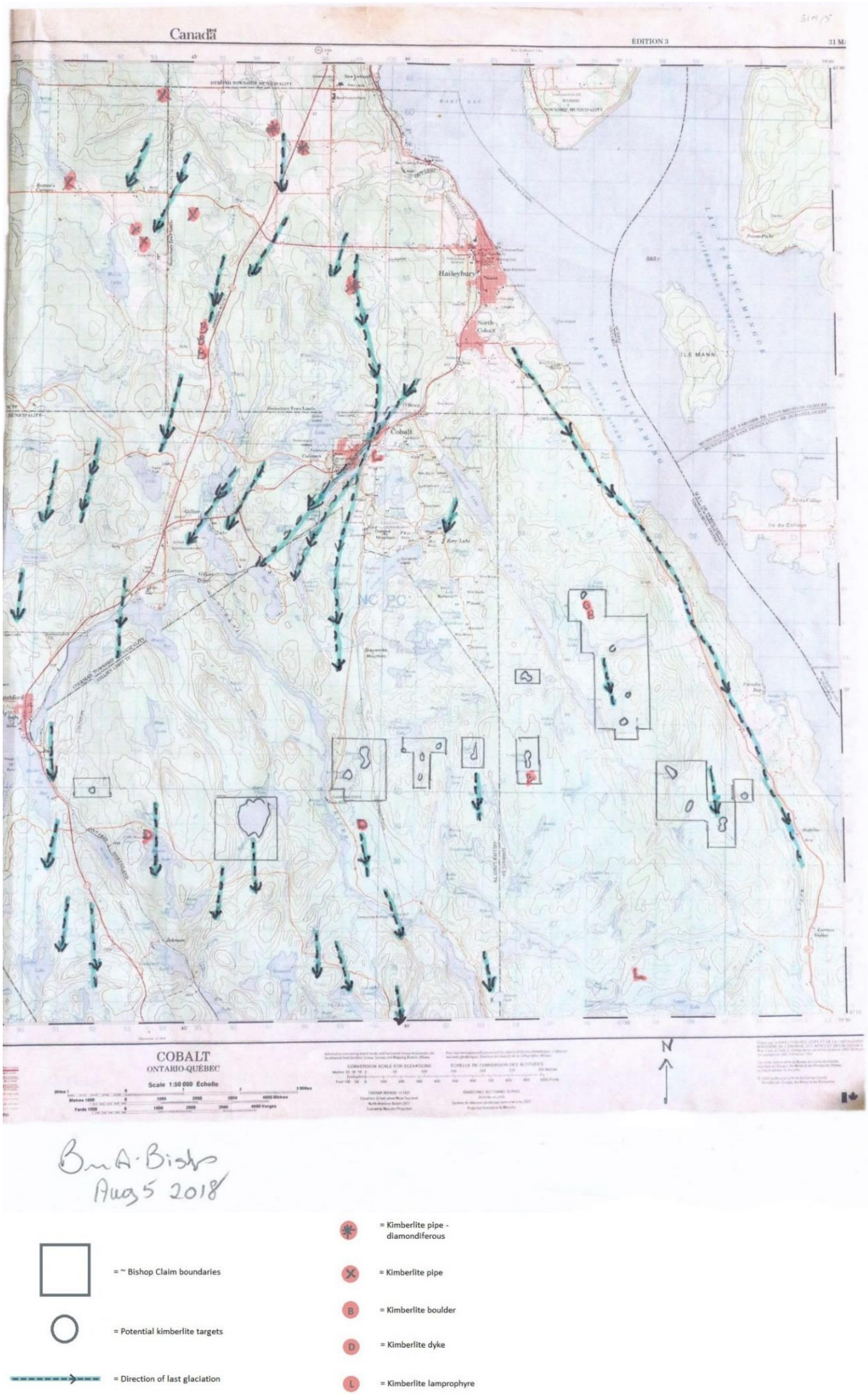

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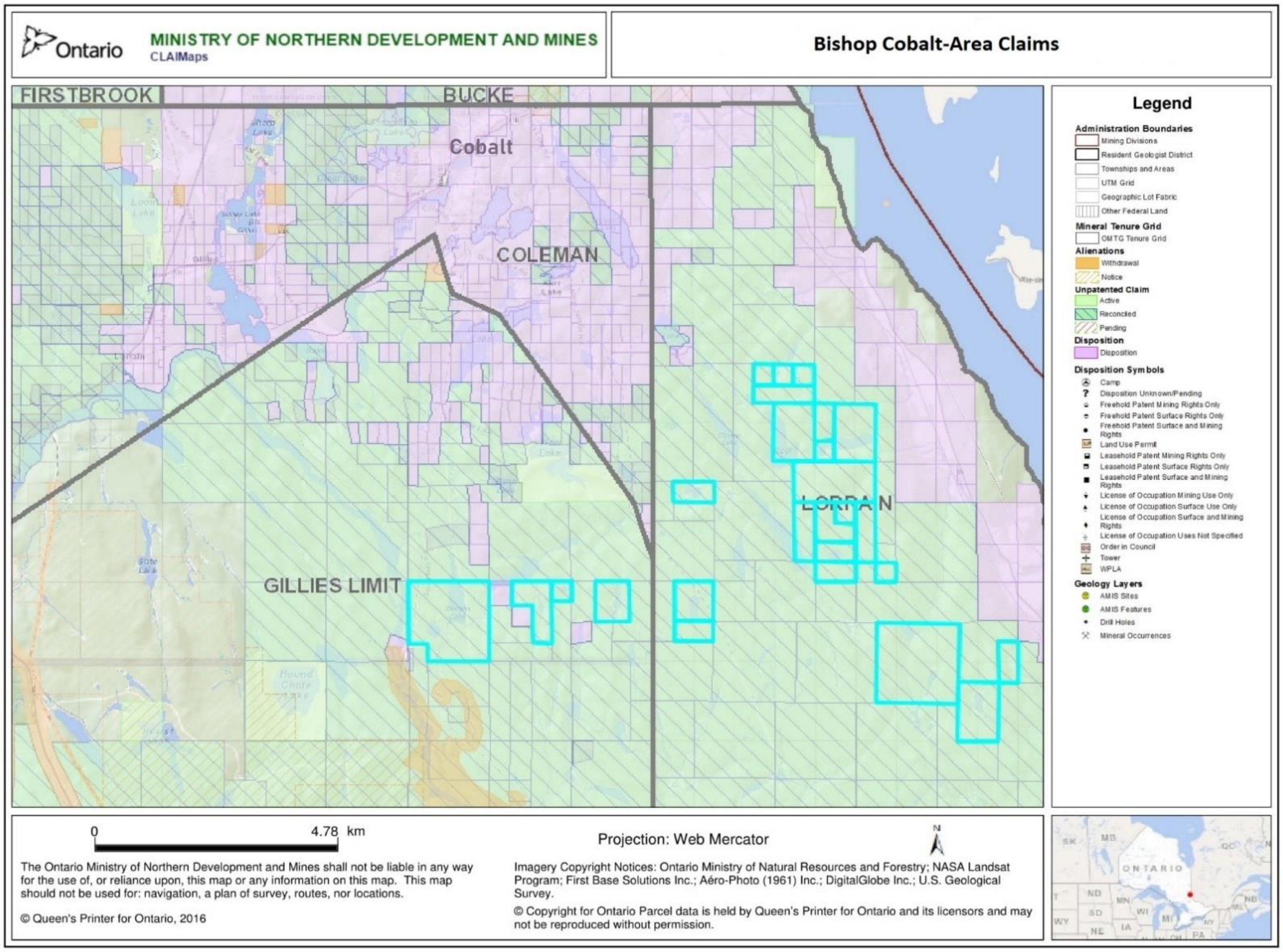
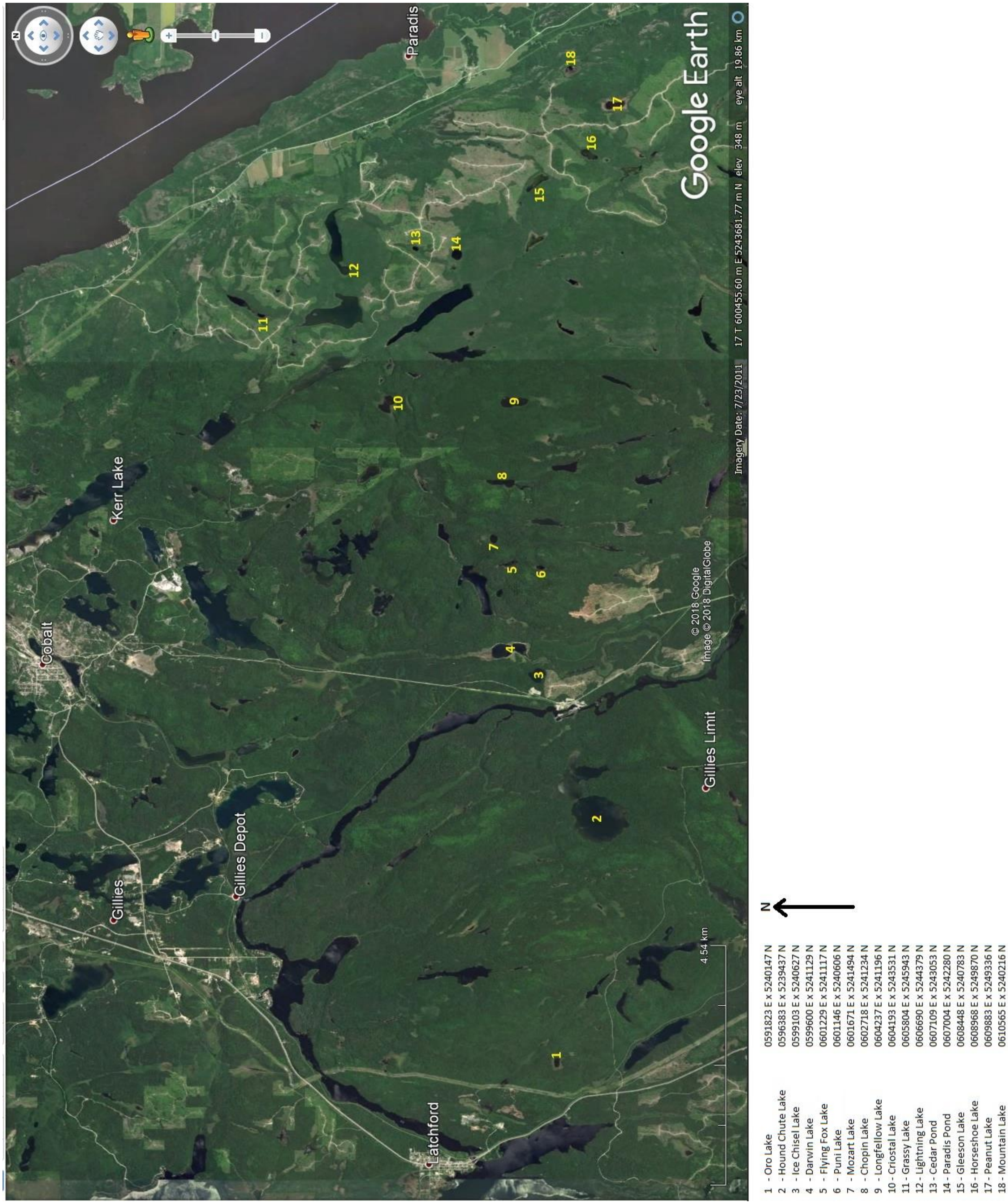
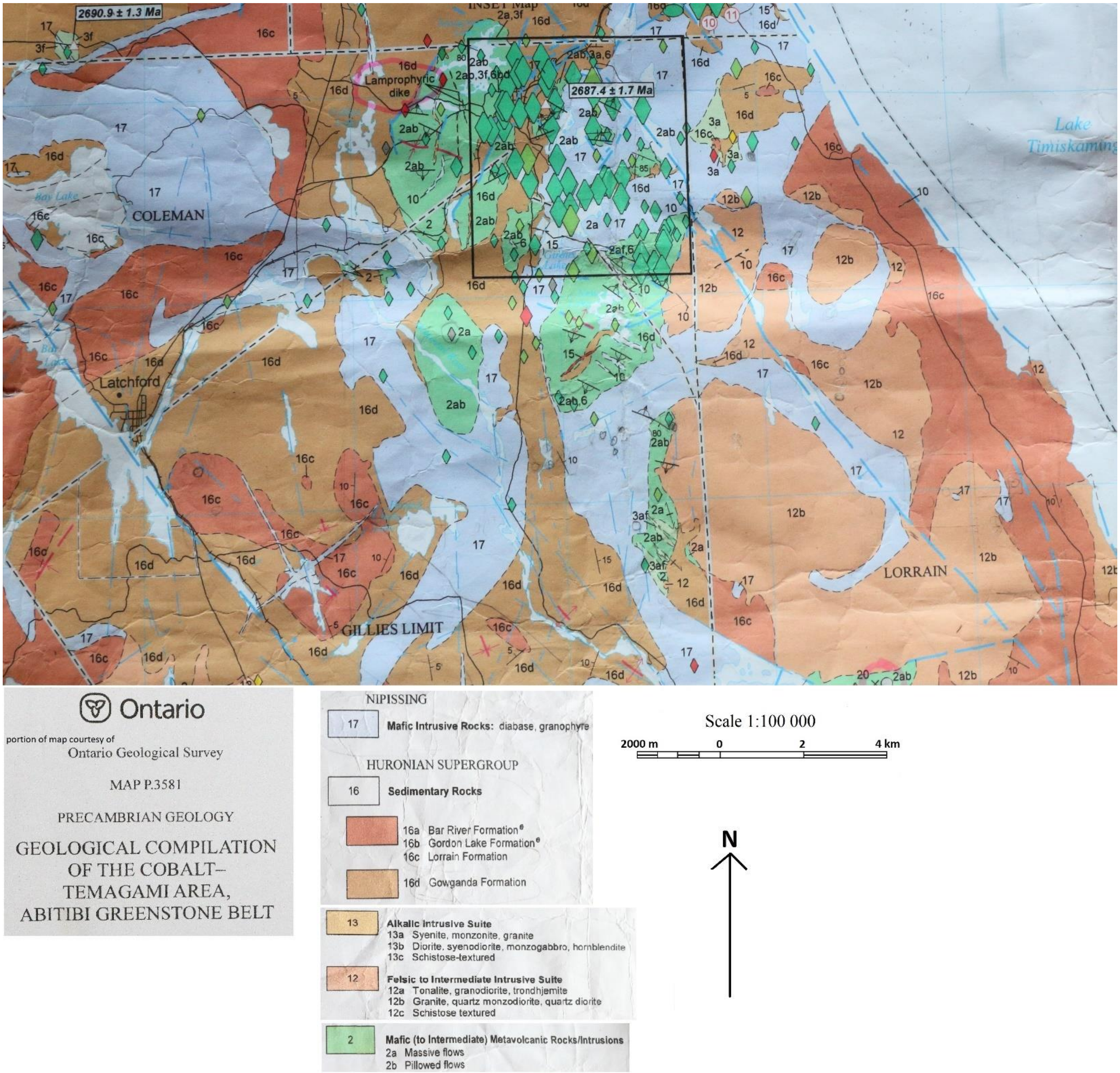


Map 4: MLAS image of Bishop Property contained in Option Agreement with RJK Exploration Ltd. Feb 1, 2019



Map 5: Google Earth view of Bishop Claims targets, saved August 4, 2018
(note, however, that since August 4, 2018, more circular mag lows have also been targeted for mag flyovers)



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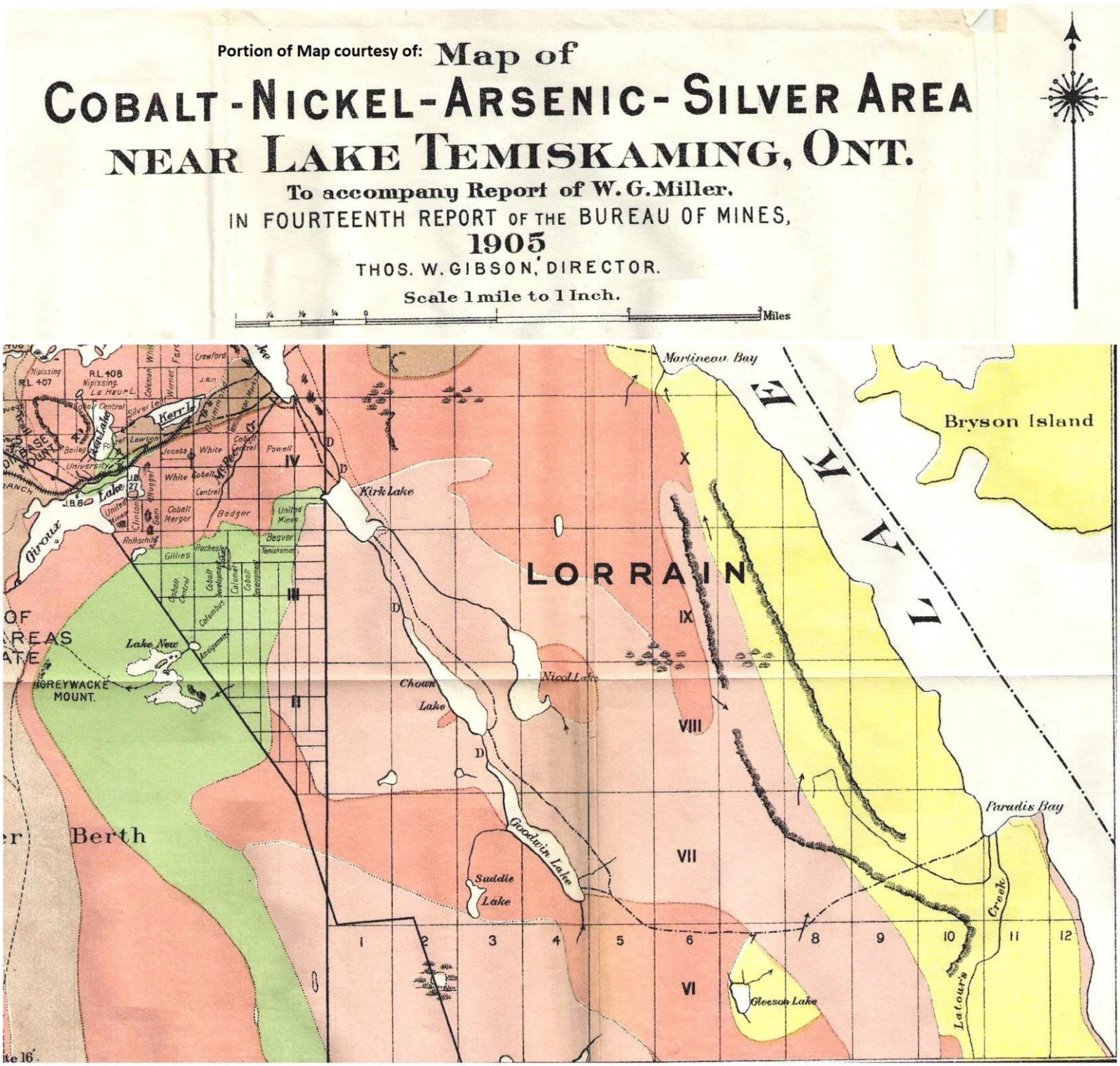

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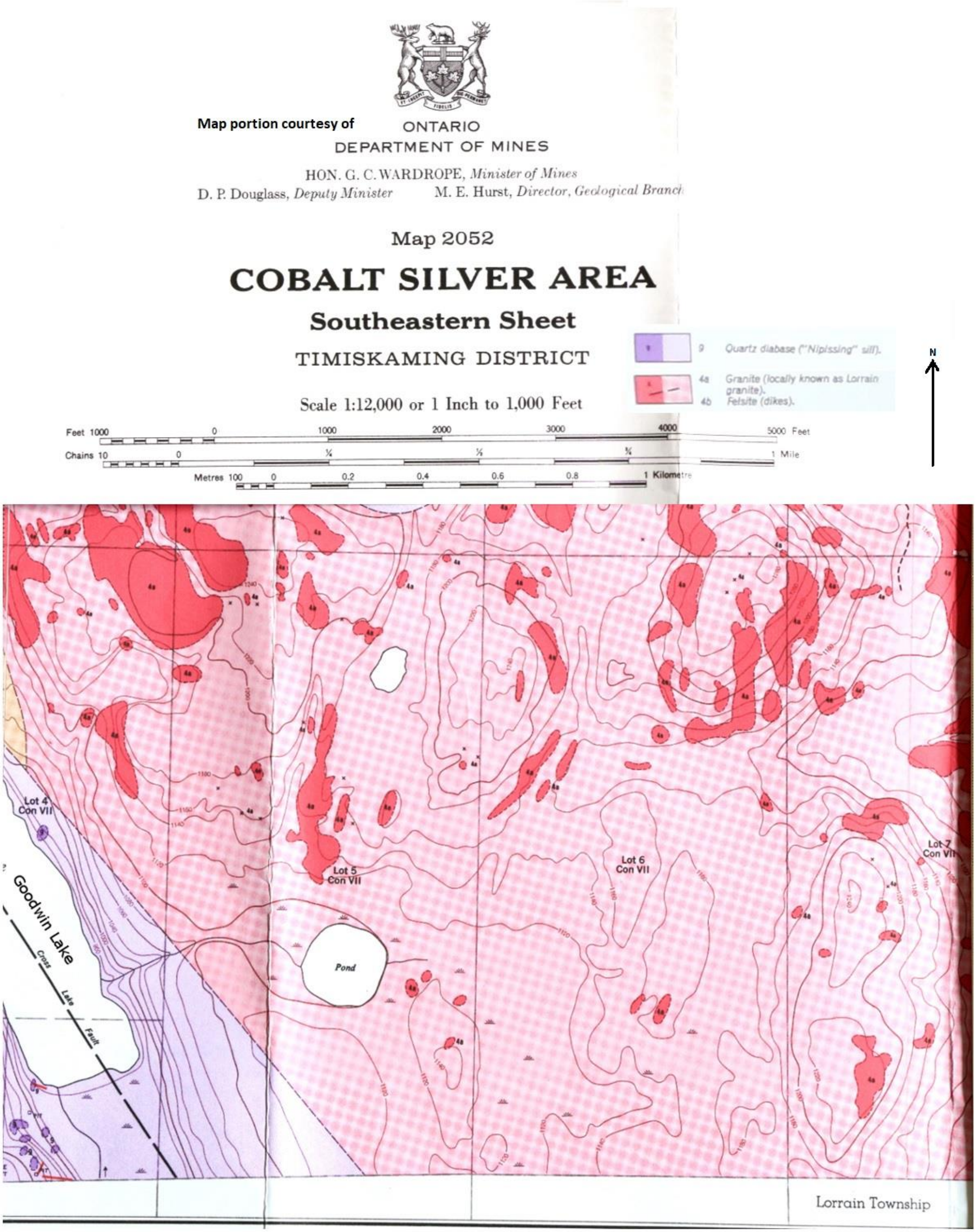

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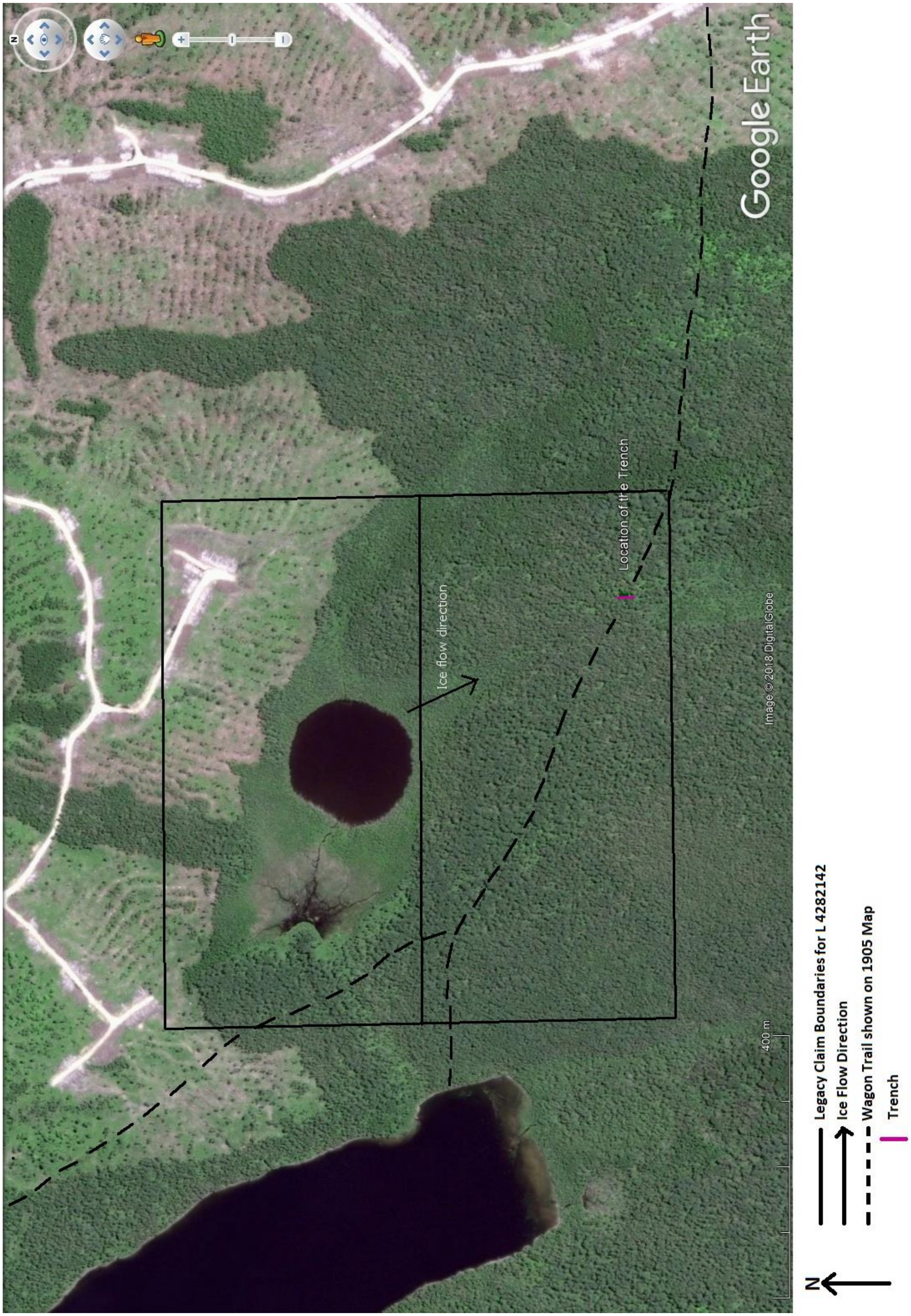

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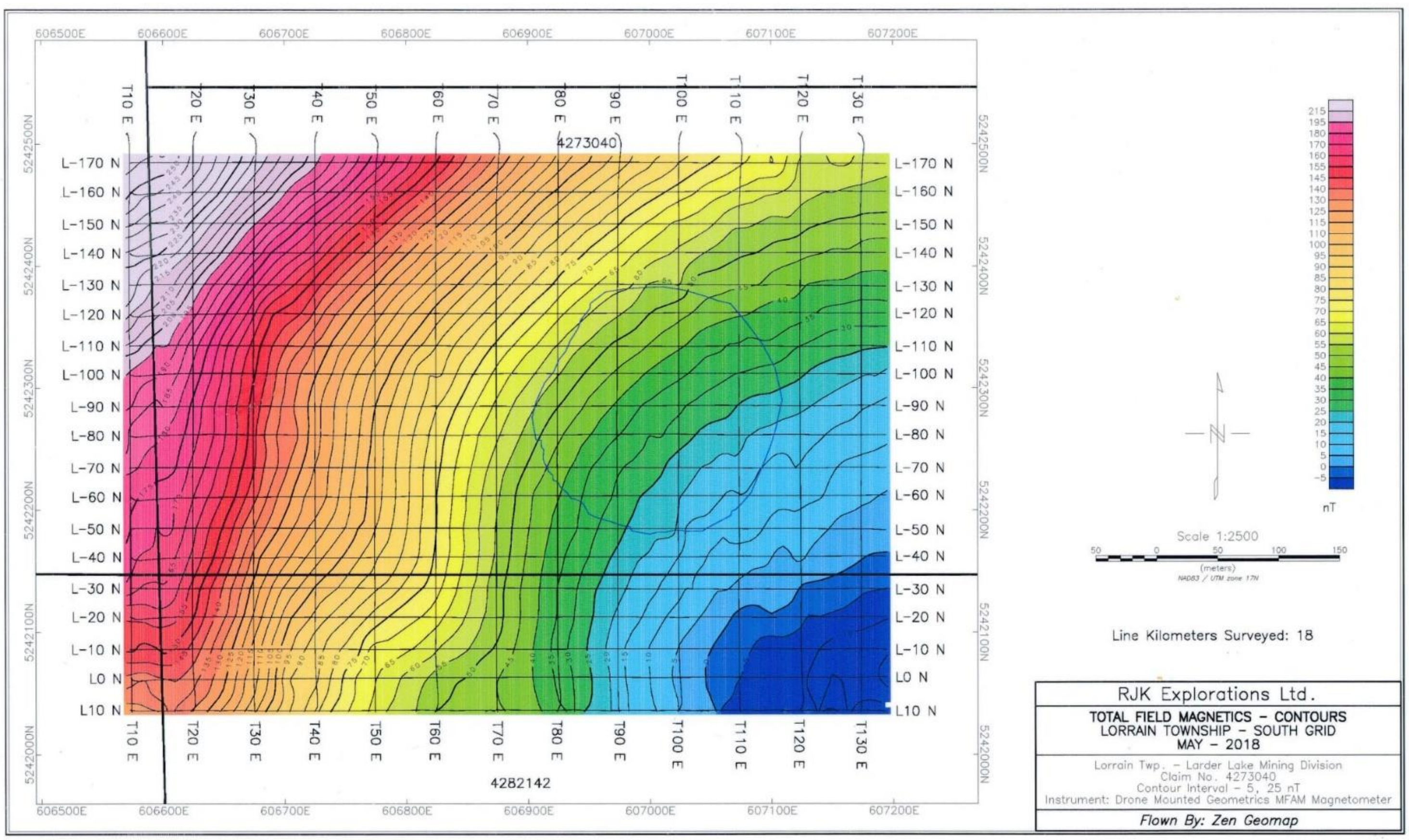


