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**Goldcorp Canada Ltd.**  
**Karl Zeemal Project**  
**2017/2018 Assessment report**

**2017 Soil and Litho-Geochemical Sampling Program**  
**2018 Biogeochemical Program**  
**2018 Diamond Drilling**

David Murray, P.Geo  
March 25, 2019

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## Introduction

This report summarizes soil, litho, and bio-geochemical sampling and diamond drilling work completed on Goldcorp's Karl Zeemal claims located in the District of Kenora, Northwestern Ontario. These programs occurred over a period of less than two years from June 10<sup>th</sup>, 2017 to October 30<sup>th</sup>, 2018 and are concisely summarized below. The work was undertaken by staff geologists and other support staff employed at Goldcorp's Musselwhite Mine with operational support and technical services commissioned from third party specialists and contractor groups.

## Summary

### Soil and litho-geochemical

Field activities related to the soil geochemical and litho-geochemical survey were conducted over 42 field days, totaling 121-man days, between June 10<sup>th</sup> and October 15<sup>th</sup>, 2017. The objective of the program was to create a complete soil geochemical profile of the project area providing greater context for the interpretation of historical diamond drilling and to further define or identify targets for future diamond drilling.

The work was performed for Goldcorp Canada Ltd. By staff geologists Andrew Stone, Alexander Hughes, Brennan Richard, David Murray, Matthew Zago and contract geologists Jeffrey Churchley and Tracy Carson, with technical guidance provided by Director of Geochemistry Dr. Thomas Bissig. Transportations services for field crews were provided by Wisk Air Helicopters of Thunder Bay Ontario.

The most favorable soil media was collected at regular intervals along parallel lines centered over and perpendicular to the known auriferous trend. Preferably, soils were collected from a small hole dug at each location which was back filled upon collection and documentation of the sample. Bedrock samples were collected where ever encountered along or proximal to the sample traverses. Location data was collected in UTM datum NAD-83 Zone 15N.

Interpretation of the data collected has succeeded in defining the most effective soil geochemical sampling methods for future campaigns. Additionally, there are indications of a possible along strike extension of the known mineralization, under cover and well beyond historical drilling.

### Biogeochemical

Field activities related to biogeochemical plant sampling were conducted over a three-day period August 21<sup>st</sup> – 23<sup>rd</sup> 2018 totaling 9-person days. the objective of the program was to test the effectiveness of this type of geochemical analysis in the local environment by sampling over known bedrock mineralization, and by comparing to results against the 2017 soil geochemistry surveys also described in this report.

This work was performed for Goldcorp Canada Ltd. by staff geologist Stephen Miller, summer student Robert Glover, and a field assistant provided by Ojijakoes Community Development Corp. Technical guidance for the program was provided by Director of Geochemistry Dr. Thomas Bissig and Dr. Colin Dunn of Colin Dunn Consulting Inc. Transportations services for field crews were provided by Wisk Air Helicopters of Thunder Bay Ontario.

Samples of two plant species were collected at regularly spaced intervals along two parallel lines centered over and perpendicular to the known mineralized trend. Samples consisted of a fixed volume of vegetation material clipped from similarly aged plants of each species with 5 meters of the predetermined sample location. Location data was collected in UTM datum NAD-83 Zone 15N and Latitude-Longitude, decimal degrees.

Primary and secondary program objectives were met. It was confidently determined that biogeochemical vegetation sampling is a viable exploration method for in local geological and environmental conditions. The program was additionally successful in delineating two targets considered high priorities for future exploration.

### Diamond Drilling

Diamond drilling related field activities including trail construction, mobilization, drilling, and demobilization, were conducted daily between and April 16th, 2018 and October 30<sup>th</sup>, 2018. The work was performed for Goldcorp Canada Ltd with the objective of confirming, delineating and modelling the previously identified, near surface, gold bearing sulphide mineralization in synformally folded oxide banded iron formations.

Permitted trail construction for the mobilization of drill rigs was contracted to LTL Contracting Ltd. of Thunder Bay Ontario, Drilling Services were provided by Boart Longyear of Haileybury Ontario, and transportation services for drill crews and materials were provided by Wisk Air Helicopters of Thunder Bay Ontario.

Two drill rigs were mobilized into the work area utilizing the constructed trail. Drill pads were prepared immediately adjacent to the trail. 32 NQ drill holes, totaling 2430m were drilled between August 10, 2018 and September 20, 2018. Drill holes are surveyed in the local grid of Goldcorp Canada Ltd.'s adjacent Musselwhite Mine. Prior to surveying drill collars, it was necessary to extend the local grid beyond its previous extent. This work required third party expertise and was contracted to Total Precision Surveying of Sault Saint Marie, Ontario.

### Location and Access

The Karl Zeemal claim group is located in the District of Kenora, Northwest Ontario. Approximately 76 km South East of Weagamow First Nation, 103 km North of the town of Pickle Lake, 430 km Northwest of Thunder Bay, and 7 km Southeast of Goldcorp Canada Ltd.'s Musselwhite Mine.

Access is available through chartered air service to the town of Pickle Lake and a four-Season road extending North to Goldcorp's Musselwhite Mine.



Figure 1. Location of Karl Zeemal Claims within the province of Ontario



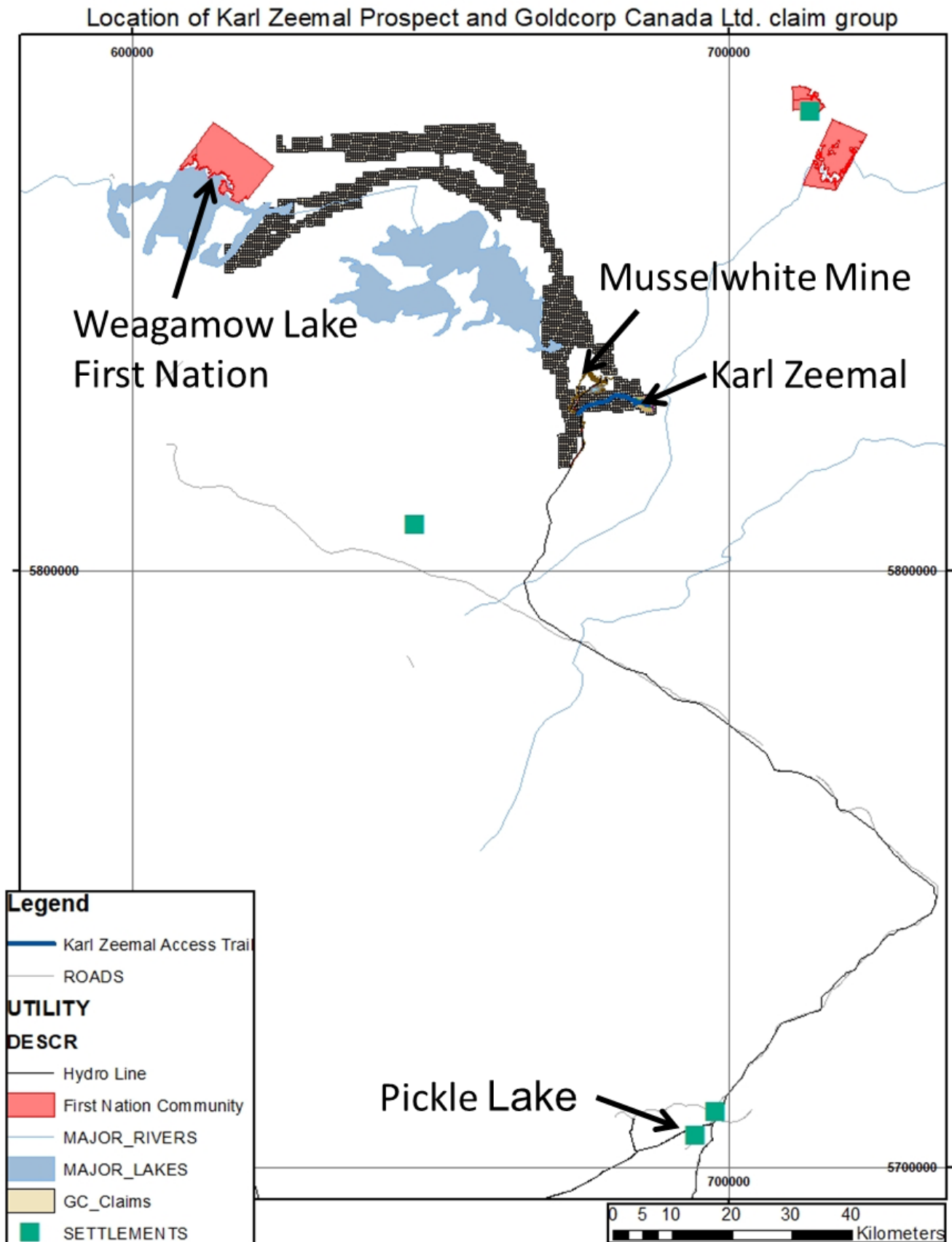


Figure 2. Location of Karl Zeemal claims relative to the town of Pickle Lake, Musselwhite Mine, and Weagamow Lake First Nation location reference in UTM-Nad83 Zone 15N



## History and previous work

1938 – (Satterly 1941) First geological map of the North Caribou Greenstone Belt produced at a scale of 1 inch to 1 Mile (1:63360).

1960 – Geological survey of Canada conducted an airborne magnetometer survey of the North Caribou Greenstone Belt.

1962 – Economic gold mineralization was first identified on the adjacent Musselwhite mining leases by the Musselwhite Brothers in 1962

1963 – The Karl Zeemal property was optioned by Kenpat Mines Ltd. in 1963. The company conducted geological and geophysical surveys.

1962 to 1963 – Inco Limited conducted an 18-hole diamond drill hole program in the area of Zeemal Lake and an additional Eight holes in area of Karl and Markop Lakes.

1973 – The Musselwhite brothers optioned their property to a consortium led by Dome Exploration Ltd. Subsequent exploration activities resulted in the discovery of the “West Anticline Zone” in 1980.

1981 – The Dome Exploration Ltd Consortium. commissioned Aerodat Ltd. to conduct an airborne magnetic and electromagnetic geophysical survey over the area surrounding the Musselwhite deposit.

1984 – Dome Mines Ltd. excavated an exploration decline into the West Anticline Zone and delineated gold deposits totaling approximately 540,000 ounces.

1985 – The Ontario Geological Survey commissioned Aerodat Ltd. to perform an extensive Airborne Magnetic and Electromagnetic survey of the North Caribou Greenstone Belt. Maps 80744 and 80745 cover the Karl Zeemal area.

1986 – Extensive surface drilling by Dome Mines Ltd focused on the East Bay Synform

1986 – in 1986 Santa Maria Resources employed Geocanex Ltd. to perform ground magnetic and electromagnetic surveys over their Zeemal Lake property immediately west of the Karl-Zeemal Claims.

1987 – Geocanex Ltd. conducted surface mapping and diamond drill programs on behalf of Santa Maria Resources Ltd on the Zeemal Lake property.

1988 – Power Explorations Inc. conducted extensive mapping, prospecting, trenching and diamond drilling along the mineralized Karl-Zeemal iron formation.

2005 – Goldcorp Canada Inc. extensive exploration drilling along the mineralized trend identified by Power Explorations Inc. in their 1988 drilling.

## Physiography and Vegetation.

The claim group is dominantly covered by low bogs which are densely forested by black spruce trees rooted in a wet, moss covered, forest floor, and moss-covered meadows which are typically dryer and dominantly vegetated by dense Labrador tea shrubs and sparse, small, black spruce trees. The Northwest end of the claim group is covered by thick glacial-fluvial sand and boulder deposits. Which

are typically forested by well-spaced jack pine and some birch trees. There is a notable ridge of approximately 50 meters relief running NW-SE through the center of the claim group. The elevated ridge is densely forested by mixed species of softwood and hardwood trees including birch, poplar, black spruce, and fir, with a thick undergrowth of labrador tea. There is approximately 5% bedrock exposure on the claims which dominantly occurs along or proximal to the crest of this ridge.

## Regional Geology

The North Caribou greenstone belt (NCG) is located on the northern edge of the North Caribou terrane, south of the Island Lake domain. It comprises various volcanic-dominated assemblages formed during two major magmatic phases dated at ca. 2980 and ca. 2870 Ma. Sedimentary-dominated assemblages lie in the core of the NCG. They are interpreted to have been deposited after 2980 Ma in the northern NCG, and after 2850 Ma in the southeastern NCG. The greenstones are intruded by several batholiths emplaced during the two magmatic phases at ca. 2870-2850 Ma and ca. 2750-2690 Ma (Oswald, 2018 and all references therein)

The envelope of the main structural fabric and fold structures is roughly parallel to the contact of the narrow, elongate, two-arc shape of the North Caribou belt. Three major phases of ductile to brittle-ductile deformation have been documented (D1, D2, D3), in addition to minor late structures related to brittle deformation ("D4"). Several regional fault zones separate lithostratigraphic assemblages. The dominant regional structural pattern and main tectonometamorphic phase is related to D2 (Oswald, 2018 and all references therein). The rocks of the North Caribou Greenstone Belt were metamorphosed to amphibolite facies around 2660 Ma (Oswald, 2018 and all references therein)

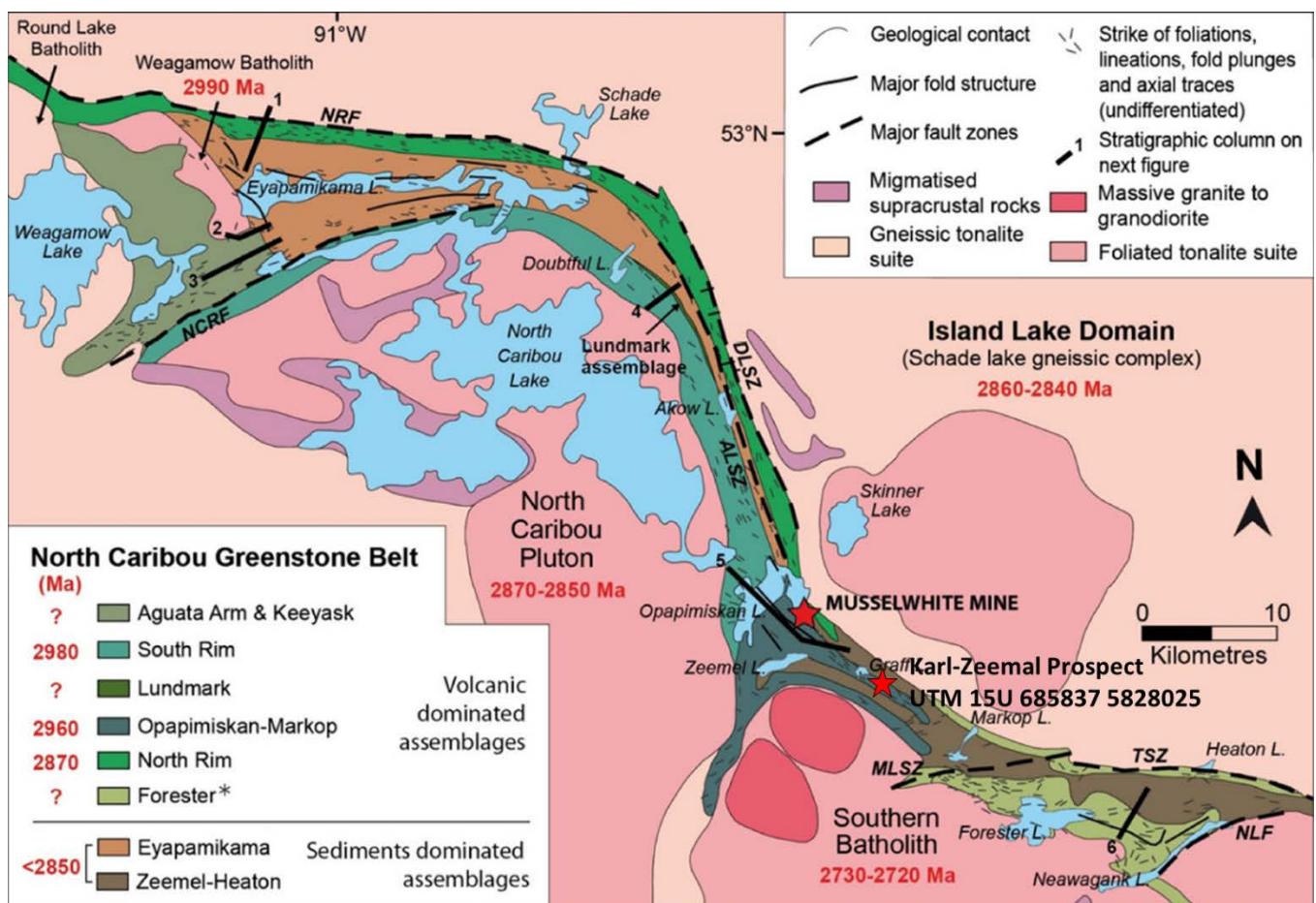


Figure 3. Simplified tectonostratigraphic map of the North Caribou belt modified from Oswald, 2018

## Local Geology

The Karl Zeemal Prospect consists of linear NW-SE trending group of Opapimiskan-Markop mafic and ultramafic metavolcanic rocks interlayered with two (possibly three) horizons of synformally folded chert-magnetite banded iron formation, typically 1-5m wide. The volcanic sequence comprises pillowed and massive lava flows. Ultramafic komatiites are common, but mafic units dominate most of the stratigraphy. Both limbs of the folded Iron formations outcrop on surface.

