

BC Geological Survey
Assessment Report
40368



ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Technical report for OPL Group

TOTAL COST: \$12,919.00

AUTHOR(S): David Manley Fredlund
SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):
STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): 5935974

YEAR OF WORK: 2021

PROPERTY NAME: OPL Group

CLAIM NAME(S) (on which work was done): Old Pen Lock, Ext 1, Ext 2

COMMODITIES SOUGHT: gold, silver, copper, base metals

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: Cranbrook

NTS / BCGS:

LATITUDE: 49 _____ ° 36 _____ ' 28 _____ "

LONGITUDE: 115 _____ ° 29 _____ ' 12 _____ " (at centre of work)

UTM Zone: _____ **EASTING:** _____ **NORTHING:** _____

OWNER(S): David Manley Fredlund

MAILING ADDRESS: 1801 3rd Ave S.E. Salmon Arm B.C. V1E-1V1

OPERATOR(S) [who paid for the work]: As above

MAILING ADDRESS:

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)

Mineralization, size

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic 4,800 lineal meter		OPL group	100%
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres, number of holes, size, storage location)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling / Assaying			
Petrographic			
Metallurgic	689 ha	OPL Group	
PROSPECTING (scale/area)			
PREPATORY / PHYSICAL			
Line/grid (km)			
Topo/Photogrammetric (scale, area)			
Legal Surveys (scale, area)			
Road, local access (km)/trail			
Trench (number/metres)			
Underground development (metres)			
Other			
		TOTAL COST	\$12,919.00



Print and Close

Cancel

Mineral Titles Online

Mineral Claim Exploration and Development Work/Expiry Date Change

Confirmation

Recorder: FREDLUND, DAVID
 MANLEY (108862) Submitter: FREDLUND, DAVID
 MANLEY (108862)
 Recorded: 2022/MAY/09 Effective: 2022/MAY/09
 D/E Date: 2022/MAY/09

Confirmation

If you have not yet submitted your report for this work program, your technical work report is due in 90 days. The Exploration and Development Work/Expiry Date Change event number is required with your report submission. **Please attach a copy of this confirmation page to your report.** Contact Mineral Titles Branch for more information.

Event Number: **5935974**

Work Type: Technical Work
 Technical Items: Geophysical, PAC Withdrawal (up to 30% of technical work required), Prospecting

Work Start Date: 2021/MAY/24
 Work Stop Date: 2021/SEP/13
 Total Value of Work: \$ 11555.00
 Mine Permit No:

Summary of the work value:

Title Number	Claim Name	Issue Date	Good To Date	New Good To Date	# of Days Forward	Area in Ha	Applied Work Value	Submission Fee
1082668	OLD PEN LOCK	2021/MAY/19	2022/MAY/19	2025/MAY/22	1099	251.01	\$ 5040.84	\$ 0.00
1082719	EXT2	2021/MAY/22	2022/MAY/22	2025/MAY/22	1096	188.30	\$ 3766.00	\$ 0.00
1082720	EXT1	2021/MAY/22	2022/MAY/22	2025/MAY/22	1096	250.99	\$ 5019.71	\$ 0.00

Financial Summary:

Total applied work value: \$ 13826.55

PAC name: dmfredlund
 Debited PAC amount: \$ 2271.55
 Credited PAC amount: \$ 0

Total Submission Fees: \$ 0.0

Total Paid: \$ 0.0

Please print this page for your records.

The event was successfully saved.

Click [here](#) to return to the Main Menu.

TECHNICAL PROSPECTING REPORT

FOR THE MINERAL PROPERTY
KNOWN AS OLD PEN LOCK (OPL) GROUP

Tenure Numbers 1082668, 1082719, 1082720

Cranbrook Mining Division, B.C.

(49°36'28" N, 115°29'12" W)

Report by
registered claim owner

David Manley Fredlund
1801 3rd Ave S.E. Salmon Arm
(250) 804-0781

Feb, 15-2024

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SUMMARY

During the summer of 2021, prospectors, Shane Ritchie, James Ritchie, Kris Fredlund, Jon Fredlund, Dan Kobi and myself made several trips to the OPL Group mineral property. The decision was made to investigate the property utilizing a magnetometer with follow up trenching or drilling. Magnetometer readings were taken utilizing existing roads which provided 4.8 kilometers of access. Due to the nature of the findings and the results of the geological investigation, further work is warranted as will be detailed in in this report and a permit application is in progress.