Figure 1: Total Field Magnetics over Paradis Pond

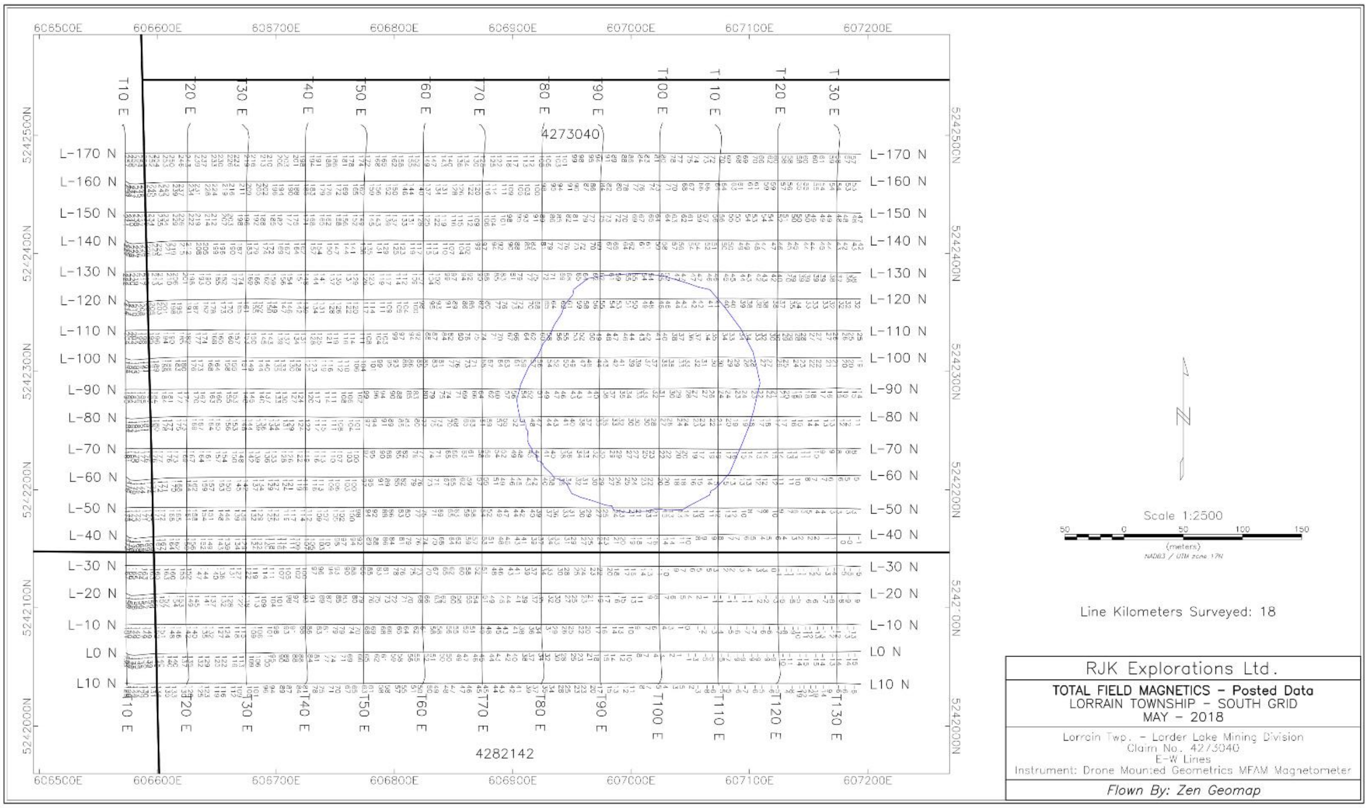


Figure 2: Total Field Magnetics – Posted Data East-West lines, Paradis Pond

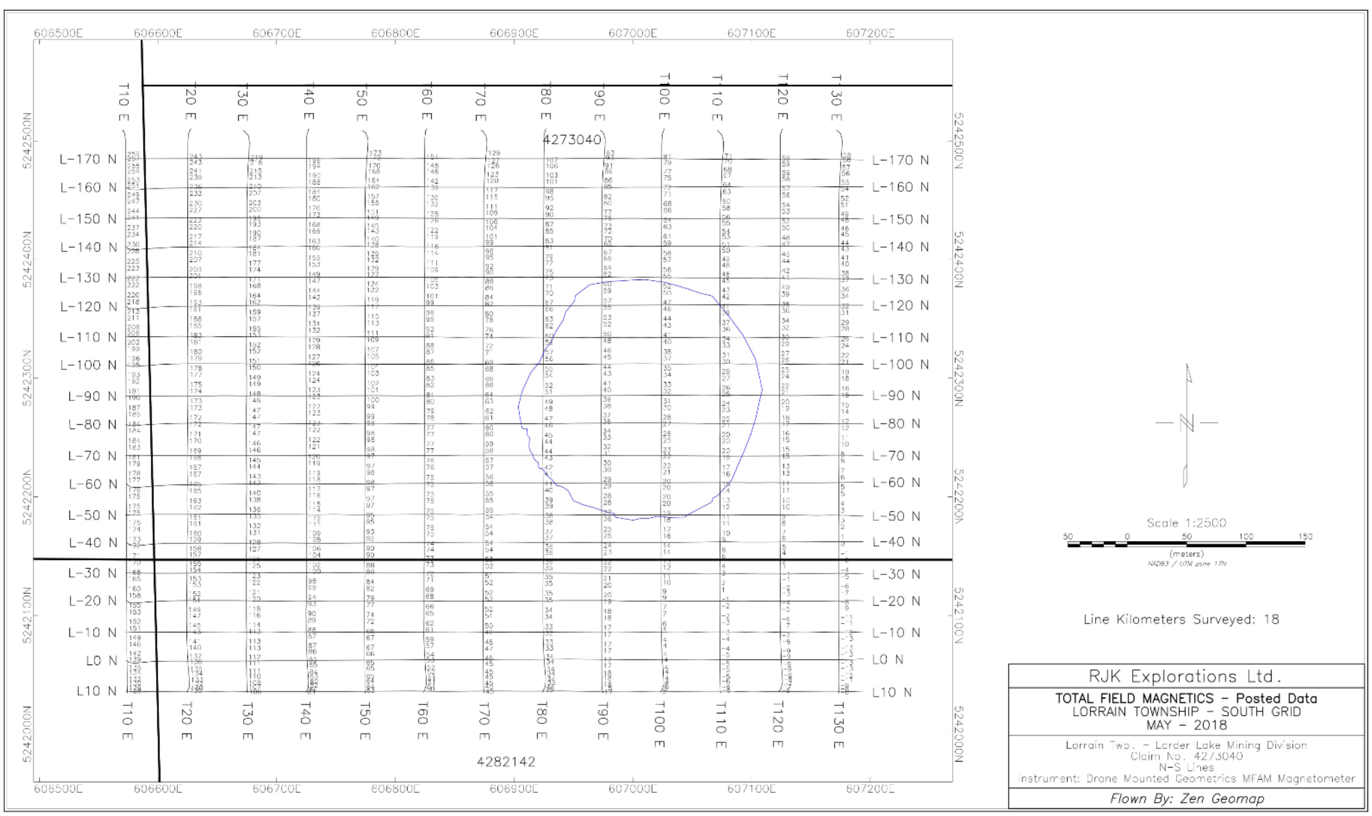
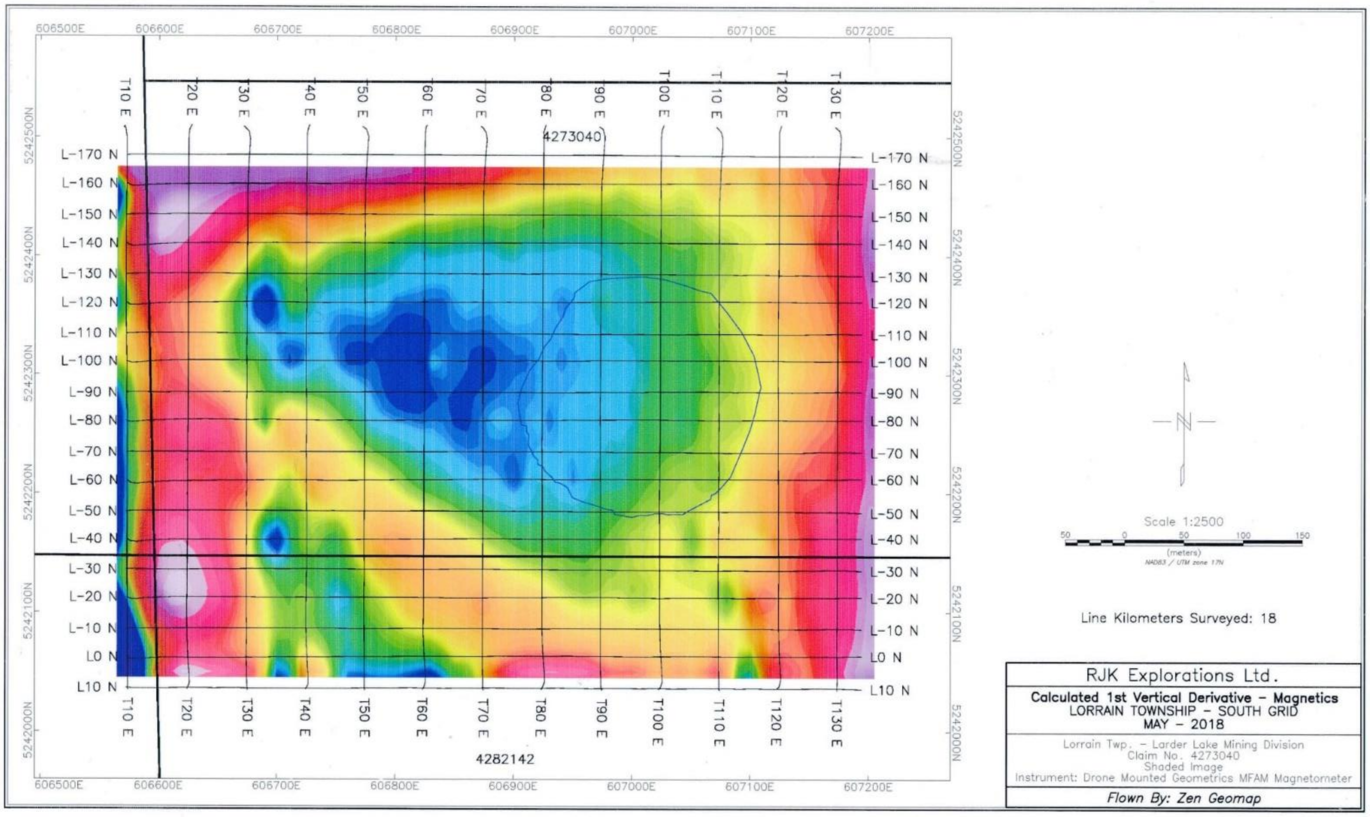


Figure 3: Total Field Magnetics – Posted Data North-South lines, Paradis Pond



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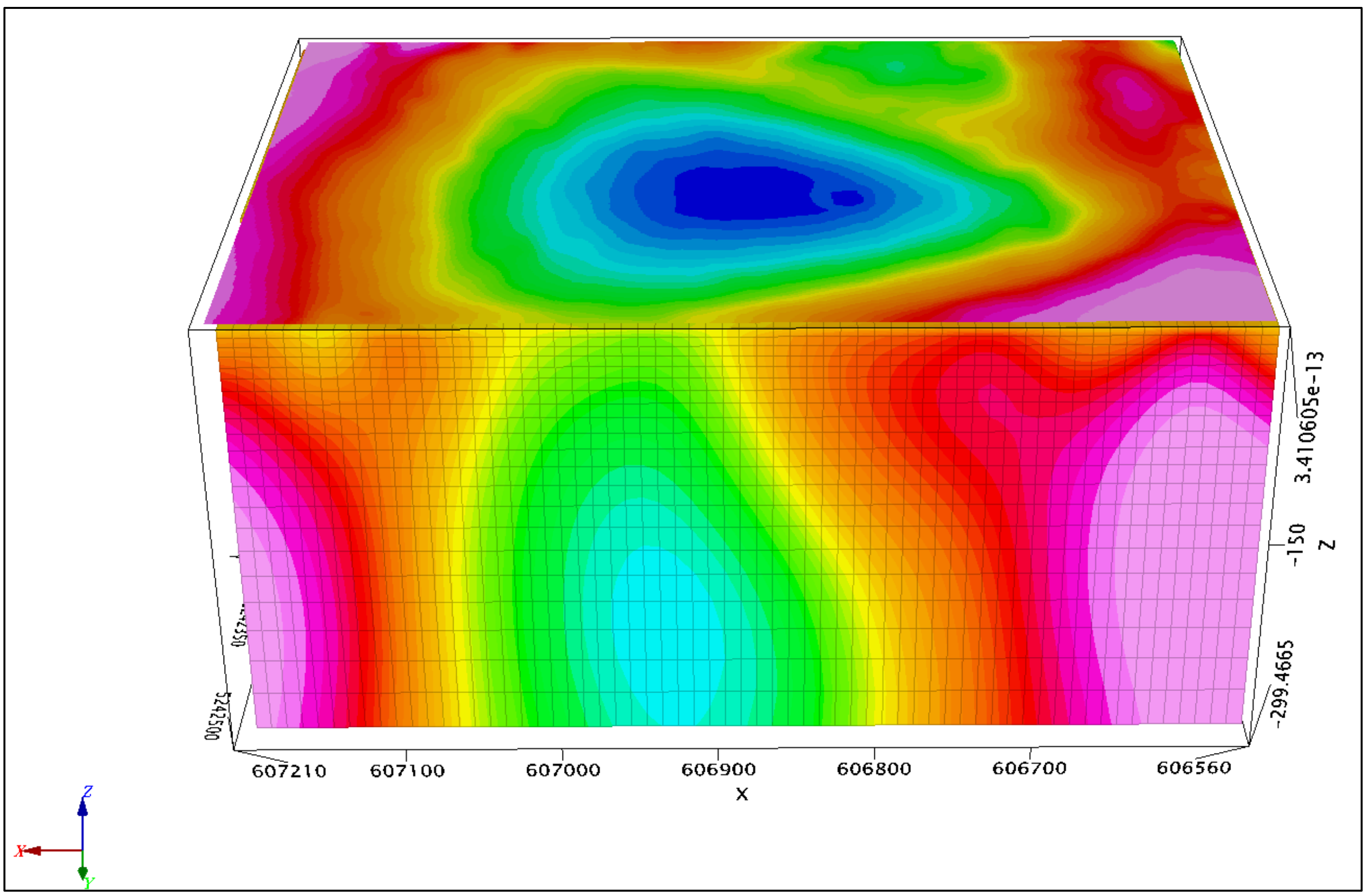

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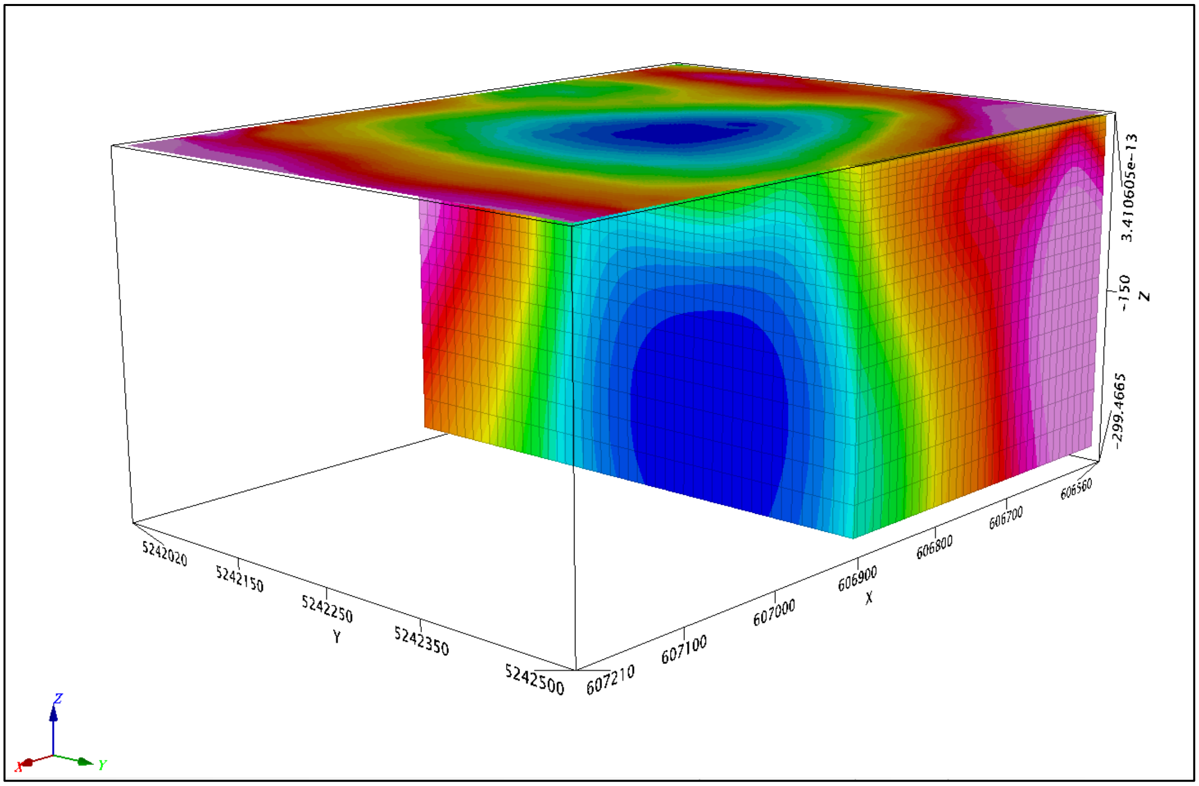

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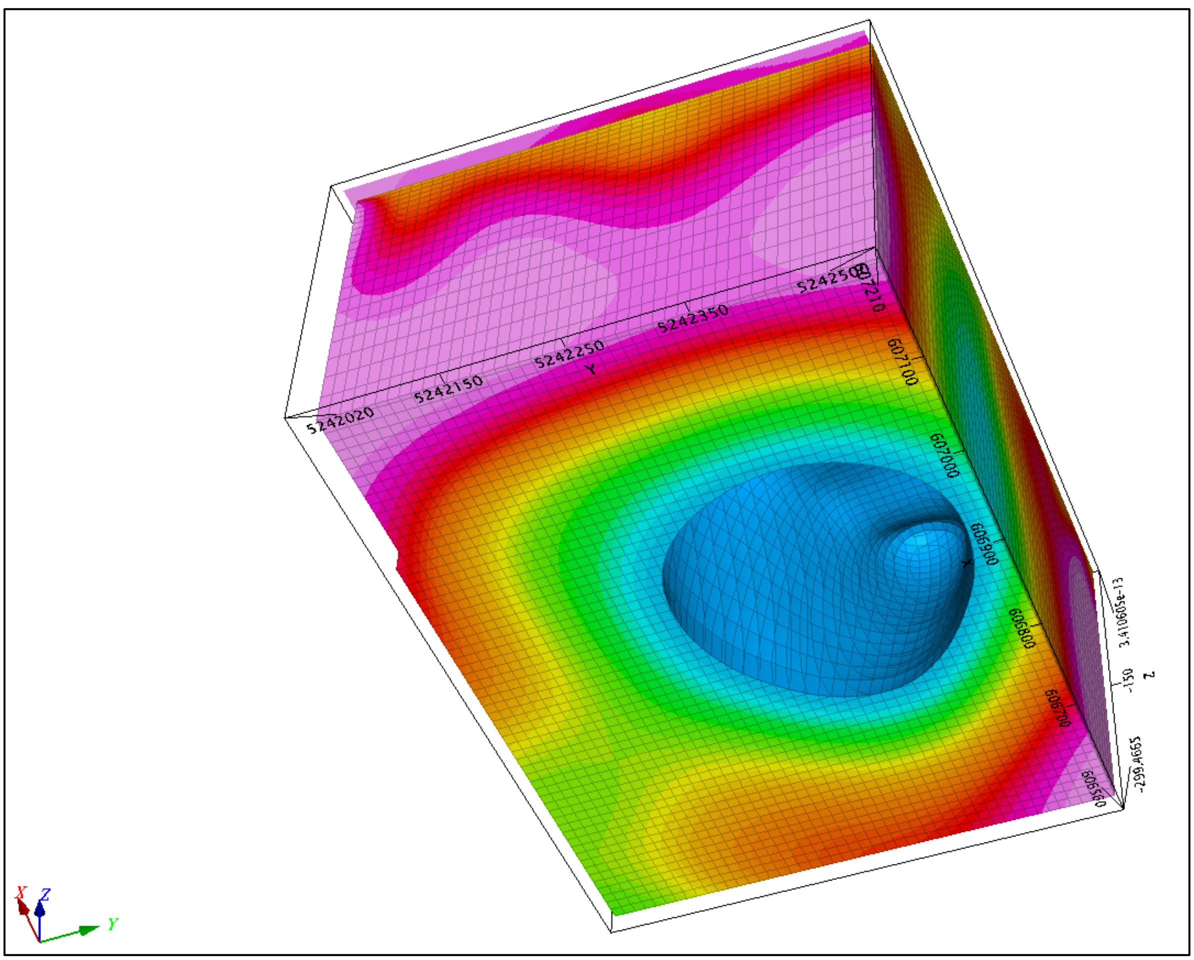

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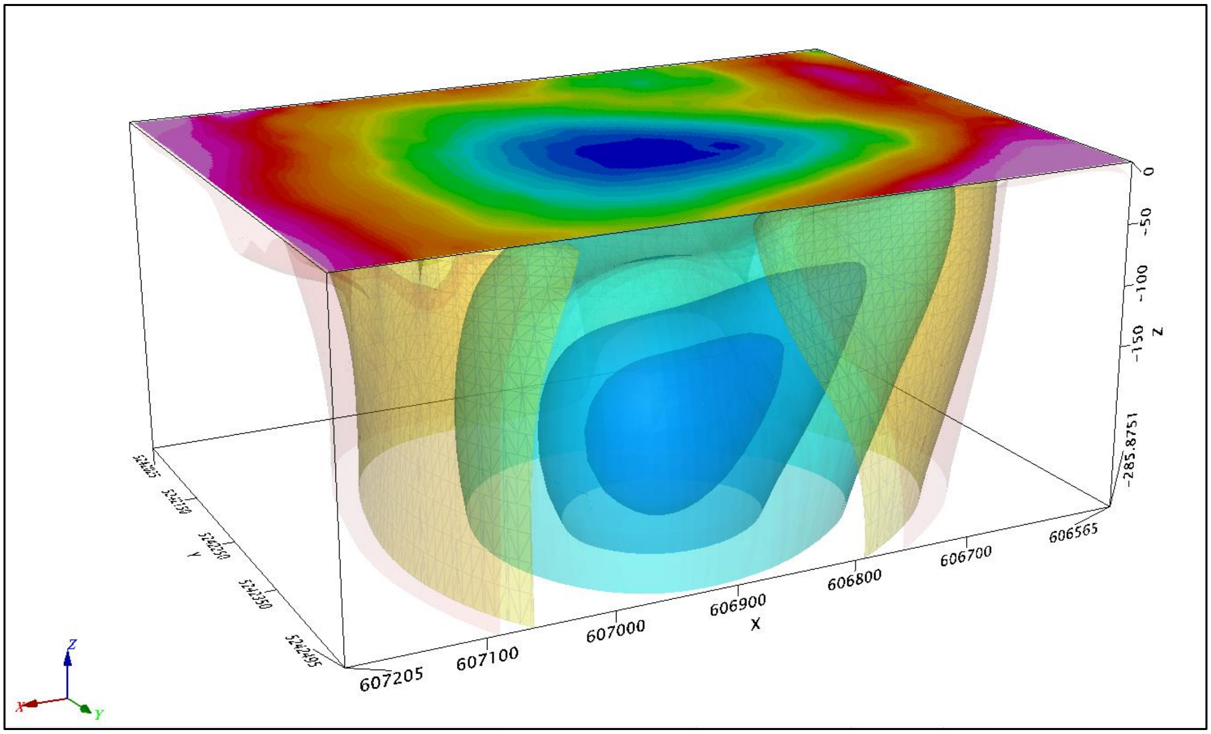

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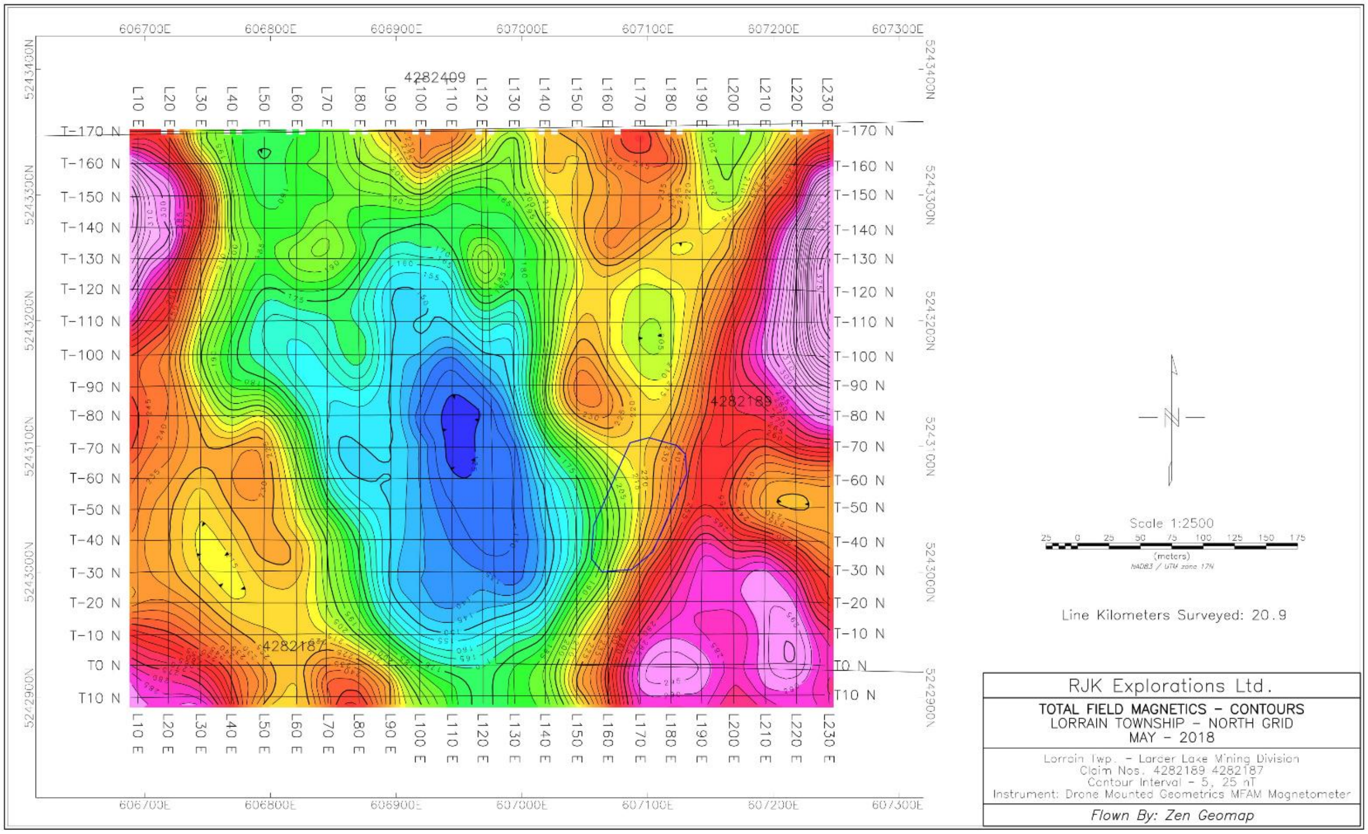

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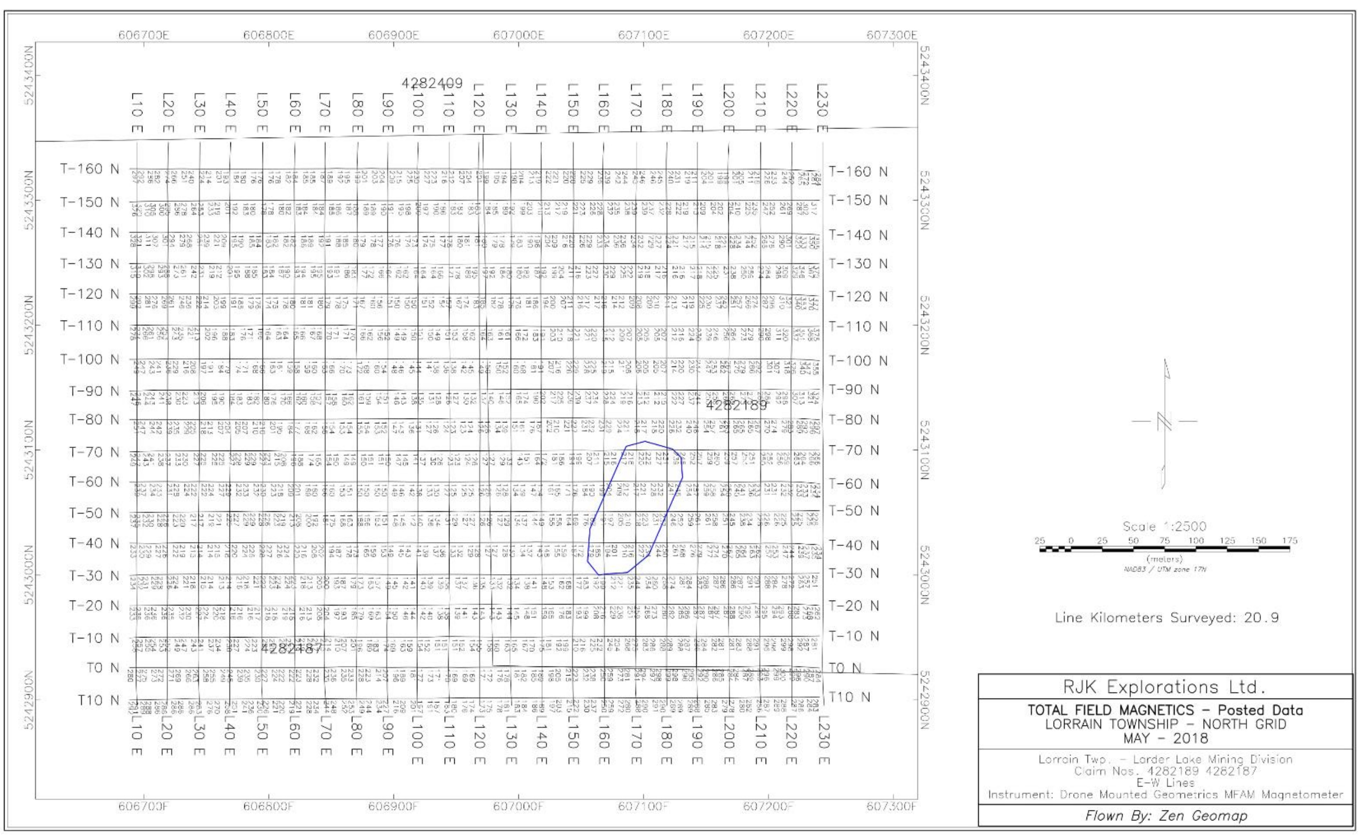

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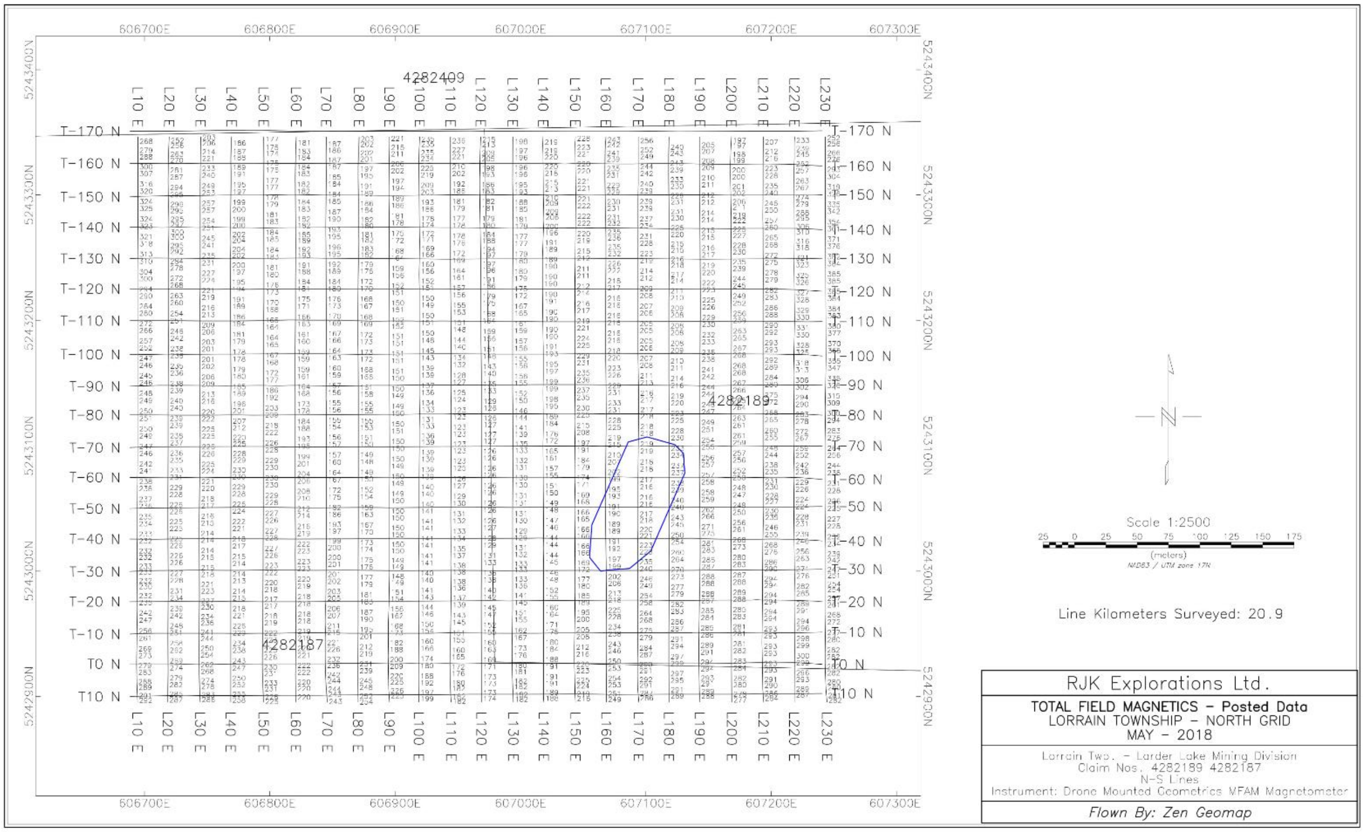