The pyrrhotite mineralized intervals known to host significant gold grades are predominantly observed in grunerite altered and silicified intervals of chert-magnetite banded iron formation, and locally, in narrow, pyrrhotite mineralized, shears or hydrothermal breccias axial planar to the folded iron formation and narrow shears along contacts between the iron formations and metavolcanics. The hinge of the folded iron formations is shallow plunging to sub-horizontal and trends NW-SE parallel/sub-parallel with the contact between the Opapimiskan-Markop assemblage and the Zeemal Heaton metasedimentary assemblage.

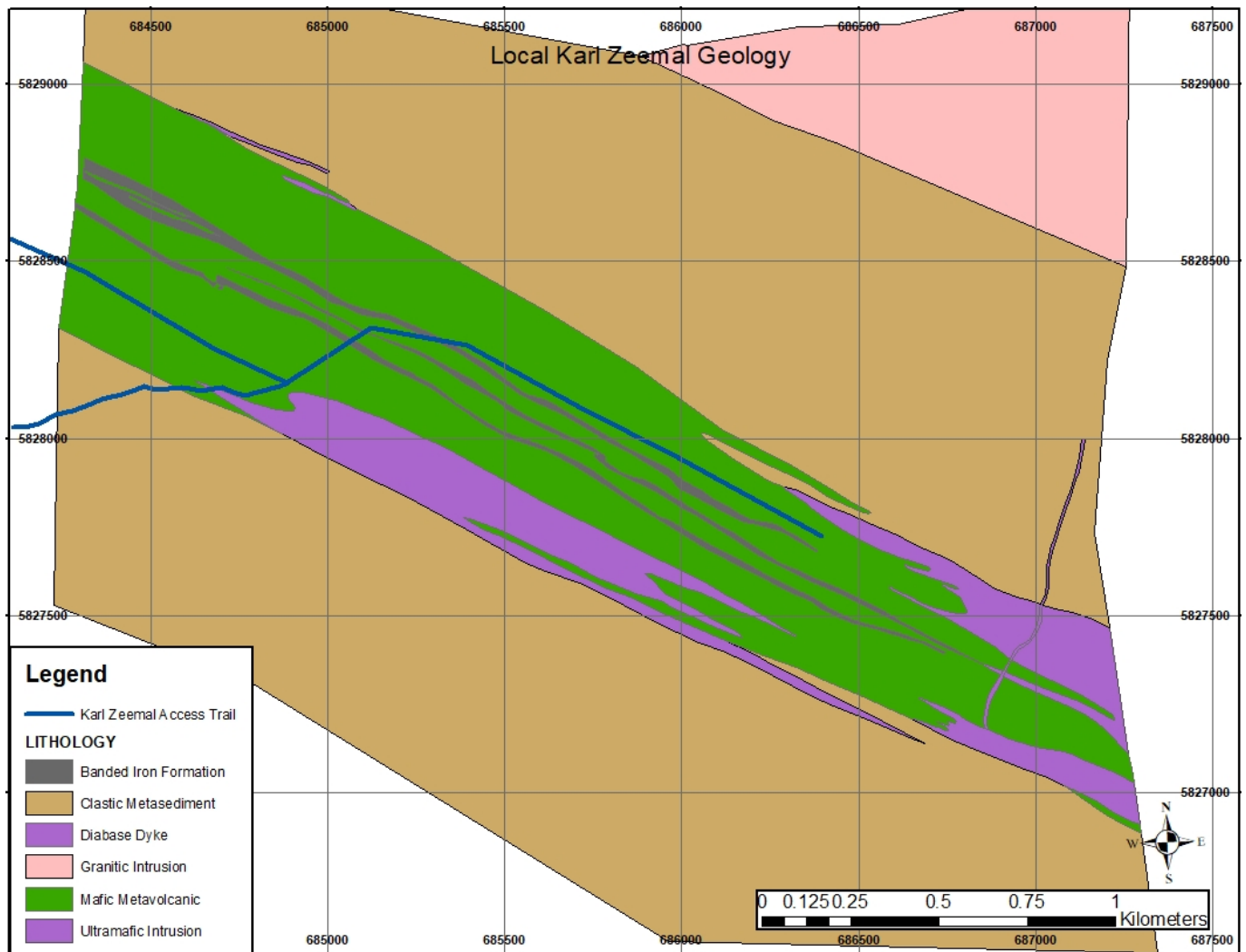


Figure 4. Local Karl-Zeemal Geology, as mapped by Power Explorations Ltd. in 1988 location reference in UTM-Nad83 Zone 15N

# **Geochemical Sampling**

## 2017 Soil and Litho-Geochemistry Program

### Table of claims

The 2017 soil Geochemical survey described in this report was carried out in the following claims mining claims held by Goldcorp Canada Ltd in the District of Kenora.

Table 1. Claims on which work was conducted during this program

Claim Number	Type	Status	Date Issued	Date Due	Holder
114666	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
145203	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
182182	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
110988	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
191417	Single Cell Mining Claim	Active	2018-04-10	2020-03-11	GOLDCORP CANADA LTD.
212535	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
314497	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
172600	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
296076	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
141048	Single Cell Mining Claim	Active	2018-04-10	2020-03-11	GOLDCORP CANADA LTD.
336654	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
193087	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
268514	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
239228	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
329699	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
241703	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
146416	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
194322	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
307247	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
256091	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
145204	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
140463	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
160522	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
289301	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
239229	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
277906	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
128739	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
138104	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
256090	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
211934	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
323204	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
285885	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
174918	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
306599	Single Cell Mining Claim	Active	2018-04-10	2020-03-11	GOLDCORP CANADA LTD.
128738	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
140272	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
315513	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
323127	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
133412	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
327248	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
212536	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
327249	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
164580	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
209126	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
175011	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
110987	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
193088	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
221207	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
259427	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
126572	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
331782	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
315727	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.



## Program Description

1079 soil samples were collected at 50m intervals along 51 parallel lines striking 23° from true north spaced 100m apart. To initiate the program an orientation survey was conducted to determine the soil media and analytical method best suited to the exploration in the local environment. This orientation survey was taken along two adjacent lines through the center of the grid. Each available soil media from every sample site was collected; humus or organic layer, Ah, Ae, and Bf or B, and sent to Activation Laboratories Ltd. in Thunder Bay Ontario for analysis. Samples were dried, sieved to  $-177\mu\text{m}$ , homogenized, and split for analysis by a proprietary enzyme leach and aqua regia partial digestion. Additionally, PH and Conductivity of each sample was measured. It was determined that the most effective analysis moving forward would be a 4 acid “near total” digestion with analysis by ICP-MS, accompanied by 30g fire assay of Bf horizon soils. Where no Bf-horizon soils were available the next most favorable media was collected in the following order of priority: B, Ah, Humus/organic, and Lastly Ae. Bedrock samples were collected wherever encountered along or proximal to survey lines totaling 257 samples. Rock samples were prepared by crushing the whole sample until 80% of the mass will pass a 2mm screen. Of the screened material a 250g split is pulverized and sieved to  $105\mu\text{m}$ . the sieved pulp is digested in a 4-acid solution which is analyzed with ICP-MS. A 30g split of the sieved pulp is analyzed for gold by fire assay.

Soil samples were collected preferably by digging a 30-60cm diameter hole to the bottom of the B-Horizon soil layer utilizing a standard spade or trenching shovel. Following the excavation, the inside walls of the hole were scraped with a plastic trowel or hand shovel to reduce the possibility of any contamination from the painted metal shovels. Using the same plastic implement, material was then collected from the sidewall of the hole at the most favorable horizon in a kraft paper envelope. The soil profile of each hole was photographed for future reference. Following collection and documentation of the samples each hole was backfilled with all the material which had been removed and compacted. In wet ground or in holes where no B-horizon soils were encountered before a depth of 50-60cm a 1.2m soil auger was used to collect the most favorable material available or deepest material available if only a single layer was encountered. Location data was collected using a Garmin GPSmap 60CSx device in UTM datum NAD-83 Zone 15N.

The work described above was conducted over 42 days between June 10<sup>th</sup> and October 15<sup>th</sup>, 2017 by one or two crews of two to three geologists and assistants totaling 121-person days. Access to the work area was accomplished via the use of a Bell 206 Long Ranger Helicopter provided and operated by Wisk Air Helicopters of Thunder Bay Ontario.

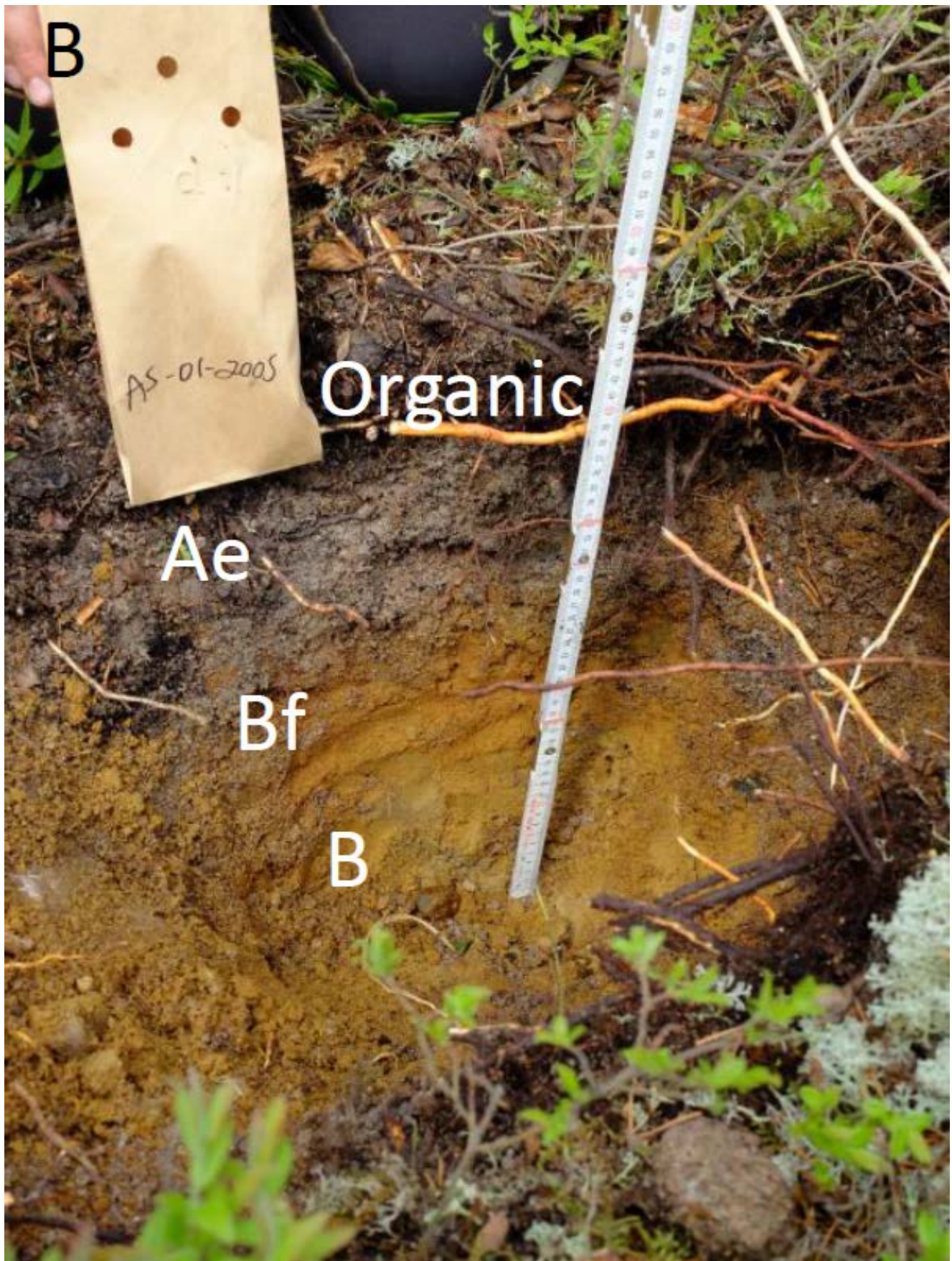


Figure 5. Example of a typical sample collection site, holes are filled and compacted following collection of the sample



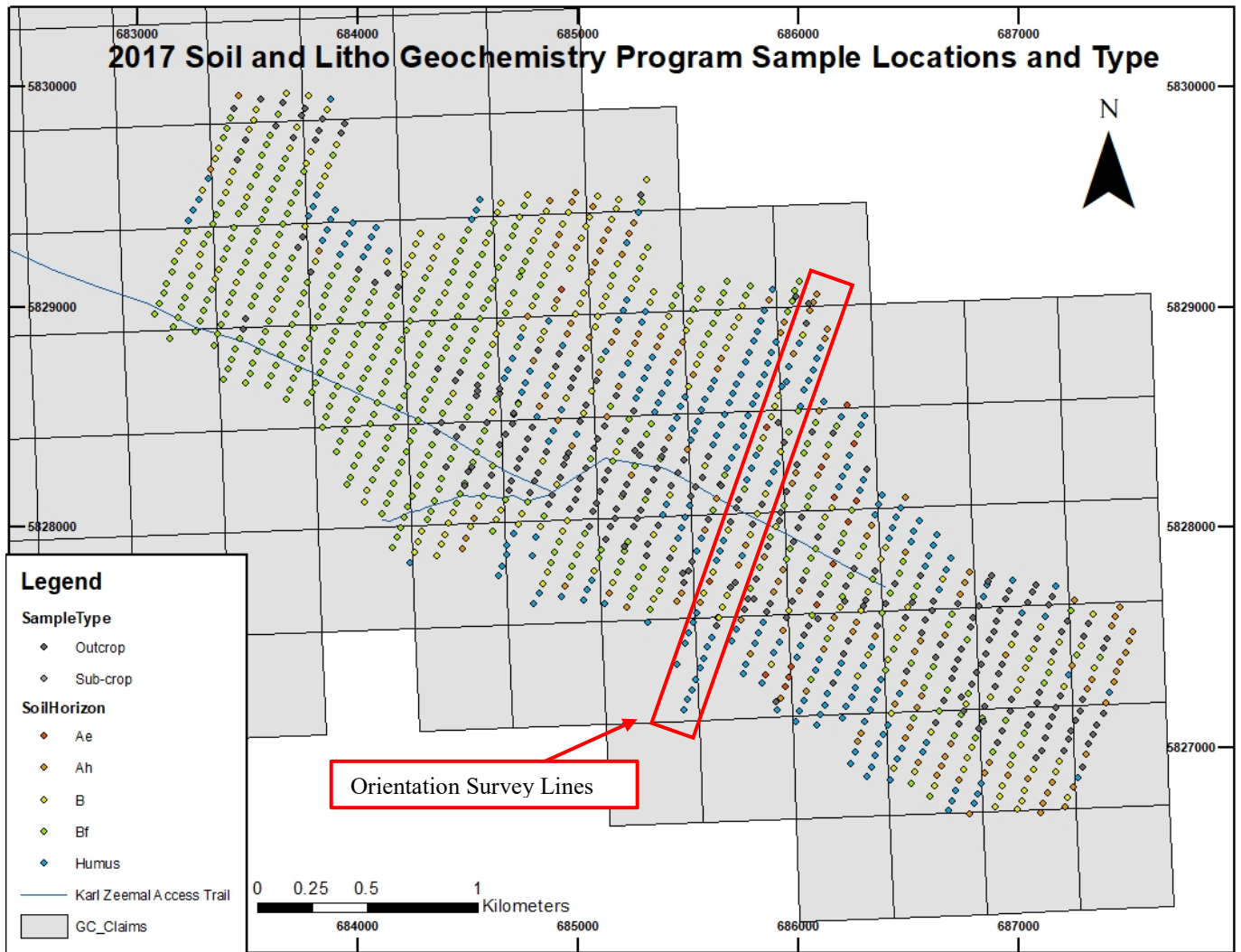


Figure 6. 2017 soil and litho geochemistry program sample locations and type. Location reference in UTM-Nad83 Zone 15N

## Results, Conclusions, and Recommendations

### Results

A complete table of all samples with field and laboratory data, sorted by sample media and then by sample number can be found in appendix I. An analysis of the data has determined that Outliers are  $> 15$  ppb for B-horizon soils;  $> 30$  ppb for outcrop and  $> 40$  ppb for humus. Outlier values are determined automatically except for Humus where based on probability plot. Outlier =  $3^{\text{rd}}$  quartile +  $1.5^*$  interquartile range.