INTRODUCTION

Location: The property lies to the west of Kimberly within the St Mary's River valley. The mineral tenure is located approximately 25 km west of Kimberly. B C

The geographical coordinates for the center of the tenure are (49°38'42" N, 116°18'47" W). The terrain consists of wooded slopes rising from St Mary's River to about 6,500 feet ASL where the terrain steepens considerably. The property is located on the North side of St Mary's valley on a South facing slope. The elevations vary from 3,500 feet ASL along the center of the property to 7,000 feet ASL to give a relief of 3500 feet.

The main water source is the easterly flowing St Mary's River which traverses the property. The forest cover is timber and tag alder, tag cedar, tag hemlock and devils club in all clear cut areas.

Access: Access is provided by the St Mary's Forest service road which crosses the property and logging access roads providing random access.

History and previous work: This general area has been the subject of attention for over a hundred years, although because of the soil cover and lack of outcrop, old workings are very hard to locate or non-existent. No successful drilling has been done and no geophysical work because of a powerline which crossed the property until decommissioning 4 years ago.

Property geology: Determining property geology was very difficult as it stretches across a wide deep overburden covered valley. Outcrops have been found on the east side of the tenure as terrain rises which expose an arduilitic mudstone impregnated with minerals. As this could indicate a SEDEX style of deposit, we are commissioning a drone magnetometer survey from Pioneer Geophysics in the coming year.

GEOLOGY

Property: Located in the Purcell range in Southeast BC.

Rocks of the Mesoproterozoic Purcell Supergroup form a conformable sequence that dominates this part of southeastern BC. Lowest rocks of the Purcell Supergroup belong to the Fort Steele Formation, originally deposited as sands, silts and muds that display characteristics of having been accumulated at or above sea level. Aldridge strata rest on the Fort Steele Formation. For the most part the Aldridge Formation accumulated as muds, silts and sands at substantial depths below sea level in a basin that developed during a period of crustal rifting. Next in the succession is the Creston Formation, initially muds, silts and sands that accumulated in a shallow aqueous to emergent environment, parts of which have been interpreted as lacustrine and other parts as alluvial fans. Kitchener Formation strata succeed the Creston Formation. Kitchener sediments were carbonate-rich silts and muds deposited in a shallow aqueous environment.

Mineralization: Based on geological reports on the area, it is this writers opinion that the Mag readings could be consistent with base and precious metals carried by quartz veins, SEDEX and/or porphyritic structures.

Magnetometer: Exploration foreman Manley Fredlund and prospector Jon Fredlund traveled to the OPL claim area during May 27-28 to conduct an initial exploration survey utilizing a DETECK SSP 2100 magnetic pulse induction generator. This instrument creates an intermittent magnetic field capable of penetrating 10 to 15 meters of overburden or bedrock while in motion if the target is small or much deeper if the target is large. The magnetic pulse is tunable in duration and strength, allowing for the elimination of false readings from mineralized overburden. Therefore, the mag gauge readings are relative to the tuning. The strong magnetic field induces eddy currents in mineralization or geological anomalies. These anomalies generate a secondary magnetic field which flows outward from the target which then passes through the antenna array winding. This signal is processed by the electronics and displayed on a meter that registers from zero to ten on an analogue scale. The size of the antenna/array is 1 meter square needing 2 men one of whom could be an operator to control the array as it moves and note readings.

A base line was established on The St Mary's River Forest Service Road on the tenure and established by GPS navigation utilizing the Iridium satellite system. The structure change/metal at depth signal was found continuously at the top of the analogue scale as the array was moved across the structural formation. This structural change was then followed until outcrop was found.

Exploration: This project was undertaken because of previous geological reports in the area and surmising that the Sullivan fault traveling west was interrupted by the Hall Lake fault providing geological settings that could be applicable to mineral deposition.

Conclusion: The extremely large anomalie has been followed to it's boundary using logging access roads and an area permit is being applied for covering exploration, drilling, and trenching. The entire anomaly will need to be examined with the magnetometer in

drilling, and trenching. The entire anomaly will need to be examined with a magnetometer in order to provide more information for geological mapping. A drone mag survey has been commissioned to examine the area in detail. Extreme hot spots will need to be uncovered or drilled in order to accurately determine controls for mineralization and potential ore bodies.