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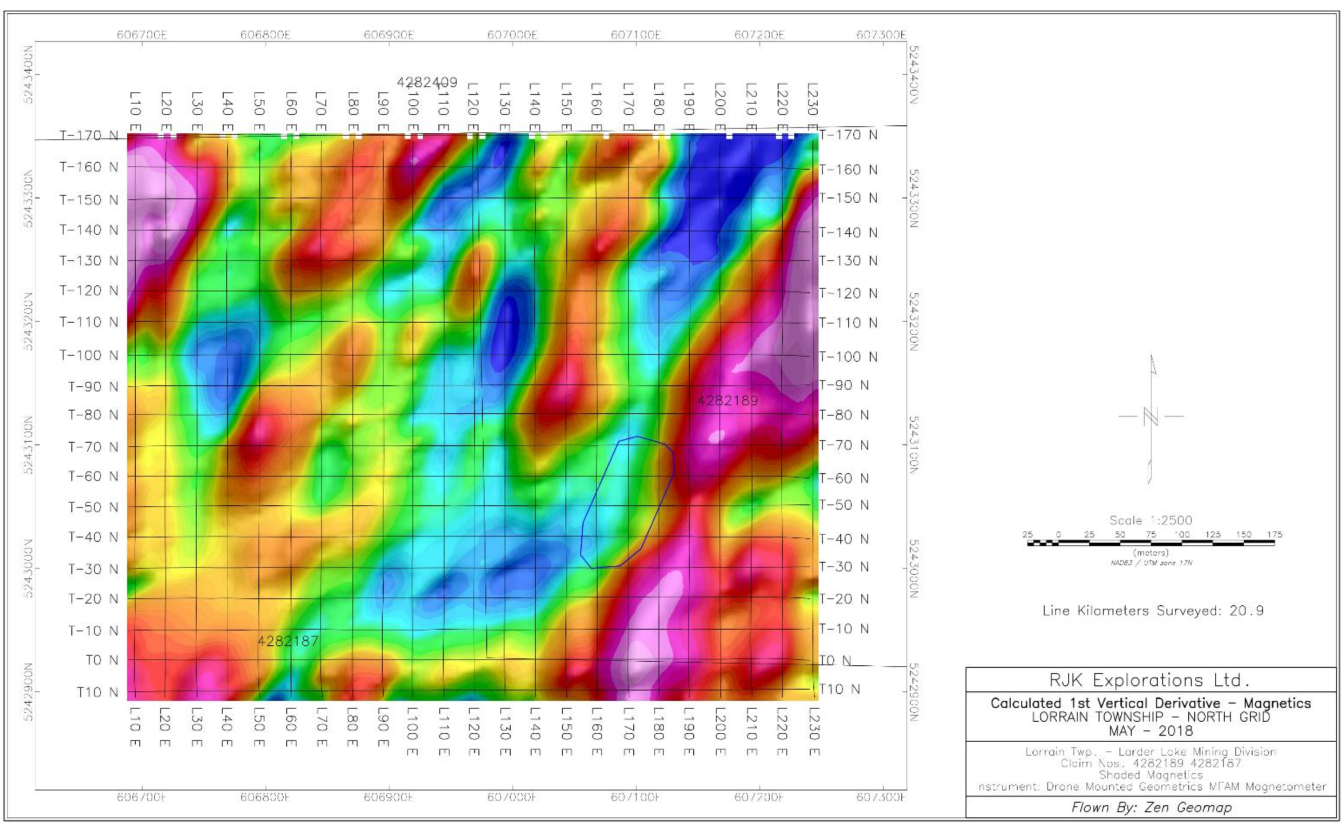

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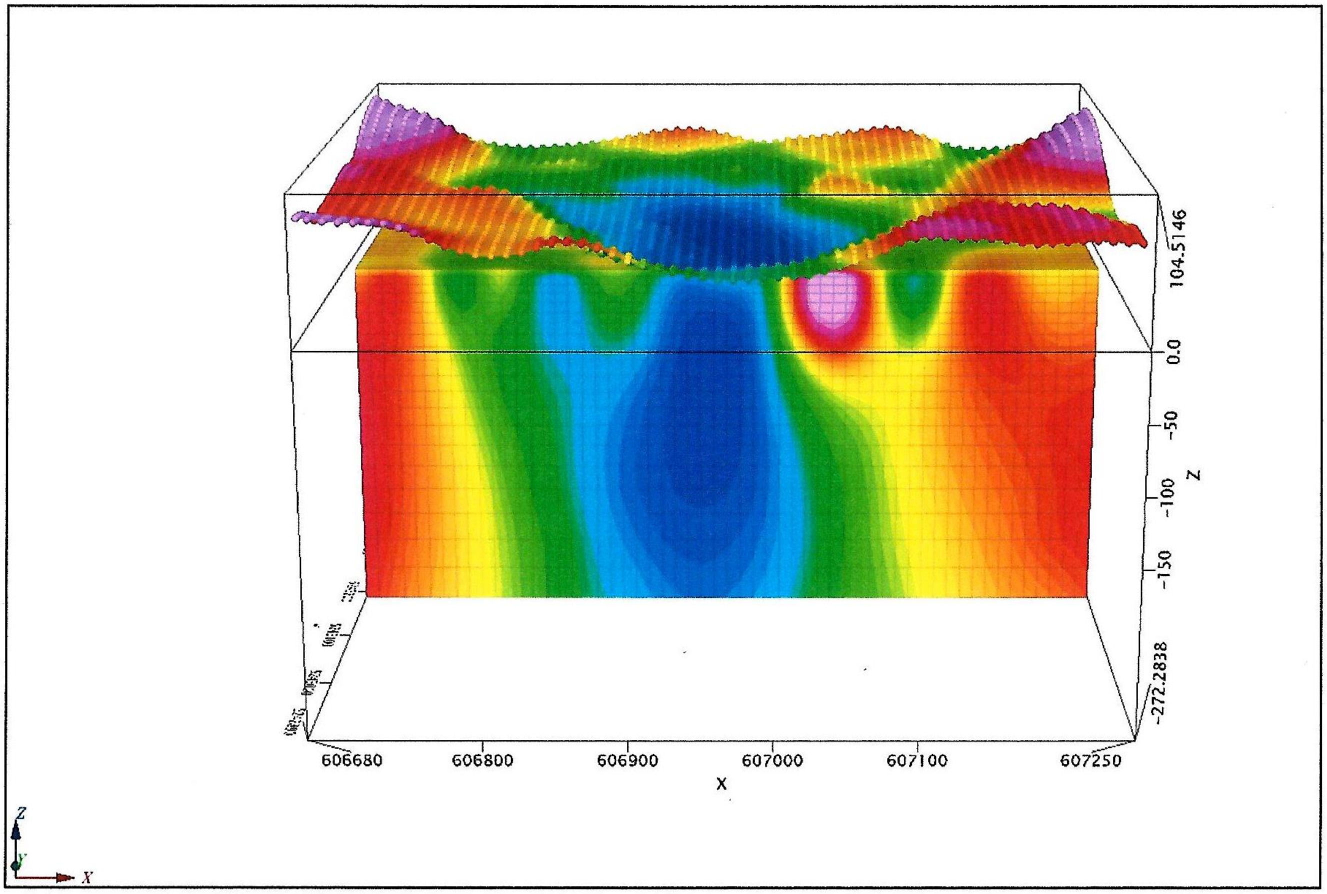

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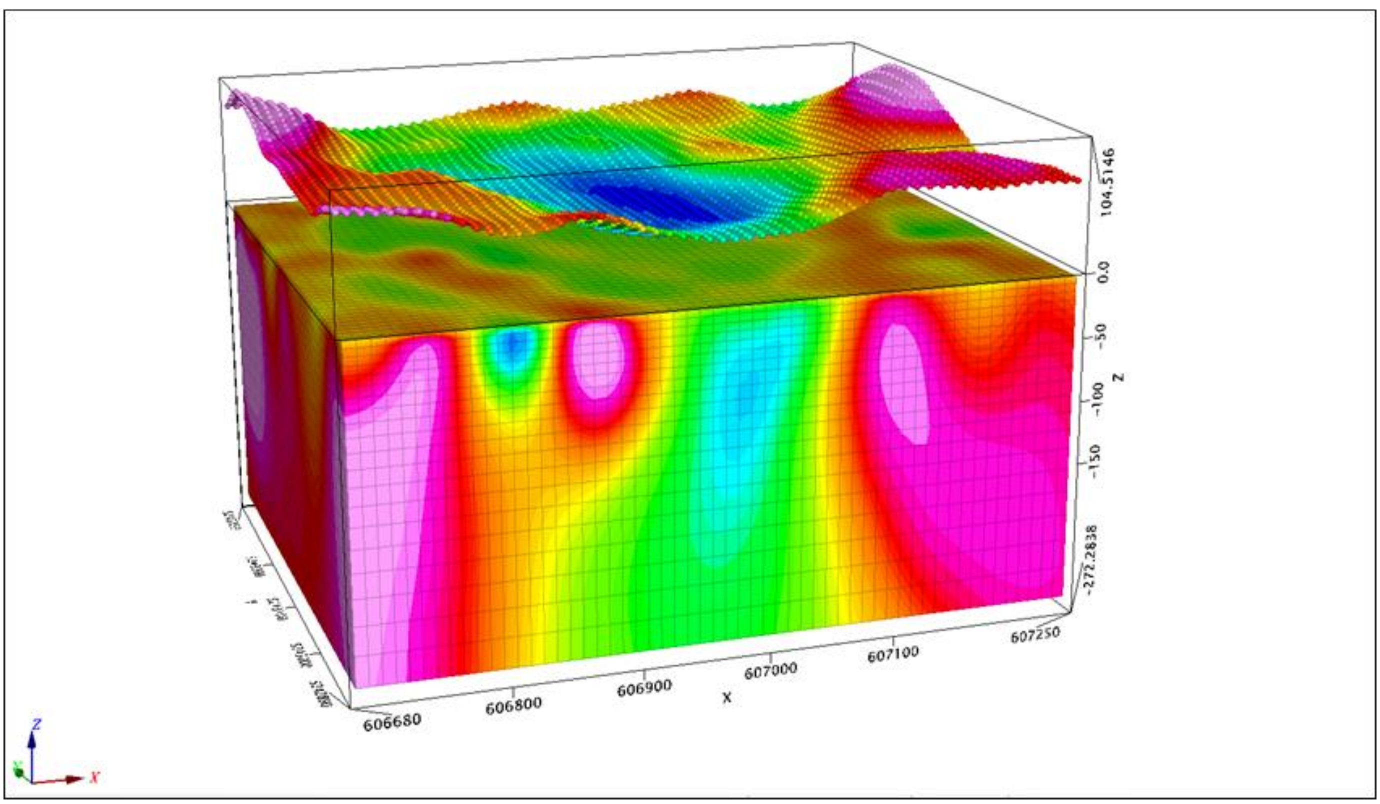

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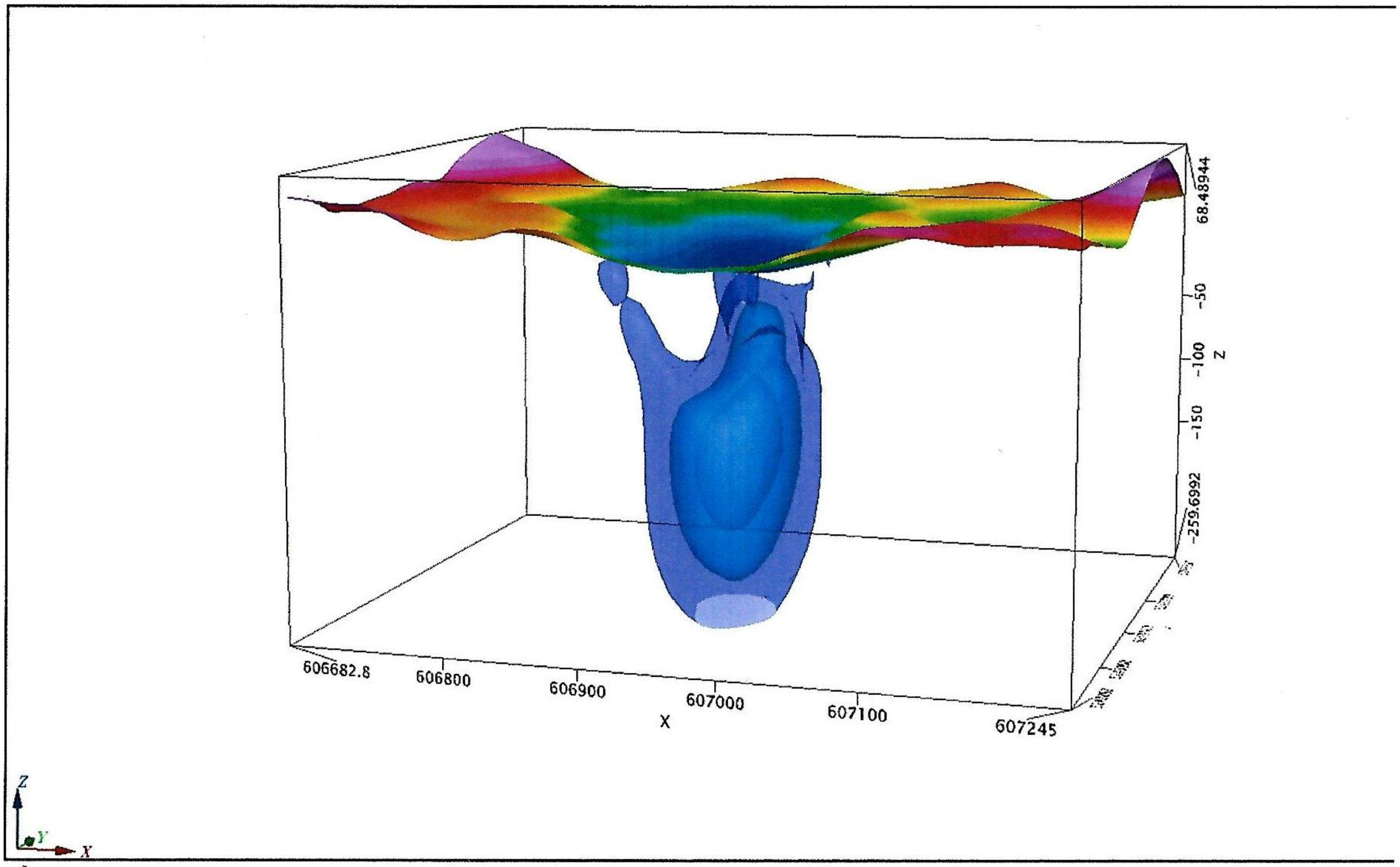

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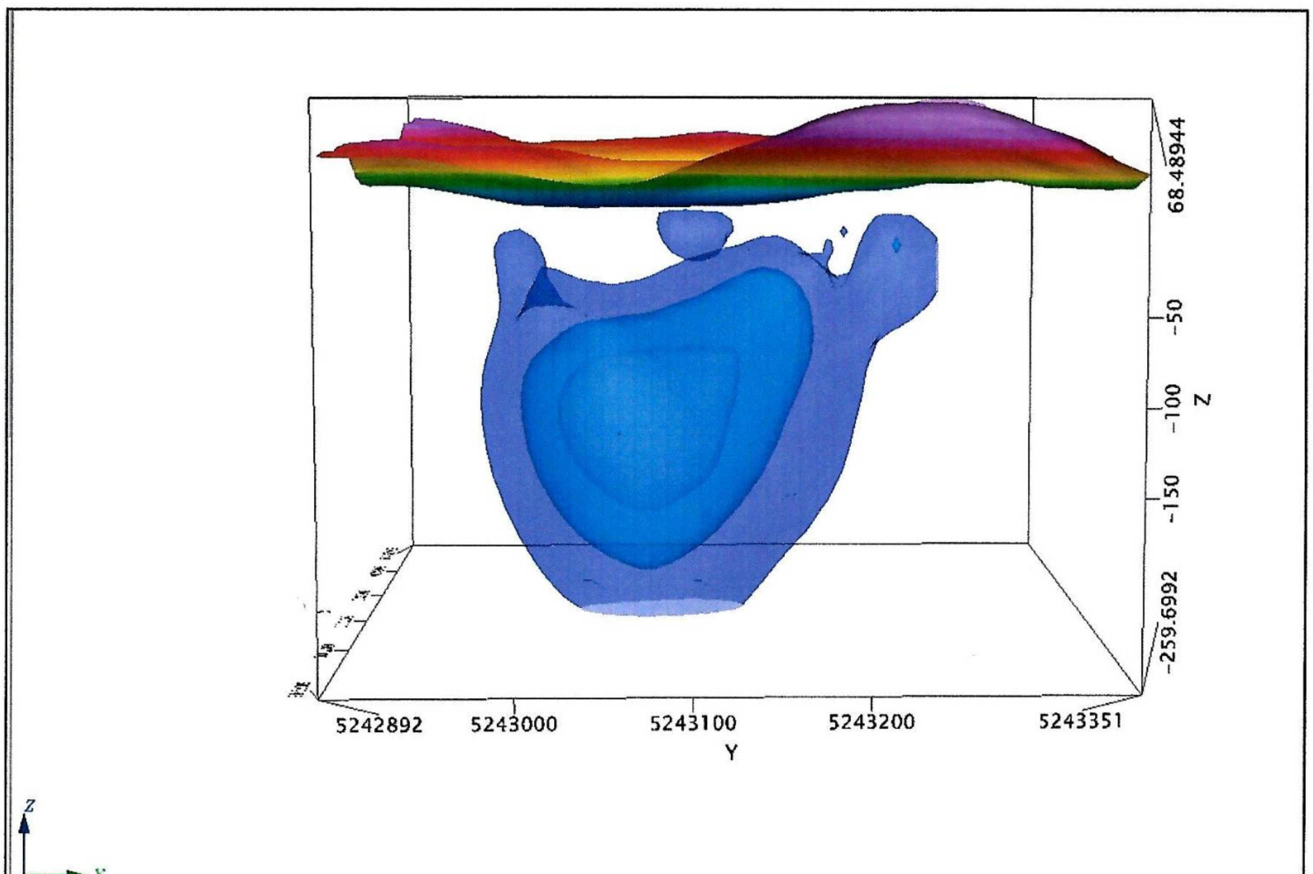

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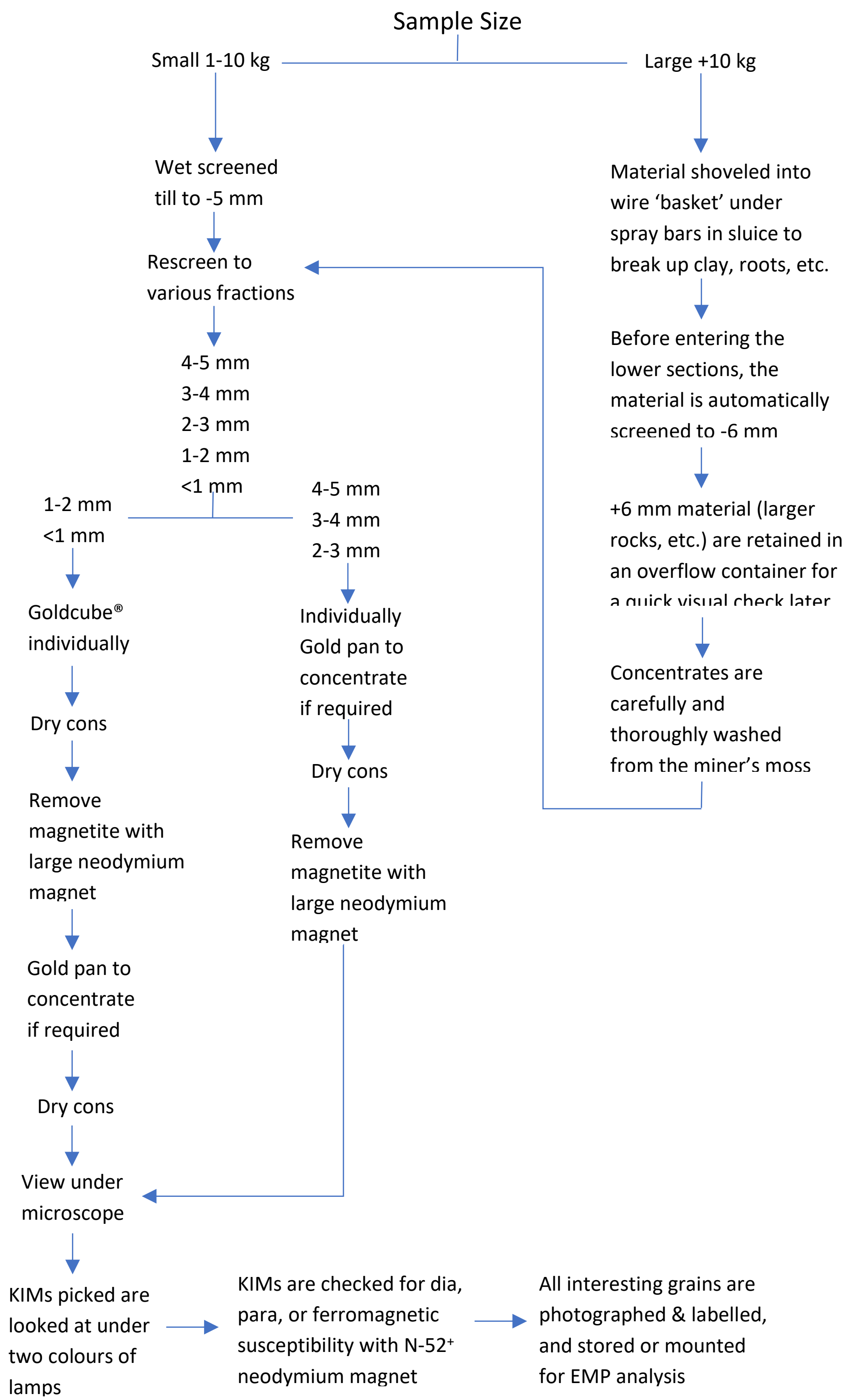
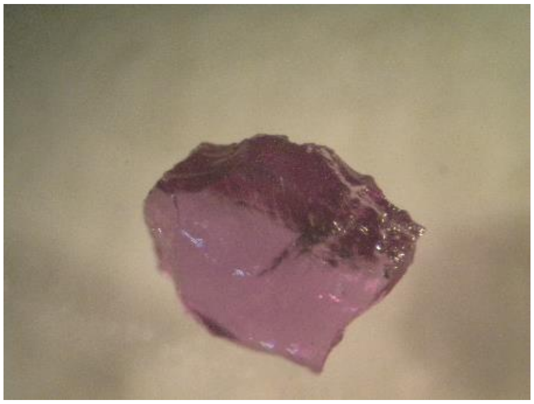
Flow Sheet for Concentrating and Retrieving KIMs from Till & Stream Samples

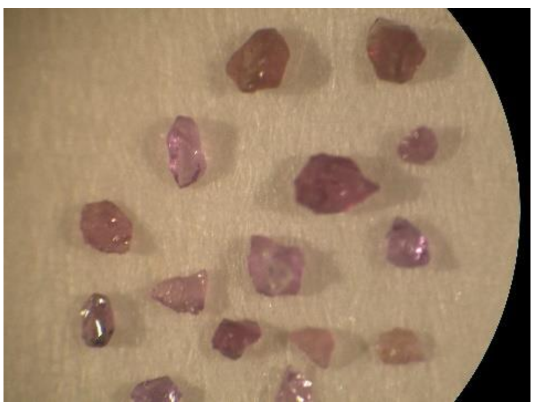


Microscope Photos of KIMs:

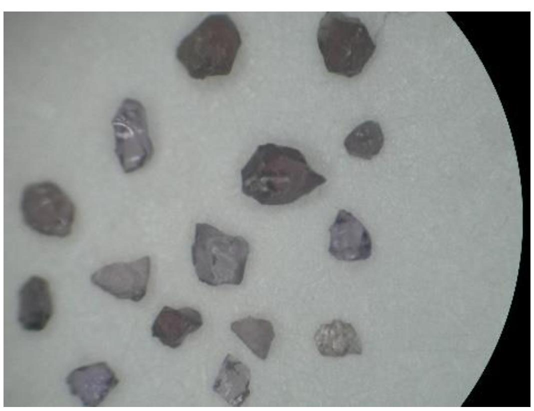


1 - G9 – Cr pyrope – 1.0 x 1.5mm

2 - G10 – Cr pyrope garnet – 0.8mm



3 - Some Cr pyropes picked by ODM – 0.25-0.5mm

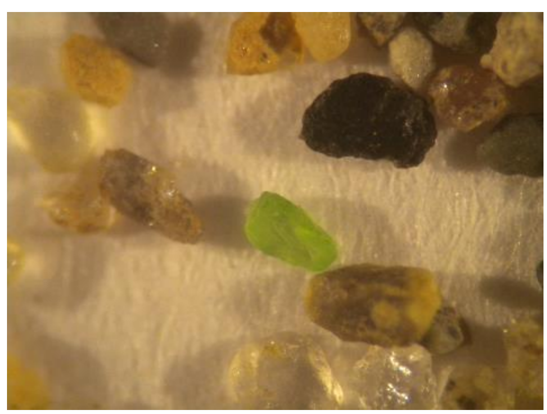


4 - Same garnets as Photo 3, with colour change

5 - G9 – Chrome pyrope, fractured but intact with attached kimberlite – 1.3 x 2.3mm

6 - The 2 purple grains microprobed are G11s – Garnets from till sample tested as magnetically inert

7 - Yellow stone (frosted) – untested – 0.6mm



8. Green chrome diopside

SECTION 1: SUMMARY

The Bishop Property in the Cobalt, Ontario area has 22 targets near Cobalt, Ontario being considered as potential kimberlites on a land package that encompasses ~18.88 sq. km (1888 hectares, or 2032 average city blocks) as of original staking date. This area has changed due to the conversion from field staking to map staking which came into effect in Ontario on April 10, 2018. As of the changeover date, the current holder area is approximately 2090.72 hectares.

The targets manifest in the post-glacial topography as circular to semi-circular lakes of a similar size and shape and in a similar geological setting as the diamondiferous pipes in Lac de Gras.

To date, with extensive till sampling for Kimberlite Indicator Minerals (KIMs), 12 targets have returned anomalous KIM results. 3 need retesting due to difficulty in obtaining samples. 3 have not yet been sampled. 4 additional potential targets have also been identified on the Bishop Property for investigation. 2 targets have had magnetometer fly-overs (report pending) and permitting has been obtained for a drilling program on these initial 2 priority targets. Mag flyovers are also planned for additional targets.

Rock types are actually not relevant to kimberlite emplacement; however, a number of targets (Lightning Lake, Grassy Lake, Mozart Lake, Peanut Lake, Cedar Pond, Paradis Pond, Gleeson Lake, Horseshoe Lake, Longfellow Lake, Criostal Lake, and Chopin Lake) are in or near contacts of granite and diabase, similar to the diamondiferous kimberlites in Lac de Gras.

As well, these claims are situated in a well-established kimberlite field in the Lake Temiskaming Structural Zone (LTSZ). A number of major and minor cross faults are near the targets and minor cross faults also intersect many of the targets.

> "Kimberlite intrusions tend to occur in clusters or fields, with the large-scale distribution possibly controlled by deep seated structural features and local emplacement by shallow zones of weakness such as faults or the margins of diabase dykes." (Power & Hildes, 2007, p 1025)

The Bishop Claims are all on Crown Land, and are mostly on high, dry, well-drained topography. Drivable logging roads are within one kilometre or less, affording easy access.

Close by are 3 hydro-electric facilities, a large electric wind farm, and a gas pipeline. The Trans-Canada Hwy is very close, as is the train station in Cobalt. The area also has a well-established historical mining history.

As far as can be ascertained, there are no encumbrances, such as commercial fisheries, traplines, touristry, etc. There has been past and planned logging, which is not a conflict and makes for easier access to the claims.

Larder Lake Mining Division – 108621 – Brian Anthony Bishop

Due to conversion to Map Staking in Ontario effective April 10, 2018, please refer to new cell claim units as per charts on page 29.

Claim Grouping Identifier	Township	Total Work Applied to legacy claims prior to April 10, 2018 (pre-conversion)	Total Work Applied to cell claims after April 10, 2018 (conversion)	Total Exploration Reserves	*Approved Total Expenditures*
The Lorrain Chain	Lorrain	$8,800	$53,600	$30,598	$ 92,998
The Gleeson-Peanut Corridor	Lorrain	0	$11,000	$ 784	$ 11,784
Ice Chisel – Darwin	Gillies Limit	0	$15,200	$ 89	$ 15,289
Mozart and adjacent	Gillies Limit	$2,400	$ 4,400	$ 4,239	$ 11,039
Chopin	Gillies Limit	0	$ 3,200	$ 260	$ 3,460
Longfellow and adjacent	Lorrain	$4,800	$ 800	$ 277	$ 5,877
Criostal	Lorrain	$4,000	$ 0	$ 32	$ 4,032
Sub-totals		***$20,000***	***$88,200***	***$36,279***	***$144,479***
Total Approved Expenditures to January 25, 2019					***$144,479***

SECTION 2: INTRODUCTION and TERMS OF REFERENCE

Introduction

Brian Anthony Bishop was contracted by RJK Explorations Ltd. to prepare a Technical Report compliant with N1-43-101 and suitable for a financing document for RJK Explorations Ltd. Brian Anthony (Tony) Bishop, the primary author, advised by Douglas (Doug) Robinson, P.Eng., Qualified Person, wrote this technical document on the Bishop Claims in Cobalt, Ontario, in best effort of accordance with the guidelines set out in N1-43-101, companion policy N143-101CP, and Form 43-101 F1, suitable for the purposes of a financing document.

This Report was prepared to update a previous submission, as requested by Glenn Kasner, President of RJK Explorations Ltd. and dated August 7, 2018.

RJK Explorations Ltd. and Brian Anthony Bishop entered into an Option Agreement, dated February 1, 2019, to option the Bishop Claims in the Cobalt Area.

As required, the Bishop Claims have over $140,000 in assessment work completed within the last two years.

Permitting approval for drilling has been received (PR-18-000247) for two of the initial target areas and drilling is planned to commence in late February 2019.

Qualifications and background in diamond exploration is on page 101. This Report is directed for the development and presentation of data with recommendations to allow RJK Exploration Ltd. and current or potential partners or investors to reach informed decisions.

Many sources of information were utilised for the interpretation of sampling results from the Bishop Claims [see References & Resources, as sourced from Work Assessment Report dated June 18, 2018 for Cell Claims 277042, 277041, 131127, & 329881 “The Grassy Lake Project”, p 115-125]. As well as various published geological reports & maps and developments in current kimberlite indicator mineral research, updated methodologies for diamond exploration specific to the kimberlite fields in Canada and scholarly journal articles have been extensively reviewed.

Geologist Douglas Robinson, P.Eng. Geo, Queen's University (Qualified Person) has closely followed the Bishop sampling & concentrating methods and lab work regarding these mining claims from their initial acquisition. Doug worked for many years as a geologist for Agnico Eagle in the Temiskaming Mine in Cobalt as well as a number of other companies in Cobalt and Gowganda silver areas. Doug gained a good deal of knowledge on rock types and field conditions as well as the glacial traits and looking for float as part of exploration for the company. Doug also performed field work sampling till for diamond exploration near Kirkland Lake. Doug did a number of laboratory visits and participated in KIM separation using a GoldCube® & gold pan and used optical facilities to view many of the concentrates & many of the images used by Tony. He has helped to develop a comprehensive and effective Exploration Program.

Discussions with retired Resident Geologist Gerhard Meyer, current Resident Geologist Peter Chadwick, retired District Geologist Gary Grabowski, of the Kirkland Lake Office of MNDM have also occurred throughout the prospecting period. Other experts consulted include Keith Barron, PhD Exploration Geologist, and Michael Leahy (prospector) who were involved with the OPAP pipe drilling program. Recent discussions occurred with Kevin Cool (former heavy mineral lab operator/owner) and Brian Polk (geologist), who were both involved in the initial exploration and discovery of the Lac de Gras diamond field. Other present and former staff of Kirkland Lake MNDM have also contributed their help and resources.