Map of sample types taken and Au outliers identified by sample type

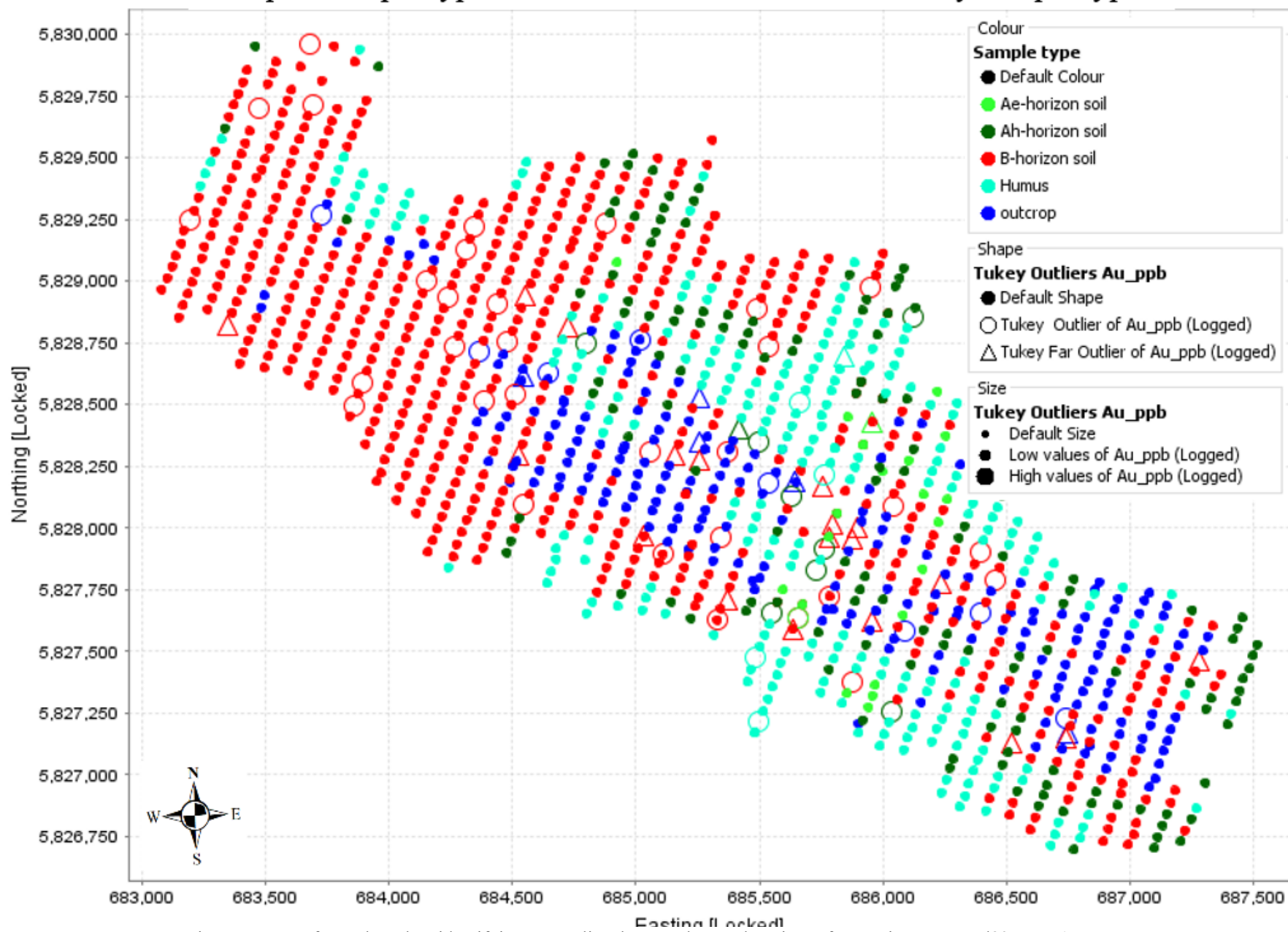


Figure 7. Map of samples taken identifying Au outliers by sample type location reference in UTM-Nad83 Zone 15N

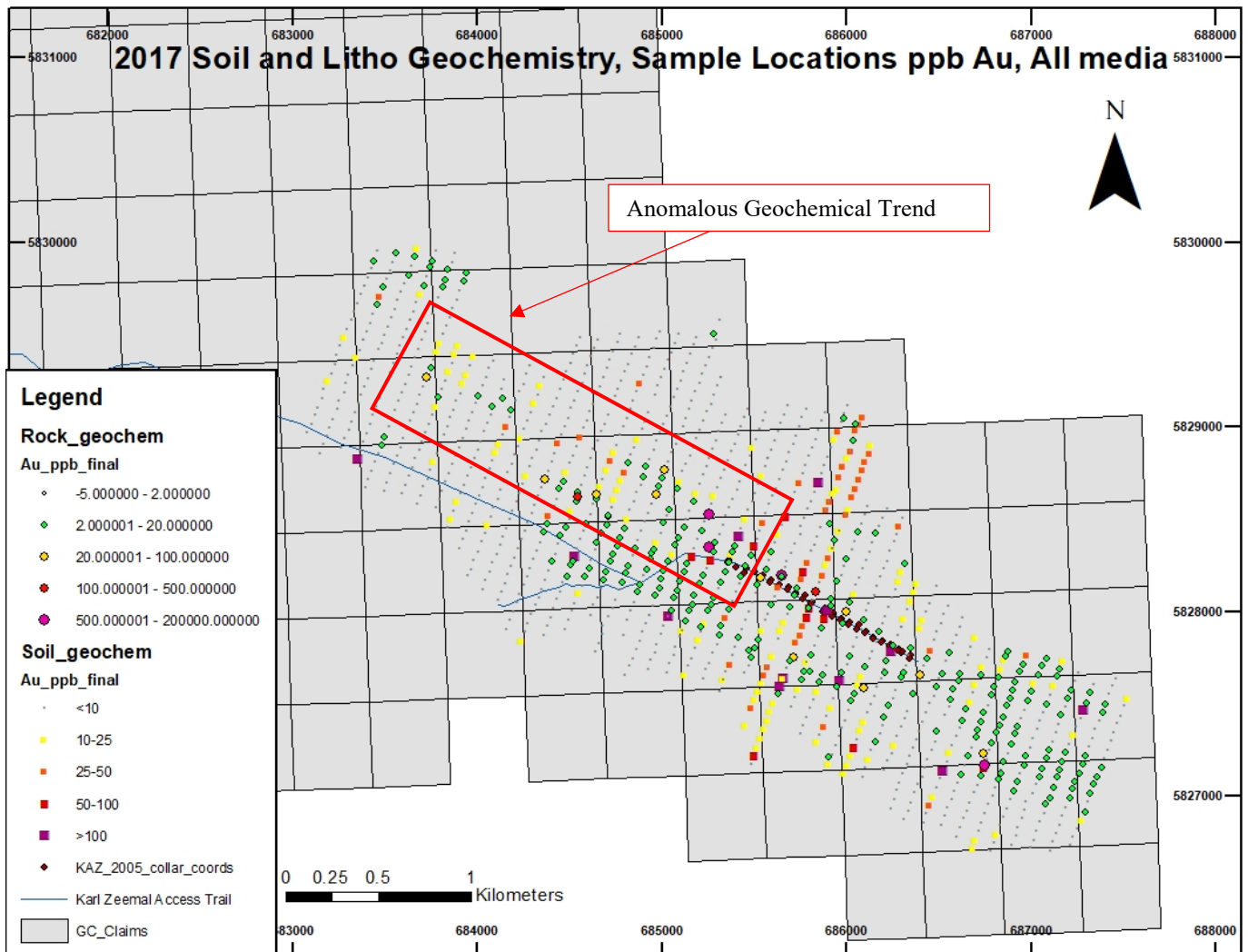


Figure 8. rock and soil sample location and ppb Au, identifying anomalous geochemical trend. Location reference in UTM-Nad83 Zone 15N

## Conclusions

Several conclusions may be drawn from the results of the program. It is evident that the most reliable soil geochemistry results in the local environment are obtained from the analysis of B-Horizon soils. These samples display excellent continuity with known near-surface bedrock mineralization, the location of which is marked by the location of 2005 diamond drill holes in Figure 8, As well as the greatest continuity of all soil types with geographically proximal outcrop analyses. Figure 8 below depicts a gradient plot of the ppb Au values obtained from all samples and all sample media, and the location of the most recent diamond drill holes in the area. There is a subtle but notable geochemical trend parallel to and Northwest of the known area of mineralization, outlined by the red rectangle. The author hypothesizes that the auriferous banded iron formation units encountered by power explorations drilling in 1988 and confirmed by Goldcorp Canada Ltd. in 2005, continue under cover along strike to the Northwest

## Recommendations

The Author recommends that future drilling be undertaken in the area to test the hypothesized continuation of the known auriferous trend, indicated by an anomalous geochemical trend and outlined on Figure 8. However, the anomalous trend exists in an area of thick glacial fluvial deposits, any possible effects glaciation may have had on the creation or presentation of this anomaly should be considered before significant exploration investments are made. During interpretation of the data significant challenges were encountered leveling geochemical data obtained from 5 distinct soil and rock sample media. Therefore, it is additionally recommended that any future soil sampling in the area consist of the collection of B-Horizon soils and outcropping bedrock only as their analysis proved to provide most effective date.

## Summary of Costs

A summary of all program costs can be observed in table 2 below. All relevant invoices and receipts are appended to this report. The total cost of personnel and services required to conduct the 2017 soil sampling program was \$178,877.41. All relevant invoices and receipts are appended to this report, non-relevant charges have been deducted from each invoice.

Table 2. summary of program costs, 2017 soil and litho geochemistry program

### Services and Materials

Category	Invoice Date	Invoice Number	Payee	Description	Amount
Transportation	27-Jun-17	6630	Wisk Air Helicopters	0.6 flight hrs.	\$782.40
	27-Jul-17	6661		2.4 flight hrs.	\$3,129.60
	21-Aug-17	6674		3.1 flight hrs.	\$4,042.40
	8-Sep-17	6692		5.6 flight hrs.	\$7,302.40
	27-Sep-17	6703		5.4 flight hrs.	\$7,041.60
	10-Oct-17	6714		1.8 flight hrs.	\$2,347.20
	23-Oct-17	6723		7.0 flight hrs.	\$9,128.00
				<b>Subtotal</b>	\$33,773.60
Assaying	4-Aug-17	A17-07441	Activation Laboratories Ltd.	UT-1/PH/TDS	\$387.00
	9-Aug-17	A17-07442		UT-1/PH/TDS	\$2,814.50
	11-Aug-17	A17-07438		UT-1/PH/TDS	\$8,336.50
	11-Aug-17	A17-07437		UT-1/PH/TDS	\$3,604.50
	18-Sep-17	A17-09167		UT-4/Fire Assay	\$2,802.00
	27-Sep-18	A17-09168		UT-4/Fire Assay	\$3,754.00
	18-Oct-17	A17-09668		UT-4/Fire Assay	\$2,868.55
	19-Oct-17	A17-09672		UT-4/Fire Assay	\$1,560.00
	17-Nov-17	A17-10380		UT-4/Fire Assay	\$12,504.00
	5-Jan-18	A17-12627		UT-4/Fire Assay	\$1,101.95
	2-Jan-18	A17-12624		UT-4/Fire Assay	\$3,648.00
	2-Jan-18	A17-12625		UT-4/Fire Assay	\$3,236.00
	2-Jan-18	A17-12631		UT-4/Fire Assay	\$1,158.00
	9-Nov-17	A17-10382		UT-4/Fire Assay	\$1,610.60
9-Nov-17	A17-10383	UT-4/Fire Assay	\$4,706.00		

10-Nov-17	A17-10877	UT-4/Fire Assay	\$1,569.50
10-Nov-17	A17-10880	UT-4/Fire Assay	\$1,569.50
10-Nov-17	A17-10882	UT-4/Fire Assay	\$1,129.50
22-Nov-12	A17-10896	UT-4/Fire Assay	\$1,591.20
22-Nov-12	A17-10885	UT-4/Fire Assay	\$729.30
3-Jan-18	A17-13833	UT-4/Fire Assay	\$1,236.16
3-Jan-18	A17-13835	UT-4/Fire Assay	\$530.40
3-Jan-18	A17-13836	UT-4/Fire Assay	\$364.65
10-Jan-18	A17-13834	UT-4/Fire Assay	\$1,092.00
9-Aug-17	A17-07439	UT-4/Fire Assay	\$510.00
<b>Subtotal</b>			\$64,413.81

## Personnel

Category	Person	Rate/Day	Person-days	Description	Amount
Field Operations	Technical Expert	\$2,000.00	1	Salary	\$2,000.00
	Exploration Supervisor	\$840.00	1		\$840.00
	Exploration Geologist	\$600.00	57		\$34,200.00
	Field Assistant	\$360.00	62		\$22,320.00
<b>Subtotal</b>					\$59,360.00
Planning	Exploration Geologist	\$600.00	5	salary	\$3,000.00
<b>Subtotal</b>					\$3,000.00
Reporting	Project Geologist	\$750.00	3	salary	\$2,250.00
<b>Subtotal</b>					\$2,250.00
Lodging	Goldcorp Personnel	\$80.00	129	Musselwhite Mine	\$10,320.00
	Wisk Air Personnel	\$80.00	84	Camp	\$5,760.00
<b>Subtotal</b>					\$16,080.00
<b>Program Total</b>					\$178,877.41

## 2018 Biogeochemical Program

### Table of claims

The 2018 biogeochemical survey described in this report was carried out in the following claims mining claims held by Goldcorp Canada Ltd in the District of Kenora.

Table 3. claims belonging to Goldcorp Canada Ltd. on which work was conducted during the 2018 biogeochemical survey

Claim Number	Type	Status	Date Issued	Date Due	Holder
114666	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
314497	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
307247	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
256091	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
239229	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
256090	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
211934	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
327249	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.

### Description of Program

Field activities related to the 2018 Karl Zeemal biogeochemical plant sampling program were conducted over a three-day period from August 21<sup>st</sup> – 23<sup>rd</sup> 2018. The objective of the program was to test the effectiveness of this type of geochemical analysis in the local environment by sampling over known bedrock mineralization, and by comparing to results against the aforementioned 2017 soil and litho geochemistry survey.