Crew activities After the first exploration ground mag survey, we returned to the tenures 2 more times to explore the property for any bedrock exposures. Several outcrops were located, and a synopsis of the assays was provided along with a map showing location. During the mag survey, we started from off the anomalie where the analogue gauge read 0 and moved onto the anomalie where the gauge jumped to 10. This reading was constant until we crossed off the target where the gauge returned to 0. There were several access roads that crossed the tenure, so we were able to determine that the anomalie was very large (appx 1.4 km x ?) as shown on the attached map. As the exploration mag is tunable and crude, we do not know how high it would read on more sophisticated equipment, so we have arranged for the latest sensitive equipment to be used on a mag drone survey to be done in 2023.

APPENDICES:

A. Statement of Expenditures for 3 trips to project (May 27-29/21, June 25-30/21, Sept 12-14/21) for 25-man days.

Field:

Foreman	M Fredlund	9 days at \$400.00 per day (mag work & prospecting)	= \$3,600.00
Prospector	Jon Fredlund	2 days at \$250.00 per day (mag work)	= \$500.00
Prospector	S Ritchie	5 days at \$350.00 per day (prospecting for outcrop)	= \$1,750.00
Prospector	James Ritchie	5 days at \$250.00 per day (prospecting for outcrop)	= \$1,250.00
Prospector	Dan Kobi	2 days at \$350.00 per day (prospecting for outcrop)	= \$700.00
Prospector	Kris Fredlund	2 days at \$250.00 per day (prospecting for outcrop)	= \$500.00
			Total = <u>\$8,350.00</u>

Transportation:

Mileage; 4x4 truck 1160 kilometers at .55/k = \$638.00
 3 trips. 1160 kilometers x 3 = 3480 km at .55/k = \$1,914.00

Equipment rental:

Deep Tech ground Magnetometer rental 13 hrs @ \$60.00 = \$780.00

Food and Lodging:

25 days food allowance @ \$25.00/day/man for crew = \$625.00

25 days camp costs @ \$50.00/day/man for crew = \$1,250.00

Total claimed for assessment work. **\$12,919.00**

Total claimed for assessment work.