A visit to the site was not deemed useful by Doug Robinson, P.Eng. Geo., as the kimberlites are not related to any local rock types and are physically represented in geologically similar Lac de Gras as small, round to semi-round, moderately deep lakes which are readily viewed in great detail in satellite imaging.

Typically, in diamond exploration, the indicator minerals, when present in till samples, are generally few in number and are microscopic grains typically 0.25-0.5mm and can only be found after carefully concentrating till or alluvium samples and then viewing these under a compound microscope with a specialised light source.

Terms of Reference

Various measuring units, abbreviations, and definitions are as follows:

‘	= Feet	f	= Frosted Surface
km	= Kilometre	Pp	= Purple
m	= Metre	P	= Pink
cm	= Centimetre	RO	= Red-Orange
mm	= Millimetre	O	= Orange
kg	= Kilogram	Dk	= Dark in Colour
1 square km	= 100 hectares	M	= Medium in Colour
		L	= Light in Colour
EM	= Electromagnetic		
mag	= Magnetic	KIMs	= Kimberlite Indicator Minerals
EMP	= Electron Microprobe	C.P.T.	= Curie Point Temperature
SEM	= Scanning Electron Microscope	G	= Garnet
		DC	= Chrome Diopside
ODM	= Overburden Drilling Management	Cr	= Chrome
OGS	= Ontario Geological Survey	OPx	= Orthopyroxene
OFR	= Open File Reports	IM	= Ilmenite
MLAS	= Mining Lands Administration System	FeO	= Iron Oxide
MNDM	= Ministry of Northern Development and Mines	Fe	= Iron
LTSZ	= Lake Temiskaming Structural Zone	Inclusion	= Any material that is trapped inside a mineral during its formation
		Cons	= Concentrates
Contiguous	= Cells sharing a common border		
Legacy Claim	= Claims staked prior to April 10, 2018		
Cell Claims	= Claims converted from legacy claims or staked after April 10, 2018		

Much of the following Report is referenced from Assessment Work Reports written by Tony Bishop (see Bishop, B.A. 2016-2018 reports listed in Section 27: References, pages 91-92).

SECTION 3: RELIANCE ON OTHER EXPERTS

I, the Qualified Person, Doug Robinson, P.Eng. Geo., have relied on previous exploration/technical assessment reports on file for the Bishop Claims, as well as discussions with Brian Anthony (Tony) Bishop. Having reviewed his methodology and results, directly viewed his concentrating till samples, and microscopically seen his concentrates and picked KIMs, I assume they are substantially accurate and complete.

The information, conclusions and recommendations contained herein are based on the findings and information in Work Assessment/Technical Reports prepared by Tony Bishop. These reports were written with the objective of presenting the results of the work performed without any misleading intent. In this sense, the information presented should be considered reliable, and may be used without any prejudice by RJK Explorations Ltd. or potential partners.

SECTION 4: PROPERTY DESCRIPTION, LOCATION, and ESTABLISHING MINERAL RIGHTS IN ONTARIO

a) The Bishop Claims in Cobalt consist of 2090.72 hectares as previously stated and expanded upon in Section 1: Summary.

b) Please refer to Illustrations: Map 5, Google Earth view of Bishop Claims targets, page 8

c) The property consists of unpatented mineral claims. Unpatented mineral claims include the mineral rights while the surface rights are held by the Crown.

d) Brian Anthony Bishop has 100% mineral right ownership on the Bishop Claims. Please see pages 29 to 35 for a complete listing and status of the claims included in the Option Agreement, dated February 1, 2019. Please refer to the Mining Lands Administration System (MLAS) Map Viewer- Ministry of Energy, Northern Development and Mines to locate cell claims at https://www.mndm.gov.on.ca/en/mines-and-minerals/applications/mining-lands-administration-system-mlas-map-viewer

e) There are no known environmental liabilities on the Bishop Claims.

f) There are no known obvious factors or risks that may affect title, right, or ability to work on the Bishop Claims.

Gillies Limit:

Legacy claim & Target #**	Tenure ID	Tenure Type (Annual Work Required is $400 for single cell claims and $200 for boundary cell claims)	Anniversary Date	Work Applied to cell claims after April 10, 2018	Work Applied to legacy claims prior to April 10, 2018	Available Exploration Reserve
#3, 4 4282172 Ice Chisel Lake & Darwin Lake	113572	Single Cell Mining Claim	2021-12-15	1200	0	0
	308493	Boundary Cell Mining Claim	2022-12-15	800		0
	268097	Single Cell Mining Claim	2022-12-15	1600		0
	268096	Boundary Cell Mining Claim	2022-12-15	800		0
	268095	Boundary Cell Mining Claim	2022-12-15	800		0
	268094	Boundary Cell Mining Claim	2022-12-15	800		0
	260652	Boundary Cell Mining Claim	2022-12-15	800		0
	249896	Boundary Cell Mining Claim	2021-12-15	600		0
	249895	Single Cell Mining Claim	2022-12-15	1600		89
	231369	Boundary Cell Mining Claim	2022-12-15	800		0
	212654	Single Cell Mining Claim	2022-12-15	1600		0
	194100	Single Cell Mining Claim	2022-12-15	1600		0
	194099	Boundary Cell Mining Claim	2022-12-15	800		0
	194098	Boundary Cell Mining Claim	2021-12-15	600		0
	140505	Boundary Cell Mining Claim	2022-12-15	800		0

Contiguous Claims

Legacy claim & Target #**	Tenure ID	Tenure Type (Annual Work Required is $400 for single cell claims and $200 for boundary cell claims)	Anniversary Date	Work Applied to cell claims after April 10, 2018	Work Applied to legacy claims prior to April 10, 2018	Available Exploration Reserve
#5, 6 4282176 West of Mozart Lake (contiguous); Flying Fox Lake, Puni Lake	117310	Boundary Cell Mining Claim	2023-12-15	1000	0	0
	287097	Boundary Cell Mining Claim	2023-12-15	1000		0
	220347	Boundary Cell Mining Claim	2023-12-15	1000		0
	171630	Boundary Cell Mining Claim	2023-12-15	1000		0
	127038	Boundary Cell Mining Claim	2024-01-26	200		4039
#7 4284088 Mozart Lake	*127038	Boundary Cell Mining Claim	2024-01-26	*200	2400	*4039
	256320	Boundary Cell Mining Claim	2024-01-26	200		200

Legacy claim & Target #**	Tenure ID	Tenure Type (Annual Work Required is $400 for single cell claims and $200 for boundary cell claims)	Anniversary Date	Work Applied to cell claims after April 10, 2018	Work Applied to legacy claims prior to April 10, 2018	Available Exploration Reserve
#8 4282175 Chopin Lake	271731	Boundary Cell Mining Claim	2022-12-15	800	0	0
	341467	Boundary Cell Mining Claim	2022-12-15	800		260
	341466	Boundary Cell Mining Claim	2022-12-15	800		0
	289879	Boundary Cell Mining Claim	2022-12-15	800		0

Lorrain Township:

Legacy claim & Target #**	Tenure ID	Tenure Type (Annual Work Required is $400 for single cell claims and $200 for boundary cell claims)	Anniversary Date	Work Applied to cell claims after April 10, 2018	Work Applied to legacy claims prior to April 10, 2018	Available Exploration Reserve
#9 4282174 Longfellow Lake	168413	Boundary Cell Mining Claim	2021-12-15	200	3200	0
	330978	Boundary Cell Mining Claim	2020-12-15	0		0
	272410	Boundary Cell Mining Claim	2020-12-15	0		0
	254044	Single Cell Mining Claim	2021-12-15	400		277
	217215	Boundary Cell Mining Claim	2020-12-15	0		0
	168414	Boundary Cell Mining Claim	2020-12-15	0		0
# (9) 4282708 Below Longfellow Lake (contiguous)	140157	Boundary Cell Mining Claim	2020-11-14	0	1600	0
	308185	Boundary Cell Mining Claim	2020-11-14	0		0
	308184	Boundary Cell Mining Claim	2021-11-14	200		0
	*254044	Single Cell Mining Claim	2021-12-15	*400		*277
	*217215	Boundary Cell Mining Claim	2020-12-15	*0		*0
	*168414	Boundary Cell Mining Claim	2020-12-15	*0		*0

Legacy claim & Target #**	Tenure ID	Tenure Type (Annual Work Required is $400 for single cell claims and $200 for boundary cell claims)	Anniversary Date	Work Applied to cell claims after April 10, 2018	Work Applied to legacy claims prior to April 10, 2018	Available Exploration Reserve
#10 4282146 Criostal Lake	229191	Boundary Cell Mining Claim	2023-12-15	0	4000	0
	295902	Boundary Cell Mining Claim	2023-12-15	0		0
	287274	Boundary Cell Mining Claim	2023-12-15	0		0
	248165	Boundary Cell Mining Claim	2023-12-15	0		0
	248164	Boundary Cell Mining Claim	2023-12-15	0		0
	241367	Boundary Cell Mining Claim	2023-12-15	0		32

The Lorrain Chain						
Legacy claim & Target #*	**Tenure ID**	**Tenure Type (Annual Work Required is $400 for single cell claims and $200 for boundary cell claims)**	**Anniversary Date**	**Work Applied to cell claims after April 10, 2018**	**Work Applied to legacy claims prior to April 10, 2018**	**Available Exploration Reserve**
#11 4282444 Little Grassy Lake	*277041	Boundary Cell Mining Claim	2024-10-24	*1000	0	*546
	*131127	Boundary Cell Mining Claim	2024-10-24	*1000		*240
	*277042	Single Cell Mining Claim	2024-10-24	*2000		*348
	*269300	Boundary Cell Mining Claim	2024-10-24	*1000		*0
# (11) 4282705 West of Little Grassy Lake	269300	Boundary Cell Mining Claim	2024-10-24	1000	0	0
	131127	Boundary Cell Mining Claim	2024-10-24	1000		240
# (11) 4282706 East of Little Grassy Lake	277041	Boundary Cell Mining Claim	2024-10-24	1000	0	546
	277042	Single Cell Mining Claim	2024-10-24	2000		348
	139060	Boundary Cell Mining Claim	2024-11-14	1200		0
	191673	Boundary Cell Mining Claim	2024-11-14	1200		0
# (11) 4282707 South of Little Grassy Lake	*131127	Boundary Cell Mining Claim	2024-10-24	*1000	0	*240
	329881	Single Cell Mining Claim	2024-04-06	2000		3758
	317177	Boundary Cell Mining Claim	2024-04-06	1000		0
	*277042	Single Cell Mining Claim	2024-10-24	*2000		*348
	247076	Boundary Cell Mining Claim	2024-04-06	1000		0
	*139060	Boundary Cell Mining Claim	2024-11-14	*1200		0
# (11, 12) 4286187 West of Lightning Lake	199542	Single Cell Mining Claim	2024-12-15	400	0	0
	341583	Single Cell Mining Claim	2024-12-15	400		0
	*329881	Single Cell Mining Claim	2024-04-06	*2000		*3758
	*317177	Boundary Cell Mining Claim	2024-04-06	*1000		*0
	302849	Boundary Cell Mining Claim	2024-10-21	1000		0
	301121	Boundary Cell Mining Claim	2019-04-06	0		0
	252459	Single Cell Mining Claim	2024-04-06	2000		0
	*247076	Boundary Cell Mining Claim	2024-04-06	*1000		*0
	205232	Boundary Cell Mining Claim	2019-04-06	0		0

The Lorrain Chain, continued						
Legacy claim & Target # **	**Tenure ID**	**Tenure Type (Annual Work Required is $400 for single cell claims and $200 for boundary cell claims)**	**Anniversary Date**	**Work Applied to cell claims after April 10, 2018**	**Work Applied to legacy claims prior to April 10, 2018**	**Available Exploration Reserve**
# (12) 4286186 North of Lightning Lake	*234633	Single Cell Mining Claim	2024-12-15	*400	0	*0
	*341583	Single Cell Mining Claim	2024-12-15	*400		*0
	*258580	Boundary Cell Mining Claim	2024-04-06	*1000		*0
	*247076	Boundary Cell Mining Claim	2024-04-06	*1000		*0
# (12) 4286185 East of Lightning Lake	131129	Boundary Cell Mining Claim	2024-04-06	1000	0	0
	*302829	Single Cell Mining Claim	2024-12-15	*400		*125
	262530	Single Cell Mining Claim	2024-04-06	2000		0
	258580	Boundary Cell Mining Claim	2024-04-06	1000		0
	*234633	Single Cell Mining Claim	2024-12-15	*400		*0
	199567	Boundary Cell Mining Claim	2024-10-21	1000		0
	150826	Single Cell Mining Claim	2024-10-21	2000		0
	147200	Boundary Cell Mining Claim	2024-04-06	1000		0
	147199	Boundary Cell Mining Claim	2024-04-06	1000		0
#12 4281431 Lightning Lake	*199542	Single Cell Mining Claim	2024-12-15	*400	2,000	*0
	*341583	Single Cell Mining Claim	2024-12-15	*400		*0
	302829	Single Cell Mining Claim	2024-12-15	400		125
	234633	Single Cell Mining Claim	2024-12-15	400		0
# (12, 13) 4282409 South of Lightning Lake/ North of Cedar Pond	106280	Single Cell Mining Claim	2024-10-21	2000	0	0
	330989	Single Cell Mining Claim	2024-12-15	400		0
	302850	Boundary Cell Mining Claim	2024-10-21	1000		0
	*302849	Boundary Cell Mining Claim	2024-10-21	*1000		*0
	*302829	Single Cell Mining Claim	2024-12-15	*400		*125
	276246	Boundary Cell Mining Claim	2024-10-21	1000		0
	254147	Boundary Cell Mining Claim	2024-10-21	1000		0
	235751	Boundary Cell Mining Claim	2024-10-21	1000		0
	199568	Single Cell Mining Claim	2024-10-21	2000		0
	*199567	Boundary Cell Mining Claim	2024-10-21	*1000		*0
	*199542	Single Cell Mining Claim	2024-12-15	*400		*0
	186844	Single Cell Mining Claim	2024-10-21	2000		227
	155683	Single Cell Mining Claim	2024-10-21	2000		0
	150827	Single Cell Mining Claim	2024-12-15	400		1400
	*150826	Single Cell Mining Claim	2024-10-21	*2000		*0
#13 4282189 Cedar Pond	143090	Single Cell Mining Claim	2024-12-15	400	2,000	2755
	*330989	Single Cell Mining Claim	2024-12-15	*400		*0
	283212	Single Cell Mining Claim	2024-12-15	400		0
	*150827	Single Cell Mining Claim	2024-12-15	*400		*1400

The Lorrain Chain, continued						
Legacy claim & Target #**	**Tenure ID**	**Tenure Type (Annual Work Required is $400 for single cell claims and $200 for boundary cell claims)**	**Anniversary Date**	**Work Applied to cell claims after April 10, 2018**	**Work Applied to legacy claims prior to April 10, 2018**	**Available Exploration Reserve**
# (13) 4282187 Below and West of Cedar Pond	*143090	Single Cell Mining Claim	2024-12-15	*400		*2755
	343852	Single Cell Mining Claim	2024-10-03	800		1324
	*283212	Single Cell Mining Claim	2024-12-15	*400		*0
	237309	Single Cell Mining Claim	2024-10-03	800		0
	175091	Single Cell Mining Claim	2024-10-03	800		1600
	172334	Single Cell Mining Claim	2024-10-21	2000		1600
	*155683	Single Cell Mining Claim	2024-10-21	*2000		*0
	*150827	Single Cell Mining Claim	2024-12-15	*400		*1400
# (13, 14) 4282410 West of Cedar Pond & Paradis Pond	*155683	Single Cell Mining Claim	2024-10-21	*2000	0	*0
	336683	Boundary Cell Mining Claim	2024-10-21	1000		0
	*276246	Boundary Cell Mining Claim	2024-10-21	*1000		*0
	229017	Boundary Cell Mining Claim	2024-10-21	1000		0
	*175091	Single Cell Mining Claim	2024-10-03	*800		*1600
	172335	Boundary Cell Mining Claim	2024-10-21	1000		0
	*172334	Single Cell Mining Claim	2024-10-21	*2000		*1600
	155684	Boundary Cell Mining Claim	2024-10-03	400		85
# (13, 14) 4282411 East of Cedar Pond & Paradis Pond	105026	Boundary Cell Mining Claim	2024-10-21	1000	0	0
	*330989	Single Cell Mining Claim	2024-12-15	*400		*0
	*283212	Single Cell Mining Claim	2024-12-15	*400		*0
	*237309	Single Cell Mining Claim	2024-10-03	*800		*0
	*235751	Boundary Cell Mining Claim	2024-10-21	*1000		*0
	217230	Boundary Cell Mining Claim	2024-11-06	1000		0
	151798	Boundary Cell Mining Claim	2024-10-03	400		7159
	123906	Boundary Cell Mining Claim	2024-10-21	1000		0
#14 4273040 Paradis Pond	126017	Single Cell Mining Claim	2024-10-03	800	4,800	8946
	*343852	Single Cell Mining Claim	2024-10-03	*800		*1324
	*237309	Single Cell Mining Claim	2024-10-03	*800		*0
	*175091	Single Cell Mining Claim	2024-10-03	*800		*1600
	*155684	Boundary Cell Mining Claim	2024-10-03	*400		*85
	*151798	Boundary Cell Mining Claim	2024-10-03	*400		*7159
# (14) 4282142 The Trench	105615	Boundary Cell Mining Claim	2024-06-06	1000	0	0
	293947	Boundary Cell Mining Claim	2024-06-06	1000		485
	239443	Boundary Cell Mining Claim	2024-06-06	1000		0
	*155684	Boundary Cell Mining Claim	2024-10-03	*400		*85
	*151798	Boundary Cell Mining Claim	2024-10-03	*400		*7159
	*126017	Single Cell Mining Claim	2024-10-03	*800		*8946

The Gleeson-Peanut Corridor contiguous claims						
Legacy claim & Target #**	**Tenure ID**	**Tenure Type (Annual Work Required is $400 for single cell claims and $200 for boundary cell claims)**	**Anniversary Date**	**Work Applied to cell claims after April 10, 2018**	**Work Applied to legacy claims prior to April 10, 2018**	**Available Exploration Reserve**
#15, 16 4282401 Gleeson Lake & Horseshoe Lake	138563	Boundary Cell Mining Claim	2020-07-05	200	0	0
	331574	Boundary Cell Mining Claim	2019-07-05	0		0
	326048	Boundary Cell Mining Claim	2020-07-05	200		0
	306514	Boundary Cell Mining Claim	2019-07-05	0		0
	276692	Boundary Cell Mining Claim	2020-07-05	200		0
	258724	Boundary Cell Mining Claim	2019-07-05	0		0
	247266	Single Cell Mining Claim	2020-07-05	400		0
	*241582	Boundary Cell Mining Claim	2023-10-21	*800		*726
	240537	Single Cell Mining Claim	2020-07-05	400		0
	*230056	Boundary Cell Mining Claim	2023-10-21	*800		*726
	222764	Boundary Cell Mining Claim	2020-07-05	200		0
	210725	Boundary Cell Mining Claim	2020-07-05	200		0
	210724	Boundary Cell Mining Claim	2020-07-05	200		0
	203195	Single Cell Mining Claim	2020-07-05	400		0
	203194	Single Cell Mining Claim	2020-07-05	400		0
	158050	Boundary Cell Mining Claim	2020-07-05	200		0
	158049	Boundary Cell Mining Claim	2020-07-05	200		0
	144504	Single Cell Mining Claim	2020-07-05	400		0
	144503	Single Cell Mining Claim	2020-07-05	400		0
	144502	Boundary Cell Mining Claim	2019-07-05	0		0
#17 4282412 Peanut Lake	124604	Boundary Cell Mining Claim	2020-10-21	200	0	0
	337055	Boundary Cell Mining Claim	2020-10-21	200		0
	337054	Single Cell Mining Claim	2023-10-21	1600		487
	296727	Boundary Cell Mining Claim	2020-10-21	200		0
	288706	Boundary Cell Mining Claim	2019-10-21	0		0
	241583	Boundary Cell Mining Claim	2023-10-21	800		19
(adjoins Gleeson)	241582	Boundary Cell Mining Claim	2023-10-21	800		26
	230056	Boundary Cell Mining Claim	2023-10-21	800		226
	241581	Boundary Cell Mining Claim	2020-10-21	200		0
	194992	Boundary Cell Mining Claim	2020-10-21	200		26
	140960	Boundary Cell Mining Claim	2019-10-21	0		0
	140959	Single Cell Mining Claim	2023-10-21	1200		0
#18 4282404 Mountain Lake	*124604	Boundary Cell Mining Claim	2020-10-21	*200	0	*0
	304636	Boundary Cell Mining Claim	2020-08-24	200		0
	254741	Boundary Cell Mining Claim	2020-08-24	200		0
	225867	Boundary Cell Mining Claim	2019-08-24	0		0
	182562	Boundary Cell Mining Claim	2020-08-24	200		0
	182561	Boundary Cell Mining Claim	2020-08-24	200		0

Legacy claim & Target #**	**Tenure ID**	**Tenure Type (Annual Work Required is $400 for single cell claims and $200 for boundary cell claims)**	**Anniversary Date**	**Work Applied to cell claims after April 10, 2018**	**Work Applied to legacy claims prior to April 10, 2018**	**Available Exploration Reserve**
4283611 Xconnector	108067	Boundary Cell Mining Claim	2019-11-06	0	0	0
	343734	Boundary Cell Mining Claim	2019-11-06	0		0
	219399	Boundary Cell Mining Claim	2019-11-06	0		0
(*adjoins 4282411)*	*217230	Boundary Cell Mining Claim	2024-11-06	*1000		*0

*listed multiple times

** Target numbers, as listed on Illustrations: Map 5, page 8

SECTION 5: ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, and PHYSIOGRAPHY

The village of Cobalt, on Highway 11B, is situated approximately 10 km to the north/northwest of the Bishop Claims. The Trans-Canada Highway is within ¾ km to 15 km (as the crow flies) from the Bishop Claim targets. Many of the kimberlite targets are in recent clear-cuts. This active clearcutting is scheduled to expand to other targets. Vehicle access is available from forestry access roads that pass within one kilometer or less of most kimberlite targets. The Cobalt Train Station is nearby. Mining in this area is accepted and encouraged. There are 3 large hydro-electric dams, a natural gas pipeline, and one large windfarm nearby. All claims are on Crown Land. Only recently have many of these claims been accessible by vehicles – less than 10 years. There is no recorded work, especially for diamonds, on these claims. The targets are generally on high/dry ground.

The Bishop Claims roughly form a T-shape running ~ EW across Gillies Limit and ~NS in approximately the centre of Lorrain Twp just east of and paralleling the Cross Lake Fault. This stretch is ~20km east-west and 9km north-south.

Access is excellent with the TransCanada Hwy 11 touching the westerly most claim and 19km from the most distant.

Another year-round road, Hwy 567, is to the east and 1-3km distant, running parallel to the claims in Lorrain Twp. Logging roads are within 1km or less of all the potential kimberlite targets and can be driven with street vehicles.

The Cobalt train station is from 7.5 to 15 km from the targets on the claims.

The lowest elevation is on the westerly most claims at ~300m above sea level and reach a high on the claims east of the Cross Lake Fault at 394m above sea level.

The vegetation is primarily Boreal forest, characterised topographically by gradually sloping till regolith overlaying bedrock outcroppings. Low-lying areas, which are the exception, exhibit near-muskeg conditions with thick moss and extrusive deadfall; however, generally, there is higher ground producing occasional open areas displaying thick fern growth that reaches five feet high. Areas bordering the lakes possess thick cedar growth, while poplars, birch, and conifers dominate elsewhere. The plant and tree growth are often very dense in low-lying and wet areas, while mature and high-canopied trees which characterise the high ground make for easier traverse. The lakes often possess no apparent aquatic plant growth.

Generally, the land is well drained with areas of bedrock and mixed till with small areas of wet ground.

Temperatures range from highs of 35°C in summer to lows of –40°C in winter, with significant snow cover generally persisting between November and April. The best season for surface exploration is between June and October; however, in lake-covered or swampy areas, exploration activities such as geophysical surveys and diamond drilling are more easily conducted during the winter months.

SECTION 6: HISTORY

History of Development in the Cobalt Area

Before 1900, when the surveyors for the right-of-way of the Temiskaming and North Ontario (T.&N.O.) Railway worked north from North Bay past Long Lake Station (Cobalt, ON) up to Cochrane, there was limited activity in what is now Lorrain Township. Some early fur trading and logging expeditions entered Lake Temiskaming after coming up the Ottawa River from Montreal as early as the late 1700s with some mid-to-late 1800s colonisation of Lake Temiskaming on the Quebec shore. A farming community was settled in the 1880s on a bay a bit south and east of the Bishop Claims in Lorrain Township, in addition to a mission of oblate Fathers, and the posts of the Northwest Company and Hudson Bay Trading Companies not far away on Lake Temiskaming. Charles Farr founded Haileybury in the late 1880s and petitioned the government for railway access to facilitate colonisation of the area. A colonisation road did exist which reached the southernmost part of Lake Temiskaming on the Ontario side, but was never widely used.

The first government infrastructure nearest the claim was the building of the T. & N.O. railway which passed to the west, reaching Cobalt, Ontario in 1903-1904, whereupon silver and cobalt-nickel arsenide deposits were discovered. The mining boom which followed the discovery of silver at Cobalt dominated the geological interest in the area for many decades, and although prospectors and geologists closely explored the terrain all around Cobalt (leading to the settling of Silver Centre south of these claims in 1907-08), most of the exploration was guided by the search for more silver and cobalt-nickel arsenide deposits.

In the 1980s, there was renewed interest in the geology of the area, this time in search of diamond-bearing kimberlite pipes, stimulated in part by the discovery of an 800-carat yellow diamond by a settler “somewhere in the Cobalt area” in or around 1904 (which was subsequently tested and confirmed and cut into gemstones by Tiffany’s), but became overshadowed by the vastly rich silver discoveries of the day. Soil sampling and geophysics by companies like Cabo, Tres-Or Resources Ltd., DeBeers, and others in addition to exploration by the Ontario Geological Survey, uncovered more than 50 known kimberlite pipes, some diamondiferous, which helped to outline the existence of a Lake Temiskaming Kimberlite Field on the Lake Temiskaming structural zone, which intruded the Canadian Shield in this region approximately 148 million years before present. Deep sonar has also revealed circular features beneath the water of Lake Temiskaming itself which are inferred to be kimberlite pipes.

As well, a number of diamondiferous lamprophyres have been discovered near Cobalt, including one just NW of Latour Lake in the south part of Lorrain Twp, and another on the “Nip” Hill in Cobalt, as well as others.

History of the Nipissing Diamond of the Cobalt Area (~112 years ago)

The Gazette Montreal, Thursday, July 26, 1906, page 5

“Stone Sent to New York.”
“’New Ontario Diamond’ Declared to Be Real Thing”

> “… recurrent reports of diamond discoveries in New Ontario by the fact that Mr. A.O. Aubin, M.P., is now in possession of a stone, which, if a genuine diamond, will be one of the largest in the world. …

"The stone … has been submitted to experts, who declare that it is a genuine diamond, and on this assurance Mr. Aubin is sending it to New York to be cut and polished."

Jeweler's Circular Weekly, August 1, 1906, page 55

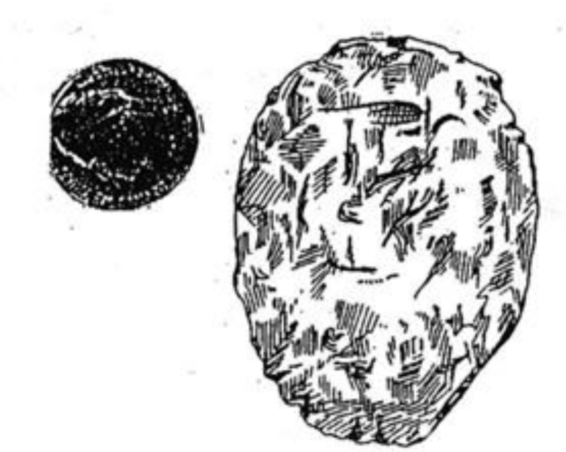
Father Paradis states, "I myself have seen the stone. It is as large as a hen's egg, and has a rough surface and a yellowish tinge. All the usual tests have been applied to it …"

The Mining Journal, September 22, 1906, page 333

The article in the Mining Journal repeats much of the material in the above articles and also includes a copy of the 'actual size' drawing (shown below) made by Father Paradis while the stone was in his possession.

Father Paradis also publicly stated a number of times that the diamond was found near Cobalt. Father Paradis was himself a prospector of note and well versed in the field of geology. Note that the pencil sketch clearly shows what appears to be trigons on the stone's surface. Along with his other attributes, he was an excellent sketch artist and to this day his artwork is considered very good and collectible. The nickel is the correct size, making the stone 55x43 mm, and it matches the size of a hen's egg (size large) when placed over the drawing.

Approximately 112 years later at the Diavik Mine, a 552-carat yellow diamond, nearly the same shape and texture as the Nipissing Diamond, was also found in Canada.



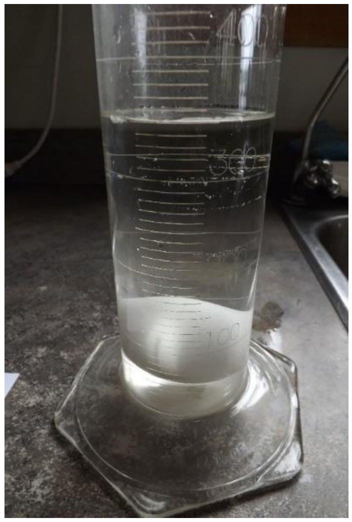
The "Nipissing Diamond."

"The stone discovered in the Nipissing District, and now owned by Mr. Adolphe O. Aubin, M.P.P. Sketch, actual size, by Rev. Father Paradis. (55mm x 43mm)" from *The Mining Journal, Sep 22, 1906 and reprinted in OGS OFR 6083 pp21. An American nickel was included in the Mining Journal sketch to provide size reference.*

A 552-carat yellow diamond unearthed in October 2018 at the Diavik Diamond Mine, approximately 217 kilometers south of the Arctic Circle in Canada's Northwest Territories (54.5mm x 33.7mm) accessed at https://www.cbc.ca/news/canada/north/large-diamond-dominion-nwt-1.4946571

The following method was used to closer determine the weight (in carats) of the Nipissing Diamond which measures 55x43mm.

A Pyrex graduated cylinder was filled to a level of 300ml with clean water. When one large egg (55x43mm) was placed in the beaker, 50ml of water was displaced.



The specific gravity of diamond is 3.52. Using the formula for finding specific gravity using mass and volume (mass = density x volume) and having a known specific gravity and volume, we can therefore find the diamond's mass (weight). The result gives a weight of 0.176kg or 880 carats.

Now, due to irregularities in the surface of the diamond, I subtracted 5% and 10% of the weight, which closer approximates the actual stone's weight of somewhere between 836 and 792 carats.

The Montreal Herald, Monday, November 12, 1906, page 268

"The Diamond Find in Temiskaming"
"… Geologists Anticipate Results from Tiffany Expedition."

"… expedition of geologists and diamond specialists that has been organized by the Tiffany diamond firm of New York for the purpose of investigating the indications of the presence of diamonds that have been found in the district west of Temiskaming."

When the writer states 'west of Temiskaming', it is likely they mean Lake Temiskaming, especially as Father Paradis said it was found near Cobalt.

"[In September 1882] Father Paradis and a Brother Moffet established a model farm … on the Quebec side (just south of … Paradis Bay on the Ontario side)" (Paradis of Temagami, Bruce W. Hodgins, (1976), page 7).

I have also read of the establishment of a farm collective at Paradis Bay in the late 1800s, which can be seen on a 1910 map in my collection (Senecal et al., Map 18A, 1910).

A number of more modern articles about the diamond name Father Paradis as the finder (including a public release by MPP David Ramsey), but the historical references mention it was found by a settler, which Father Paradis was himself. If it was in fact found by a different settler, there's a good possibility that settler would have shown it to Father Paradis, the local priest and also a well-known prospector.