150 samples were collected at 50m intervals along two parallel lines striking 23° from true north spaced 100m apart. This grid was designed to exactly duplicate the 2017 soil and litho geochemical orientation survey. Two plant species were sampled at each sample site, labrador tea and black spruce. Labrador tea samples were collected by cutting several plants off at ground level to fill an 18cm x 32cm cloth bag, approximately 150g to 250g of material. Black spruce samples were collected from a single tree preferably between 2m and 2.5m in height. Approximately 100-200g of twigs representing the most recent 5 years of growth were cut from the tree to fill an 18cm x 32cm cloth bag. Samples were cut with a standard pair of garden shears. Data was collected on a GPS enabled Apple iPad Mini in custom survey forms created through the Esri ArcGIS Survey 123 Application. The application provided location data for sample locations in latitude and longitude, decimal degrees. Additional location information was available in UTM datum NAD83 Zone 15N from handheld Garmin inReach Explorer devices.

Samples of both plant species were shipped to ALS Canada Ltd. in Vancouver, British Columbia for chemical analysis. The specific components of the plants analyzed were black spruce needles and woody labrador tea stems and branches. All other materials were discarded. Sample preparation involved ashing the sample media in a 475° C kiln for 24 consecutive hours. A comprehensive super-trace analysis is then conducted on a 0.25g pulp of the ashed material by digestion in Aqua regia followed by ICP-MS.

## Results Conclusions and Recommendations

### Results

A complete table of all samples with field data and analytical results, sorted by sample media and then by sample number can be found in appendix IV. The primary objective of this survey was to determine if biogeochemical sampling of any plant species is an effective exploration tool within the local environmental and geological conditions. It is the opinion of the author that this has been accomplished with a positive result. Maps displayed in figures 9,10, and 11 below provide visual comparisons of relative Au abundances between labrador tea stems and black spruce needles sampled in 2018, as well as, leveled soil and lithogeochemical Au values obtained during the 2017 soil and litho geochemical orientation survey. As previously stated the 2018 biogeochemical survey grid was an intentional duplicate of the 2017 soil and litho geochemical orientation survey. This was done to improve the quality and confidence of any comparisons between the effectiveness of soil and vegetation sampling.



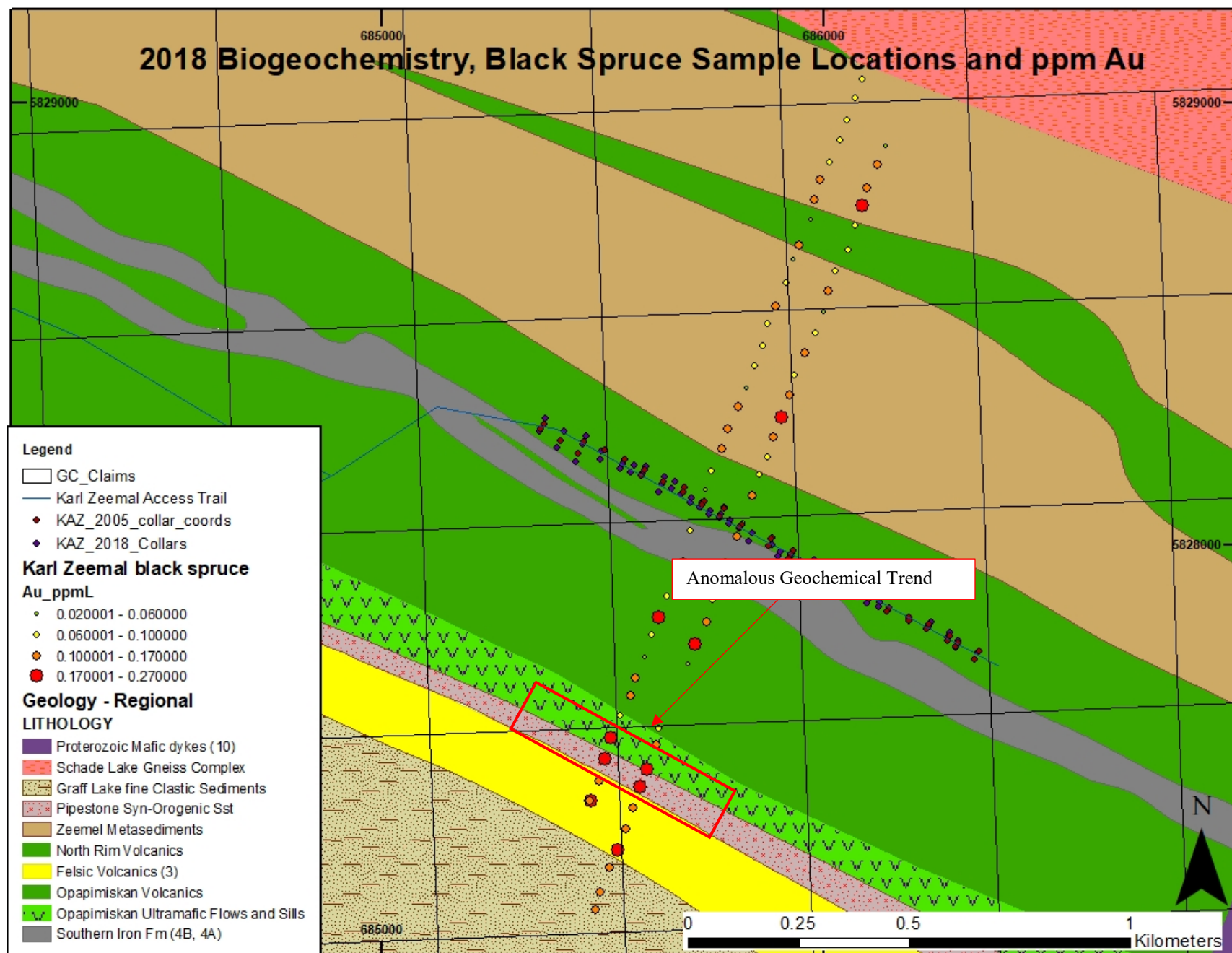


Figure 9. Location and ppb Au of 2018 Karl Zeemal black spruce samples, location reference in UTM-Nad83 Zone 15N

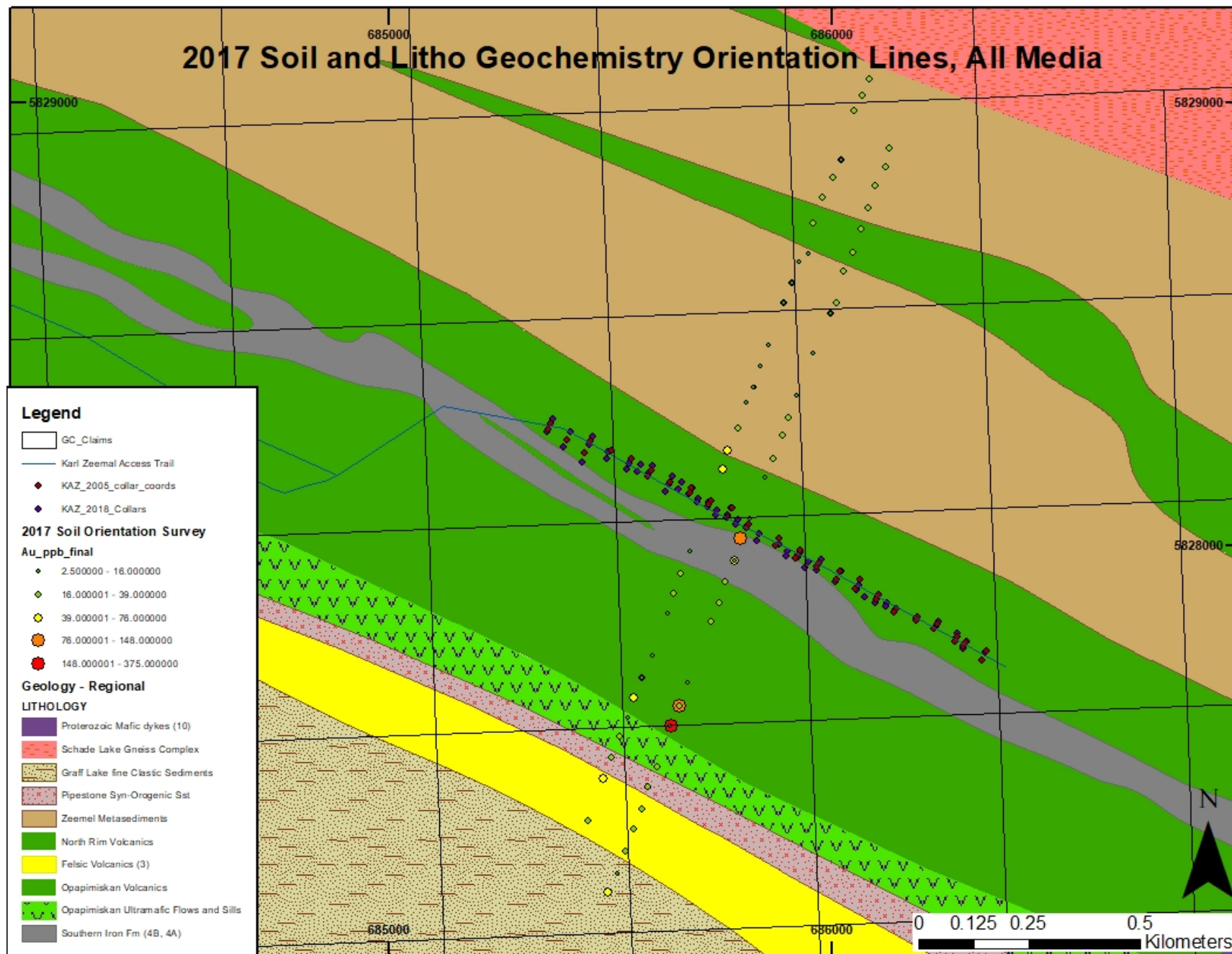


Figure 10. 2017 leveled soil and litho geochemistry orientation survey data sample location and ppb Au, location reference in UTM-Nad83 Zone 15N

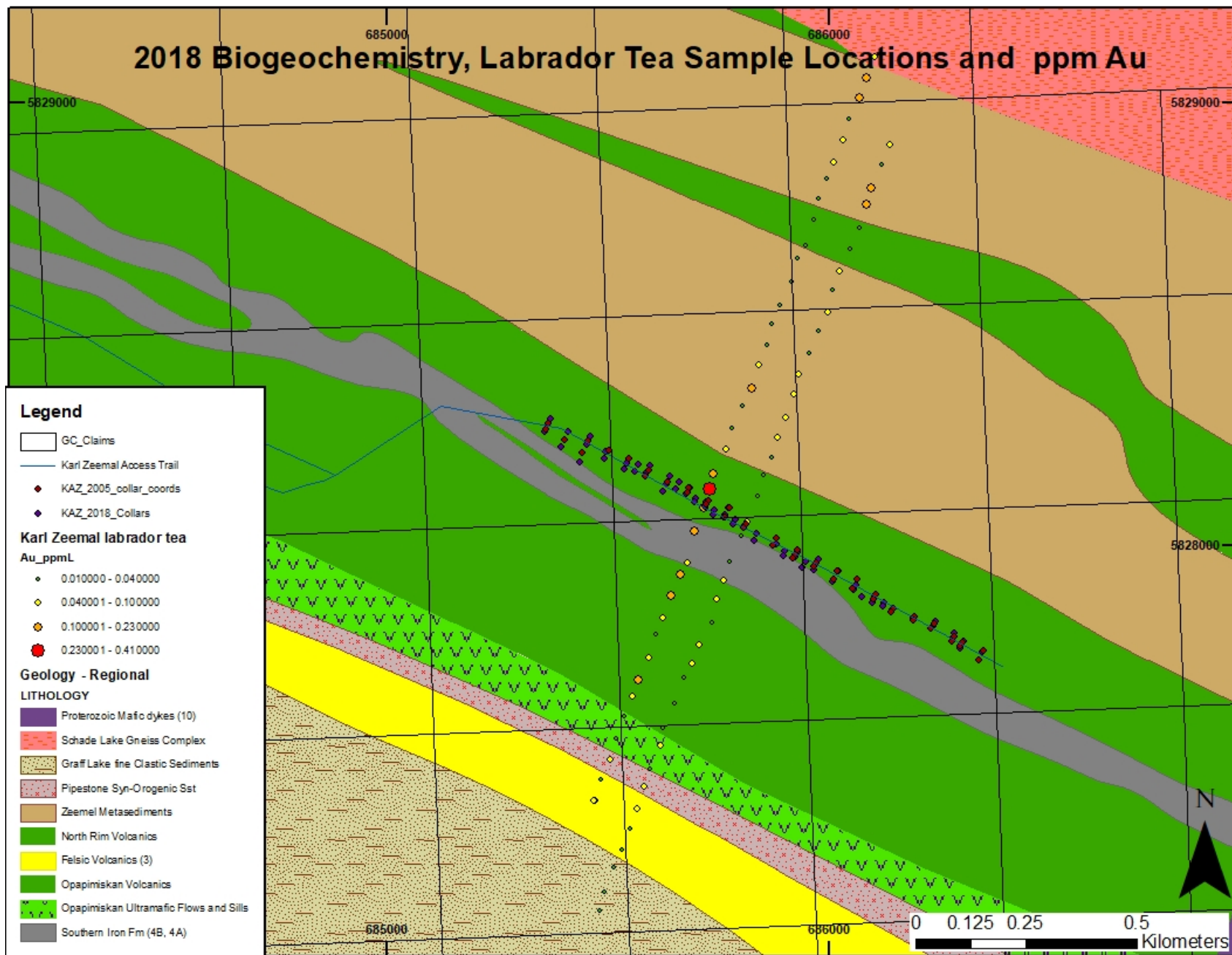


Figure 11. 2018 Biogeochemical survey labrador tea sample locations and ppm Au, location reference in UTM-Nad83 Zone 15N



## Conclusions

In comparisons with leveled data from the 2017 soil orientation survey, the plant results do not always correspond closely. However, one must consider the inconsistent availability of B-horizon soil and outcropping bedrock on these lines. The most effective multi element comparisons are between vegetation data and the full 2017 B-horizon and outcrop survey results (Figure 12). In doing so, it becomes apparent that anomalies of all three media lie on the same trends or clusters. Although all three surveys are comparable, black spruce needles are demonstrably more consistent with B-Horizon soils. It is evident from the data collected during this program that biogeochemical sampling of black spruce needles is, at a minimum, equally as effective as B-horizon soil sampling at delineating metalliferous geochemical anomalies. Additionally, direct comparison between Ag values in spruce needs and labrador tea stems shows that Ag is an order of magnitude more concentrated in black spruce adding weight to the determination that is a superior sample media to labrador tea in the detection of precious metal anomalies. As stated, it has been well established that the availability of quality soil sampling media (B-horizon) is highly inconsistent in the Karl Zeemal claim group. Therefore, the nearly ubiquitous distribution of black spruce trees throughout the region is an exploration advantage of critical importance.

The secondary objective of the program was to identify new geochemical exploration targets and add confidence to those identified by the 2017 soil and litho geochemistry program. Two are recommended as high priorities for future exploration. In referencing Figure 9, target 1 can be observed as a significant black spruce Au anomaly occurring in both sample lines at the southwestern boundary between the Opapimiskan-Markop metavolcanic and the Zeemal-Heaton metasedimentary terranes. Figure 13 depicts black spruce geochemical results over detailed Opapimiskan-Markop geology mapped by power explorations in 1988. A notable geochemical anomaly coinciding with the contact between mafic metavolcanic rocks and a strongly folded ultramafic intrusion is target 2.

## Recommendations.

As it is well documented for economic gold deposits to occur along significant volcanic-sedimentary terrane boundaries. For this reason, the geochemical anomaly along the Opapimiskan-Markop / Zeemal-Heaton contact (target 1) is highly recommended for follow up exploration. The planning of any future diamond drilling of the Karl Zeemal iron formations should consider testing this contact for economic Au mineralization. Less costly/more risk averse testing of this target can be accomplished with additional biogeochemical sampling along additional lines to Northwest and Southeast, centered over and perpendicular to the current anomalous trend. As this survey would be considerably more targeted, reducing sample spacing to half that of the 2018 survey is recommended. The second target identified in Figure 13 and described above is also recommended for follow up exploration. Assuming the Power Explorations geological map is accurate, this anomaly is present in a geological environment similar to the West Limb deposits occurring within the same geological terrane at Goldcorp's Musselwhite Mine 7 km to the Northwest. It is recommended that field reconnaissance be conducted to verify, if possible, the accuracy of the Power Explorations lithological map. If the result is positive, recommended actions are the same as described for target 1.