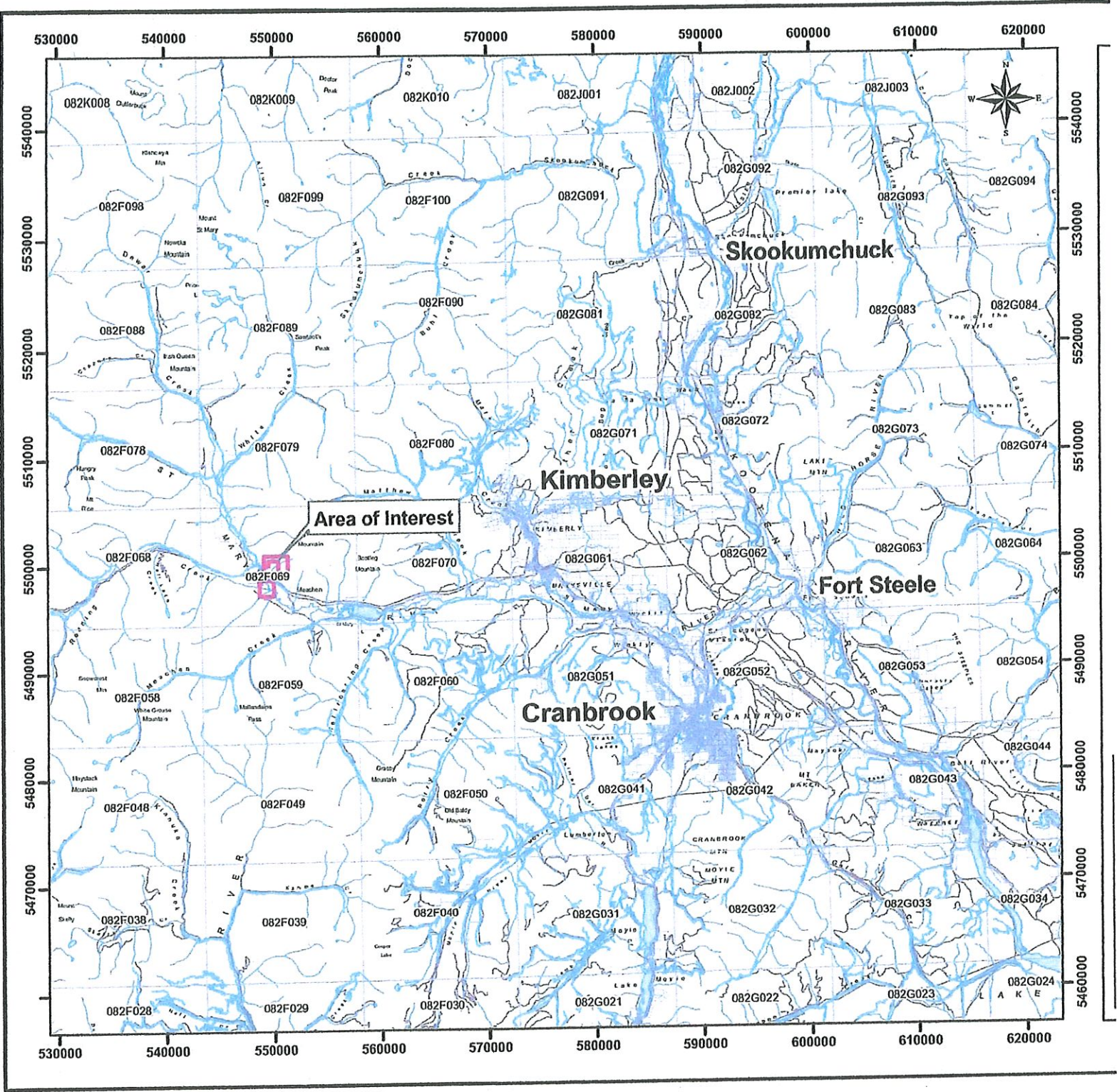
\$12,919.00

APPENDICES:

B. Statement of Writer's Qualifications

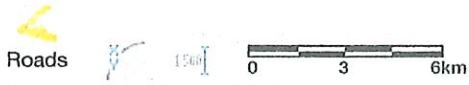