Another interesting paper was found by David Crouch (PEng), who worked at finding the original newspaper articles on the discovery of the Nipissing Diamond, as well as including Mr. Aubin's Certificate of Registration of Death – District of Nipissing, March 27, 1932, where interestingly, his father's name was written as "Jean B. Aubin (Paradis)". It seems that the father/husband in a French family also lists their mother's maiden name. This strongly suggests Mr. Aubin, the buyer of the Nipissing Diamond, and Father Paradis, who arranged for Aubin to buy the diamond (and possibly found it), were closely related.

Recently, David Crouch (PEng) also tracked down a surviving descendent of Mr. Aubin and personally viewed several multi-carat stones cut from the original rough by Tiffany's. This adds yet more proof of its existence. She mentioned that more stones were in the possession of other family members.

After I staked the original legacy claim, 4273040, I remembered Keith Barron (P.Eng) telling me a couple of decades earlier about the Diamond in the Cobalt area that he had researched. I have reprinted here a portion of an article he wrote in 1995 but that I just recently read (thanks to the Internet).

"A Geologist on the Trail of a Canadian Find"

> "An exciting new exploration play is unfolding in Canada, far from the frozen tundra of Lac de Gras, in rolling farmland just a day's drive from Toronto. Diapros, a De Beers subsidiary, had been working quietly in this area in the early 1960s. It was joined by four other companies, who worked through the late 1980s until they abandoned the area for prospects elsewhere. But others have filled the gap, using new techniques and ideas which are yielding sparkling success. I entered the scene in 1991, following up on a reference in a 1906 U.S. Geological Survey Report to a large diamond found in the Nipissing district of Ontario. My research uncovered a jewelry trade article of that year describing the stone as 'large as a hen's egg with a rough surface and a yellowish tinge.' The stone had passed through the hands of a priest, a colonization agent for the Canadian Pacific Railway, and Adolphe Aubin, Member of Parliament. Ultimately, it was sent to Tiffany for cutting. The story rang true, especially since the location of the find – on the west side of Lake Timiskaming – matched the location of two kimberlite pipes found 75 years later. The weight was not recorded, but some quick math renders an approximate weight of more than 700 carats. How the discovery escaped world attention was a quirk of history. The find was made near the settlement of Cobalt, where three years earlier, silver veins were uncovered by railway workers. This led to a silver rush, with all it's associated wild rumors and con games. The Provincial Geologist, Willett Miller, was badgered by prospectors for glowing endorsements of their claims, prompting him to refuse to visit or write about the area for a full five years. He probably considered reports of a giant diamond to be a hoax. The Montreal Herald reported that Tiffany sent geologists to investigate the area, but it's quite possible they decided against sharing their information with the press, particularly with a silver mining tent city down the road. There is, however, strong evidence that the stone was real. The granddaughter of the original owner, Nicole Aubin, claims that her sister owns one of five stones 'cut from a large rough diamond owned by her grandfather'." (Keith Barron, (Dec 3, 1995))

Story of the Trench

Approximately 3km to the east of one of my claims lies a steep, high hill that runs north-south with Hwy 567 and Lake Timiskaming on the other side; however, at one location, a small valley extends from Cedar Pond and Paradis Pond to the east through which Lake Timiskaming can be seen.

When I first noticed this and after driving Hwy 567 and utilising a Topo Map, I realised I was seeing Paradis Bay. I reckoned that with the discovery of silver in 1903-1904, a farming community in Paradis Bay and others in Quebec nearby would have wanted to ship fresh produce, meat, etc. to the many thousands of hungry prospectors in Cobalt. About then I recalled the discovery of an 800-carat diamond found near Cobalt as first told to me by Keith Barron (PhD Exploration Geologist).

It occurred to me that the most direct route to the Cobalt market from Paradis Bay would be a road through my claims. I envisioned an east-west road from Paradis Bay between the lakes on two of my claims, Paradis Pond and Cedar Pond, which are ~600m apart a short distance to the east of Goodwin Lake. From there, the road would have continued northwest to the top of Chown Lake where it would then trend towards Cobalt. Many recent articles (including one by our MPP David Ramsey) credited Father Paradis with finding the large diamond. This led me to wonder if the diamond might have been found while building the (hypothetical) road from Paradis Bay at the time of the diamond's discovery, which was first reported in print in 1906.

I was then and afterwards getting excellent KIM results from sampling below but not off-ice of the two lakes mentioned, which added even more interest. Then sometime after, my son Graeme was looking through his extensive historical map collection, and on one map from 1905 (Miller, 1905) [as seen in Illustrations, Map 7], there was a wagon road shown from Paradis Bay to just below Paradis Pond, closely paralleling the hypothetical road I had previously sketched. To be included on the 1905 map, the road would have been under construction in 1903-1904 (when silver was discovered) and being used by 1905.

This is especially interesting, as it would have been within the time frame in which the diamond was reported as being found by a settler and purchased by Mr. Aubin. With this in mind, I drew a line down-ice of Paradis Pond to where it met the road from Paradis Bay and replotted that to Google Earth and recorded the UTM co-ordinates. I then planned a traverse for my son Graeme to take a sample from that location and others in the general area that he deemed interesting.

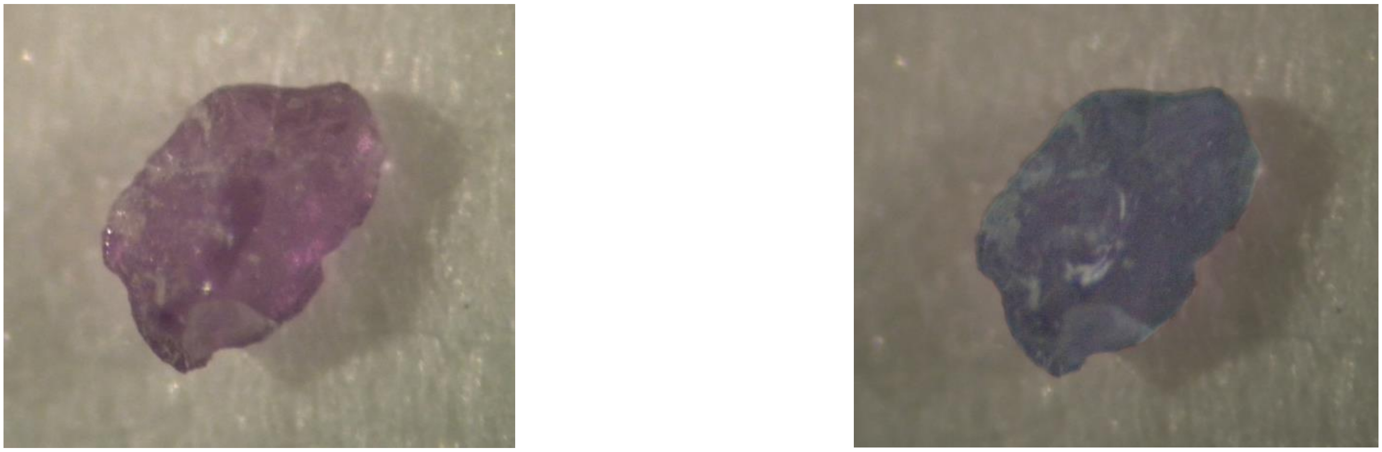
When he arrived at the location, Graeme could see the general area was in the trough-like feature extending directly down-ice (glacial) from Paradis Pond. He found the ground a bit wet and difficult to sample in, so he moved uphill a short distance to the east, closer to the UTM co-ordinates, to get a dry till sample. At the top of the gentle ~20' rise, he 'stumbled' across a trench. It was obviously very old, ~50' long, oriented due north-south with two trees growing in it and much humus infill. Realising the potential importance of the trench being where material glaciated from Paradis Pond meets the road, he took several samples from the trench and then spent the remainder of the day looking for other signs of the wagon road or human activity, before returning to the truck.

When Graeme and I later returned, the ferns were a solid carpet waist-deep and the trench was not visible from five metres away, unlike Graeme's first trip in early spring.

Directly north of the trench, an early test pit had also been dug in till.

This trench, from a technical perspective and manpower expedition, makes no sense. There are no outcrops nearby. It's in a huge area of granite (the Lorrain Granite Batholith), and there are no recorded silver and/or other mineral deposits directly up-ice of this trench. This helps lend the possibility of a diamond exploration team from Tiffany's in 1906 having dug it.

Related Notes



Photos A & B: kimberlitic Cr pyrope photographed under two different LED lights from Trench till sample

A number of interesting KIMs were found from these samples, including a rare colour-change chrome pyrope (see pictures above), sharp-edged black orthopyroxene, non-magnetic garnets, and others. All kimberlitic chrome pyropes are colour-change garnets.

Due to Tiffany's secretive nature, they never released any details of their work in this area.

SECTION 7: GEOLOGICAL SETTING & MINERALISATION

Rock types are actually not relevant to kimberlite emplacement; however, a number of targets (Cedar Pond, Chopin Lake, Criostal Lake, Gleeson Lake, Grassy Lake, Horseshoe Lake, Lightning Lake, Longfellow Lake, Mountain Lake, Mozart Lake, Paradis Pond, and Peanut Lake) are in or near contacts of granite and diabase, similar to the diamondiferous kimberlites in Lac de Gras.

Structural Geology

> "Kimberlite intrusions tend to occur in clusters or fields, with the large-scale distribution possibly controlled by deep seated structural features and local emplacement by shallow zones of weakness such as faults or the margins of diabase dykes." (Power & Hildes, 2007, p 1025)

These targets are near intrusives including upper and the lower contacts of the diabase sills which are also specifically noted as priority targets for silver where favourable mineralization is found within 150 metres of the contact. Although silver/cobalt is not our primary mineral of interest, there is good potential for locating this type of mineralization.

These claims are well situated within the Lake Temiskaming Structural Zone (LTSZ) which is known as host for a large number of diamond projects undertaken by a number of notable explorers and Public Junior Mining Companies. Locally over a dozen kimberlite pipes and lamprophyres, many diamondiferous, have been found mainly by testing magnetic anomalies. But, as is now well accepted, many of the most highly diamondiferous kimberlite pipes/phases within a pipe found and continuing to be found in Canada are not detectable by mag or often by EM. Gravity is useful in these cases, but often progressive companies are returning to high KIM results in till and stream samples and then looking for visual round pipe-sized anomalies, either as lakes or circular depressions in the topography.

A key feature of a number of significant projects within the LTSZ is the Cross Lake Fault. Locally, this deep, regional fault is in close proximity to these claims. The Lake Temiskaming West Shore Fault, south Montreal River Fault, and Montreal River Main Fault are also proximal to the Bishop Claims, as well as many smaller cross-faults.

Publicly available OGS Geophysical Data and subsequent correlations were instrumental in the decision to stake these targets given a high probability of potential for diamonds and other mineral occurrences. This information was related to products released by the Ontario Geological Society. Lorrain & Gillies Limit have ideal conditions for kimberlite/diamond exploration.

In the New Liskeard kimberlite field, there is a strong correlation to localised cross faults perpendicular to the regional Cross Lake Fault near to or through the known kimberlite pipes. Pipes (3) on the east side of the fault are diamondiferous while those on the west side are less so. The Bishop Claim kimberlite targets on the east side of the Cross Lake Fault are the first choice to be drilled as they fit this criteria and are in an area of diabase/granite contacts.

The Cross Lake Fault dips steeply to a great depth. This would provide an easy method of transport for an ascending kimberlite and would also allow for faster ascension which is necessary for diamond preservation. This is demonstrated in the New Liskeard area pipes, where the three pipes, Bucke, Gravel, and Peddie, on the east side of the fault are all more highly diamondiferous than the known pipes on the west side of the fault.

Fourteen of the Bishop kimberlite targets are on the east side of the Cross Lake Fault, very close (within several hundred metres) to the same distance east of the fault as these three pipes in New Liskeard and there are cross faults near or through all of these.

As well, the nature of the rugged Archean terrain of the Lorrain Batholith is important to the diamond potential. The Granite and Diabase are both very hard and when fractured it is reasonable to infer that they are deeply fractured just as the Cross Lake Fault is a deep, regional fracture, which is still active today as part of the Ottawa-Bonnechere Graben System.

As a result, the claims' location within the Lorrain Batholith offers a prime setting to allow for Kimberlite Material to transport readily to surface which allows for better preservation of diamonds in ascending kimberlites. Glacial erosion would have been limited owing to the hardness of the rock, as well as a higher elevation. This may allow for a preservation of a greater volume of pipe than those discovered in glacially eroded terrains. Rapid transportation of diamond bearing magma is essential to the preservation of diamond stability during transport.

Adapted in part from Prairie C – The Lorrain Batholith Project
http://www.geocities.ws/Eureka/Account/6322/PcProprt.html

SECTIONS 8: DEPOSIT TYPES

The Bishop Claims are principally being investigated for their kimberlite/diamond potential. Kimberlite pipes in Canada very often manifest in the post-glacial topography as small, circular to semi-circular lakes from 50m to 200m in diameter, as are the potential kimberlites being investigated. This is especially evident in the geologically similar Lac de Gras area. The Bishop Claims have a number of important features associated with them. Deep regional faults, such as the Cross Lake Fault [see Illustrations: Map 2, Detailed Local Faults, page 5], and smaller faults at ~90° to the regional faults nearby. Proximity to other known kimberlites nearby in Haileybury/New Liskeard areas is also important.

Other anomalous mineral grains encountered in the heavy mineral concentrates are gold grains, specifically down-ice of Ice Chisel and Darwin Lakes, and specific types of garnets, namely colour-change chrome pyropes, a common component of kimberlite pipes (it seems that kimberlitic Cr pyropes are also colour-change garnets), which when faceted can sell for $500-1500 USD/carat. A colourless G3 (very rare leuco) garnet, which retails for similar prices to the Cr pyropes, is also found in relatively large quantities, but these garnets are not saved from presently operated diamond mines. They go into the waste rock pile.

> "Chromian (chrome) diopside [a kimberlite indicator mineral] which is under-used as a gem can produce stones that are nearly indistinguishable from emerald; but because of a lack of marketing and poor supply chromian diopside will probably remain as an uncommon gem rather than a major gemstone unless a major diamond mine attempts to recover these gems with diamonds."
> (Hausel, W.D., 2014)

There is also Cobalt mineral potential. Cobalt 1 and its predecessors approached Tony Bishop four times with intent to option certain and then all the Bishop Claims for their cobalt potential. Mr. Bishop so far has declined to option his potential diamond properties for the cobalt potential. Bishop and consultant Doug Robinson give the cobalt potential of the area low priority.

SECTION 9: EXPLORATION

Exploration for kimberlite pipes is different from traditional methods used for gold and other metallic minerals and is constantly evolving as new theories and information is made available in scholarly articles. Basically, because diamonds are so few and far between even in a rich kimberlite deposit/pipe, exploration is not for diamonds but instead for kimberlite indicator minerals (KIMs), certain garnets, diopsides, chromite, ilmenite, and others, that are difficult to easily separate from soil samples and comparatively small in size. Commonly picked KIMs are from 0.25-0.5mm, less commonly from 0.5-3.0mm, requiring specialised equipment to save.

Whereas metallic mineral assays have discreet, standardised values – usually ounces per ton or parts per million (PPM), numbers of KIMs are often expressed as none, few, many, etc.

If enough KIMs are found in till or creek samples, and a round feature such as a lake, depression in the soil, or even a vegetation anomaly, and the site of a potential kimberlite is in an up-ice glaciation direction, then the only recourse is to drill the target, preferably subsequent to a closely spaced mag and possibly EM survey, or if near the surface to dig with heavy equipment to find and test the kimberlite deposit/pipe.

In addition to favourable KIM results, the use of drone flyovers to conduct magnetometer surveys and subsequent 3D modelling can provide important information. These surveys are relatively low cost with high value returns in deciding which targets will be drilled, as well as more accurately planning the drill program.

The Bishop claims have undergone extensive till sampling, as described in Bishop Work Assessment Reports (see Section 27: References). Drone magnetometer surveys have been conducted on 2 targets, with plans to conduct surveys on the remaining targets in the near future.

Drilling is the next planned stage on the Bishop Claims/targets, subsequent to the mag flyover results.

SECTION 10: DRILLING

Drilling is planned for a number of targets that appear to be most favourable. Permits have been approved for 2 targets with 3D mag modelling that clearly displays pipe-like structures on an irregular round, slightly low mag (see Illustrations: Figures, pages 13-21).

This result is potentially of increased importance in that the more highly diamondiferous kimberlite pipes in Canada are typically represented as slightly negative mag lows. In Paradis Pond, the 1st derivative shows a clearly defined contact between a mag low kimberlite pipe-like structure against the dominant granite background.

None of these targets have been previously drilled or tested in any way for kimberlite or other mineral potential.

SECTION 11: SAMPLE PREPARATION, ANALYSES, & SECURITY

A flow chart of methodology can be seen on page 22 [Illustrations: Flow Sheet for Concentrating and Retrieving KIMs from Till & Stream Samples].

Till samples taken to delineate potential kimberlite targets are placed in standard 38cm x 28cm clear plastic sample bags and taped shut. The sample number and UTM co-ordinates are clearly recorded on the bag and entered into a log book with a brief description of soil type, colour, etc. These are carefully stored until ready for concentration.

In two targets, similar samples taken nearby and at the same depth were bagged and shipped to ODM (Overburden Drilling Management) for independent concentration and picking for KIMs. These results are included in this section.

A number of grains picked from till concentrates were sent from a number of individual targets to the Geoscience Lab in Sudbury to be analysed by microprobe. The microprobe will determine the percentage of certain elements, such as chrome (Cr_2O_3), calcium (CaO), titanium (T_1O_2), and others in the small picked grains.

This is useful because these percentages can be statistically different for crustal (rocks and minerals that form at shallower depths) and kimberlitic (minerals that form at great depths with high pressure and temperature). The important grains are those that form at the same depth as diamonds and are occasionally found as inclusions in diamonds.

Due to cost constraints and the number of potential targets, only a few select grains from some of the targets were sent out to the Geoscience Labs in Sudbury for testing. A number of grains were Cr Pyropes and were mostly purple with a few red and pink grains. Several orange garnets were also sent. Other grains were sent because they could not be visually identified when picked from the concentrate and did not visually correlate to anything in public literature.

Till samples were also sent to Overburden Drilling Management (ODM) in Nepean for two of the legacy claims, with findings identifying 80 magnesium ilmenite grains, and 30 G9/G10s among the kimberlite indicator minerals, as well as gold grains. ODM File 201747554, dated September 5, 2017 (from Ice Chisel Lake legacy claim) reported 48 visible gold grains (33 reshaped, 14 modified, 1 pristine),

The Geoscience and ODM lab results are included in this report below.

Geoscience Labs – Results

EMP-100:

GEOSCIENCE LABORATORIES REPORT
ELECTRON MICROPROBE ANALYSIS
Data reviewed by Dave Crabtree

Client	**Tony Bishop**
Mineral	**Garnet**
Sample	**Various**
Job #	**17-0107**
Analyst	**D. Crabtree**
Analyst Approved	**September 20th 2017**

Sample Label	SiO2	TiO2	Al2O3	V2O3	Cr2O3	MgO	CaO	MnO	FeO^t	Na2O	K2O	Total
Cr-Pyrope Garnet Analyses												
G10 Harzburgite Garnet (Grutter Classification)												
S-G74	41.683	0.010	20.756	0.023	4.499	22.088	3.284	0.410	7.065	0.016	0.000	99.834
S-G83	42.142	0.017	21.101	0.019	4.059	21.869	4.078	0.413	6.779	0.017	0.000	100.494
S-G91	40.929	0.026	19.480	0.029	5.713	20.867	3.765	0.377	8.595	0.018	0.000	99.799
G9 Lherzolite Garnet (Grutter Classification)												
S-G1	41.928	0.016	21.103	0.026	4.033	20.266	5.397	0.400	7.324	0.012	0.003	100.508
S-G5	41.536	0.069	20.875	0.021	4.178	20.355	4.939	0.497	7.630	0.027	0.000	100.127
S-G6	41.726	0.027	22.573	0.013	1.678	20.498	4.551	0.438	8.892	0.017	0.000	100.413
S-G10	42.109	0.002	21.274	0.013	3.680	21.500	4.587	0.377	6.724	0.013	0.003	100.282
S-G11	40.175	0.230	18.840	0.026	5.538	17.109	5.951	0.478	11.335	0.035	0.000	99.717
S-G15	41.776	0.201	21.270	0.029	3.128	20.819	4.698	0.404	7.977	0.041	0.000	100.343
S-G16	41.404	0.018	19.656	0.028	5.856	20.577	4.915	0.473	7.274	0.019	0.000	100.220
S-G24	41.729	0.023	20.961	0.015	3.940	20.956	4.978	0.423	7.441	0.019	0.000	100.485
S-G25	41.460	0.000	20.893	0.019	3.984	20.437	5.489	0.476	7.215	0.005	0.001	99.979
S-G29	41.719	0.007	21.406	0.017	3.476	21.136	4.402	0.479	7.215	0.014	0.000	99.871
S-G30	41.503	0.017	20.215	0.019	5.003	20.494	5.446	0.434	7.096	0.016	0.002	100.245
S-G36	41.606	0.018	20.361	0.020	5.000	20.641	4.962	0.470	7.182	0.025	0.000	100.285
S-G37	41.793	0.322	20.707	0.039	3.442	21.317	5.098	0.287	6.903	0.030	0.002	99.940
S-G38	41.417	0.010	19.838	0.032	5.016	18.963	5.786	0.489	8.566	0.010	0.001	100.128
S-G40	41.701	0.193	19.902	0.033	5.028	20.928	4.995	0.356	7.049	0.043	0.000	100.228
S-G41	41.636	0.228	20.473	0.024	3.980	21.250	4.802	0.392	7.312	0.046	0.000	100.143
S-G42	41.890	0.105	20.707	0.028	4.167	20.214	5.370	0.399	7.368	0.018	0.000	100.266
S-G47	41.392	0.199	19.758	0.034	5.005	19.983	5.281	0.436	8.052	0.044	0.000	100.184

All concentrations are reported as wt%. 1 of 7 17-0107-EMP-100-Bishop-Version2 Report

Sample Label	SiO2	TiO2	Al2O3	V2O3	Cr2O3	MgO	CaO	MnO	FeO^t	Na2O	K2O	Total
S-G48	41.823	0.131	21.166	0.029	3.545	20.549	4.863	0.460	8.058	0.022	0.002	100.648
S-G49	41.206	0.034	19.937	0.024	5.113	20.139	5.461	0.439	7.403	0.017	0.000	99.773
S-G50	41.392	0.004	20.500	0.031	4.361	20.182	5.593	0.423	7.696	0.006	0.000	100.188
S-G51	41.411	0.045	21.135	0.012	3.717	20.487	4.885	0.513	7.675	0.026	0.001	99.907
S-G52	41.938	0.145	21.202	0.037	3.486	20.141	4.947	0.409	8.014	0.027	0.000	100.346
S-G64	41.903	0.040	20.716	0.026	4.495	20.754	5.220	0.402	7.244	0.016	0.000	100.816
S-G65	41.437	0.197	19.624	0.038	5.553	20.689	5.265	0.396	7.063	0.037	0.000	100.299
S-G66	41.859	0.087	21.601	0.021	3.016	20.770	4.634	0.403	7.960	0.022	0.002	100.375
S-G67	41.066	0.320	18.159	0.025	7.077	20.068	5.831	0.379	6.983	0.040	0.000	99.948
S-G68	41.768	0.043	21.777	0.031	2.836	20.080	5.030	0.393	8.451	0.017	0.000	100.426
S-G69	41.530	0.173	19.667	0.033	5.482	20.247	5.293	0.425	7.422	0.044	0.000	100.316
S-G70	41.382	0.097	19.462	0.020	5.673	20.360	5.528	0.443	7.222	0.031	0.003	100.221
S-G71	41.412	0.066	20.628	0.022	4.183	19.342	5.800	0.581	8.397	0.016	0.000	100.447
S-G72	41.289	0.102	19.620	0.029	5.599	20.507	5.391	0.442	7.134	0.029	0.000	100.142
S-G75	41.079	0.002	19.948	0.024	5.155	19.497	6.385	0.481	7.247	0.009	0.001	99.828
S-G77	41.383	0.005	19.975	0.031	5.052	20.504	5.488	0.422	7.331	0.015	0.000	100.206
S-G80	41.298	0.090	19.228	0.043	5.653	20.267	5.683	0.364	7.399	0.023	0.000	100.048
S-G81	41.550	0.094	20.943	0.025	3.855	19.930	4.953	0.465	8.400	0.024	0.000	100.239
S-G84	41.347	0.000	20.916	0.020	3.747	20.100	5.208	0.506	8.039	0.013	0.000	99.896
S-G90	40.920	0.047	19.879	0.019	5.116	19.037	5.711	0.573	8.330	0.026	0.001	99.659
S-G93	41.128	0.084	18.771	0.040	6.828	20.239	5.396	0.450	7.128	0.010	0.000	100.074
S-G94	40.699	0.208	19.110	0.031	5.984	20.344	5.144	0.430	7.529	0.047	0.000	99.526
S-G96	41.056	0.202	18.569	0.034	6.389	20.215	5.720	0.376	7.221	0.028	0.000	99.810
G11 Hi-Ti Peridotitic Garnet (Grutter Classification)												
S-G17	41.268	0.807	18.398	0.054	5.169	19.570	6.396	0.303	8.064	0.032	0.000	100.061
S-G22	41.330	1.014	17.583	0.046	6.727	20.524	6.135	0.273	6.696	0.060	0.000	100.388
S-G92	41.535	0.658	19.707	0.040	4.495	21.091	5.267	0.303	7.206	0.061	0.000	100.363
G1 Low-Cr Megacryst Garnet (Grutter Classification)												
S-G45	41.804	0.468	21.449	0.034	1.818	20.562	4.605	0.323	8.880	0.048	0.003	99.994
S-G8	42.153	0.694	22.048	0.039	1.223	21.071	4.604	0.324	8.513	0.067	0.001	100.737

All concentrations are reported as wt%.

Sample Label	SiO2	TiO2	Al2O3	V2O3	Cr2O3	MgO	CaO	MnO	FeO^t	Na2O	K2O	Total
G12 Wherlitic Garnet (Grutter Classification)												
S-G89	39.707	0.054	20.229	0.041	3.341	14.980	6.444	0.697	14.028	0.006	0.000	99.527
S-G95	40.189	0.042	17.663	0.062	7.221	16.088	7.901	0.652	10.165	0.003	0.001	99.987

All concentrations are reported as wt%.

Sample Label	SiO2	TiO2	Al2O3	V2O3	Cr2O3	MgO	CaO	MnO	FeO[t]	Na2O	K2O	Total

QUALITY CONTROL

Analytical Conditions:	**Majors - 20kV & 20nA. Trace 20kV & 200nA.**
Routine:	**WDS acquisition.**
Correction Procedure:	**PAP**

Sample Label	SiO2	TiO2	Al2O3	V2O3	Cr2O3	MgO	CaO	MnO	FeO[t]	Na2O	K2O	Total
diopAST	55.030	0.077	0.063	0.028	0.000	18.738	25.829	0.053	0.051	0.006	0.002	99.877
diopAST	55.217	0.070	0.087	0.021	0.002	18.652	25.878	0.042	0.040	0.014	0.000	100.023
garKNZ	41.020	0.432	23.063	0.025	0.087	19.207	5.190	0.298	10.265	0.019	0.000	99.606
garKNZ	41.227	0.438	23.174	0.025	0.105	19.029	5.160	0.321	10.261	0.019	0.000	99.759
garKNZ	41.144	0.434	23.062	0.027	0.097	19.106	5.180	0.316	10.227	0.025	0.000	99.618
garKNZ	41.192	0.438	23.008	0.024	0.091	19.215	5.150	0.313	10.257	0.023	0.000	99.711
garKNZ	41.080	0.434	23.066	0.026	0.097	19.224	5.177	0.312	10.274	0.019	0.000	99.709
garKNZ	41.176	0.423	22.941	0.018	0.086	19.043	5.194	0.311	10.337	0.025	0.000	99.554
garKNZ	41.375	0.438	23.263	0.016	0.102	19.222	5.245	0.305	10.276	0.017	0.000	100.259
garKNZ	41.597	0.428	23.136	0.023	0.091	18.940	5.219	0.318	10.343	0.020	0.000	100.115
garRV3	42.185	0.027	19.804	0.034	5.678	23.233	2.505	0.333	6.319	0.007	0.000	100.125
garRV3	41.952	0.028	19.836	0.031	5.697	23.169	2.513	0.330	6.318	0.008	0.002	99.884
garRV3	42.070	0.023	19.934	0.033	5.727	23.338	2.529	0.323	6.260	0.007	0.000	100.244
garRV3	42.030	0.022	19.932	0.033	5.675	23.323	2.505	0.326	6.391	0.008	0.002	100.247
garRV3	42.032	0.028	19.960	0.033	5.652	23.219	2.460	0.326	6.396	0.009	0.000	100.115
garRV3	42.146	0.028	19.752	0.037	5.674	23.251	2.493	0.320	6.389	0.007	0.003	100.100
garRV3	42.068	0.021	19.913	0.026	5.678	23.246	2.472	0.334	6.324	0.007	0.002	100.091
garRV3	41.974	0.031	19.990	0.037	5.648	23.266	2.461	0.327	6.330	0.013	0.000	100.077
Standard	garKNZ	garKNZ	garKNZ	garKNZ	garRV3	garKNZ	garKNZ	garKNZ	garKNZ	garKNZ	garKNZ	
Average wt%	41.226	0.433	23.089	0.023	5.679	19.123	5.189	0.312	10.280	0.021	L.O.D.	
Expected wt% *	41.441	0.440	23.166	n.d.	5.770	18.887	5.098	0.313	10.441	n.d.	n.d.	
Accuracy % rel.	-0.52	-1.63	-0.33		-1.58	1.25	1.78	-0.52	-1.54			
Mode	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	
Signal	Si Ka	Ti Ka	Al Ka	V Ka	Cr Ka	Mg Ka	Ca Ka	Mn Ka	Fe Ka	Na Ka	K Ka	
XTAL	TAP1	PET2	TAP1	LLiF3	LLiF3	TAP1	PET2	LiF4	LiF4	TAP1	LPET5	

All concentrations are reported as wt%.

Sample Label	SiO2	TiO2	Al2O3	V2O3	Cr2O3	MgO	CaO	MnO	FeO^t	Na2O	K2O	Total
Count time (seconds)	15	20	15	20	45	15	45	20	45	20	20	
Beam Current (nA)	20	200	20	200	20	20	20	200	20	200	200	
L.O.D. (estimate)	0.027	0.006	0.023	0.006	0.012	0.023	0.012	0.008	0.018	0.006	0.003	
L.O.Q. (estimate)	0.090	0.020	0.077	0.021	0.040	0.078	0.041	0.028	0.060	0.021	0.011	

* Expected Values are from long term in-house charcterization of mineral standards.

QC notes

1) None of the reported values for these mineral standards are certified:" accuracy" is therefore based on available chemical data.
2) n.d. not determined for the specified mineral standard.
3) n.a. not applicable
4) LOD = Limit of Detection defined here as 3 x standard deviation of the total accumulated background counts.
The L.O.D. reported here represents the minimum value in this report where the peak - background signal exceeds 3 x standard deviation of the background signal.
5) L.O.Q. = Limit of quantification (3.3 x L.O.D), precision ~ 10-30%.
6) Reported count times are for both peak and background measurements.
7) FeO^t - total Iron expressed as FeO

All concentrations are reported as wt%.

GEO LABS
GEOSCIENCE LABORATORIES

Ontario

Q.C. NOTE TO ACCOMPANY ANALYTICAL RESULTS

Client : Bishop
Job # : 17-0107
Test : EMP-100
Sample # : see below
Date : September 21, 2017

Please Note:

Labelling errors discovered in the report for job 17-0107 by the EMP-100 test method have been corrected. Please see the attached revised report. If you would like additional work please contact Kayla Kalmo at (705) 670-5632 or email kayla.kalmo@ontario.ca.