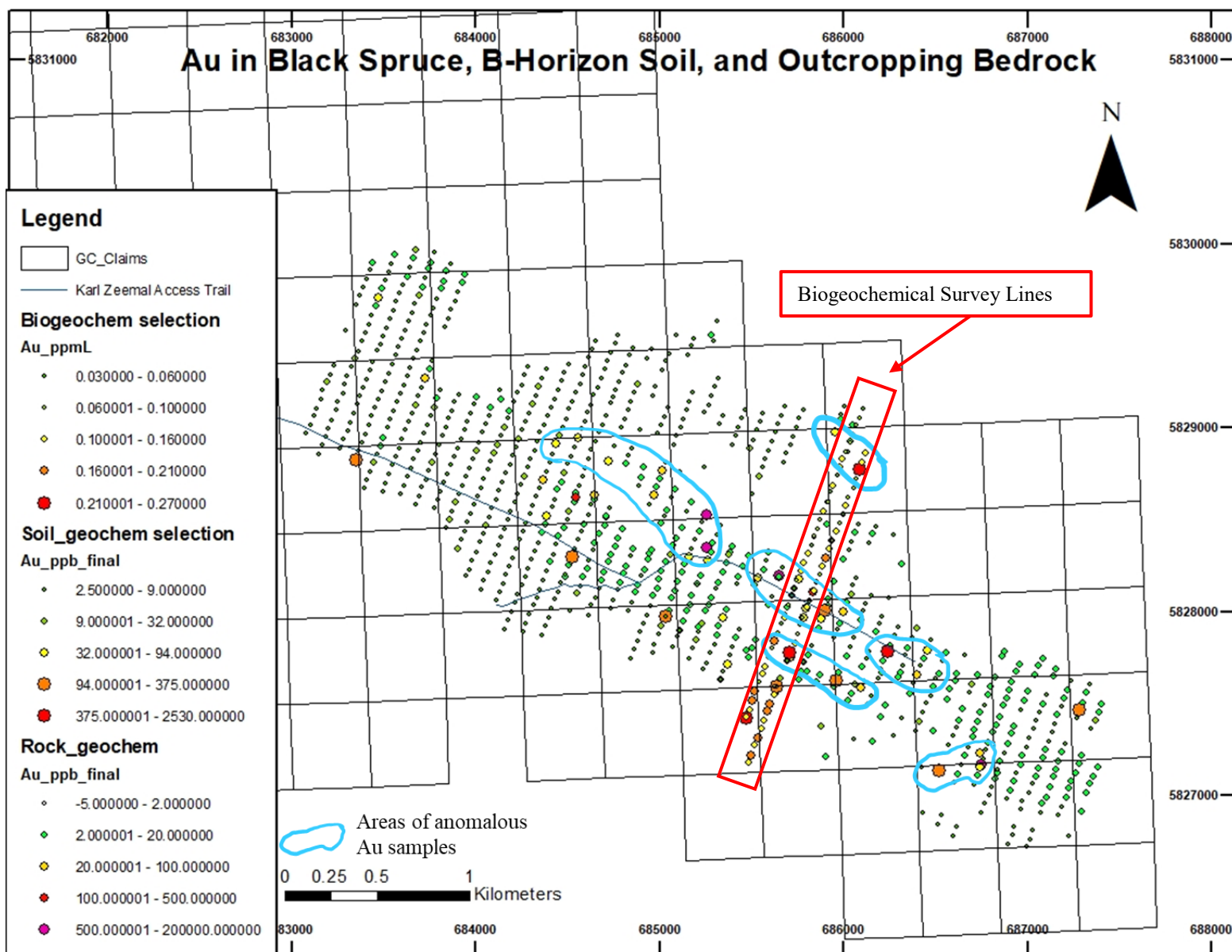


Figure 12. Common areas of anomalous Au between 2017 B-horizon soil samples, rock samples, and 2018 black spruce samples, location reference in UTM-Nad83 Zone 15N

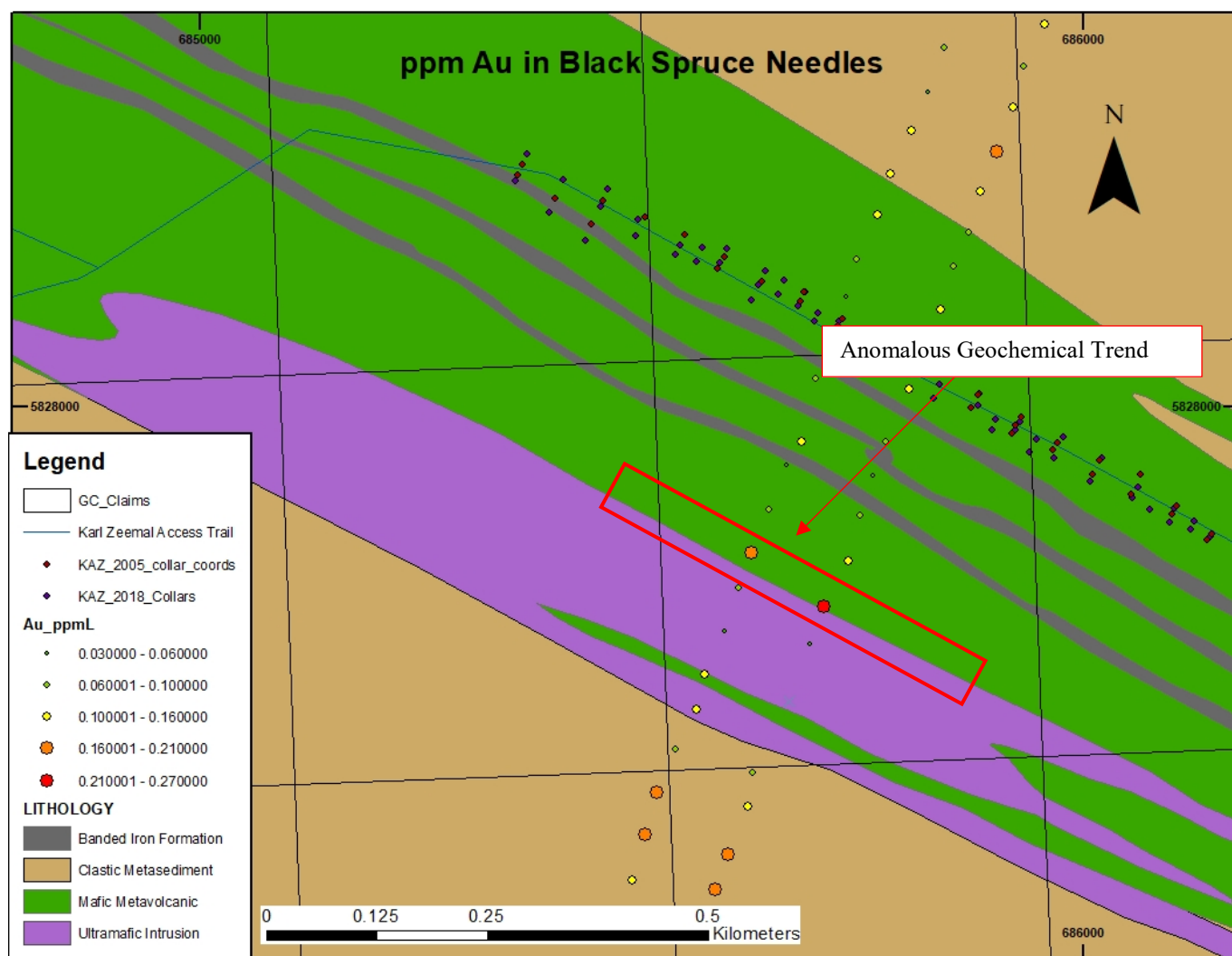


Figure 13. ppm Au in Black Spruce Needles over Karl Zeemal Geology mapped by Power Explorations. Location reference in UTM-Nad83 Zone 15N

## Summary of Costs

A summary of all expenditures required to perform the 2018 biogeochemical survey can be observed in table 4 below. All relevant invoices and receipts are appended to this report. The total cost of personnel and services required to conduct the 2018 biogeochemical sampling program was \$16,655.78

Table 4. Summary of program expenditures, 2018 biogeochemical survey

### Services and Materials

Category	Invoice Date	Invoice Number	Payee	Description	Amount
Transportation	6-Sep-18	6984	Wisk Air Helicopters	1.8 flight hrs.	\$2,349.00
				<b>Subtotal</b>	\$2,349.00
Assaying	10-Oct-18	4448037	ALS Canada Ltd.	ME-VEG41a	\$6,527.66
				<b>Subtotal</b>	\$6,527.66
Consulting	24-Sep-18	113-18	Colin Dunn Consulting	Reference samples and laboratory supervision	\$834.36
				<b>Subtotal</b>	\$834.36
Staffing	29-Aug-18	935359	Ojjjakoes Community Development Corp.	Field Assistant	\$1,004.76
				<b>Subtotal</b>	\$1,004.76

### Personnel

Category	Person	Rate/Day	Person-days	Description	Amount
Field	Exploration Geologist	\$600.00	3	Salary	\$1,800.00
Operations	Summer Student	\$360.00	3		\$1,080.00
				<b>Subtotal</b>	\$2,880.00
Planning	Exploration Geologist	\$600.00	1	salary	\$600.00
				<b>Subtotal</b>	\$600.00
Reporting	Project Geologist	\$750.00	2	salary	\$1,500.00
				<b>Subtotal</b>	\$1,500.00
Lodging	Goldcorp Personnel	\$80.00	9	Musselwhite Mine Camp	\$720.00
	Ojjjakoes	\$80.00	3		\$240.00
				<b>Subtotal</b>	\$960.00
				<b>Program Total</b>	\$16,655.78



# **Diamond Drilling**

## 2018 Mine Grid Expansion

### Table of Claims

Table 5 Below contains a list of all mining claims held by Goldcorp Canada Ltd. in the District of Kenora which the Musselwhite Mine local grid was expanded to include.

Table 5. Table of Claims included in the Musselwhite Mine Grid Expansion, work required to survey the Karl Zeemal Exploration diamond drill holes.

Claim Number	Type	Status	Date Issued	Date Due	HOLDER
343353	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
109175	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
270800	Boundary Cell Mining Claim	Active	2018-04-10	2020-09-22	GOLDCORP CANADA LTD.
114853	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
255858	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
150923	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
182168	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
113176	Single Cell Mining Claim	Active	2018-04-10	2021-10-26	GOLDCORP CANADA LTD.
123833	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
144055	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
342064	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
103046	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
114666	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
328265	Single Cell Mining Claim	Active	2018-04-10	2020-03-05	GOLDCORP CANADA LTD.
286554	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
277907	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
251433	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
336036	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
174627	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
343336	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
311452	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
270098	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
138429	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
221578	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
138543	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
267010	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
201558	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
300465	Boundary Cell Mining Claim	Active	2018-04-10	2020-09-22	GOLDCORP CANADA LTD.
242138	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
220416	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
239280	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
266907	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
271979	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
206974	Single Cell Mining Claim	Active	2018-04-10	2020-10-27	GOLDCORP CANADA LTD.
169204	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
166005	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
101493	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
314184	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
145203	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
159347	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
188894	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
182182	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
292728	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
110988	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
293916	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
191417	Single Cell Mining Claim	Active	2018-04-10	2020-03-11	GOLDCORP CANADA LTD.
260014	Boundary Cell Mining Claim	Active	2018-04-10	2021-01-13	GOLDCORP CANADA LTD.
245375	Single Cell Mining Claim	Active	2018-04-10	2020-09-09	GOLDCORP CANADA LTD.
246146	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
205813	Single Cell Mining Claim	Active	2018-04-10	2020-06-26	GOLDCORP CANADA LTD.
143985	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
323586	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
298012	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
103159	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
293796	Single Cell Mining Claim	Active	2018-04-10	2020-10-27	GOLDCORP CANADA LTD.
135449	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.



221547	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
173864	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
275629	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
173574	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
201445	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
291977	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
284118	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
131005	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
322026	Boundary Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
227221	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
196120	Boundary Cell Mining Claim	Active	2018-04-10	2022-08-28	GOLDCORP CANADA LTD.
169856	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
219826	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
173215	Single Cell Mining Claim	Active	2018-04-10	2020-10-27	GOLDCORP CANADA LTD.
173214	Single Cell Mining Claim	Active	2018-04-10	2020-06-24	GOLDCORP CANADA LTD.
169714	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
101311	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
110989	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
117381	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
336654	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
193087	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
173861	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
172216	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
158596	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
156173	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
152331	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
238624	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
205499	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
127698	Single Cell Mining Claim	Active	2018-04-10	2022-09-26	GOLDCORP CANADA LTD.
268514	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
328286	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
155064	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
180196	Single Cell Mining Claim	Active	2018-04-10	2022-09-26	GOLDCORP CANADA LTD.
189783	Single Cell Mining Claim	Active	2018-04-10	2020-10-27	GOLDCORP CANADA LTD.
196331	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
145301	Boundary Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
254321	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
295912	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
284119	Boundary Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
333408	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
231931	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
299909	Boundary Cell Mining Claim	Active	2018-04-10	2022-02-23	GOLDCORP CANADA LTD.
101312	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
118855	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
118461	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
239228	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
329699	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
331555	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
345411	Single Cell Mining Claim	Active	2018-04-10	2020-10-27	GOLDCORP CANADA LTD.
198631	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
169203	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
262426	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
104193	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
260389	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
271830	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
103263	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
283479	Boundary Cell Mining Claim	Active	2018-04-10	2020-09-22	GOLDCORP CANADA LTD.
241703	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
144002	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
262238	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
265151	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
187548	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
146416	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
156135	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
274706	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
118361	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
275628	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
315101	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
322532	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
294490	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
333409	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
127065	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.

142913	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
171316	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
180617	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
296522	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
344132	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
134361	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
194322	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
325180	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
221549	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
307247	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
262237	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
190481	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
126357	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
241102	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
290688	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
255856	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
114337	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
237752	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
276673	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
256091	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
145204	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
118157	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
140463	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
290687	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
318616	Boundary Cell Mining Claim	Active	2018-04-10	2020-12-02	GOLDCORP CANADA LTD.
278629	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
306670	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
149375	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
274900	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
185778	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
239354	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
114913	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
148870	Single Cell Mining Claim	Active	2018-04-10	2020-09-09	GOLDCORP CANADA LTD.
160522	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
107027	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
183629	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
154945	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
289301	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
306493	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
335638	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
131381	Boundary Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
322424	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
232829	Boundary Cell Mining Claim	Active	2018-04-10	2022-08-28	GOLDCORP CANADA LTD.
201559	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
241103	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
231325	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
130379	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
201603	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
172877	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
249768	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
285820	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
169202	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
239229	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
195774	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
153114	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
317923	Boundary Cell Mining Claim	Active	2018-04-10	2022-08-28	GOLDCORP CANADA LTD.
263751	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
160677	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
277906	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
321750	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
172599	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
180780	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
128739	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
178893	Boundary Cell Mining Claim	Active	2018-04-10	2020-06-26	GOLDCORP CANADA LTD.
226670	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
136656	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
138104	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
335178	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
249423	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
256090	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
148922	Single Cell Mining Claim	Active	2018-04-10	2020-03-11	GOLDCORP CANADA LTD.
333263	Boundary Cell Mining Claim	Active	2018-04-10	2022-02-23	GOLDCORP CANADA LTD.