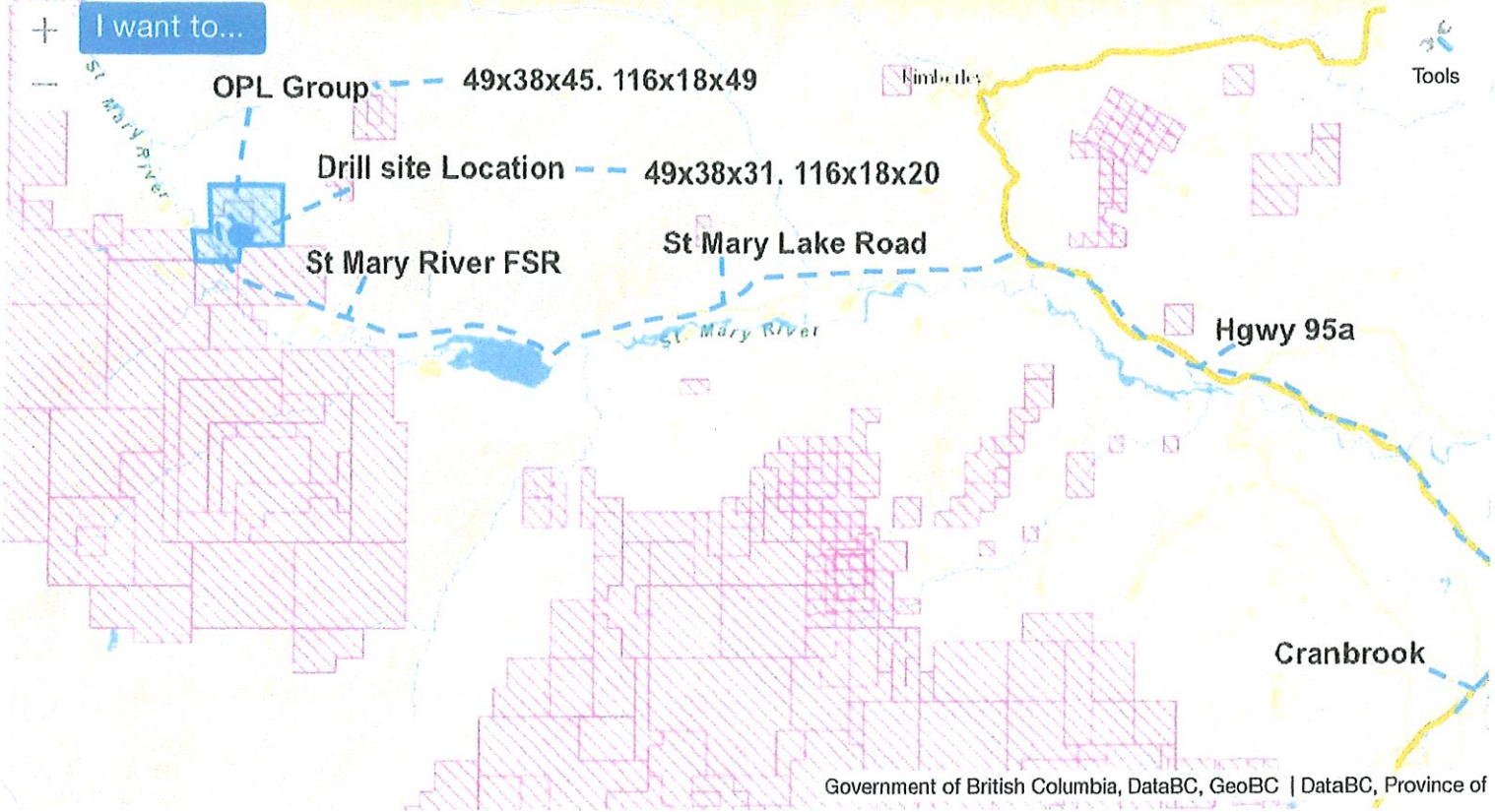
I, David Manley Fredlund am holder of valid free miners license number 108862 which I have held since 1965 and hereby certify that:

1. I started my mining career at age four as the camp water boy and cooks helper in a placer mining operation (my fathers).
2. I have been involved professionally in mineral exploration in different places for over forty two years including ;
 - Kootenays – gold, silver, lead, magnesite
 - Cariboo – gold
 - Revelstoke areas – silver, zinc, lead, dolomite, feldspar
 - Baker Lake N.W.T. – uranium, gold
 - Ominica – zinc
 - Stikine – gold, silver
 - Turnagain – gold, copper, jade
 - James Bay – diamonds
 - Pickle Lake – gold, platinum
3. I have worked with exploration crews for Boulder Creek Mines, Magnum Resources, Noranda, ESSO Resources, Texasgulf, Baker Mines, Powder Ridge Resources, Hammond Exploration and De Beers Canada Exploration (Monopros).
4. I am experienced in evaluating mineral prospects by Deteck magnetometer as I was the Canadian distributor for Deteck for 3 years and was able to practice on known mineralization, also in geology, soil sampling, rock sampling and pan sampling.
5. I maintain an extensive library of geological books, reports and articles.
6. I am the author of this report, which is primarily based on my personal observations made while in the field.





Click or tap locations along the map to create a line. Double click/tap to finish.



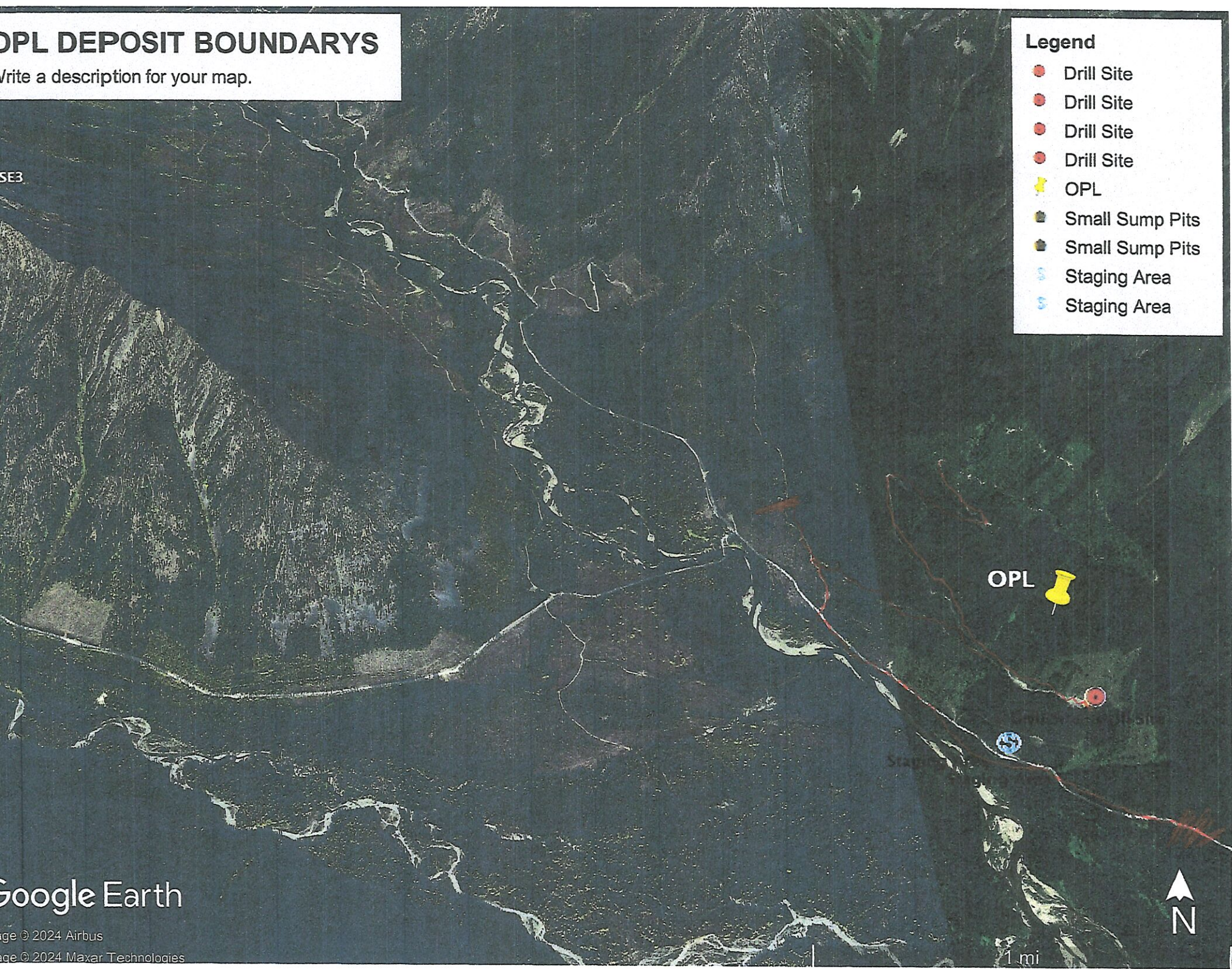
OPL DEPOSIT BOUNDARIES

Write a description for your map.

SE3

Legend

- Drill Site
- Drill Site
- Drill Site
- Drill Site
- 📌 OPL
- 🗑️ Small Sump Pits
- 🗑️ Small Sump Pits
- 📍 Staging Area
- 📍 Staging Area