Sincerely,

Jennifer Hargreaves,
Quality Assurance Coordinator

Client	**Tony Bishop**	**GEOSCIENCE LABORATORIES REPORT**
Mineral	**Various**	**ELECTRON MICROPROBE ANALYSIS**
Sample	**Various**	Data reviewed by Dave Crabtree
Job #	**17-0279**	
Analyst	**D. Crabtree**	
Analyst Approved	**September 28th 2017**	

Note that low totals in some of the analyses are the result of hydration in the mineral structure, or in the case of andradite are due to the presence of Fe^{3+}

Sample Label	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	ZnO	Na2O	K2O	F	Cl	Y2O3	La2O3	Ce2O3	Pr2O3	Nd2O3	Sm2O3	Gd2O3	Total
Titanite (Rare Earth Elements and Halogens included)																					
S-G53	29.830	36.360	1.145	0.024	0.000	27.398	0.050	1.690	0.003	0.026	0.000	0.307	0.000	0.143	0.311	0.845	0.120	0.513	0.040	0.104	98.909
S-G56	29.772	35.814	1.147	0.020	0.014	26.999	0.037	1.851	0.009	0.032	0.007	0.484	0.000	0.156	0.342	0.865	0.139	0.519	0.071	0.092	98.370
S-G59	30.263	37.306	1.460	0.013	0.007	27.952	0.098	1.186	0.000	0.000	0.000	0.265	0.000	0.097	0.032	0.279	0.045	0.227	0.000	0.045	99.275
S-G62	29.802	37.337	1.044	0.096	0.018	27.392	0.050	1.153	0.000	0.014	0.000	0.335	0.007	0.200	0.117	0.439	0.078	0.325	0.077	0.092	98.576
S-G19	29.419	35.727	1.117	0.018	0.027	26.646	0.070	2.041	0.000	0.090	0.010	0.471	0.001	0.207	0.363	0.937	0.180	0.671	0.108	0.211	98.314
S-G21	29.681	35.867	1.023	0.030	0.015	26.796	0.085	1.801	0.000	0.026	0.001	0.361	0.009	0.164	0.334	0.897	0.137	0.516	0.092	0.123	97.958
S-G28	30.285	36.374	1.205	0.027	0.000	27.776	0.048	1.456	0.000	0.002	0.007	0.335	0.009	0.104	0.127	0.470	0.070	0.331	0.080	0.084	98.790
S-G31	29.853	37.179	1.019	0.042	0.000	27.330	0.060	1.173	0.003	0.028	0.012	0.200	0.002	0.143	0.172	0.751	0.100	0.486	0.065	0.146	98.764
S-G88	29.299	35.937	0.478	0.040	0.012	25.091	0.104	2.047	0.007	0.181	0.004	0.111	0.000	0.380	0.543	1.823	0.281	1.194	0.209	0.223	97.964
S-G3	29.529	35.406	0.901	0.054	0.018	26.497	0.072	2.440	0.000	0.096	0.000	0.448	0.000	0.200	0.407	1.113	0.157	0.627	0.087	0.206	98.258
S-G35	29.673	36.179	1.284	0.032	0.000	26.710	0.055	1.322	0.006	0.022	0.000	0.313	0.007	0.240	0.119	0.742	0.169	0.807	0.201	0.161	98.042
S-G54	29.982	36.496	1.565	0.000	0.002	27.507	0.070	1.524	0.024	0.001	0.000	0.339	0.005	0.288	0.024	0.307	0.086	0.402	0.073	0.115	98.810
Almandine																					
S-G57	37.463	0.029	21.448	0.009	4.703	1.075	1.488	34.373	0.000	0.000	0.004	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.592
S-G33	38.233	0.002	22.049	0.059	8.309	1.060	0.579	30.437	0.002	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.730
S-G18	37.454	0.013	21.730	0.000	7.361	0.899	1.268	30.772	0.000	0.000	0.001	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.498
S-G32	37.403	0.099	21.211	0.040	3.545	1.641	3.045	33.609	0.000	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.593
S-G12	37.263	0.020	21.325	0.048	7.015	0.679	1.764	30.373	0.003	0.000	0.006	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	98.496
S-G7	36.983	0.026	21.340	0.024	3.955	1.445	5.286	31.175	0.000	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.234
S-G9a	37.144	0.134	20.782	0.014	2.581	4.170	0.318	34.531	0.006	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.680
S-G26	37.386	0.003	21.393	0.016	4.404	1.098	4.417	32.203	0.000	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.920
S-G27	37.334	0.000	21.476	0.003	4.559	1.502	4.076	31.301	0.000	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.251
Andradite																					
S-G73	36.118	0.648	6.572	0.024	0.087	32.441	0.886	20.648	0.015	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	97.439
S-G34	37.161	0.138	10.456	0.000	0.000	31.077	0.088	19.728	0.000	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	98.648
Spessertine																					
S-G39	37.043	0.109	20.390	0.001	2.038	5.760	8.385	26.561	0.000	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.287
S-G4	35.863	0.077	20.404	0.000	0.761	0.936	13.878	27.914	0.021	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.854
S-G13	35.716	0.069	20.075	0.001	0.367	0.486	25.392	17.323	0.059	0.006	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.494
S-G14	35.409	0.108	19.825	0.000	0.823	1.248	19.794	21.264	0.000	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	98.471
S-G23	35.927	0.208	19.988	0.000	0.971	0.660	19.327	21.998	0.013	0.034	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.126
S-G58	35.346	0.191	19.925	0.001	0.503	0.220	28.457	14.303	0.024	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	98.970
S-G61	35.773	0.026	20.863	0.002	0.884	0.616	25.809	15.635	0.015	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.623
S-G2	35.661	0.200	20.016	0.000	0.771	0.565	23.078	19.098	0.012	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.401
S-G85	35.731	0.102	19.994	0.000	0.291	0.718	21.550	21.495	0.048	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.929
S-G86	36.042	0.111	19.948	0.000	0.362	0.894	25.171	17.574	0.043	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.145
S-G43	35.640	0.035	20.224	0.009	0.893	1.030	17.628	23.617	0.011	0.028	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.115

All concentrations are reported as wt%.

Sample Label	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	ZnO	Na2O	K2O	F	Cl	Y2O3	La2O3	Ce2O3	Pr2O3	Nd2O3	Sm2O3	Gd2O3	Total
Stauralite																					
S-G78	27.283	0.607	54.209	0.048	1.847	0.000	0.330	13.122	0.191	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	97.637
S-G20	27.446	0.604	53.586	0.102	1.886	0.000	0.271	13.308	1.038	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	98.241
S-G82	27.022	0.549	54.851	0.062	1.796	0.014	0.271	13.600	0.231	0.000	0.009	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	98.405
S-G44	27.124	0.523	54.921	0.039	2.485	0.011	0.322	13.187	0.147	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	98.759
S-G79	27.619	0.657	53.688	0.064	1.920	0.001	0.371	13.717	0.326	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	98.363
Quartz																					
S-G9b	100.919	0.010	0.000	0.000	0.008	0.010	0.001	0.365	0.000	0.000	0.006	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	101.319
S-G60	100.238	0.000	0.139	0.003	0.005	0.000	0.000	0.102	0.005	0.000	0.054	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.546
Feldspar																					
S-G76	64.499	0.000	18.427	0.009	0.000	0.000	0.000	0.040	0.000	0.672	15.877	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.524
Aletered silicate (serpentine?)																					
S-G87	41.519	0.028	1.785	0.000	36.743	0.183	0.062	6.234	0.034	0.014	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	86.602

All concentrations are reported as wt%.

QUALITY CONTROL

Analytical Conditions:	Majors - 20kV & 20nA. REE run at 20kV & 100nA.
Routine:	WDS acquisition.
Correction Procedure:	PAP

Sample Label	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	ZnO	Na2O	K2O	F	Cl	Y2O3	La2O3	Ce2O3	Pr2O3	Nd2O3	Sm2O3	Gd2O3	Total
albFF	68.069	0.000	19.744	0.000	0.000	0.088	0.015	0.000	0.000	11.685	0.101	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.702
albFF	67.901	0.000	19.744	0.003	0.000	0.092	0.000	0.002	0.000	11.803	0.080	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.625
diopAST	55.144	0.059	0.075	0.001	18.573	25.949	0.039	0.041	0.006	0.015	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.902
diopAST	55.469	0.066	0.055	0.009	18.653	26.167	0.035	0.060	0.000	0.009	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.523
garKNZ	41.341	0.415	23.376	0.098	19.032	5.261	0.311	10.352	0.007	0.000	0.002	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.195
garKNZ	41.523	0.423	23.090	0.101	18.989	5.165	0.285	10.183	0.000	0.000	0.003	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.762
garRV3	42.095	0.049	19.920	5.742	23.316	2.485	0.340	6.268	0.006	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	100.221
garRV3	41.695	0.016	19.976	5.592	23.391	2.477	0.365	6.356	0.000	0.006	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.874
kyaSTD	36.382	0.022	63.223	0.099	0.008	0.000	0.006	0.115	0.015	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.870
kyaSTD	36.311	0.001	63.215	0.082	0.000	0.000	0.000	0.146	0.000	0.000	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.755
Or-1	63.963	0.000	18.534	0.000	0.016	0.012	0.007	0.005	0.000	1.084	15.195	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	98.816
pyxBRN	50.308	0.483	7.493	0.922	17.264	17.248	0.129	4.701	0.009	0.843	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	99.400
pyxBRN	50.001	0.479	7.469	0.898	17.218	17.139	0.123	4.661	0.000	0.851	0.000	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	98.839
Standard	garKNZ	garKNZ	garKNZ	garRV3	garKNZ	garKNZ	garKNZ	garKNZ	n.a	albFF	Or-1	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	
Average wt%	41.432	0.419	23.233	5.667	19.011	5.213	0.298	10.268	n.a	11.744	15.195	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	
Expected wt% *	41.441	0.440	23.166	5.770	18.887	5.098	0.313	10.441	n.a	11.820	15.120	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	
Accuracy % rel.	-0.02	-4.84	0.29	-1.79	0.65	2.25	-4.91	-1.66		-0.64	0.50										
Mode	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	WDS	
Signal	Si Ka	Ti Ka	Al Ka	Cr Ka	Mg Ka	Ca Ka	Mn Ka	Fe Ka	Zn Ka	Na Ka	K Ka	F Ka	Cl Ka	Y La	La La	Ce La	Pr Lb	Nd La	Sm La	Gd La	
XTAL	TAP1	LLIF3	TAP1	LLIF3	TAP1	LPET5	LIF4	LIF4	LLIF3	LTAP2	LPET5	LTAP2	LPET5	LPET5	LLiF3	LLiF3	LLiF3	LiF4	LiF4	LiF4	
Count time (seconds)	15	15	15	15	15	10	25	20	15	15	15	30	20	30	10	10	10	10	10	10	
Beam Current (nA)	20	20	20	20	20	20	20	20	20	20	20	20	20	100	100	100	100	100	100	100	
L.O.D. (estimate)	0.025	0.029	0.021	0.024	0.023	0.018	0.028	0.030	0.033	0.018	0.012	0.053	0.009	0.025	0.036	0.039	0.052	0.052	0.048	0.046	
L.O.Q. (estimate)	0.085	0.096	0.071	0.078	0.076	0.060	0.093	0.100	0.110	0.060	0.040	0.176	0.032	0.082	0.120	0.129	0.172	0.173	0.159	0.154	

* Expected Values are from long term in-house charcterization of mineral standards.

QC notes

1) None of the reported values for these mineral standards are certified:" accuracy" is therefore based on available chemical data.
2) n.d. not determined for the specified mineral standard.
3) n.a. not applicable
4) LOD = Limit of Detection defined here as 3 x standard deviation of the total accumulated background counts.
The L.O.D. reported here represents the minimum value in this report where the peak - background signal exceeds 3 x standard deviation of the background signal.
5) L.O.Q. = Limit of quantification (3.3 x L.O.D), precision ~ 10-30%.
6) Reported count times are for both peak and background measurements.
7) FeO^t - total Iron expressed as FeO

ODM Lab – Results

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ODM
Exploring Heavy Minerals

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Laboratory Data Report

Client Information

Mr. David Crouch

[redacted]

Email: [redacted]

Attention: Mr. David Crouch

Data-File Information

Date:	Septembe 05, 2017
Project name:	
ODM batch number:	7554
Sample numbers:	DC-ICL-TZ-72
Data file:	201747554 - Crouch - KIM - (DC-ICL-TZ-72) - September 2017
Number of samples in this report:	1
Number of samples processed to date:	1
Total number of samples in project:	1
Preliminary data:	
Final data:	X
Revised data:	

Sample Processing Specifications

1. Submitted by client: Sand and gravel sample prescreened to -5.0 mm in the field.
2. One 300 g archival split taken.
3. Sample panned for gold, PGMs and fine-grained metallic indicator minerals.
4. The shaking table concentrates refined by heavy liquid separation at S.G. 3.2 to create a heavy mineral concentrate ("HMC").
5. The 0.25-2.0 mm, nonferromagnetic HMC fractions picked for indicator minerals.

Notes

For: Don Holmes, P.Geo.
President

Overburden Drilling Management Limited

2017-09-07

Primary Sample Processing Weights and Descriptions

Client: Mr. David Crouch
File Name: 201747554 - Crouch - KIM - (DC-ICL-TZ-72) - September 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7554

	Weight (kg wet)					Screening and Shaking Table Sample Descriptions													
						Clasts (+2.0 mm)*					Matrix (-2.0 mm)								
							Percentage				Distribution					Colour			
Sample Number	Bulk Rec'd	Archived Split	Table Split	+2.0 mm Clasts*	Table Feed	Size	V/S	GR	LS	OT	S/U	SD	ST	CY	ORG	SD	CY	Class
DC-ICL-TZ-72	11.8	0.3	11.5	2.8	8.7	G	90	10	Tr	0	S	MC	-	N	N	MOC	NA	SAND + GRAVEL

*Sample prescreened to -5.0 mm in the field.

 Overburden Drilling Management Limited 2017-09-06

Gold Grain Summary

Client: Mr. David Crouch
File Name: 201747554 - Crouch - KIM - (DC-ICL-TZ-72) - September 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7554

	Number of Visible Gold Grains				Nonmag HMC Weight	Calculated PPB Visible Gold in HMC			
Sample Number	Total	Reshaped	Modified	Pristine	(g)*	Total	Reshaped	Modified	Pristine
DC-ICL-TZ-72	48	33	14	1	34.8	1649	1468	177	4

* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 1/250th of the table feed.

Page 1 of 1 Overburden Drilling Management Limited 2017-09-06

Detailed Gold Grain Data

Client: Mr. David Crouch
File Name: 201747554 - Crouch - KIM - (DC-ICL-TZ-72) - September 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7554

Sample Number	Dimensions (µm) Thickness		Width	Length	Number of Visible Gold Grains Reshaped	Modified	Pristine	Total	Nonmag HMC Weight* (g)	Calculated V.G. Assay in HMC (ppb)	Metallic Minerals in Pan Concentrate
DC-ICL-TZ-72	3	C	15	15	2			2		<1	Tr (5 grains) arsenopyrite (25-75 µm).
	5	C	25	25	3	2		5		3	
	8	C	25	50	2	3		5		10	
	10	C	25	75	1	1	1	3		12	
	10	C	50	50	4	2		6		33	
	13	C	50	75	9	2		11		113	
	15	C	50	100	1	2		3		49	
	15	C	75	75	2			2		37	
	18	C	75	100	2			2		57	
	20	C	75	125	2	1		3		121	
	22	C	100	125	3	1		4		241	
	27	C	125	150	1			1		109	
	100	M	200	200	1			1		862	
								48	34.8	1649	

* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 1/250th of the table feed.

Overburden Drilling Management Limited

2017-09-06

Laboratory Processing Weights

Client: Mr. David Crouch
File Name: 201747554 - Crouch - KIM - (DC-ICL-TZ-72) - September 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7554

	Weight of -2.0 mm Table Concentrate (g)												
			0.25 to 2.0 mm Heavy Liquid Separation S.G. 3.20										
					HMC S.G.>3.20								
								Nonferromagnetic HMC					
									Processed Split				
									Total				
Sample Number	Total	-0.25 mm	Total	Lights S.G. <3.2	Total	-0.25 mm (wash)	Mag	Total	%	Weight	0.25 to 0.5 mm	0.5 to 1.0 mm	1.0 to 2.0 mm
DC-ICL-TZ-72	1603.8	921.3	682.5	656.0	26.5	4.4	2.3	19.8	100	19.8	10.8	6.6	2.4

Overburden Drilling Management Limited

2017-09-06

Kimberlite Indicator Mineral Counts

Client: Mr. David Crouch
File Name: 201747554 - Crouch - KIM - (DC-ICL-TZ-72) - September 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7554

Number of Grains – Selected MMSIMs

Sample Number	1.0 to 2.0 mm Low-Cr diopside T	P	Cpy T	P	Gh T	P	0.5 to 1.0 mm Low-Cr diopside T	P	Cpy T	P	Gh T	P	0.25 to 0.5 mm Low-Cr diopside T	P	Cpy T	P	Gh T	P
DC-ICL-TZ-72	1	1	0	0	0	0	0	0	0	0	0	0	8	8	0	0	0	0

Number of Grains – KIMs 1.0 to 2.0 mm and 0.5 to 1.0 mm

Sample Number	1.0 to 2.0 mm GP T	P	GO T	P	DC T	P	IM T	P	CR T	P	FO T	P	0.5 to 1.0 mm GP T	P	GO T	P	DC T	P	IM T	P	CR T	P	FO T	P
DC-ICL-TZ-72	1	1	1	1	0	0	1	1	0	0	1	1	8	8	3	3	0	0	29	29	7	7	6	6

Number of Grains – KIMs 0.25 to 0.5 mm and Total

Sample Number	0.25 to 0.5 mm GP T	P	GO T	P	DC T	P	IM T	P	CR T	P	FO T	P	Total (KIMs) T	P
DC-ICL-TZ-72	21	21	13	13	4	4	50	20	60	20	12	12	217	147

T = Total number of grains in sample. Total is estimated if number is greater than number of picked grains.
P = Number of picked grains in sample.

Page 1 of 1 Overburden Drilling Management Limited 2017-09-07

Kimberlite Indicator Mineral Remarks

Client: Mr. David Crouch
File Name: 201747554 - Crouch - KIM - (DC-ICL-TZ-72) - September 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7554

Sample Number	Remarks
DC-ICL-TZ-72	Almandine-hornblende-goethite/epidote assemblage. SEM checks from 1.0-2.0 mm fraction: 1 GO versus almandine candidate = 1 GO (Cr-poor pyrope); 2 IM versus crustal ilmenite candidates = 1 IM and 1 crustal ilmenite; and 1 FO versus diopside candidate = 1 FO. SEM checks from 0.5-1.0 mm fraction: 5 GO versus almandine candidates = 3 GO (Cr-poor pyrope) and 2 almandine; 7 IM versus crustal ilmenite candidates = 4 IM and 3 crustal ilmenite; 1 CR candidate = 1 CR; and 6 FO versus diopside candidates = 6 FO. SEM checks from 0.25-0.5 mm fraction: 6 GO versus almandine candidates = 5 GO (Cr-poor pyrope) and 1 grossular. Sole IM from 1.0-2.0 mm fraction, 16 IM from 0.5-1.0 mm fraction, and 3 GP and 40% of IM have partial alteration mantles.

ODM Lab – Results

ODM

Exploring Heavy Minerals

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Laboratory Data Report

Client Information

Mr. David Crouch

Email:

Attention: Mr. David Crouch

Data-File Information

Date:	August 28, 2017
Project name:	L444
ODM batch number:	7538
Sample numbers:	L444
Data file:	201747538 - Crouch - KIM - (L444) - August 2017
Number of samples in this report:	1
Number of samples processed to date:	1
Total number of samples in project:	1
Preliminary data:	
Final data:	X
Revised data:	

Sample Processing Specifications

1. Submitted by client: Sand/gravel sample prescreened to -5.0 mm in the field.
2. One 300 g archival split taken.
3. Sample panned for gold, PGMs and fine-grained metallic indicator minerals.
4. The shaking table concentrates refined by heavy liquid separation at S.G. 3.2 to create a heavy mineral concentrate ("HMC").
5. The 0.25-2.0 mm, nonferromagnetic HMC fractions picked for indicator minerals.

Notes

Don Holmes, P.Geo.
President

Overburden Drilling Management Limited

2017-08-25

Primary Sample Processing Weights and Descriptions

Client: Mr. David Crouch
File Name: 201747538 - Crouch - KIM - (L444) - August 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7538

						Screening and Shaking Table Sample Descriptions												
						Clasts (+2.0 mm)					Matrix (-2.0 mm)							
	Weight (kg wet)						Percentage				Distribution					Colour		
Sample Number	Bulk Rec'd	Archived Split	Table Split	+2.0 mm Clasts	Table Feed	Size	V/S	GR	LS	OT	S/U	SD	ST	CY	ORG	SD	CY	Class
L444	12.0	0.3	11.7	2.0	9.7	G	80	Tr	20	0	S	MC	N	N	N	LOC	NA	SAND + GRAVEL

 Overburden Drilling Management Limited 2017-08-25

Gold Grain Summary

Client: Mr. David Crouch
File Name: 201747538 - Crouch - KIM - (L444) - August 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7538

Sample Number	Number of Visible Gold Grains				Nonmag HMC Weight (g)*	Calculated PPB Visible Gold in HMC			
	Total	Reshaped	Modified	Pristine		Total	Reshaped	Modified	Pristine
L444	4	4	0	0	38.8	1829	1829	0	0

* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 1/250th of the table feed.

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Detailed Gold Grain Data

Client: Mr. David Crouch
File Name: 201747538 - Crouch - KIM - (L444) - August 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7538

Sample Number	Dimensions (μm)				Number of Visible Gold Grains				Nonmag HMC Weight* (g)	Calculated V.G. Assay in HMC (ppb)	Metallic Minerals in Pan Concentrate
	Thickness		Width	Length	Reshaped	Modified	Pristine	Total			
L444	5	C	25	25	1			1		1	No sulphides.
	8	C	25	50	1			1		2	SEM checks: 2 of ~10 Sn-Ag
	15	C	50	100	1			1		15	candidates = 2 Sn-Ag (25-50 μm;
	50	M	300	625	1			1		1812	contamination).
								4	38.8	1829	

* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 1/250th of the table feed.

 Overburden Drilling Management Limited 2017-08-25

Laboratory Processing Weights

Client: Mr. David Crouch
File Name: 201747538 - Crouch - KIM - (L444) - August 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7538

	Weight of -2.0 mm Table Concentrate (g)												
			0.25 to 2.0 mm Heavy Liquid Separation S.G. 3.20										
					HMC S.G.>3.20								
								Nonferromagnetic HMC					
									Processed Split				
									Total				
Sample Number	Total	-0.25 mm	Total	Lights S.G. <3.2	Total	-0.25 mm (wash)	Mag	Total	%	Weight	0.25 to 0.5 mm	0.5 to 1.0 mm	1.0 to 2.0 mm
L444	1087.6	689.5	398.1	374.0	24.1	2.1	4.0	18.0	100	18.0	11.0	4.7	2.3

Kimberlite Indicator Mineral Counts

Client: Mr. David Crouch
File Name: 201747538 - Crouch - KIM - (L444) - August 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7538

Number of Grains — Selected MMSIMs

Sample Number	1.0 to 2.0 mm Low-Cr diopside T	P	Cpy T	P	Gh T	P	0.5 to 1.0 mm Low-Cr diopside T	P	Cpy T	P	Gh T	P	0.25 to 0.5 mm Low-Cr diopside T	P	Cpy T	P	Gh T	P
L444	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	1	0	0

Number of Grains — KIMs

Sample Number	1.0 to 2.0 mm GP T	P	GO T	P	DC T	P	IM T	P	CR T	P	FO T	P	0.5 to 1.0 mm GP T	P	GO T	P	DC T	P	IM T	P	CR T	P	FO T	P	0.25 to 0.5 mm GP T	P	GO T	P	DC T	P	IM T	P	CR T	P	FO T	P	Total (KIMs) T	P
L444	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	3	3	2	2	3	3	15	15	1	1	0	0	21	21	22	22	3	3	71	71

T = Total number of grains in sample. Total is estimated if number is greater than number of picked grains.
P = Number of picked grains in sample.

 Overburden Drilling Management Limited 2017-08-28

Kimberlite Indicator Mineral Remarks

Client: Mr. David Crouch
File Name: 201747538 - Crouch - KIM - (L444) - August 2017
Total Number of Samples in this Report: 1
ODM Batch Number(s): 7538

Sample Number	Remarks
L444	Almandine-augite-hornblende/epidote-diopside assemblage. SEM checks from 0.5-1.0 fraction: 4 IM versus crustal ilmenite candidates = 2 IM, 1 crustal ilmenite and 1 CR; and 3 FO candidates = 3 FO. SEM checks from 0.25-0.5 mm fraction: 1 GO versus grossular candidate = 1 GO (Cr-poor pyrope); 2 DC versus Cr-garnet candidates = 1 Cr-grossular and 1 Cr-andradite; 6 IM versus crustal ilmenite candidates = 1 IM, 4 crustal ilmenite and 1 CR; and 5 FO versus diopside candidates = 3 FO, 1 diopside and 1 enstatite (KIM). 7 IM from 0.25-0.5 mm fraction have alteration mantles. Also picked 1 >250 µm wide gold grain from 0.25-0.5 mm fraction. See detailed gold grain data page.

SECTION 12: DATA VERIFICATION

I, Douglas Robinson, have monitored the development of Tony Bishop's exploration and deposit model from inception. I have reviewed his technical data and have found it to be accurate and of high quality.

Certain pertinent data in this report has come primarily from the assessment files available at the Ontario Ministry of Northern Development and Mines (MNDM).

Tony has conducted considerable historical web and literary research of both the exploration and geology of kimberlites and is knowledgeable. I have examined his field work, exploration principles and practices and have full confidence in their validity.

I have personally reviewed his information and observed his lab procedure in action.

SECTION 13: MINERAL PROCESSING & METALLURGICAL TESTING

Methodologies for Field Work & Till Sample Processing

PREFACE:

Diamond exploration is unlike that for any other mineral resource. Search areas are 'limited' to ancient 'cratons' (such as the 'Canadian Shield') which in themselves are vast areas. Geological maps are, in a general sense, of little to no use, as economic kimberlite pipes, relatively small circular to semi-circular, vertical volcanoes, when found may have no direct correlation to local rock types, although locating faults and contacts between different rock types, such as granite/diabase, can be very useful once a kimberlite field has been located by geophysics or till sampling.

Locating a pipe is largely a matter of detective work. Typically, mag maps have been utilized in the search for magnetic 'bulls-eyes' which are then, as funds permit, drilled to see if it is kimberlite or some other magnetic target. However, in Canada so far most of the pipes (or portions of pipes, as there can be multiple eruptions, i.e. +/- 3 or 4 within a single pipe at different time periods with varying diamond content) richest in diamonds have little to no magnetic signature. As well, EM surveys often don't work for the same reason, as is also true of gravity surveys (i.e. no detectible mag, EM, or gravity anomaly).

Soil sampling, either in till or streams, is the simplest and most common method of looking for kimberlites. In fact, though, the search is not directly for diamonds but for kimberlite indicator minerals (KIMs), which include certain garnets, chrome diopsides, ilmenites, chromites, zircons and others.

Stream sediment surveys are for larger scale drainage basins to initially locate KIMs. Till sampling should be then utilized to best zero in on a pipe's location; however, till sampling generally leads to such low KIM numbers that the OGS program, for example, basically quit using them in favour of stream (placer) samples.

These grains must be separated by utilizing their slightly greater specific gravity (SG) compared to most other minerals in the 'soil' samples. However, these grains are generally only 0.25mm to 2.0mm in diameter. This, and the very slightest difference in SG, make it very difficult to concentrate and recognize and pick KIMs from. Basically, commercial-grade microscopes, tweezers, and concentrators must be acquired at great initial cost with trained operators.

As a result, most exploration companies utilize a dedicated lab at a cost of $500 and up per sample for concentrating, visual identification and estimate of KIM grain numbers.

Old-fashioned gold panning for KIMs as one would with gold grains is next to impossible: gold has a specific gravity (SG) of ~20 and therefore is roughly 7 times heavier than the other soil and rocks in a sample. KIMs have an SG 3.3 to 4.3, only very slightly (i.e. <1.4 times) more than most other grains in a field sample. (Common non-KIMs have an SG of ~2.6 to 2.9). As well, size matters. Even experienced individuals can have trouble with separating gold grains the size of KIMs from till or stream gravels, and one basically cannot pan gold this size out of 'black sands', i.e. magnetite. Magnetite (SG of 5.2) is commonly found in kimberlites and hence is also found with KIMs, further complicating concentration of a sample, as magnetite is actually heavier.

With the right equipment however, an individual with background in placer mining can concentrate and pick KIMs from till samples.

To further complicate issues, due to a number of glaciations in Canada in different directions, samples must be taken from tens of metres to several kilometres down-ice (usually along the last estimated glacial direction) of the potential kimberlite source. This requires the bulk of meaningful sampling to be done off claim, sometimes a long way off claim, which then cannot be applied for assessment work to maintain that claim in good standing, so staking larger blocks of land down-ice of the target is desirable but costly. Direct sampling of a kimberlite target is only accomplished by bulk sampling with a large diamond drilling program, or if near surface, directly with heavy machinery (both very costly and permit-intensive).

These initial obstacles can only be overcome with determination, knowledge, the use of a collection of specialised equipment, and lots of time (and patience). Even for established commercial labs the bulk of the time and cost comes down to an individual meticulously picking KIMs with a pair of tweezers while viewing the concentrates from a sample under a microscope. This lengthy time-consuming process is such that if large numbers of indicators are encountered, only a portion of the sample is picked for KIMs in a lab and then averaged (i.e. 'guesstimated') to the full sample, possibly risking losing the few/any all-important G10s and other similar grains in the remaining portion.

Methodology/Overview of Field Work & Till Sample Collection

Standard 38cm x 28cm sample bags are used for collecting till samples. Small shovels are used to dig a 1' to 3' deep hole below the humus line, or augers to 4 metre + depths, and the bags filled ½ to ⅔ full, taped shut, and labelled. When possible, the sample is screened through a 4-mesh screen (typically just creek samples), or if not, then larger rocks and roots can be removed by hand. If a sample site is very near to the transport vehicle, I just remove larger cobbles and take a somewhat larger sample to be screened later, before concentrating. In between samples the equipment is cleaned as well as possible to avoid cross-contamination. GPS coordinates are taken at each sample site and then recorded if not matching the prechosen map coordinates.

The base of logging roads is basically composed of till collected immediately adjacent to the road as it is constructed. This makes for a very useful till sampling location, namely the area beside the road where the heavy machinery dug down from several to 10+ feet deep. This creates the possibility to collect from a number of horizons at various locations without mechanized equipment, thereby increasing the possibility of finding KIMs. This is unfortunately a rare occurrence.

Whereas most approaches initially involve a regional sampling survey and then trace up-ice to the possible target, I start with identifying a potential target based on structural, glacial, landscape features, and publicly available OGS reports. I then take multiple samples to determine the likelihood of my target hypothesis, down-ice and off-ice for comparison.

My intent is basically to determine kimberlite pipe/or not a kimberlite pipe, based on a visual identification and number of KIMs picked from my till sample concentrates, and EMP and/or SEM analysis of an affordable minimal # of grains selected and sent for lab analysis. Interestingly, a number of exploration companies as well as ODM in Nepean have stated (within the last 5 years) that visually picked KIM grains and total number of potential KIMs are their criteria for continued interest in an area rather than analysis of grains. ODM said recently in an email that most companies have been adopting this approach. (From personal research it also appears that many of the most successful companies at finding new discoveries of diamondiferous kimberlite pipes now are looking for non- to low-mag and EM targets utilizing gravity surveys, which do not always produce usable results, and finally results in till sampling for KIMs as the primary prospecting tool), especially in a region with known kimberlites.

In their sampling programs, OGS Open File Reports on Alluvium Sampling Surveys for Heavy Minerals recommend creek samples for a far more pre-concentrated material for heavy minerals including KIMs (e.g. do not sample some distance – say 500-1000 metres down-ice/water flow of a lake due to its being a heavy mineral trap), and so recommend to “maximise the distance between the sample site and the lake”, so I then thought that this is not true if the lake (heavy trap) is the source of KIMs. Large distances between sample spacing and large 10-30kg samples are more applicable to doing regional surveys while hunting for a ‘target’, i.e. in this case a kimberlite pipe. Also, creeks are rarely conveniently placed directly down-ice of a pipe-sized target (in Canada typically 50-200m in diameter) and they concentrate material from a large area, so when sampled can strongly skew results to high numbers of KIMs compared to till samples. In my case, where the lake itself is a potential kimberlite pipe, I take many (5-20) small 1-3 kg unscreened till samples, relatively closely spaced, from between ±50 to 1000 metres down-ice of the target, and generally combine the results into one larger sample, creating a more representative sampling of post-glacial conditions for emplacing KIMs into till.