209006	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
280494	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
270551	Single Cell Mining Claim	Active	2018-04-10	2021-10-26	GOLDCORP CANADA LTD.
117790	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
171598	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
228437	Single Cell Mining Claim	Active	2018-04-10	2022-09-26	GOLDCORP CANADA LTD.
267009	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
211934	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
174619	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
297301	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
220488	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
138750	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
331297	Boundary Cell Mining Claim	Active	2018-04-10	2022-08-28	GOLDCORP CANADA LTD.
206262	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
180572	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
228480	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
144030	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
116821	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
189005	Single Cell Mining Claim	Active	2018-04-10	2020-10-07	GOLDCORP CANADA LTD.
164073	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
264042	Boundary Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
219228	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
247812	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
323204	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
158190	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
170316	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
198886	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
271824	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
171230	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
285885	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
117380	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
174918	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
312010	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
266906	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
196787	Boundary Cell Mining Claim	Active	2018-04-10	2020-09-22	GOLDCORP CANADA LTD.
306599	Single Cell Mining Claim	Active	2018-04-10	2020-03-11	GOLDCORP CANADA LTD.
315601	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
276472	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
128738	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
287110	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
140272	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
326028	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
318129	Single Cell Mining Claim	Active	2018-04-10	2020-09-09	GOLDCORP CANADA LTD.
153825	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
130002	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
240050	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
186763	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
315513	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
246776	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
244203	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
112059	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
323941	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
239281	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
171597	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
174443	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
141994	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
323127	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
336032	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
133412	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
276672	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
208916	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
172222	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
130003	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
112584	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
327248	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
324025	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
212536	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
123834	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
250413	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
168933	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
302511	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
226093	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.

271911	Single Cell Mining Claim	Active	2018-04-10	2020-09-09	GOLDCORP CANADA LTD.
327249	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
253494	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
267958	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
164580	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
139710	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
282418	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
300666	Boundary Cell Mining Claim	Active	2018-04-10	2022-08-28	GOLDCORP CANADA LTD.
234468	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
186624	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
186762	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
186761	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
301350	Boundary Cell Mining Claim	Active	2018-04-10	2020-04-12	GOLDCORP CANADA LTD.
169205	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
250095	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
261301	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
285156	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
248845	Single Cell Mining Claim	Active	2018-04-10	2022-09-26	GOLDCORP CANADA LTD.
218770	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
291976	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
343337	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
198529	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
189782	Single Cell Mining Claim	Active	2018-04-10	2020-10-27	GOLDCORP CANADA LTD.
335004	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
286596	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
209126	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
132619	Boundary Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
139441	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
230724	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
163318	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
148451	Single Cell Mining Claim	Active	2018-04-10	2020-09-22	GOLDCORP CANADA LTD.
274899	Single Cell Mining Claim	Active	2018-04-10	2020-10-27	GOLDCORP CANADA LTD.
117791	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
156172	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
255857	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
138628	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
205498	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
186816	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
204852	Boundary Cell Mining Claim	Active	2018-04-10	2020-12-02	GOLDCORP CANADA LTD.
310246	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
171241	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
267634	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
286976	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
293293	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
284475	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
171796	Single Cell Mining Claim	Active	2018-04-10	2020-09-09	GOLDCORP CANADA LTD.
196832	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
220432	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
286595	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
206973	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
175011	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
318128	Single Cell Mining Claim	Active	2018-04-10	2020-09-09	GOLDCORP CANADA LTD.
227745	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
110987	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
272329	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
311813	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
255656	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
228866	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
292320	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
156171	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
177522	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
258722	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
206261	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
274968	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
193088	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
128082	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
225879	Single Cell Mining Claim	Active	2018-04-10	2021-10-26	GOLDCORP CANADA LTD.
256182	Single Cell Mining Claim	Active	2018-04-10	2020-09-09	GOLDCORP CANADA LTD.
342077	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
260020	Boundary Cell Mining Claim	Active	2018-04-10	2021-12-28	GOLDCORP CANADA LTD.
221207	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
292727	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.



320967	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
259427	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
338274	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
168759	Boundary Cell Mining Claim	Active	2018-04-10	2022-02-23	GOLDCORP CANADA LTD.
229935	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
337184	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
187163	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
219192	Single Cell Mining Claim	Active	2018-04-10	2022-09-11	GOLDCORP CANADA LTD.
107954	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
318585	Boundary Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
113912	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
142914	Single Cell Mining Claim	Active	2018-04-10	2020-01-28	GOLDCORP CANADA LTD.
114365	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
152150	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
220415	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
335631	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
230086	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
142443	Single Cell Mining Claim	Active	2018-04-10	2020-10-07	GOLDCORP CANADA LTD.
316380	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
316964	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
176778	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
219806	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
126778	Single Cell Mining Claim	Active	2018-04-10	2020-01-13	GOLDCORP CANADA LTD.
319452	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
309959	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
172188	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
126572	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
100746	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
287072	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
333227	Single Cell Mining Claim	Active	2018-04-10	2022-10-27	GOLDCORP CANADA LTD.
265915	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
179552	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
331782	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
272330	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
192132	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
221605	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
297513	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
343338	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
153386	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
315727	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
124419	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
315106	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
125861	Single Cell Mining Claim	Active	2018-04-10	2020-09-11	GOLDCORP CANADA LTD.
268832	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
208943	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
276075	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
219274	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
253278	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
156092	Single Cell Mining Claim	Active	2018-04-10	2020-10-26	GOLDCORP CANADA LTD.
206642	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
177330	Single Cell Mining Claim	Active	2018-04-10	2020-09-12	GOLDCORP CANADA LTD.
128917	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
219735	Single Cell Mining Claim	Active	2018-04-10	2020-10-27	GOLDCORP CANADA LTD.
333040	Boundary Cell Mining Claim	Active	2018-04-10	2020-12-31	GOLDCORP CANADA LTD.
320130	Single Cell Mining Claim	Active	2018-04-10	2020-02-11	GOLDCORP CANADA LTD.
290801	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
234451	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
154377	Single Cell Mining Claim	Active	2018-04-10	2020-10-27	GOLDCORP CANADA LTD.
254116	Single Cell Mining Claim	Active	2018-04-10	2020-09-10	GOLDCORP CANADA LTD.
103282	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.

## Description of work

Surveying of the 2018 Karl Zeemal exploration diamond drill holes into the local mine grid of Goldcorp Canada Ltd's Musselwhite Mine required significant expansion of this grid on surface. Total Precision Surveying of Sault Saint Marie, Ontario was commissioned to perform this work with the assistance of

a staff surveyor from Goldcorp’s Musselwhite Mine. Field operations occurred over a 5-day period from April 16<sup>th</sup> to April 20<sup>th</sup>, 2018.

The grid was established around a group of seven control points (Figure 14.) surveyed to 3 cm accuracy using a Leica GX1230 differential GPS Base station and rover. Survey markers consisted of a ½ inch rebar pin drilled into bedrock or very large boulders. Markers were left in place for future check surveys or additional grid expansions. The differential GPS base station is located within the industrial complex of Musselwhite Mine. Transportation to and from the field control points was provided by Wisk Air Helicopters of Thunder bay Ontario who provided a Bel 206 Long Ranger Helicopter.

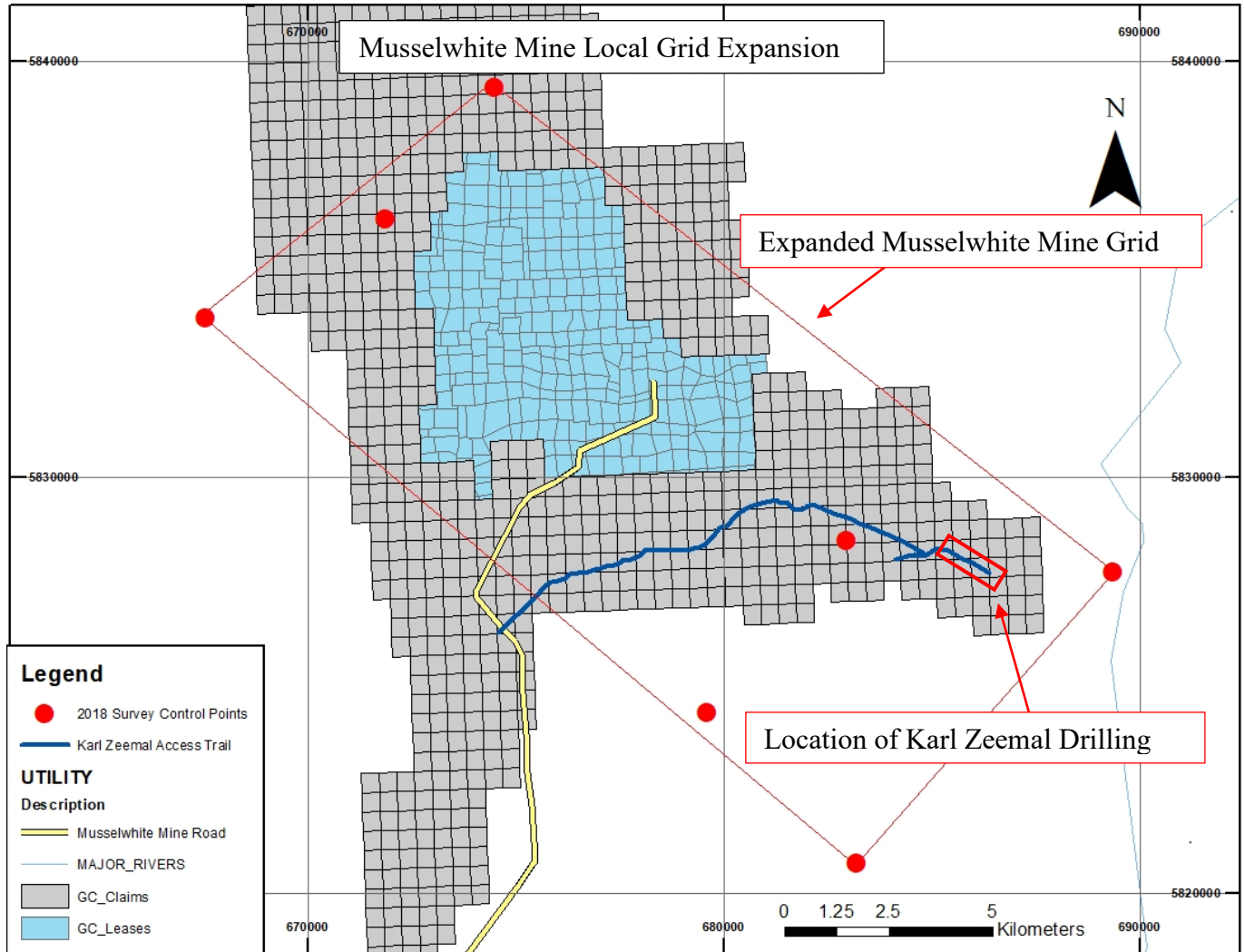


Figure 14. Map of survey control points used to expand the local grid of Goldcorp Canada Ltd.'s Musselwhite Mine. new grid is enclosed within the large red box .

### Summary of Expenses

Table 6 below contains a comprehensive summary of all costs incurred to complete the expansion of Musselwhite Mine’s local grid over the Karl Zeemal claim group. Total cost to complete the work totaled \$36,777.50. all relevant invoices are appended to this report.

Table 6. Summary of expenses incurred to complete an expansion of Musselwhite Mine's local grid over the Karl Zeemal claim group

### Services and Materials

Category	Invoice Date	Invoice Number	Payee	Description	Amount
Transportation	24-Apr-18	6809	Wisk Air Helicopters	18.7 flight hrs.	\$24,427.50
<b>Subtotal</b>					\$24,427.50
Surveying	26-Apr-18	4570028749	Total Precision Surveying	Control point survey and grid expansion	\$7,720.00
<b>Subtotal</b>					\$7,720.00

### Personnel

Category	Person	Rate/Day	Person-days	Description	Amount
Field Operations	Staff surveyor - Field assistant	\$400.00	4	Salary	\$1,600.00
<b>Subtotal</b>					\$1,600.00
Planning	Exploration Supervisor	\$840.00	1	Salary	\$840.00
<b>Subtotal</b>					\$840.00
Reporting	Project Geologist	\$750.00	1	Salary	\$750.00
<b>Subtotal</b>					\$750.00
Lodging	Goldcorp	\$80.00	6	Musselwhite Mine	\$480.00
	Wisk Air	\$80.00	8	Camp	\$640.00
	TPS	\$80.00	4		\$320.00
<b>Subtotal</b>					\$1,440.00
<b>Program Total</b>					\$36,777.50

## 2018 Exploration Trail Construction

### Table of Claims

Construction of a permitted trail for the purposes of diamond drill mobilization was undertaken through the following claims held by Goldcorp Canada Ltd. in District of Kenora.

Table 7. Goldcorp Canada Ltd. Claims through which the exploration drilling trail was constructed

Claim Number	Type	Status	Date Issued	Date Due	HOLDER
103263	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
110987	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
117380	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
117381	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
117791	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
128917	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
133412	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
146319	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
152331	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
153421	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
164073	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
164580	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
171597	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
174918	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
182182	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
193087	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
206262	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
208943	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
219340	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
219826	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
223652	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
259427	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
262150	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
262237	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
262238	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
267010	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
272329	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
272330	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
289301	Single Cell Mining Claim	Active	2018-04-10	2021-03-11	GOLDCORP CANADA LTD.
306670	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
314497	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
315601	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
323204	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
326240	Single Cell Mining Claim	Active	2018-04-10	2020-09-26	GOLDCORP CANADA LTD.
327248	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
327249	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
329699	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
329755	Single Cell Mining Claim	Active	2018-04-10	2021-01-28	GOLDCORP CANADA LTD.
335178	Single Cell Mining Claim	Active	2018-04-10	2020-11-06	GOLDCORP CANADA LTD.
336032	Single Cell Mining Claim	Active	2018-04-10	2022-06-24	GOLDCORP CANADA LTD.
336036	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
343336	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.
343337	Single Cell Mining Claim	Active	2018-04-10	2021-10-27	GOLDCORP CANADA LTD.

### Description of Program

The mobilization of two diamond drilling rigs into the Karl Zeemal claims required the construction of a trail. Work associated with this project took place in two phases. During the summer of 2017 members of Goldcorp Canada Ltd.'s Musselwhite Mine environment and sustainability department surveyed and began permitting the route. Construction began the following spring and was carried out by LTL Contracting Ltd. of Thunder Bay Ontario. The work required the installation of cross drains at

four water crossing locations. The culvert installation work was conducted under the work permit SL2017-0192-AP001, appended to this report (Appendix X)

Route surveying was conducted to identify the location of any water crossings, sensitive environments, or species at risk. A Bell 206 long ranger helicopter was used to transport environmental professionals during the survey work, this vehicle was provided and operated by Wisk Air Helicopters of Thunder Bay Ontario. Location data of the proposed route was acquired using a Garmin GPSmap 60CSx device in UTM Datum NAD 83 Zone 15N.

Field activities associated with the construction of the trail commenced on June 25<sup>th</sup>, 2018 and concluded on September 11<sup>th</sup>, 2018. LTL Contracting Ltd. provided a 5-person crew and the necessary equipment to complete the work which included a backhoe, bulldozer and two dump trucks. Field activities totaled 229 person-days. Figure 15 below depicts the Karl Zeemal Access trail as built over a cell grid of Goldcorp Canada Ltd's exploration claims.