OPL



Drill Site

Staging Area

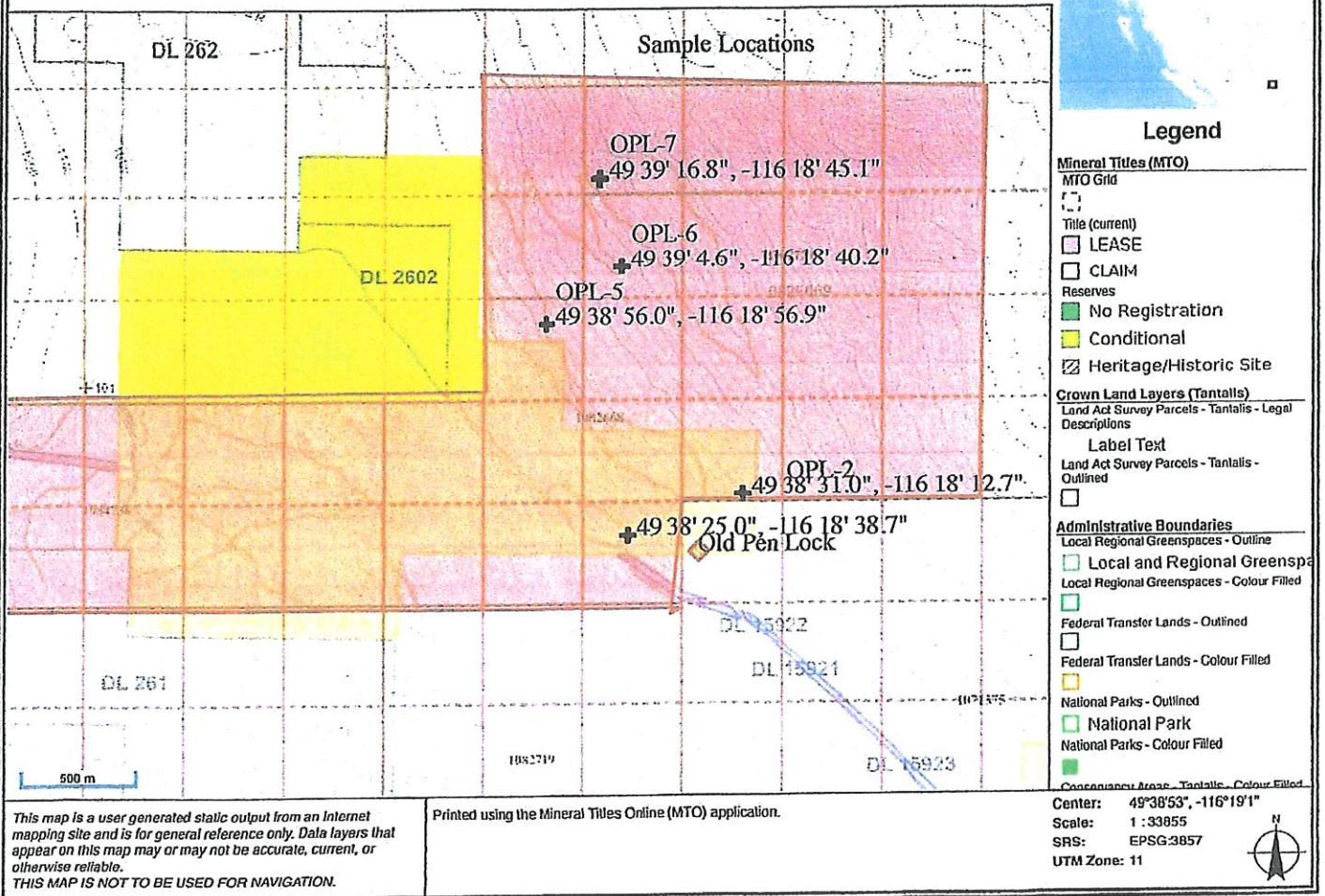
Google Earth

Image © 2024 Airbus
Image © 2024 Maxar Technologies



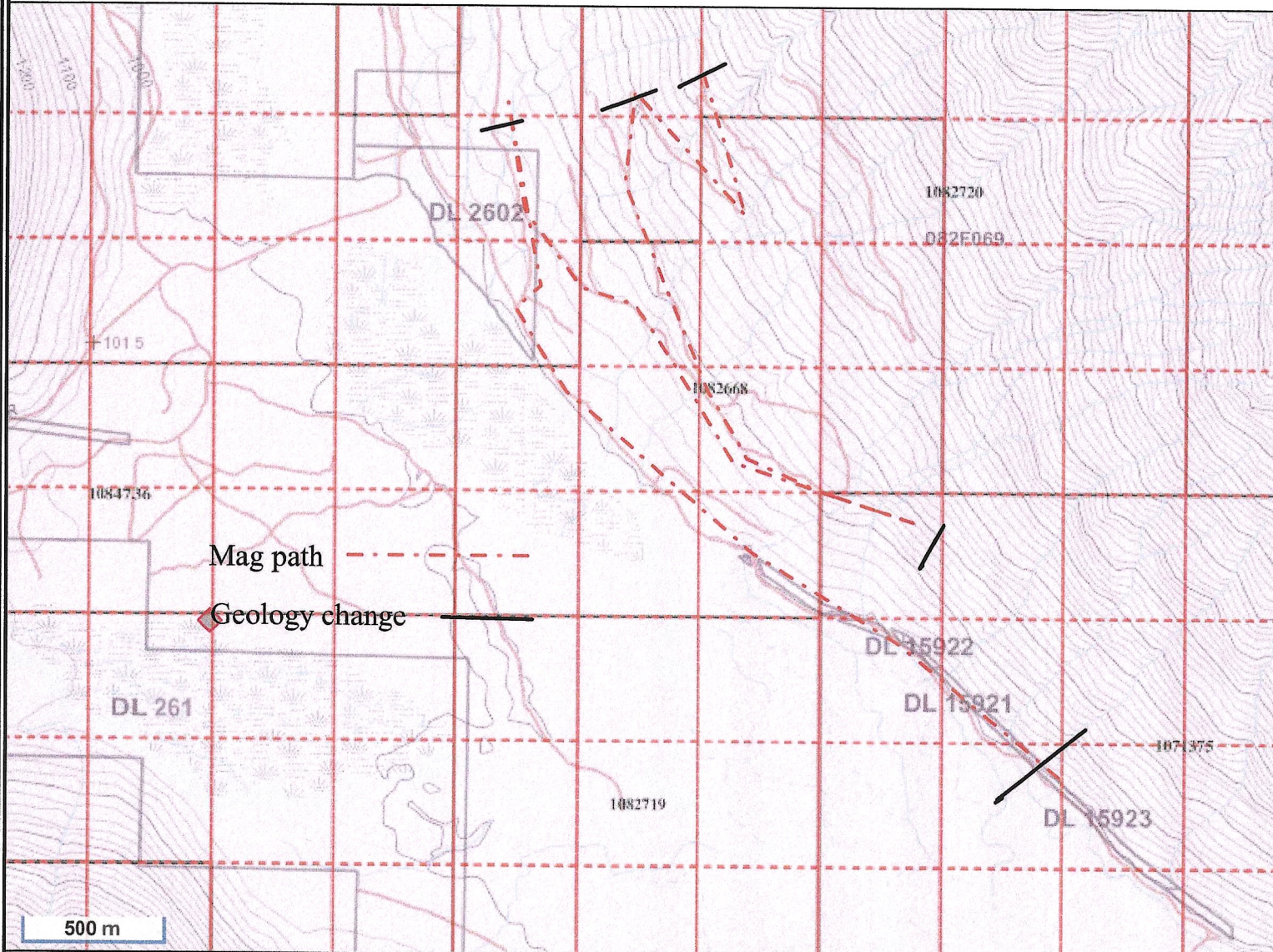
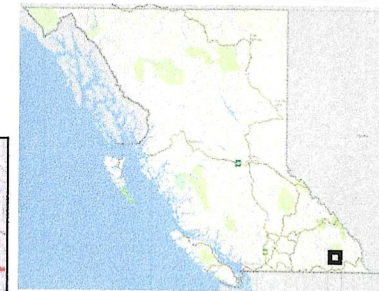
1 mi

Old Pen Lock Sample Locations



Sample ID	Ag	Pb	Zn	Cu	Cr	Ni	V	Fe
Old Pen Lock	.03 ppm	10.6 ppm	43 ppm	17.8 ppm	17 ppm	4.6ppm	13 ppm	2.67 %
OPL-2	.06 ppm	2.7 ppm	42 ppm	132 ppm	50 ppm	35.5 ppm	65 ppm	3.39 %
OPL-5	.1 ppm	14.9 ppm	36 ppm	25.8 ppm	16 ppm	4.7 ppm	15 ppm	3.1 %
OPL-6	.09 ppm	17 ppm	39ppm	20.8 ppm	14 ppm	5.6 ppm	15 ppm	2.93 %
OPL-7	.01 ppm	1.6 ppm	20 ppm	2.0 ppm	7 pp	2.3 ppm	3 ppm	.99 %

OPL grd mag path & geo change



Legend

- Mineral Titles (MTO)**
- MTO Grid
- Title (current)
 - LEASE
 - CLAIM
- Reserves
- No Registration
 - Conditional
 - Heritage/Historic Site
- Crown Land Layers (Tantalis)**
- Land Act Survey Parcels - Tantalis - Legal Descriptions
- Label Text
- Land Act Survey Parcels - Tantalis - Outlined
-
- Administrative Boundaries**
- Local Regional Greenspaces - Outline
- Local and Regional Greenspaces
 - Local Regional Greenspaces - Colour Filled
- Federal Transfer Lands - Outlined
-
- Federal Transfer Lands - Colour Filled
-
- National Parks - Outlined
- National Park
 - National Parks - Colour Filled
- Conservancy Areas - Tantalis - Colour Filled
-

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

starting at the geology change mark, all mag readings were pegged at the top of the analogue gauge

Center: 49°38'31", -116°18'59"
Scale: 1 : 33855
SRS: EPSG:3857
UTM Zone: 11