As you can see, due to the lake being a heavy mineral trap for material up-ice/water flow, all the samples I take from ‘close’ proximity down-ice/water flow can in all probability be attributed to that lake (or in theory, a hidden pipe in very close proximity down-ice of the lake). So, any of these samples below a proposed pipe can individually or collectively statistically be attributed to this discrete target. Taking many smaller till samples from various locations down-ice was deemed appropriate to mitigate the extreme nugget effect caused by KIMs potentially being restricted to thin stratigraphic horizons in the till.

Side View – Till Sampling Program

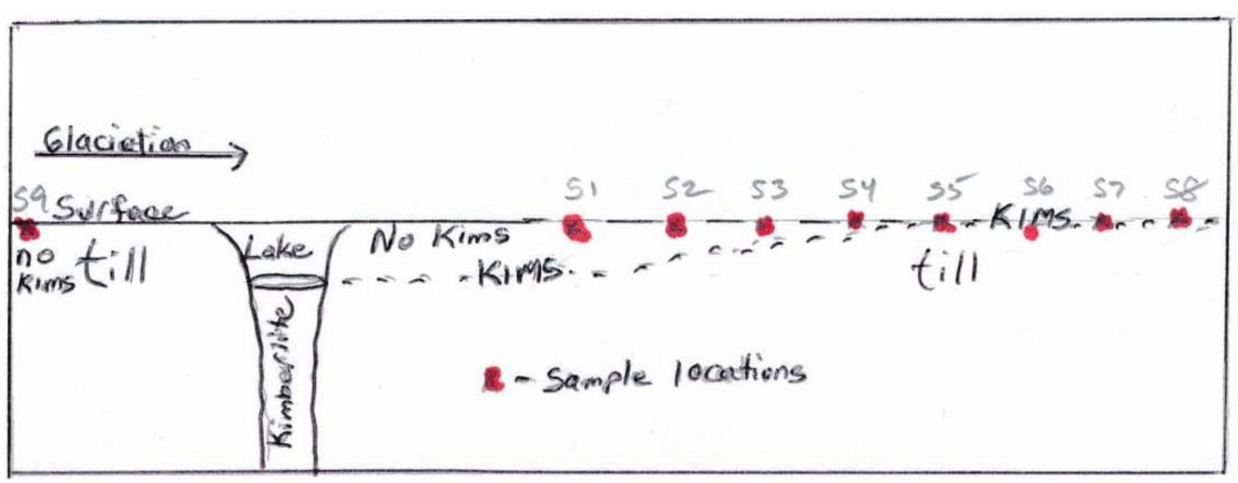

Diagram A

- If only S1 and/or S2 and/or S3 and/or S4 in till were sampled, one would find no KIMs and conclude no kimberlite up-ice
- If any one of S5, S6, S7, or S8 were sampled one might get favourable results for KIMs
- If the S1 ↔ S8 results, after concentrating and picking KIMs, the results are combined to a single, statistically larger sample, which dramatically increases the chance of finding KIMs even though only ‘one’ or more samples

contained KIMs initially. This is demonstrably more efficient and accurate at predicting proximity to a kimberlite pipe than only one larger sample would do

- Up-ice, S9 is a check and should statistically contain little to no KIMs
- Further sampling can then help verify/delineate the source of the KIMs

Top View – Till Sampling Program

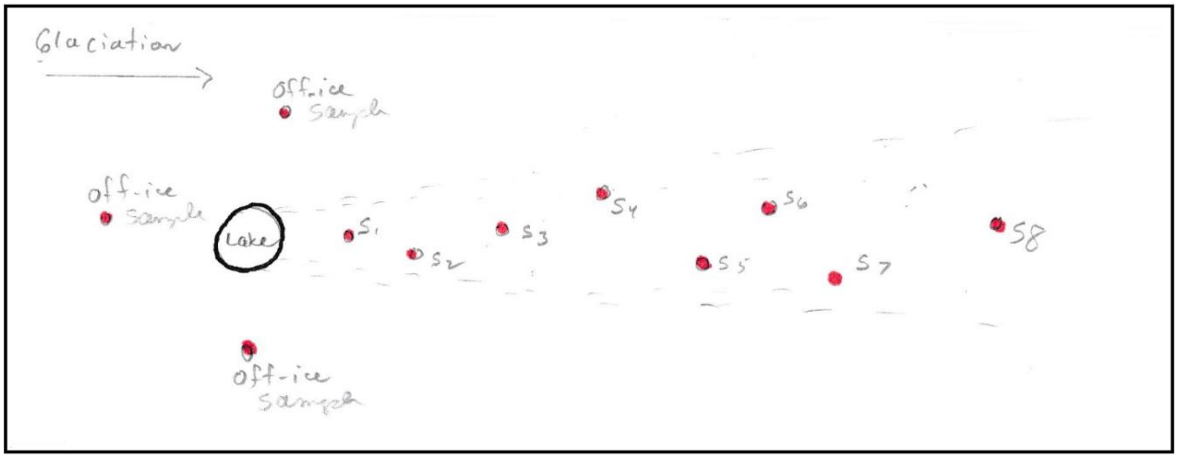

Diagram B

- Same as Diagram A, with off-ice samples containing little-to-no KIMs if lake is a kimberlite pipe

My blended till samples increases finding one or more that are confined to the appropriate KIM emplacement zone: I concentrate off-ice samples individually/separately. When KIM counts in off-ice samples drop to very few to zero, it adds to the probability of a favourable target location.

After concentrating, picking KIMs is done under a variable power binocular microscope with multiple lighting arrangements. I try to pick all KIMs, unless, as in some cases, they are in the thousands, then numbers are estimated. This of course takes many hours to days (sometime weeks) of work, especially when photographing and entering the photos into the computer correctly labelled.

Also, to maximize local topography in the field, my knowledgeable samplers or I can make on the spot decisions in the field to sample near but not on my pre-planned coordinates (e.g., an upended tree root nearby etc.), and GPS coordinates are accepted by field workers as possibly being ± 10-50 metres off on any given day.

The up-ice samples are processed separately and considered separately. This initial sampling program was performed to obtain a yes/no probability of my target hypothesis. Additional sampling program(s) help further delineate these preliminary results.

Included in picking pyrope garnets are red, pink, and purple colours. Typically, Cr pyrope (by definition) garnets in most literature are considered to be red (colour comes from enhanced chromium and/or iron content) or purple depending on the article; however, McLean et al (2007) shows that the colours in the Canadian Diavik Mine A154-S kimberlite pipe garnets, in order of Chromium content which is important for diamond exploration, are as follows:

- “Orange xenocrysts have <1 wt.% Cr_2O_3, and are inferred to have eclogitic derivation

- There is a general increase in Cr content from orange → red → pink → purple. A similar trend may be seen in the data of Hawthorne et al. (1979) for garnets from the Dokolwayo kimberlite and Hlane paleoalluvial deposits in Swaziland
- Red grains increase in Cr from light → dark red
- Purple xenocrysts are more likely than pink or red to be harzburgitic (G10 or G10D), but colour alone cannot be used as a definitive test"

Pink garnets, however, are not commonly mentioned in diamond exploration literature. In samples from Canadian kimberlites, the Cr content of the pink-purple garnets seem to exceed that of the darker purple garnets when tested at the lab in Sudbury (verbal communication, Dave Crabtree, Geoscience Lab), (McLean et al, 2007), (Grutter et al, 2004); therefore, I am including pink garnets in pyrope garnet counts. This is, of course, subject to change as I continue to sample and have picked garnet grains analysed.

From reading a great number of articles it seems that there is no definitive rule concerning kimberlite minerals, colours of G10s can vary, some diamond pipes have no G10s at all and many other differences also occur. The differences are so numerous and interesting that a future paper or book could be compiled. A certain part of these findings will be presented in this report when applicable to certain claims. G10s and other grains vary enormously within a given pipe, so care should be afforded by individuals or companies that attribute too much importance to analysis of individual grains.

In targeting and evaluating potential kimberlite pipes it is important also to note an article on 'Following kimberlite indicator minerals to source' in GSC OF-7374, "**The corollary for exploration at Chidliak is that any source of high garnet counts in sediment samples is considered worthy of pursuit, regardless of garnet compositions**" (Pell et al, 2013, p 51). With that in mind, if I attempt to normalize my results vs. sample size as compared to say, the OGS-OF report 6088 (see p 13 & 17), taking into account my samples were unscreened (until processed in the sluice and/or GoldCube®), the number of KIMs I picked could be averaged up a considerable amount in quantity.

Of course, while till sampling a large part of the day/traverse is spent investigating boulders by removing moss, etc. and in this case specifically looking for kimberlite boulders (which have been located on 2 claims so far with other possible grain sized pieces that might be) or other interesting rocks with mineralization.

So… I'm sampling unconsolidated till, down-ice of a heavy mineral trap (lake) and taking comparatively small samples and getting high to very high in KIM anomalous results, which in classic teachings should result in poor→ no results. Unless of course the heavy mineral trap (lake) is the source of the heavy minerals.

SECTION 14: MINERAL RESOURCE ESTIMATES

Not applicable.

SECTION 15: MINERAL RESERVE ESTIMATES

Not applicable.

SECTION 16: MINING METHODS

Not applicable.

SECTION 17: RECOVERY METHODS

Not applicable.

SECTION 18: PROJECT INFRASTRUCTURE

Not applicable.

SECTION 19: MARKET STUDIES AND CONTRACTS

RJK ACQUIRES THE BISHOP NIPISSING DIAMOND PROPERTIES SOUTH OF COBALT, ONTARIO

Kirkland Lake, Ontario – Feb. 5th, 2019 – **RJK Explorations Ltd.** ("RJK" or the "Company") (**TSXV: RJX.A**) announces that the Company has entered into a property option agreement with Anthony "Tony" Bishop for the Bishop Nipissing Diamond Properties, exploration properties totalling 2,090 hectares encompassing at least 18 potential kimberlite pipes located approximately 10 km south of Cobalt, Ontario.

Tony Bishop, Prospector, has spent over 4 years looking for the source of the Nipissing Yellow Diamond that was found sometime during the development of the silver mines at Cobalt, Ontario in the 1903 to 1905 time period. After closely following Bishop's work for the last year and reviewing all of the data that Bishop has compiled, including a NI-43-101 technical report, RJK has decided to option the property and will initially drill the mostly likely potential kimberlite pipes that Bishop believes the Nipissing Yellow Diamond may have come from.

The Bishop claims are situated in a well-established kimberlite field within the Lake Temiskaming Structural Zone. All are on Crown Land, are mostly on high, dry, well-drained topography. Drivable logging roads are within one kilometre or less, affording easy access. Close by are 3 hydro-electric facilities, a large electric wind farm and a gas pipeline. The Trans-Canada Hwy is also very close, as is the train station in Cobalt, an area with a well-established historical mining history.

The terms of the option are a cash payment of $50,000 on signing and issuance of 1,000,000 shares upon regulatory approval and spread over a 4-year period are further cash payments totalling $50,000, 1,500,000 shares and a work commitment of $1,000,000 to earn 100% of the properties. There will be a 10% GORR for diamonds and a 1.5% N.S.R. for other minerals.

William MacRae M.Sc. PGeo, a qualified person as defined by National Instrument 43-101, is the qualified person responsible for reviewing and approving the technical contents of this press release.

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

Forward Looking Information

This news release includes certain forward-looking statements, which may include, but are not limited to, statements concerning future mineral exploration and property option payments. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking, including those identified by the expressions "will", "anticipate", "believe", "plan", "estimate", "expect", "intend", "propose" and similar expressions. Forward-looking statements involve known and unknown risks and uncertainties that could cause actual results, performance, or achievements to differ materially from those expressed or implied in this news release. Factors that could cause actual results to differ materially from those anticipated in this news release include, but are not limited to, the financial resources of the Corporation being inadequate to carry out its stated plans. RJK assumes no obligation to update the forward-looking statements or to update the reasons why actual results could differ from those reflected in the forward-looking statements except as required by applicable law.

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SECTION 20: ENVIRONMENTAL STUDIES, PERMITTING & SOCIAL OR COMMUNITY IMPACT

Permit Application MNDM reference # PR-18-000247 to drill on Cedar Pond and Paradis Pond properties has been approved.

SECTION 21: CAPITAL & OPERATING COSTS

Not applicable.

SECTION 22: ECONOMIC ANALYSIS

Not applicable.

SECTION 23: ADJACENT PROPERTIES

[Refer to Illustrations: Map 2, Detailed Local Faults, page 5]

There are no known kimberlites immediately adjacent to the Bishop Claims, except for Alan Kon's discovery south of Ice Chisel Lake in Gillies Limit. However, a number of kimberlite pipes are found to the north a short distance near the towns of Haileybury and New Liskeard. Diamondiferous lamprophyres are found near Cobalt, and at Latour Lake to the south of the Bishop Claims.

This is important because kimberlite pipes are often found in swarms and the best place to look for new pipes is in an area where others have been located.

SECTION 24: OTHER RELEVANT DATA & INFORMATION

On Curie Point and Magnetism

Many silicate and oxide minerals including garnets, pyroxene, and iron oxides are normally magnetic except above their Curie Point Temperature (C.P.T.). Above their C.P.T. they are non-magnetic.

If these minerals are flash chilled through their Curie Point, such as by explosive transport to surface during kimberlite eruption, their non-magnetic signatures can be preserved.

The conditions of ascent and rapid cooling required to preserve the non-magnetic signature of minerals are the same conditions required to preserve diamonds. Rapid ascent of kimberlite magma prevents or minimizes absorption and/or oxidation of diamonds and/or conversion of diamonds to graphite.

Non-magnetic kimberlite garnets were recovered from KIM concentrates down-ice from kimberlite targets on the Bishop Claims. A single non-magnetic staurolite (composition confirmed by microprobe analysis) was also recovered in concentrates. Also found down-ice of a number of my targets were non-magnetic round, frosted grains with a brownish-to-black glassy surface and identified as FeO by SEM analysis at the Geosciences Lab in Sudbury [first described in Report 4282172, see References: Bishop 2017c, p12, Photos S-D23, and p15]. Conversely, it appears that KIMs cooled slowly through their Curie points and similar minerals from crustal sources are magnetic.

Visually similar spherules are quite common in volcanic ejecta and major impacts by asteroids, etc. (like the one that killed the dinosaurs), from fly ash, from various industrial processes, automotive exhaust, etc., but they are all magnetite (magnetic), and less commonly silicon spherules (with no iron – non-magnetic) and sometimes with dendritic magnetite throughout the matrix.

So, if these spherules are found in concentrates with (other) KIMs and are non-magnetic (inert) and test as FeO, it would appear to be an indicator of these grains originating in a kimberlite that sampled the diamond formation part of the mantle and was preserved in a strongly reducing environment as the kimberlite ascended, perfect for diamond preservation as well.

Preservation of diamonds and preservation of non-magnetic signatures of KIMs both involve rapid cooling during rapid ascent to surface.

Recent theories suggest that in an ascending kimberlite, a pressurised 'froth'/foam of CO_2 precedes the 'solid' constituent. This acts as a 'super-cooling' wave, much like a freezer in your house, while the kimberlite ascends and has been theorised might actually flash-freeze the kimberlite when it reaches the surface. This helps explain why diamonds don't always absorb, convert to graphite, or oxidise (burn) when ascending to the surface (they are carbon, much the same as coal, and will burn in an O_2 environment).

On Non-Magnetic Garnets and Other KIMs

In many 1000s of samples tested by microprobe in OGS and other reports, non-kimberlitic (crustal garnets) vary approximately between 20-40% FeO, others considered to be kimberlitic are eclogitic and Cr poor megacrysts from 10-20% FeO, G9/G10 garnets vary from 5-10% FeO.

However, a while back I tested a small group of concentrates picked from KIMs from Little Grassy Lake where I also found kimberlites in till samples with a very powerful, small neodymium magnet, and **discovered a few inert/non-magnetic garnets when microprobed had normal iron levels (two of three G11s are non-magnetic)**.

Then recently, with this information in mind as reported in my previous Work Assessment Report on Legacy claim 4282142 [see References: Bishop 2018a], I rechecked the concentrates and picked KIMs from the Trench samples to test for the magnetic susceptibility of the garnets. Many of the orange garnets were non-magnetic. This result, according to classic literature, is not possible.

In several years of extensive research and from conversations with a prominent lab, it appears that **most companies and labs** involved in the quest for **KIMs pick eclogitic garnets based on an orange colour; the deeper, brighter (pretty) garnets were at the top of the picking list**. However, an article titled 'Garnet xenocrysts from the Diavik mine, NWT, Canada: Composition, color, and paragenesis' (McLean, Banas, et al. (2007), p 1136, 1138, 1139), in part I've included below, clearly shows the Lo (light orange), MLo (medium light orange), and MDo (medium dark orange) & Do (dark orange) garnets (at least at the Diavik Mine) encompasses the majority of G3 and G4s which have (recently?) become of great interest in diamond exploration.

In addition, this article drew attention to the importance of pink garnets, which I'm finding in very high numbers in my heavy concentrates along with KIMs. In four years of research, this is the only article I have found discussing the significance of pink garnets as being kimberlitic. From the charts made on Diavik garnets (they only tested a few pinks), the pink garnets seem to be far more likely than other colours to be G10s. Only purple garnets are more likely to be G10s.

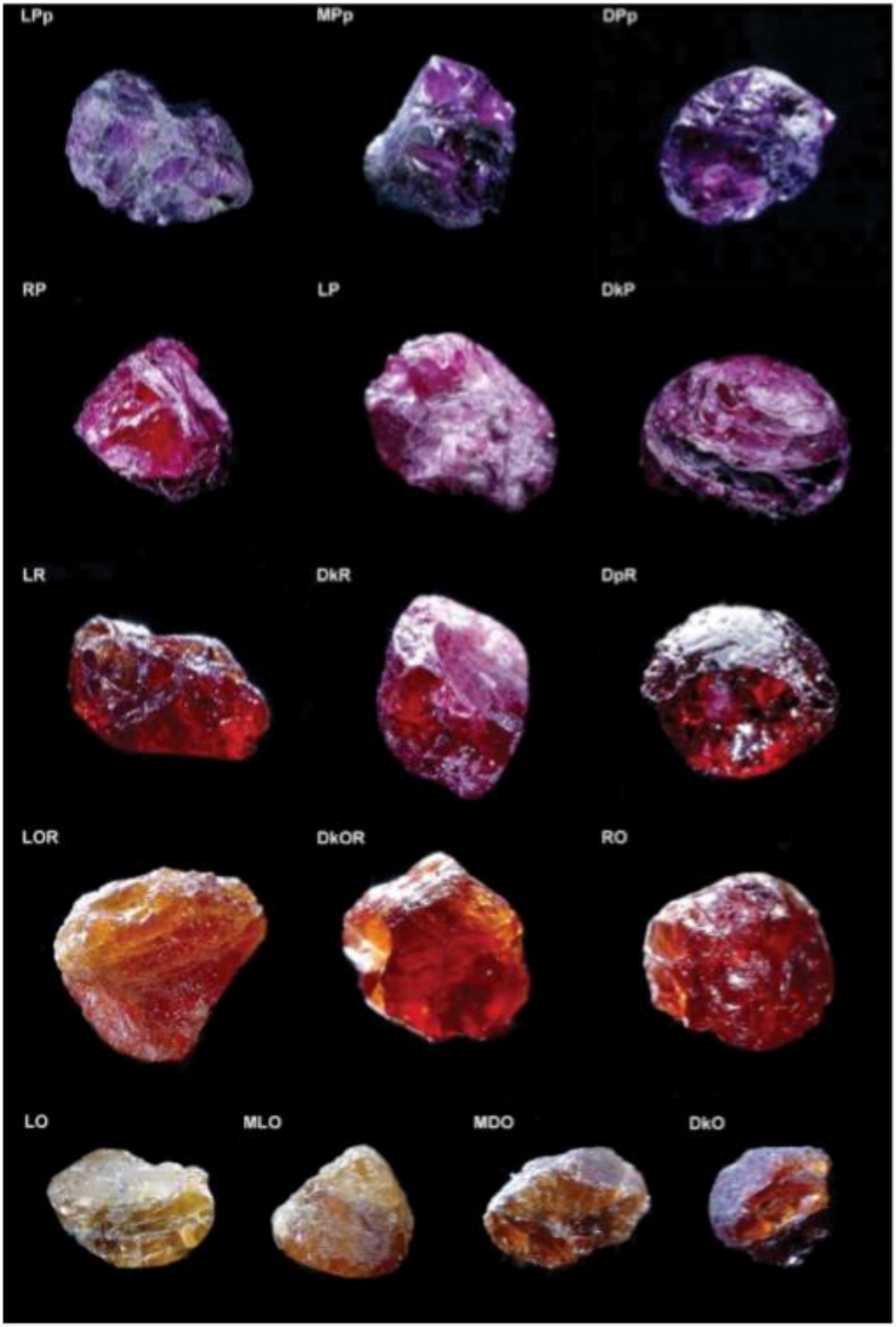


Diagram C (McLean, Banas, et al. (2007), p 1136)

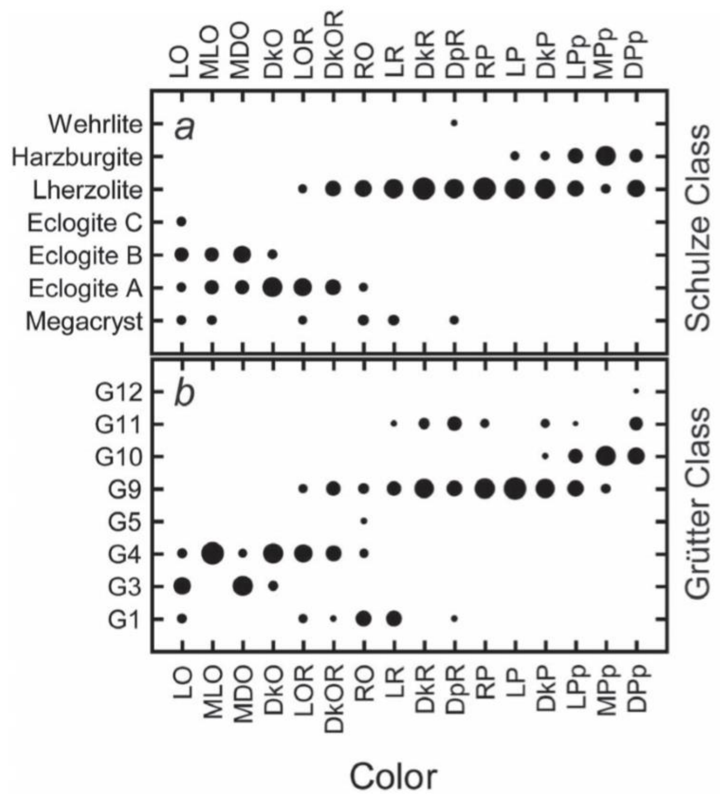


FIG. 4. Correlation diagrams showing garnet classes represented by each color group. Note that most colors are comprised of several types of garnet. (a) Classification scheme of Schulze (2003). (b) Classification scheme of Grütter *et al.* (2004). Grütter classes represented at Diavik are: G1: low-Cr megacrysts, G3: eclogitic (high-Ca), G4: eclogitic (low-Ca), pyroxenitic or websteritic, G5: pyroxenitic, G9: lherzolitic, G10: harzburgitic, G11: high-Ti peridotitic, G12: wehrlitic.

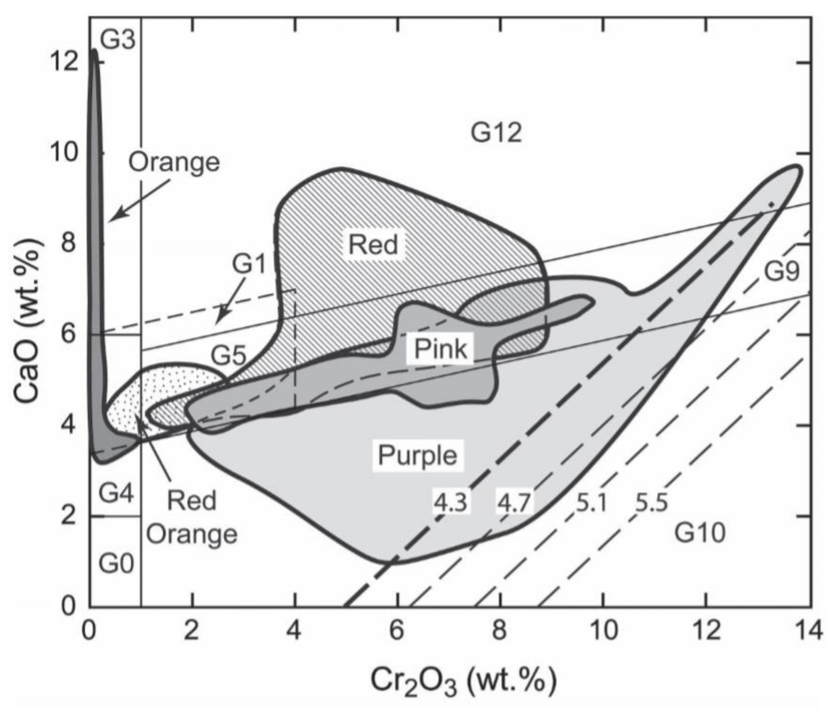


FIG. 5. CaO–Cr_2O_3 diagram, showing the compositional ranges of garnet xenocrysts of different color. For clarity, the classes were consolidated into Orange (LO, MLO, MDO, DkO), Red Orange (LOR, DkOR, RO), Red (LR, DkR, DpR), Pink (LP, DkP), and Purple (LPp, MPp, DPp). Solid lines and fields after Grütter *et al.* (2004). Dashed lines are isobars from the Cr–Ca barometer of Grütter *et al.* (2006). Numbers on isobars are pressure in GPa; the 4.3 GPa isobar is emphasized because it represents the graphite–diamond transition along a 38 mW/m^2 geotherm.

Diagrams D & E (McLean, Banas, et al. (2007) p 1138, 1139)

With that in mind, I repicked the cons and largely concentrated on picking these previously neglected orange shades which I then tested for magnetic response.

As I had hoped for, a large statistical portion had a non-magnetic response, which traditionally would not be possible unless the iron in the garnet is non-magnetic from having passed through the Curie-point of Fe at the pressure/temperature in the mantle required for diamond formation, from which can be inferred that the kimberlite sampled that zone.

One grain tested by microprobe as staurolite, a partially yellow/brown grain with a red centre, transparent to translucent. The microprobe measured 13.308% FeO. Four similar grains were found on other claims, and also tested ~13% FeO.

Staurolite is **rarely found** as **transparent** crystals, dark red, **and highly magnetic**. Too rare to facet except for collectors (Feral, K, website: gemstonemagnetism.com).

This grain was tested by me with a very strong neodymium magnet, and exhibited no response, therefore is inert/non-magnetic, which means either the microprobe from the Sudbury lab was wrong, which is not very likely, or again, the grain passed through the Curie-point but cooled quickly enough to remain non-magnetic. This would suggest the grain was formed in the diamond formation zone of the mantle.

On Orthopyroxene

Orthopyroxene is a common accessory mineral in Diabase (Doug Robinson, P.Eng. – personal conversation) and is typically honey-brown in colour.

So, when till sampling a number of my potential kimberlites, I was finding, on occasion, very odd, delicate, black, pristine grains unlike any I had come across in three years of diamond/kimberlite internet research from other diamond sampling programs.

Early on I showed a microphotograph of one grain to Mike Leahy (a local, very knowledgeable prospector) and he said it was mafic but again, unlike anything he'd seen before.

Within the last year I acquired a piece of kimberlite that Jack Crouch, a family friend, had collected in the 1980s/90s while working on an article for the Northern Daily News. Jack had recently passed away, but the family knew it came from a Kirkland Lake area kimberlite [see Photo C below].

Photo C: The green Cr Diopside xenocryst at the foreground is ~2.5cm wide

When I recently decided to look closely at it under my Nikon microscope, I could see glassy black grains here and there in a beautiful Cr Diopside xenocryst. These black grains appeared to be identical to those I had picked from my concentrates, but still didn't know what they were. Then, several months later while researching kimberlite related articles, I came across a photograph almost identical to Jack's specimen.

It was labelled as a mantle-peridotite xenolith dominated by green peridot olivine, with rare grass-green diopside and black orthopyroxene [see Photo D below].

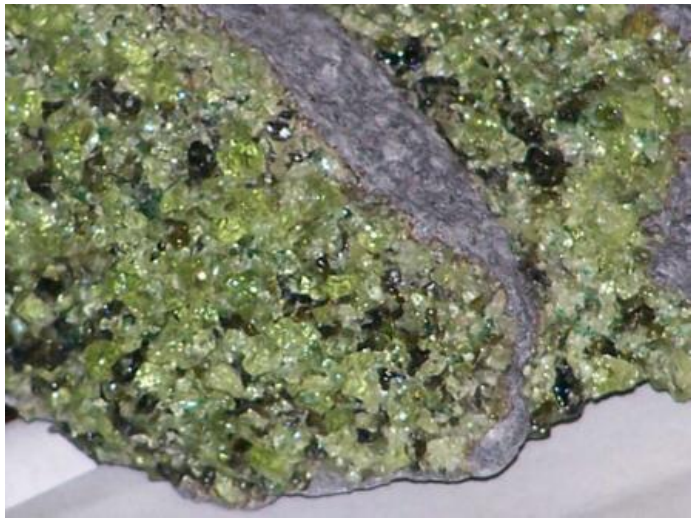


Photo D: Black Orthopyroxene (n.d.). Image referenced from https:en.wikipedia.org/wiki/Pyroxene

This explained a great deal about these delicate black grains as their irregular shape can be explained as basically pseudocrystalline from growing around the Cr Diopside and olivine in a kimberlitic xenocryst.

So, the black grains I found most likely originated in a piece of kimberlite that has been transported locally from a pipe by glaciation. Kimberlite typically weathers completely away when exposed to the elements. Chrome Diopside will weather to serpentine (mud) in a relatively short period of time. Orthopyroxene, however, is very stable, hence if it originated in a Cr Diopside xenocryst it would eventually very gently be deposited in the till in undamaged condition.

From a few till samples from the trench, I found a couple dozen of these odd grains all in pristine condition. One was lace-like and broke in two when I picked it up with tweezers. I've also discovered these grains down-ice in till samples from other targets on the Bishop Claims. Also, I discovered these grains are non-magnetic unlike other similar black mineral grains.

Orthopyroxene is a common component of kimberlites, comprising ~20% of mantle peridotite.

On Glaciation and Determining Source of KIMs

If only a large-scale Ice Flow Movement map is referred to then it would lead to the conclusion of a northwest-southeast glacial flow when tracing KIMs back to their source, in the whole area of the map.

However, locally I plotted 89 recent glacial striae on a map that takes in an area from the New Liskeard/Haileybury kimberlites to the north and the Bishop Claims to the south. These were utilised to create the detailed Ice Flow Movement map. I then plotted the flow direction onto a topographical map of Cobalt [see Illustrations: Map 3, Local Glacial Directions, page 6].

As you can see the glacial flow from the striae indicates flowing around the hills the glaciers encountered. On a smaller scale, this is very nicely shown on the 'Nip Hill' in Cobalt, which on the west side, the deep striae are basically to the southwest, and on the hilltop – to the south and on the east side are oriented somewhat to the southeast.

So, utilising this map there is a *very* slim possibility for transport from the distance to the known kimberlites, except possibly legacy claims 4282172 (Ice Chisel & Darwin Lakes), which can be eliminated by much up-ice and down-ice sampling results. As well, the Bishop Claims are uphill from the New Liskeard kimberlites which makes transport from 15+km to the north very unlikely. Therefore, it is very probable the KIMs found here are from close by (proximal).