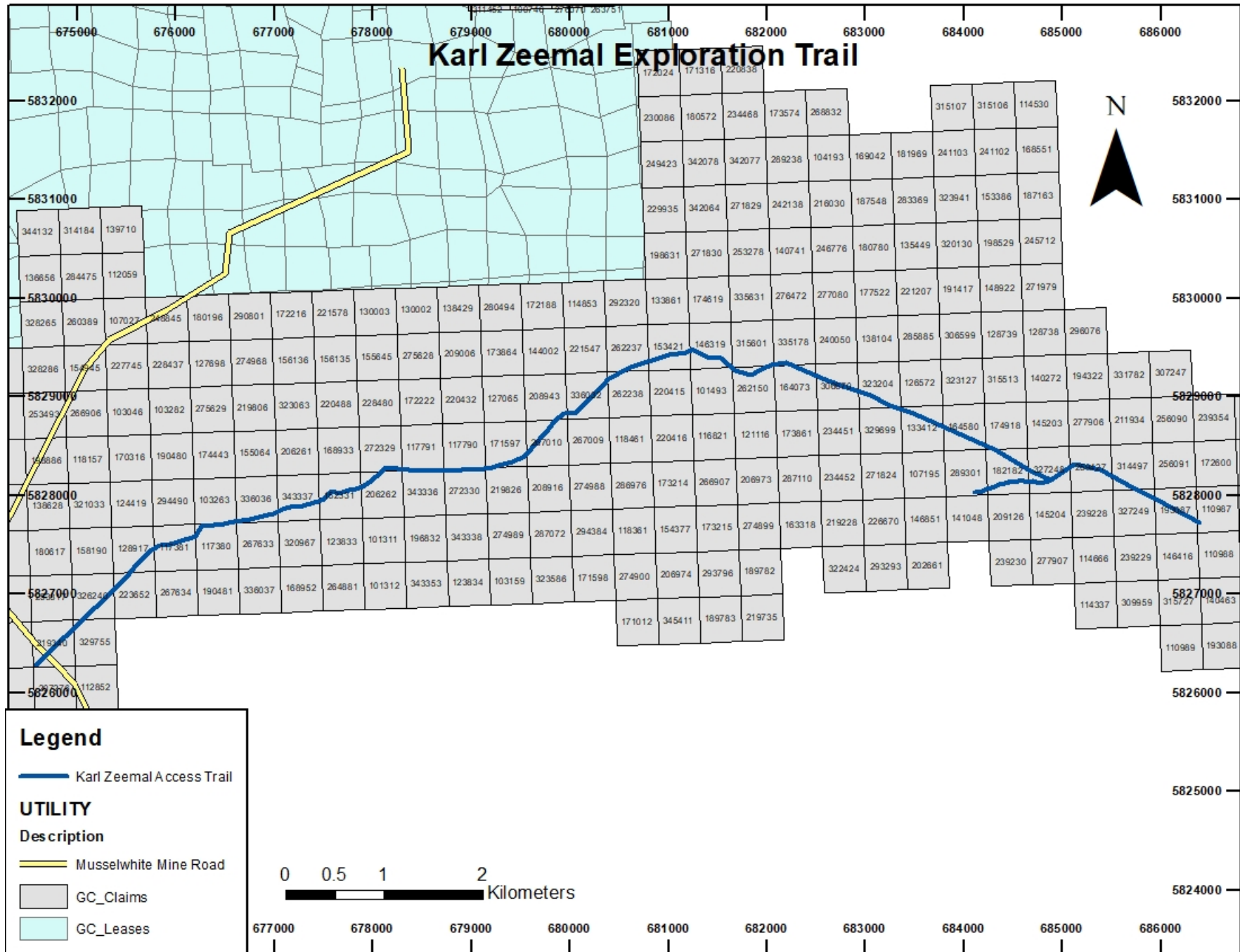


Figure 15. Map of Karl Zeemal Trail, location reference in UTM-NAD83 Zone 15N

## Summary of Costs

Table 5. below contains a detailed summary of costs incurred during the construction of an access trail for the mobilization of two diamond drilling rigs into Goldcorp Canada Ltd.'s Karl Zeemal claims. Total trail expenditures totaled \$542,130.65

Table 8. Summary of costs for the construction of the Karl Zeemal exploration drilling access trail

### Services and Materials

Category	Invoice Date	Invoice Number	Payee	Description	Amount
Transportation	10-Oct-17	6714	Wisk Air	4.1 flight hrs.	\$5,346.40
	18-Jul-18	6921	Helicopters	4.1 flight hrs.	\$5,350.50
<b>Subtotal</b>					\$10,305.70
Construction	31-Jul-18	C20180701	LTL Contracting Ltd.	Rim Certification	\$10,000.00
	31-Jul-18	C20180700		Trail Construction	\$121,671.75
	30-Aug-18	20180910		Trail Construction	\$365,015.25
<b>Subtotal</b>					\$496,687.00
Materials	15-Jul-18		Armtec	Culverts	\$3,147.95
<b>Subtotal</b>					\$3,147.95
<b>Personnel</b>					
Category	Person	Rate/Day	Person-days	Description	Amount
Route Surveying	Environmental Coordinator	\$840.00	5	Salary	\$4,200.00
<b>Subtotal</b>					\$4,200.00
Inspection	Logistics Supervisor	\$840.00	9	Salary	\$6,720.00
<b>Subtotal</b>					\$6,720.00
Reporting	Project Geologist	\$750.00	1	Salary	\$750.00
<b>Subtotal</b>					\$750.00
Lodging	Goldcorp Personnel	\$80.00	15	Musselwhite Mine Camp	\$1,200.00
	Wisk Air	\$80.00	10		\$800.00
	LTL	\$80.00	229		\$18,320.00
<b>Subtotal</b>					\$20,320.00
<b>Program Total</b>					\$542,130.65



## 2018 Exploration Diamond Drilling

### Table of claims

Exploration drilling of historically identified gold bearing banded iron formations was conducted on the following claims held by Goldcorp Canada Ltd. in the District of Kenora

Table 9. Goldcorp Canada Ltd. Karl Zeemal Claims on which exploration diamond drilling was conducted

Claim Number	Type	Status	Date Issued	Date Due	HOLDER
314497	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
193087	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
327249	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.
259427	Single Cell Mining Claim	Active	2018-04-10	2021-02-11	GOLDCORP CANADA LTD.

### Description of program

Activities required to execute the 2018 Karl Zeemal Exploration drilling program on behalf of Goldcorp Canada Ltd. included, mobilization of equipment, preparation of drill pads, drilling, and demobilization. Field operations were conducted daily between and July 1st, 2018 and October 30<sup>th</sup>, 2018 totaling 122 operational days. The program consisted of two LF-70 diamond drill rigs drilling 32 NQ holes totaling 2430m. This work was conducted under and authorized by Exploration Permit number PR-17-11171, appended to this report. Drilling services and pad preparation was provided by Boart Longyear of Haileybury, Ontario. With operational support for the transportation of personnel and materials from Wisk Air Helicopters of Thunder Bay Ontario. Project planning, Supervision, and drill hole surveying was facilitated by staff Exploration Geologists, Geology Supervisors, and surveyors employed at Goldcorp Canada Ltd.'s Musselwhite Mine. Diamond drill rigs were towed into the program area with the use of a bulldozer on a trail constructed for the purpose, and previously described in this report.

All drill core was logged and sampled by staff exploration geologists at Musselwhite Mine. Drill core was cut prior to analysis by employees of Ojijakoes Community Development Corp. One half of each holes is retained at Musselwhite Mine for future reference. Analytical services were provided by Activation Laboratories Ltd. at locations in Dryden, Ontario and Geraldton, Ontario. 30g pulps of pulverized and homogenized drill core samples were analyzed by fire assay. An industry standard QA/QC program was implemented to audit the quality and reliability of laboratory results. Samples returning over 10 ppm Au are reanalyzed with Gravimetric Fire Assay.

In 2005 the Karl Zeemal prospect was drilled by Goldcorp Canada Ltd. to confirm and expand on results obtained by Power Explorations in 1988. The 2005 Goldcorp program was unsuccessful in confirming the presence of an economic resource and recommended that no further exploration take place until favorable market conditions made the prospect more economical. The purpose of the 2018 Karl Zeemal drilling program was in infill the 2005 drill hole spacing with the objective of rebuilding the geological model and performing a resource calculation if applicable.

The target of exploration is two synformally folded units of banded iron formations hosted within the Opapimiskan-Markop metavolcanic terrane. The units are typically 1-5m in width, and outcrop on surface. Historically these units have hosted significant Au bearing pyrrhotite mineralization and visible gold grains in areas of folding, shearing, gruneritization. Values are notably elevated in intervals of brecciation especially where breccias are cemented with pyrrhotite.

Table 10. Karl Zeemal drill hole collar info, locations in both Musselwhite Mine grid (surveyed) and UTM (converted)

Hole Number	Planned Dip (degrees)	Planned Azimuth (Mine North)	Planned Azimuth (True North)	Length (m)	Core Diameter	Surveyed East (Mine Grid)	Surveyed North (Mine Grid)	Surveyed Mine Reference Level	UTM East (Converted)	UTM North (Converted)
18-KAZ-001	-62	248	203.8	139	NQ	10975.3956	1840.8983	5317.3784	685367.4699	5828284.621
18-KAZ-002	-54	248	203.8	134	NQ	10975.3956	1840.8983	5317.3784	685367.4699	5828284.621
18-KAZ-012	-62	248	203.8	41	NQ	11013.682	1699.241	5318.495	685493.6219	5828209.676
18-KAZ-013	-62	248	203.8	38	NQ	11000.883	1687.758	5319.304	685492.4392	5828192.511
18-KAZ-025	-52	248	203.8	209	NQ	11085.117	1532.609	5314.797	685660.9537	5828139.886
18-KAZ-028	-55	248	203.8	50	NQ	11093.309	1508.189	5314.745	685683.8429	5828128.073
18-KAZ-034	-64	248	203.8	51	NQ	11100.097	1457.302	5314.646	685724.1628	5828096.295
18-KAZ-035	-48	248	203.8	47	NQ	11099.067	1456.788	5314.694	685723.7819	5828095.209
18-KAZ-036	-48	248	203.8	31	NQ	11092.637	1453.735	5315.211	685721.2958	5828088.539
18-KAZ-040	-63	248	203.8	39	NQ	11123.073	1412.952	5314.067	685771.5423	5828080.484
18-KAZ-041	-63	248	203.8	46	NQ	11110.032	1407.728	5315.384	685765.8257	5828067.651
18-KAZ-042	-49	248	203.8	42	NQ	11110.032	1407.728	5315.384	685765.8257	5828067.651
18-KAZ-047	-70	248	203.8	34	NQ	11123.149	1359.615	5316.24	685808.7537	5828042.272
18-KAZ-048	-50	248	203.8	29	NQ	11123.149	1359.615	5316.24	685808.7537	5828042.272
18-KAZ-050	-52	248	203.8	45	NQ	11133.614	1325.991	5317.111	685839.6854	5828025.44
18-KAZ-051	-68	248	203.8	36	NQ	11115.598	1323.8	5318.274	685828.2868	5828011.317
18-KAZ-052	-76	248	203.8	35	NQ	11135.479	1275.937	5321.452	685875.8932	5827990.829
18-KAZ-053	-45	248	203.8	23	NQ	11135.479	1275.937	5321.452	685875.8932	5827990.829
18-KAZ-054	-47	248	203.8	200	NQ	11150.273	1255.604	5319.162	685900.6715	5827986.548
18-KAZ-055	-64	248	203.8	210	NQ	11150.273	1255.604	5319.162	685900.6715	5827986.548
18-KAZ-056	-45	248	203.8	183	NQ	11136.721	1249.098	5319.919	685895.4815	5827972.44
18-KAZ-058	-49	248	203.8	53	NQ	11167.201	1237.088	5320.479	685925.715	5827985.057
18-KAZ-059	-46	248	203.8	251	NQ	11156.519	1233.672	5320.888	685920.4313	5827975.165
18-KAZ-060	-65	248	203.8	62	NQ	11160.6772	1205.4671	5318.8088	685943.0632	5827957.827
18-KAZ-061	-45	248	203.8	53	NQ	11159.8955	1205.0416	5318.7911	685942.7989	5827956.977
18-KAZ-063	-50	248	203.8	59	NQ	11186.0489	1185.6492	5318.401	685975.0714	5827961.284
18-KAZ-064	-50	248	203.8	32	NQ	11162.5688	1177.5574	5319.366	685963.8634	5827939.122
18-KAZ-066	-49	248	203.8	113	NQ	11173.919	1130.164	5319.21	686005.0226	5827913.028
18-KAZ-090	-64	248	203.8	52	NQ	11100.314	1457.414	5314.613	685724.2404	5828096.527
18-KAZ-091	-48	248	203.8	32	NQ	11092.735	1453.735	5315.211	685721.3661	5828088.607
18-KAZ-092	-50	248	203.8	50	NQ	11175.5529	1181.7428	5318.8363	685970.2627	5827951.17
18-KAZ-093	-54	248	203.8	11	NQ	10946.9	1828	5318	685356.0122	5828255.516

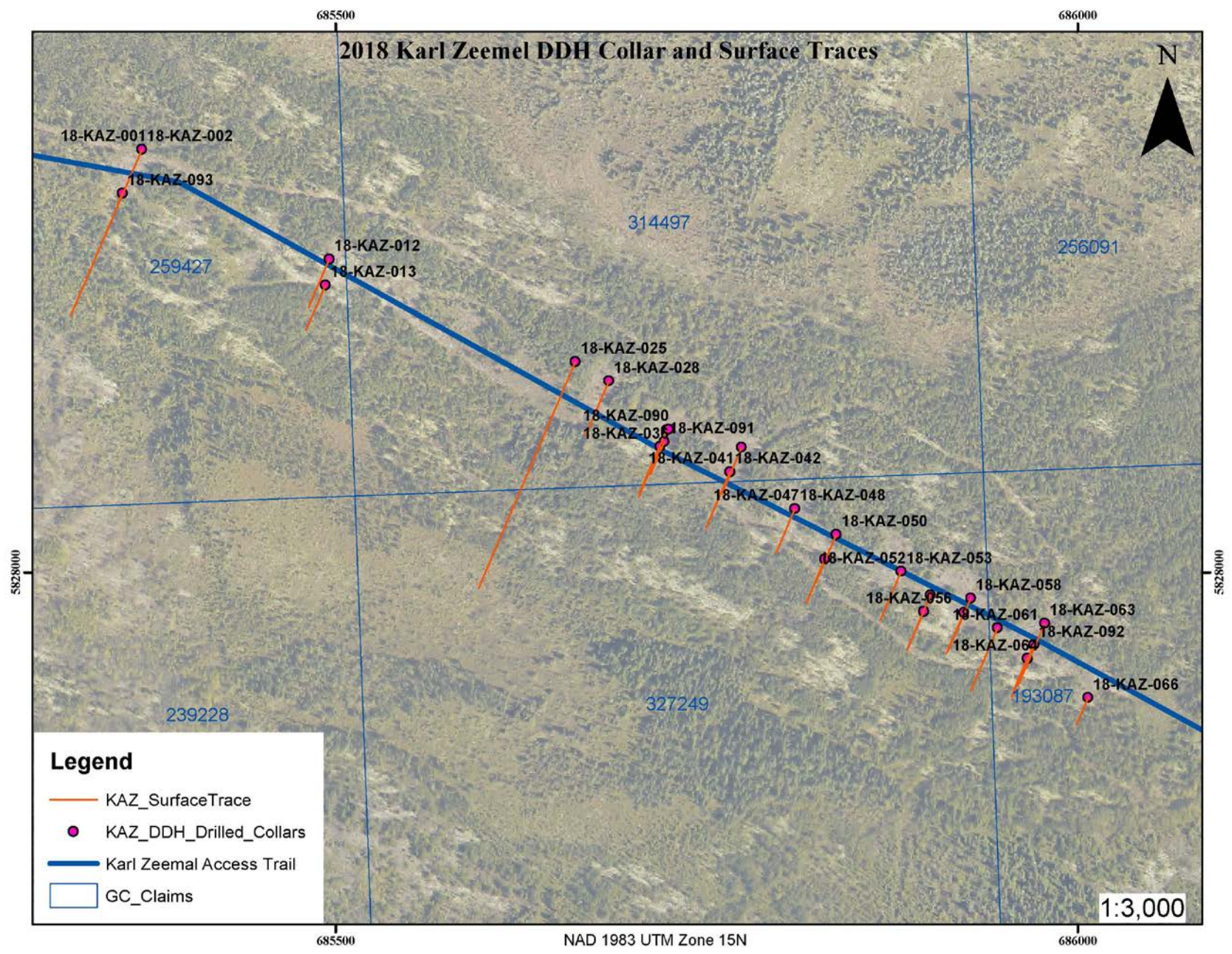


Figure 16. Map of 2018 Karl Zeemel diamond drill hole collars and surface traces over cell grid of exploration claims



## Results

Due to a series of operational deficiencies the 2018 Karl Zeemal diamond drilling program was terminated ahead of schedule with only 32 of a planned 93 holes completed. Unfortunately, this limited selection of diamond drill holes was not a robust enough program with which to refine the geological model generated from the 2005 diamond drilling. However, the program did succeed in conforming historical drill results, identifying mineralization styles, and in intersecting new intervals of significant gold grades. Table 11 below lists all significant gold intersections resulting from the program.