> "Basal sliding occurs only where a glacier is at pressure melting point at its base. Most of the fast ice flow associated with ice streams comes about because of basal sliding. Wet glacier ice on a smooth surface is slippery. The sliding at the ice-bed interface is controlled by freezing to the bed, bed roughness, the quantity of water at the bed, and the amount of rock debris in the basal glacier ice.
>
> "Glacier beds are rough [i.e. bedrock], not smooth. Bumps in the surface of the glacier bed cause melting on the upstream side, and re-freezing on the downstream side. This is called regelation, and it occurs because pressures mount up from behind obstacles to ice flow. Ice melts under pressure, and this lubricates the bed of the glacier.
>
> "Meltwater at the ice-bed interface reduces the adhesion of the glacier to its bed, making it more slippery and enhancing sliding. If a glacier is flowing over a rock bed, a water film may enhance sliding and submerge minor obstacles, making the bed smoother." (Davies, B. (2017))

So, as you can see from the Local Glacial Flow Direction map [see Illustrations: Map 3], **when the glacier encounters a hill**, pressure builds up and the ice will flow much like water in a creek flows around a boulder. This of course forces material in the creek to flow with it. As such, any **heavy materials in the water/ice flow will be forced around the obstacle, not over it**. Ignoring this effect when interpreting a regional or local sampling program will cause misinterpretation of results. Again, this emphasises the very high probability that my high numbers of KIMs are proximal to the source.

To further complicate KIM emplacement, local to the Cobalt area one must also take into account the final stages of glaciation melt which formed Lake Ojibway/Barlow [see reference (Roy, M. et al (2015). p14-23) for more information]. Basically, 8400 years ago there was a staggeringly huge lake in and around north of the Cobalt area, that rose to 272-299 metres above sea level. Coincidentally, **the Bishop Claims are between 300-394m above sea level** [see Diagram F, page 81]. However, **the kimberlites in the New Liskeard area are 30-60m below** that (230-270m above sea level), so water movement and wave action would have spread out and diluted heavy mineral concentrates disrupting a classic till KIM emplacement profile in the kimberlites in that area. Further, when the 'dam' finally broke when the water level was 250m above sea level, the massive water flow locally followed the Montreal River and Lake Temiskaming/Ottawa River systems, further disrupting KIM emplacement.

From Haileybury Map 5024, legacy claim 4282172 (and to a lesser extent legacy claim 4282402, Hound Chute Lake) is the only claim in the Bishop Claims group to be affected by glaciofluvial deposits.

So, the point of all this is that it is **highly unlikely** the possibility that the high numbers of KIMs I'm finding on the rest of the Bishop Claims could have originated from the known kimberlites in the New Liskeard area.

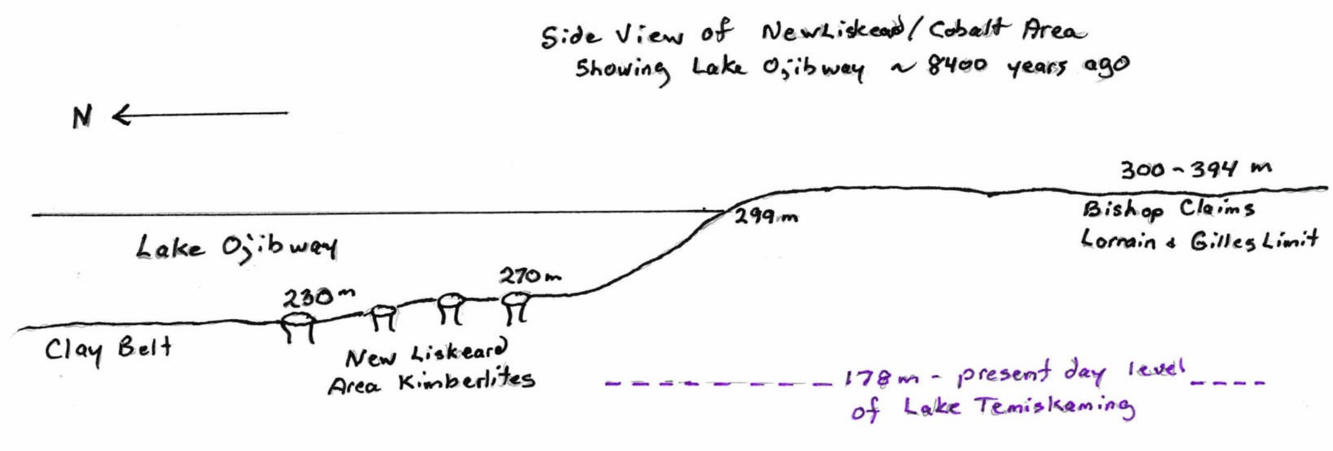


Diagram F – Side view of New Liskeard/Cobalt Area, showing Lake Ojibway ~8400 years ago

On the Importance of Till (Dirt/Sand/Gravel) vs. Alluvium (Creek/River) Samples

What makes the results that I'm finding in my concentrates interesting is that they are taken in till. Most samples weigh from 1-3kg unscreened, as compared to the 10-30kg screened to <5mm samples recommended in OGS-OFR and other reports. This effect makes my typical samples 10-20x smaller when screened to <5mm.

Of five OGS-OFR reports of KIM and other heavy mineral regional and sampling surveys, namely 6060 (Bajc and Crabtree, 2001), 6043 (Allan, 2001), 6088 (Reid, 2002), 6119 (Reid, 2004), and 6124 (Guindon and Reid, 2005), only 6060 took till samples, 400 of them which produced 13 pyrope garnet grains (G9s), recovered from 12 of the 400 samples. 1 in $33^{1}/_{3}$, or only 3 in every 100 samples produced a single Cr pyrope.

As such, after this the other reports relied almost exclusively on alluvium (creek) samples, or less so esker or beach deposits. A creek can concentrate heavy minerals 100-1000x+ over unconsolidated till. This is why placer gold is found in quantities in creeks and why the KIM count increased considerably in the next four OGS-OFR reports. For example, 6043 took 256 alluvium and 2 till; 6088 – 254 alluvium, 14 glaciofluvial, 1 beach, and 8 till; 6119 – 175 alluvium, 6 glaciofluvial, and 2 till; 6124 – 317 alluvium, 22 glaciofluvial, 2 beach, and 6 till. Grand total: 876 pre-concentrated alluvium, etc. samples and 18 till results in 1371(G9) and 45(G10) or 12 Cr pyropes in every 19 samples. This is 21x higher results than till samples alone.

This comparison is striking and enhances the KIM results I've encountered in my sampling programs below the Bishop Claim kimberlite targets.

On Grain Size

An interesting read is GSC-Open File 7111-2014. This report's basic premise is

> "indicator minerals break down (comminute) during transport [(glaciation)] as they contact each other or the bed … which causes a decrease in mineral frequency and size … and an increase in mineral roundness downflow in dispersal trains … the larger, more numerous and more angular … the closer the ore body source." (Cummings et al. (2014))

So, the investigators tumbled each individual type of KIMs (importantly they were sourced from various kimberlites) with stainless steel shot and at various intervals, checked the results for grain size and mass lost to 'mud'. The KIMs were pyrope, garnet, ilmenite, and Cr diopside. However, chromite and olivine were not tested due to problems related to equipment and test parameters.

The results were surprising as they contradict many previous assumptions (other previous test experiments actually used **non-kimberlitic** industrial garnets), particularly related to garnet durability. Kimberlitic garnets lost mass and broke into small 'pieces' way faster than other KIMs.

> "The experimental results have several implications for mineral exploration. One of these relates to the use of KIM abundance as an indicator for proximity to source. Kimberlite indicator minerals are typically picked and counted from a portion of the sand fraction … If larger pyrope garnets, such as those analyzed in the experiment, were present in the kimberlite source rock, break down of these grains at the head of the dispersal train could flood the sand fraction with garnet fragments. This could potentially lead to an increase in the number of garnet and total KIM fragments moving downflow, with a commensurate increase in angularity of garnet grains [Fig. 7]. In situations where this occurs, **the total mass of KIM fragments in the sand and gravel fraction might serve as a better proxy for transport distance than KIM counts**, given that it should always decrease downflow in dispersal trains due to some combination of comminution, dilution, and/or selective sorting."
> (Cummings et al. (2014))

In a nutshell, one large KIM grain (especially garnet and especially if found fractured but intact) is equivalent to many smaller grains and better indicates proximity to a pipe.

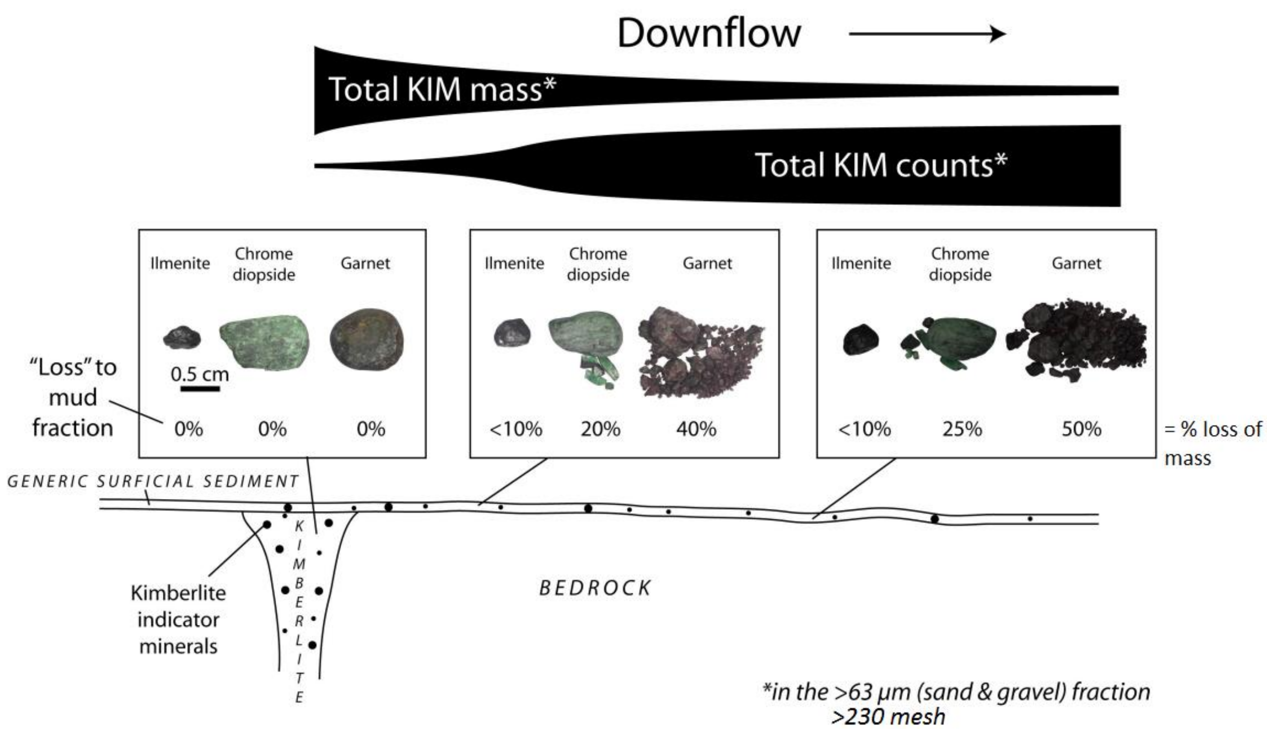


Diagram G: Farther downflow, total KIM counts would decrease, assuming continued comminution (in addition to selective sorting and/or dilution). (Cummings et al. (2014))

Down-Ice of a Kimberlite KIM Grain Distribution

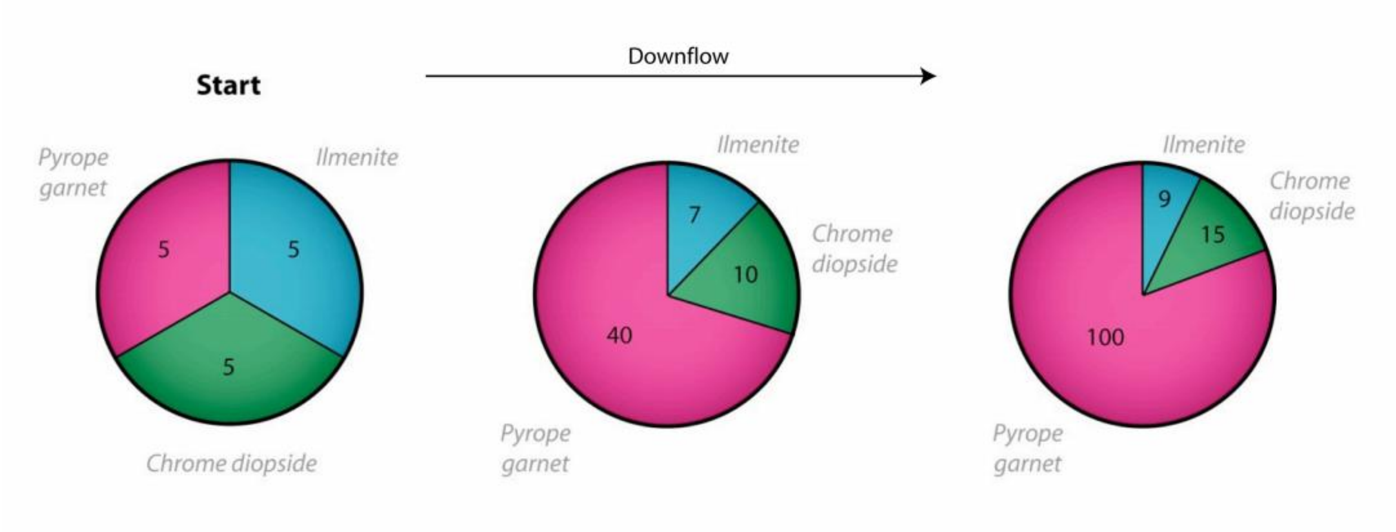


Diagram H: Downflow evolution of indicator mineral assemblages … in which rapid break down of larger pyrope garnets produces abundant sand-sized grains. … Numbers refer to grain counts. (Cummings et al. (2014))

So for interest's sake and interpretation of sampling results for KIMs, I produced the following charts. For simplicity in calculations, I assumed rounded grains. These charts show the relative masses/volume of various sizes of KIM grains and the numbers of smaller grains required to equal the mass of each successive larger size. In KIMs, bigger is better, i.e. proximal to source.

Using the formula for volume of a sphere ($V = \frac{4}{3}\pi\, r^3$), where r = radius of the grain, will reflect an equal relative increase in mass in KIMs from 0.25mm to 2.5mm in diameter, as shown in the following chart.

Kim Grains

Diameter (mm)	Radius (mm)	Volume (mm^3)
0.25	0.125	0.00818
0.375	0.1875	0.028
0.5	0.25	0.065
0.75	0.35	0.22
1.0	0.5	0.52
1.5	0.75	1.77
2.0	1.0	4.19
2.5	1.25	8.18

The next chart shows the total number of smaller grains required to equal the mass of larger grains (number of grains increases as size decreases). (Read: left to right)

Size of grain (mm) → decreases

2.5	2.0	1.5	1.0	0.75	0.5	0.375	0.25	Grain Size
1.0	1.95	4.6	15.7	37	126	292	1000	**# of grains required to maintain same total mass**
	1.0	2.4	8	19	64.5	150	512	
		1.0	3.4	8	27	63	216.4	
			1.0	2.4	8	18.6	63.5	
				1.0	3.4	8	27	
					1.0	2.3	8	
						1.0	3.4	
							1.0	

So, as you can see **finding one 2.5mm grain is potentially equivalent to 1000 0.25mm grains**. Companies generally recommend only looking in the 0.25-0.5mm fraction for KIMs in order to maximise returns – this chart explains why.

However, looking for 1.0-2.0mm and 2.0-3.0mm grains becomes much more important (especially Cr pyropes) as one or two of this size indicates a proximal source, even (especially) if many small grains are also encountered. Knowing this, a few larger grains should be given more value than many smaller grains.

Photo E: Unpicked till sample concentrates from the GoldCube®, 0.25-0.5mm from Grassy Lake (legacy claim 4282444)

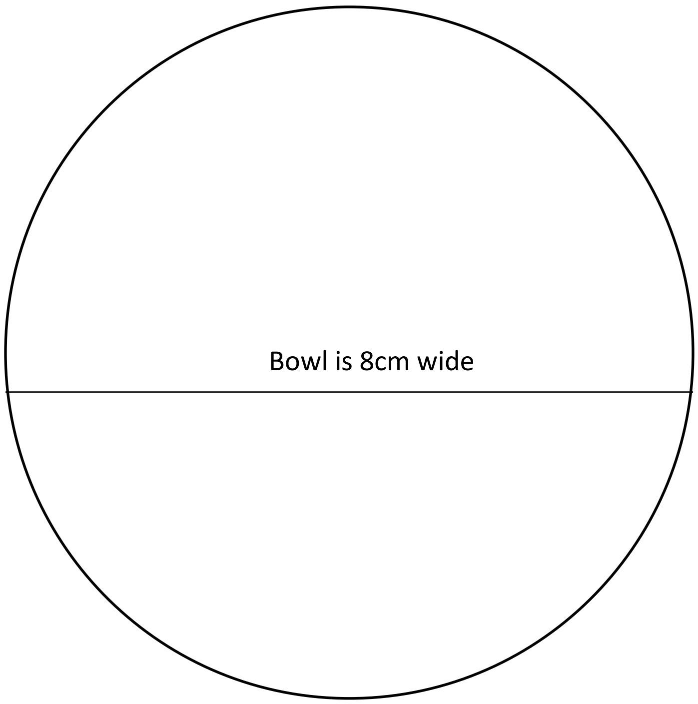
> "To determine priority of targets, sample sites containing more than a dozen indicator minerals typically signify a proximal target. Sites containing more than 100 indicator minerals are of high priority" (Erlich & Hausel, (2002), p 311).

Most of the coloured grains in this picture are probable KIMs.

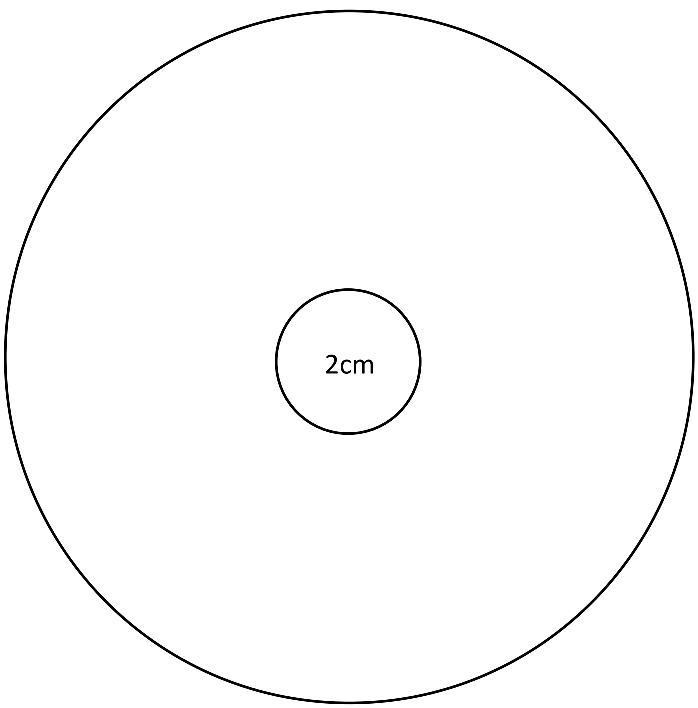
The following section explains how I attempted to estimate KIM numbers in this concentrate from Grassy Lake target.

On Estimating High Numbers of KIMs in a Sample from Legacy Claim 4282444 Target

-40 Cons, Fine Sand Fraction



- The concentrate was placed in a white porcelain bowl with a flat bottom and steep sides



- View under Nikon SMZ-2B Binocular Microscope at 10x is 2cm across
- Make a circular groove in -40 cons with toothpick at edge of view at 10x magnification
- Then within that 2cm diameter circle counted various KIMs at 25x magnification several times in a row for each type and averaged amount

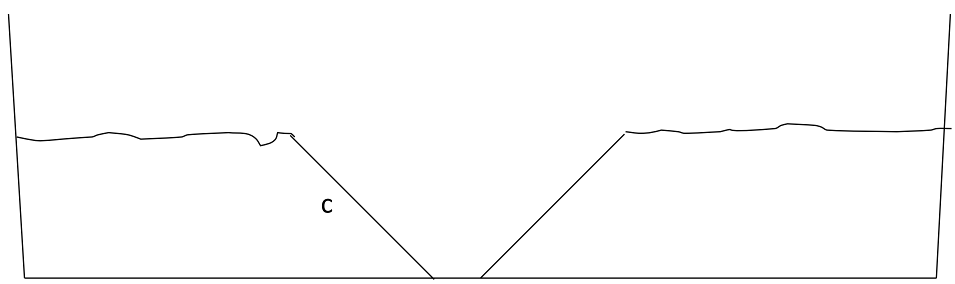
- Using $Area = \pi r^2$ (to calculate Area of a circle)
    - Area of 2cm diameter circle = 3.14 cm^2
    - Area of 8cm diameter circle = 50.24 cm^2
- 50.24 ÷ 3.14 = 16
- ∴ Sixteen 2cm diameter circles are enclosed by the 8cm diameter plate
- ∴ The KIMs counted within the 2cm diameter circle can be multiplied by 16 to estimate the total on surface layer of plate

Width of viewing diameter under Nikon SMZ-2B at various magnifications

Magnification	Viewing Diameter (cm – inches)
8x	= 2.5 cm – 1
10x	= 2 cm – $^{7}/_{8}$
15x	= 1.5 cm – $^{9}/_{16}$
20x	= 1 cm – $^{7}/_{16}$
30x	= 0.6cm – $^{1}/_{4}$
40x	= 0.5 cm – $^{6}/_{32}$
50x	= 0.4 cm – $^{5}/_{32}$

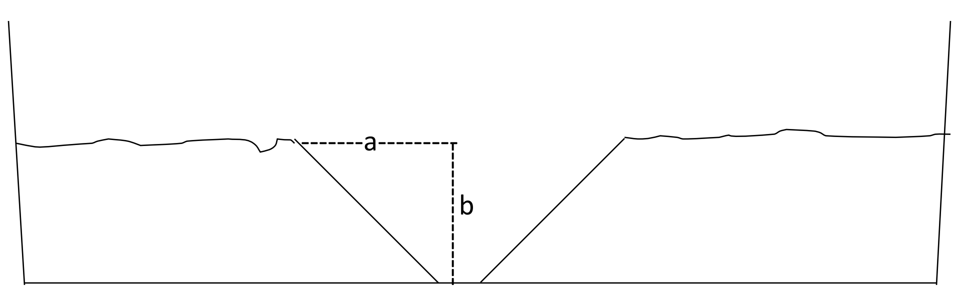
To estimate the number of layers of cons in the plate/bowl I dug a cone shaped hole to the plate/bowl's bottom at a ~45° angle. [see Diagram I below]

Diagram I:



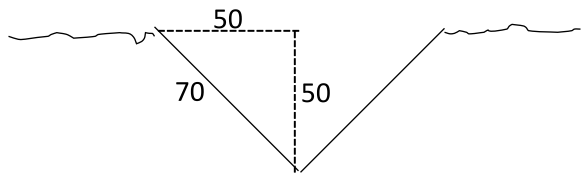
- I then at 25x magnification counted the grains from top to bottom of side 'c' = ~70 grains
- The sides of the cone were ~45° to the vertical
- So, assuming a right-angled triangle with the hypotenuse 'c' being 70 grains of ~ equal size, I then calculated the vertical length 'b' (same as 'a') which gives a =50, b = 50 for a vertical count of 50 grain layers deep

Diagram J:



- So the total KIM count can now be calculated to be ~ (# of KIMs counted) x 16 x 50 for each type

Diagram K:



I visually counted pink, red, orange, and purple garnets, as well as Cr-diopside (visual ID only), and also non-magnetic black grains (probable ilmenites and chromites).

Results: the numbers of potential KIMs comes out in the 10,000+ range, much more if various orange shades of garnets are counted, much much more if shades of pink garnets, which are considered moderately rare, are counted (which are not picked traditionally, but do not show up in off-ice samples on my various claims/targets, but there are always high numbers in my down-ice concentrates). In fact, of the grains I sent to be microprobed at Geo Labs in Sudbury, one is a pink, surface-frosted (and non-magnetic) garnet that tested as one of 3 G11s from legacy claim 4282444.

On G3 Garnets

Photo F, "Kimberlite Indicator Minerals. From top left-clockwise: picroilmenite (Mg-rich ilmenite); eclogitic Fe-Mg-Ca almandine G3 garnets; peridotitic chrome pyrope G9/G10 garnets; chromites; chrome diopsides; Ti-Cr-Mg pyrope G1/G2 garnets; and olivines in the centre" (Quirt, 2004, p 2).

- According to my research, G1 and especially G4 garnets are orange. There are no G2 garnets, so I think this (G2) is a typo, and should read "G1/G4 garnets" (McLean, Banas et al. 2007)

This is the only picture I've been able to find that shows eclogitic G3 garnets. They appear to be mostly colourless (although a few seem to be slightly orange) transparent grains. This colour is generally not picked by labs. The closest comparison is shown on Diagram C [page 76] (McLean, Banas et al. 2007), which shows G3s in light, medium-dark, and dark orange colours. In Diavik tests all eclogitic G1, G3, and G4 grains were various shades of orange. So, as I write elsewhere, if a magnetic grain is colourless and transparent (with no inclusions), then it must be a garnet (unless it is one of my unusual grains which are inert (non-magnetic) and require a microprobe to fully identify them as garnets). Also, a truly colourless garnet is extremely rare.

More research on garnets reveals that the only known colourless (white) garnet is a type of grossular called a leuco garnet. With a bare minimum of time spent I found a colourless, transparent, non-included, slightly magnetic grain in one of my concentrates. This result is pretty much diagnostic for a leuco (and possibly G3) garnet.

> "Most [leuco garnets] are not completely colorless. Most have a strong tinge of yellow or green. They also tend to be heavily included." (AJS Gems)

Blue and white are the rarest garnets with a colourless garnet being so rare it is seldom used in jewellery. I found a 1.54 carat colourless garnet gemstone being sold for $994 USD ($645/carat). Colour change purple garnets also bring a very high price. Garnet gemstones cannot be enhanced, the colour is always natural. Colour change in purple garnets is the criteria ODM and others use as proof of a kimberlite Cr pyrope.

Except for the detailed and lengthy Assessment Reports written by Tony Bishop (please refer to Bishop, B.A. 2016-2018 reports listed in Section: 27, References, pages 91-92) on some of his targets on the Bishop Claims, the author is unaware of any other relevant data or information.

SECTION 25: INTERPRETATION & CONCLUSIONS

The property has a number of kimberlite targets, which can be observed as round to semi-round lakes, similar to those in Lac de Gras. The local geology of many targets are near or in contacts between granite and diabase, again as in Lac de Gras. Also similar are the major and minor fault systems.

High KIM counts are encountered immediately down-ice, including G10s, but are not encountered off-ice.

Many other kimberlites have been found 'nearby', some diamondiferous. Kimberlites typically appear in swarms. This increases the likelihood of finding more in the same general area.

The topographical and KIM dispersal evidence indicates the minerals identified as KIM are derived from kimberlites on the Bishop Property. The occurrence of probable kimberlites in high elevation indicates any kimberlites will perhaps have greater diamond preservation than the known kimberlite identified at lower elevation near New Liskeard. It also appears that Canadian kimberlites with weak magnetic signatures have enhanced probability of preserved diamonds. The apparent weak magnetic signatures of the kimberlite targets on the Bishop Property explain why other exploration companies depending on positive airborne magnetic surveys have overlooked this high priority diamond exploration target area.

SECTION 26: RECOMMENDATIONS

The next stage of work will be to initially drill two prime targets that have been flown with a proton magnetometer at low level and 25 to 50 metre grid spacing.

Due to the ease of access to these targets, drilling will be relatively inexpensive. A minimum of $150,000 is proposed for initial drilling costs. Report writing, core logging, etc. is estimated to be a minimum of $50,000. Analysis/laboratory work of kimberlite and any associated KIMs is estimated to be a minimum of $10,000 and up depending on drilling results.

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Statement of Qualifications: Brian Anthony (Tony) Bishop

I have been prospecting and placer mining part-time for 43+ years in Ontario, British Columbia, and Nova Scotia (which led to writing a book *The Gold Hunter's Guide to Nova Scotia* (Nimbus Publishing, 1988, ISBN 0-920852-93-9) which was used in prospecting courses in Nova Scotia). I have held an Ontario Prospector's License for 39 years and was issued a Permanent Prospector's License in 2005. I have completed a number of prospecting courses given by the Ministry and have my Prospector's Blasting Permit. I was one of the Directors on the Northern Prospectors Association (NPA) in the early years when Mike Leahy revitalized/resurrected the NPA in Kirkland Lake, and with Mike, initiated the annual gold panning event as part of Kirkland Lake Gold Days.

As well, I sold and used small scale mining and concentrating/processing equipment for over 20 years. This included instructing others in their use. Since then I have designed, built and used new types of concentrating equipment for heavy minerals/metals.

For over forty years I was a dealer for many of the major metal detector manufacturers at that time. I was also a dealer for Keene's Engineering of California, possibly the best-known manufacturer of small to medium scale prospecting and mineral recovery equipment. I was also (the only) dealer for Goldfinder Custom Sluices built by Wayne Loewan in Alberta. Until recently I was sent new models/types of Garrett metal detectors to test in the field for their prospecting capabilities.

On short term contracts I have performed specialized work for Cobatec, Macassa, Castle Silver Mines Inc., Gold Bullion Development Corp, as well as short stints in Ecuador and Montana.

I was the first (and possibly only) person to use a Garrett Sentry Tracing instrument (used to find underground cables etc.) to look for silver veins (Cobatec, Castle Resources), and underground at Macassa Mine (now Kirkland Lake Gold) to successfully locate 600' and 800' vertical length large bore holes (for paste) that had missed the adit by 14' and 18' respectively.

I have also been hired by two different mining exploration companies to locate samples of gold and silver with metal detectors and grade waste dumps with metal detectors to determine if they could be profitably re-milled.

The last four and a half years I have devoted to full-time diamond exploration. While interpreting the results of till sampling programs and the KIMs that were found, the primary author has conducted 1,000+ hours of research on the scientific and exploration aspects of Canadian diamond discoveries from many diverse sources on exploration and processing techniques. The Resident Geologist's office (MNDM, Kirkland Lake) has many kimberlite and KIM samples that were compared to the ones found on the Bishop Claims. One present and two former Resident Geologists were regularly consulted, as well as the former District Geologist who is considered the local diamond expert for this area. Other prospectors and geologists are regularly consulted, especially Douglas Robinson, P.Eng Geo, who has overseen and verified much of the results and methodologies of the work.

My comprehensive assessment reports can be viewed online on the MNDM website. In the last few years I've developed new techniques for identifying KIMs and for determining the diamond potential in kimberlite pipes, and some of these are outlined in my latest reports.

Drawing on this research and my many years of practical experience, especially in placer mining techniques, I have assembled a complete till processing lab I feel rivals many commercial ones. Importantly, I sometimes exceed their results by testing a wider range of samples' fraction sizes and as a result have found a number of kimberlite indicator minerals, notably a number of indicators in the 2.0 – 3.0 mm size that are larger than the usual upper cut-off for commercial labs' mesh sizes. Additionally, I pick far more potential KIMs than any lab can reasonably do, given time/cost constraints. I recently purchased a complete heavy mineral lab formerly operated by True North Mineral Laboratories in Timmins to integrate as another part of my KIM processing equipment.

Redundancy tests are routinely performed to monitor potential losses of the KIMs and I feel my equipment and techniques closely match that of the industry.

Signed:

Brian Anthony (Tony) Bishop
February 19, 2019

Certificate of Qualifications: Douglas Robinson, P.Eng. Geo

I, Douglas Robinson, of 24 Victoria Avenue, Swastika, Ontario hereby certify that:

1. I am a registered professional Engineer of the Province of Ontario, No. 39322011.

2. I am a graduate of Queen's University in Kingston, Ontario with an Honours Bachelor of Science, Geological Engineering, 1975, and Northern College, School of Mines in Haileybury, Ontario, 1970.

3. I have been practicing my profession since graduation, focused in the Cobalt, New Liskeard, Gowganda, and Kirkland Lake area of Northeastern Ontario.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I, along with primary author Brian Anthony Bishop, am responsible for the preparation and items of all sections of the technical report titled "Technical Report on the Bishop Claims Property, for RJK Explorations Ltd., Gillies Limit & Lorrain Townships, Larder Lake Mining Division, Ontario, Canada", and dated February 19, 2019, relating to the group of claims optioned by RJK Explorations Ltd. forming the Bishop Claims Property.

6. I am not aware of any scientific or technical information with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

7. I am an Independent Consultant as I am not a Vendor of the Property.

8. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication company files or their website.

Signed:

D. ROBINSON

Douglas Robinson, P.Eng. Geology
February 19, 2019