The mineralized intervals are predominantly hosted in pyrrhotite mineralized intervals of chert-magnetite banded iron formation, as well as, grunerite altered and silicified chert-magnetite banded iron formation. It is common for the primary compositional banding to be significantly destroyed by this grunerite and silica alteration. Less common, but not insignificant, styles of mineralization include pyrrhotite mineralized shears and breccias which occur along the contacts between the banded iron formations and the mafic metavolcanic as well as within the iron formation along the axial planes of parasitic folds. Within the iron formations and shears pyrrhotite ranges in abundance from 5-15% and may be observed as banding parallel wisps or stringers, crack seal veinlets, amorphous blebs, or finely disseminated grains. The tectonic breccias typically feature milled and ground Iron formation fragments, with rare angular clasts, supported in a cement of massive pyrrhotite. Visible gold is not common but was observed in numerous holes.

Table 11. Significant Gold intersections encountered in the 2018 Karl Zeemal Diamond Drilling Program

Hole ID	From (m)	To (m)	Drilled Length	Lithology	Grade and True Width
18-KAZ-013	1.3	1.9	0.6	Chert-Magnetite BIF	0.3m @ 11.9 g/t
18-KAZ-013	6.5	7.2	0.7	Mafic Metavolcanic	0.5m @ 2.3 g/t
18-KAZ-028	12.4	13.2	0.8	Mafic Metavolcanic	0.7m @ 1.1 g/t
18-KAZ-035	32.2	33.8	1.6	Pyrrhotite Cemented Breccia	1.2m @ 4.8 g/t
18-KAZ-041	38.3	38.6	0.3	Mafic Metavolcanic	0.2m @ 4.3 g/t
18-KAZ-042	23.5	24	0.5	Mafic Metavolcanic	0.4m @ 5.7 g/t
18-KAZ-042	31.4	35.9	4.5	Chert-Magnetite BIF	3.1m @ 5 g/t
18-KAZ-047	29.5	30.3	0.8	Mafic Metavolcanic	0.3m @ 1.4 g/t
18-KAZ-048	19.2	26	6.8	Chert-Magnetite BIF	3.8m @ 5.3 g/t
18-KAZ-050	20.4	26.9	6.5	Mafic Metavolcanic	5.4m @ 2.7 g/t
18-KAZ-051	3.4	9.5	6.1	Chert-Magnetite BIF	3.9m @ 3.4 g/t
18-KAZ-052	24.4	24.8	0.4	Mafic Metavolcanic	0.1m @ 5 g/t
18-KAZ-053	2.6	5.8	3.2	Mafic Metavolcanic	2.6m @ 2.3 g/t
18-KAZ-053	14.3	19.6	5.3	Chert-Grunerite BIF	4m @ 1.9 g/t
18-KAZ-054	22.4	37	14.6	Chert-Grunerite BIF	9.3m @ 2.8 g/t
18-KAZ-056	21	24.6	3.6	Chert-Magnetite BIF	3m @ 2.6 g/t
18-KAZ-056	67	67.8	0.8	Chert-Grunerite BIF	0.8m @ 2.2 g/t

18-KAZ-056	114.7	115.2	0.5	Chert-Magnetite BIF	0.4m @ 2.5 g/t
18-KAZ-058	39.4	49.3	9.9	Chert-Grunerite BIF	8.5m @ 4.1 g/t
18-KAZ-059	21.3	22.5	1.2	Pyrrhotite Cemented Breccia	1.1m @ 10.5 g/t
18-KAZ-059	35.8	37.4	1.6	Chert-Grunerite BIF	1.4m @ 4.1 g/t
18-KAZ-060	17.2	19.5	2.3	Mafic Metavolcanic	1.3m @ 10.6 g/t
18-KAZ-060	35.5	40.8	5.3	Chert-Grunerite BIF	4.5m @ 1.8 g/t
18-KAZ-061	7.8	14.9	7.1	Chert-Magnetite BIF	5.6m @ 3.3 g/t
18-KAZ-061	30	34.9	4.9	Chert-Grunerite BIF	4.8m @ 1.1 g/t
18-KAZ-063	37.1	38.4	1.3	Pyrrhotite Cemented Breccia	0.9m @ 21.9 g/t
18-KAZ-063	48	51.2	3.2	Chert-Grunerite BIF	3.1m @ 1.4 g/t
18-KAZ-064	9.6	11.3	1.7	Mafic Metavolcanic	1.5m @ 4.2 g/t
18-KAZ-064	23.2	28.9	5.7	Chert-Grunerite BIF	5.5m @ 6 g/t
18-KAZ-066	8.6	9.2	0.6	Chert-Grunerite BIF	0.6m @ 4.7 g/t
18-KAZ-066	18.3	22.8	4.5	Chert-Grunerite BIF	3.5m @ 1.8 g/t
18-KAZ-090	3.3	13	9.7	Mafic Metavolcanic	5.9m @ 3.4 g/t
18-KAZ-091	13.6	20.2	6.6	Pyrrhotite Cemented Breccia	5.3m @ 4.2 g/t
18-KAZ-091	27.3	30.8	3.5	Chert-Grunerite BIF	2.8m @ 1.2 g/t
18-KAZ-092	23.8	25.7	1.9	Pyrrhotite Cemented Breccia	1.7m @ 6.4 g/t
18-KAZ-092	38.7	39.1	0.4	Chert-Magnetite BIF	0.3m @ 2.6 g/t

## Conclusions

Results of the 2018 Karl Zeemel drilling program clearly indicate that significant gold bearing mineralization of multiple styles is present throughout the previously identified trend. Thus, corroborating results obtained by similar drilling programs in the mid 1980's and 2005. Although these intercepts are of shallow depth it would be premature to speculate on the economic viability of this open pit target without first constructing a robust 3-dimensional geological model.

## Recommendations

Completion of the remaining planned drill holes from the 2018 diamond drill program is recommended in addition to step out drilling to the Northwest along strike towards Musselwhite Mine. There are thick glacial deposits here which may be obscuring the geophysical signature of the iron formation in this direction. Additionally, the 2017 soil geochemical survey also described in his report.

To ensure that any future diamond drilling is planned as effectively as possible it would be prudent to create an updated map of bedrock geology which considers new bedrock exposures unearthed by the construction of the access trail and drill pads during the drill program described in this report.

Following completion of follow up diamond drilling an implicit 3-dimensional model of the subsurface geology must be completed to fully assess the economic viability of this open pit prospect as a satellite deposit to Goldcorp Canada Ltd.'s Musselwhite Mine.

## Summary of Costs.

Table 12 below details all costs and expenses incurred to execute the diamond drilling program described above. All non-relevant charges on any invoice have been redacted or subtracted. All relevant invoices and receipts can be found in Appendix XIV.

Table 12. Summary of costs incurred during the 2018 Karl Zeeemel exploration diamond drilling program.

### Services and Materials

Category	Invoice Date	Invoice Number	Payee	Description	Amount
Transportation	7-Aug-18	6945	Wisk Air Helicopters	3.3 flight hrs.	\$4,306.50
	27-Aug-18	6976		11.5 flight hrs.	\$15,007.50
	6-Sep-18	6984		42.5 flight hrs.	\$55,462.50
	19-Sep-18	6999		41 flight hrs.	\$53,505.00
	9-Oct-18	7019		14.9 flight hrs.	\$19,444.50
				<b>Subtotal</b>	\$147,726.00
Assaying by Fire Assay (FA)	11-Oct-18	A18-12413	Activation Laboratories Ltd.	FA 150 Samples	\$2,437.50
	24-Oct-18	A18-12927		FA 136 Samples	\$2,210.00
	20-Nov-18	A18-13446		FA 434 Samples	\$7,863.11
	20-Nov-18	A18-13951		FA 48 Samples	\$780.00
	20-Nov-18	A18-13950		FA 133 Samples	\$2,161.25
	28-Nov-18	A18-14373		FA 99 Samples	\$1,608.75
	29-Nov-18	A18-15030		FA 296 Samples	\$4,810.00
	5-Dec-18	A18-15029		FA 128 Samples	\$2,080.00
	3-Jan-19	A18-16031		FA 177 Samples	\$2,876.25
	9-Jan-19	A18-16821		FA 36 Samples	\$585.00
	18-Jan-18	A18-16826		FA 73 Samples	\$1,186.25
	24-Dec-18	A18-17371		FA 76 Samples	\$1,235.00
	11-Feb-19	A18-17372		FA 33 Samples	\$536.25
	10-Jan-19	A18-17375		FA 104 Samples	\$1,705.00
	9-Jan-19	A18-17366		FA 11 Samples	\$178.75
	9-Jan-19	A18-17864		FA 104 Samples	\$1,668.00
	17-Jan-19	A18-17865		FA 104 Samples	\$1,840.75
	9-Jan-19	A18-17862		FA 104 Samples	\$1,665.00
	14-Jan-19	A18-17868		FA 108 Samples	\$1,730.00
	9-Jan-19	A18-17866		FA 39 Samples	\$633.75
	5-Feb-19	A19-00595		FA 104 Samples	\$1,690.00
	9-Feb-19	A19-00597		FA 108 Samples	\$1,800.00
	13-Feb-19	A19-00687		FA 99 Samples	\$1,608.75
	15-Feb-19	A19-00689		FA 108 Samples	\$1,755.00
	15-Feb-19	A19-00690		FA 105 Samples	\$1,706.25
	15-Feb-19	A19-00691		FA 103 Samples	\$1,673.75
	15-Feb-19	A19-00692		FA 25 Samples	\$406.25
				<b>Subtotal</b>	\$50,430.61
	30-Jun-18	2112023614		Mobilization	\$10,028.11
	30-Jun-18	2112023615		Mobilization	\$7,328.11
	8-Aug-18	2112023886		Mobilization	\$42,945.48
	22-Aug-18	2112024117		Skidder -Dozer Mob	\$32,458.23
	22-Aug-18	2112024116		Supervisor - Mob	\$3,575.00

Diamond Drilling	22-Aug-18	2112024115	Boart Longyear	Skidder -Dozer Mob	\$11,672.40
	24-Aug-18	2112023823		Mobilization	\$42,377.04
	10-Sep-18	2112024235		Drilling	\$61,968.94
	10-Sep-18	2112024234		Supervisor	\$14,297.40
	10-Sep-18	2112024233		Drilling	\$73,075.38
	19-Sep-18	2112024338		Supervisor	\$19,784.70
	19-Sep-18	2112024337		Skidder and Dozer	\$6,251.70
	19-Sep-18	2112024339		Drilling	\$79,823.87
	5-Oct-18	2112024475		Supervisor	\$48,080.55
	5-Oct-18	2112024476		Drilling	\$57,413.45
	5-Oct-18	2112024474		Drilling	\$38,784.42
	23-Oct-18	2112024594		Demobilization	\$27,000.00
	23-Oct-18	2112024592		Demobilization	\$13,500.00
	23-Oct-18	2112024593		Supervisor - Demob	\$60,591.77
	31-Oct-18	2112024701		Demobilization	\$7,328.11
				<b>Subtotal</b>	\$658,284.66

Equipment Rentals	31-Aug-18	20181503	SurveyTECH Instruments and Services	Gyro and Devialigner	\$26,802.00
	30-Sep-18	20181551		Gyro and Devialigner	\$26,802.00
	31-Oct-18	20181627		Gyro and Devialigner	\$17,868.00
				<b>Subtotal</b>	\$71,472.00

## Personnel

Category	Person	Rate/12 hr. Day	Person-days	Description	Amount
Planning and supervision	Exploration Geology Supervisor	\$840.00	76	1-person day per day of drilling	\$63,840.00
					<b>Subtotal</b>
Core Logging	Exploration Geologist	\$600.00	24	salary, approx. 100m logged per day	\$14,400.00
					<b>Subtotal</b>
Core Cutting	Core Cutter	\$420.00	31	salary, approx 100 samples per day	\$13,020.00
					<b>Subtotal</b>
Reporting	Project Geologist	\$750.00	5	salary	\$3,750.00
					<b>Subtotal</b>
Lodging	Goldcorp Personnel	\$80.00	136	Musselwhite Mine Camp	\$10,880.00
	Boart Longyear	\$80.00	684		\$54,720.00
	Wisk Air Personnel	\$80.00	84		\$6,720.00
				<b>Subtotal</b>	\$72,320.00
<b>Program Total</b>					\$1,095,243.27



## Statement of Qualifications

I, David M. Murray, do hereby certify that, as of the date signed:

I am a resident of the city of Halifax, Nova Scotia, Canada

I am a graduate of St. Francis Xavier University receiving Advanced Major Degree in Earth Science, concentrating in hard rock geoscience in 2011.

I am a professional geoscientist registered in good standing with the Association of Professional Geoscientists of Nova Scotia, member #236.

I am a core member in good standing of the Association of Prospectors and Developers of Canada.

I am a member in good standing of the Society of Economic Geologists.

I am employed by Goldcorp Canada Ltd, as a Project Geologist at Musselwhite Mine in the District of Kenora, Northwestern Ontario.

I agree with all the information contained within this report and believe that it is an accurate description of the work performed.



Signature: \_\_\_\_\_

Date: \_\_\_\_\_ March 25, 2019

## Statement of Qualifications

I, Kristy-Lee Beal, do hereby certify that:

I am a resident of the city of Thunder Bay, Ontario, Canada

I am a graduate of the University of New Brunswick receiving a Bachelor of Science Degree in Earth Science in 2008 followed by a Masters of Science in 2014.

I am professional geoscientist registered in good standing with the Professional Geoscientists Ontario, member #2486.

I am employed by Newmont Goldcorp as a Senior Database and Land Geology at Musselwhite Mine in the District of Kenora, Northwestern Ontario.

I supervised the revision of this report to meet the standards of MNDM for submission. I believe that it is an accurate description of the work performed.

The above statements are valid.



## References

Oswald, W. (2018). GEOLOGY OF THE BANDED IRON FORMATION-HOSTED MUSSELWHITE GOLD DEPOSIT, SUPERIOR PROVINCE, ONTARIO, CANADA (Unpublished master's thesis). Université du Québec Institut National de la Recherche Scientifique Centre Eau Terre Environnement.

Breaks, F.W., Osmani, I.A. and deKemp, E.A. 2001. Geology of the North Caribou Lake area, northwestern Ontario; Ontario Geological Survey, Open File Report 6023, 80p.

## Appendices

### 2017 Soil and Litho Geochemical Program

Appendix I ..... Complete table of samples and results

Appendix II ..... Assay Certificates

Appendix III ..... Invoices and Receipts

- Activation Laboratories
- Wisk Air Helicopters

### 2018 Biogeochemical Program

Appendix IV ..... Complete tables of samples and results

- Black Spruce results levelled to dry weight
- Labrador Tea results levelled to dry weight

Appendix V ..... Assay Certificate

Appendix VI ..... Invoices and Receipts

- ALS Canada Ltd.
- Colin Dunn Consulting
- Ojijakos Community Development Corporation
- Wisk Air Helicopters

### 2018 Mine-Grid Expansion

Appendix VII ..... Invoices and receipts

- Total Precision Surveying
- Wisk Air Helicopters

### 2018 Exploration Trail Construction

Appendix VIII ..... Invoices and receipts

- LTL Contracting Ltd.
- Armtec
- Wisk Air Helicopters

Appendix IX ..... Permits

- Work Permit

- Memorandum of Understanding

### 2018 Exploration Diamond Drilling

Appendix X .....Exploration Permit

Appendix XI .....2018 Karl Zeemel DDH Logs

- Litho Code Index
- 2018 Karl Zeemel DDH logs sorted by Hole ID

Appendix XII .....Annotated DDH Cross Sections

- Litho Code Index
- Annotated DDH cross sections

Appendix XIII .....Assay certificates

Appendix XIV .....Invoices and receipts

- Boart Longyear Diamond Drilling
- Wisk Air Helicopters
- Activation Laboratories
- Survey Tech Instruments and Services