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**32D04F**

**REPORT ON PROSPECTING TRAVRSES:  
GRASSY LAKE NORTH AREA,  
LARDER LAKE MINING DIVISION,  
McELROY TOWNSHIP, ONTARIO**

**By: Jim Renaud  
LONDON, ONTARIO**

**January 5, 2022**

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## Summary

This report summarizes the results of prospecting traverses on the Grassy Lake North Property which consists of 1 claim made up by 3 cells located approximately 6 kilometres west of the town of Larder Lake, Northeastern Ontario. This claim was prospected over a 2 day period on June 6 and June 7 2020. This report summarizes the work from claim #539399 in the following cells:

32D04F331,

32D04F332,

32D04F333

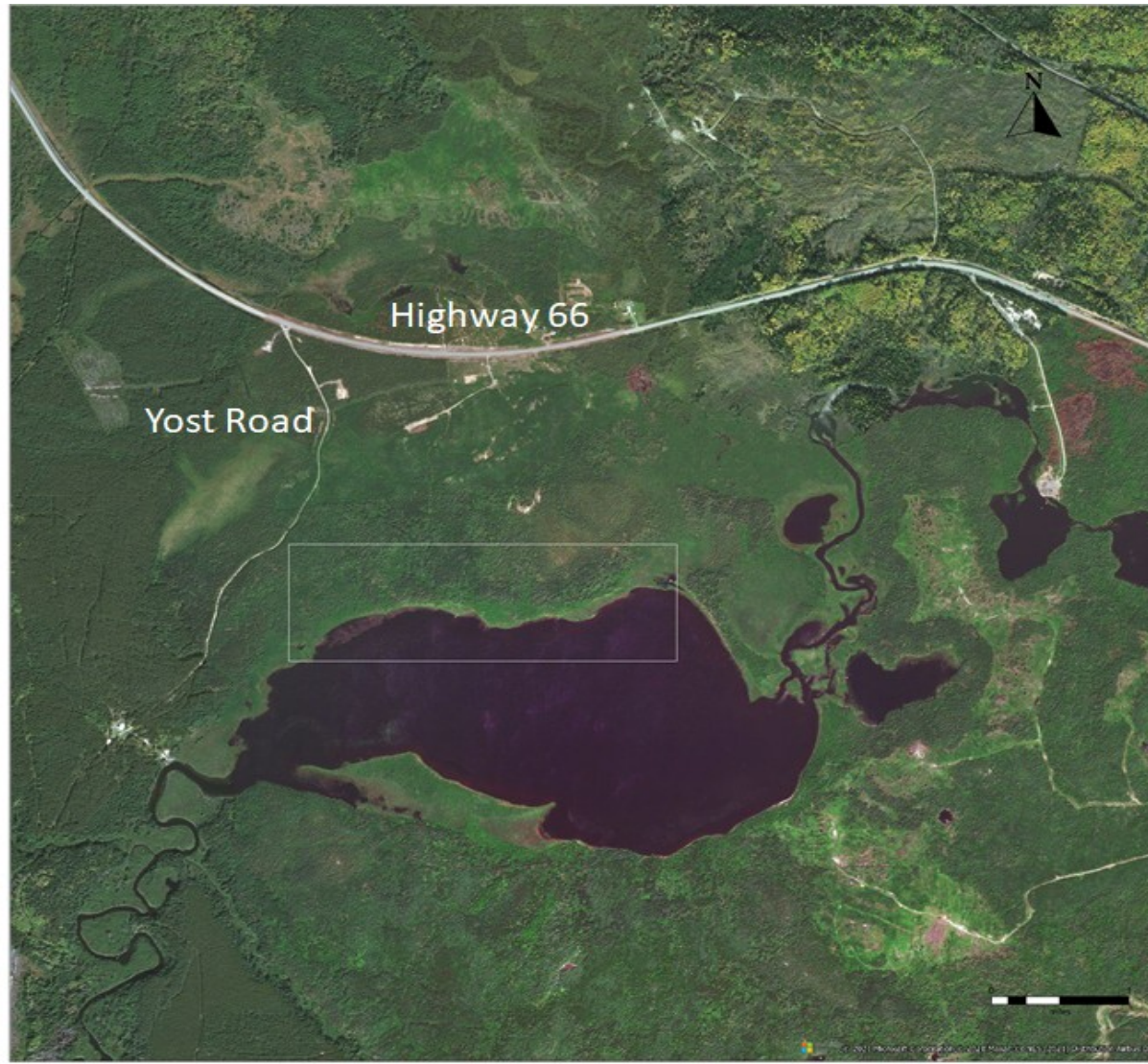
The property is located approximately 3 km south of the Larder Lake-Cadillac Break. The Break had changed direction from east-west to northwest about 2km north of the northeastern corner of the property. The splay/fault may have developed westward from this bend and may have extended well into the property. This kind of splay-fault is known to host gold mineralization in the region. The purpose of the traverses was to locate outcrop, gossanous boulders, or structure that may support the above observations.

## Location and Access

The Grassy Lake North Property is located in McElroy Township, Larder Lake Mining Division, Ontario, some 6 kilometres west of the town of Larder Lake. (Figure 1). Access to the property is excellent. The central and eastern part of the property can be reached from Highway 66 taking the Yost Road approximately 7 km west of the Town of Larder Lake.

Climatic conditions are typical of northeastern Ontario. Mean total precipitation for Kirkland Lake is 883.8 millimetres including 589.7 mm of rainfall and 294.1 mm of snowfall. Mean July daily temperature is 17.8° C while mean January daily temperature is -17.1° C (Source: Meteorological Service of Canada).

Elevation of the property ranges from just between 260 to 290m. Outcrops are rare, and the property is heavily covered with till and overburden.



*Figure 1: Google Earth image illustrating Highway 66 and the Yost Road with the white rectangle illustrating the Grassy Lake claims.*

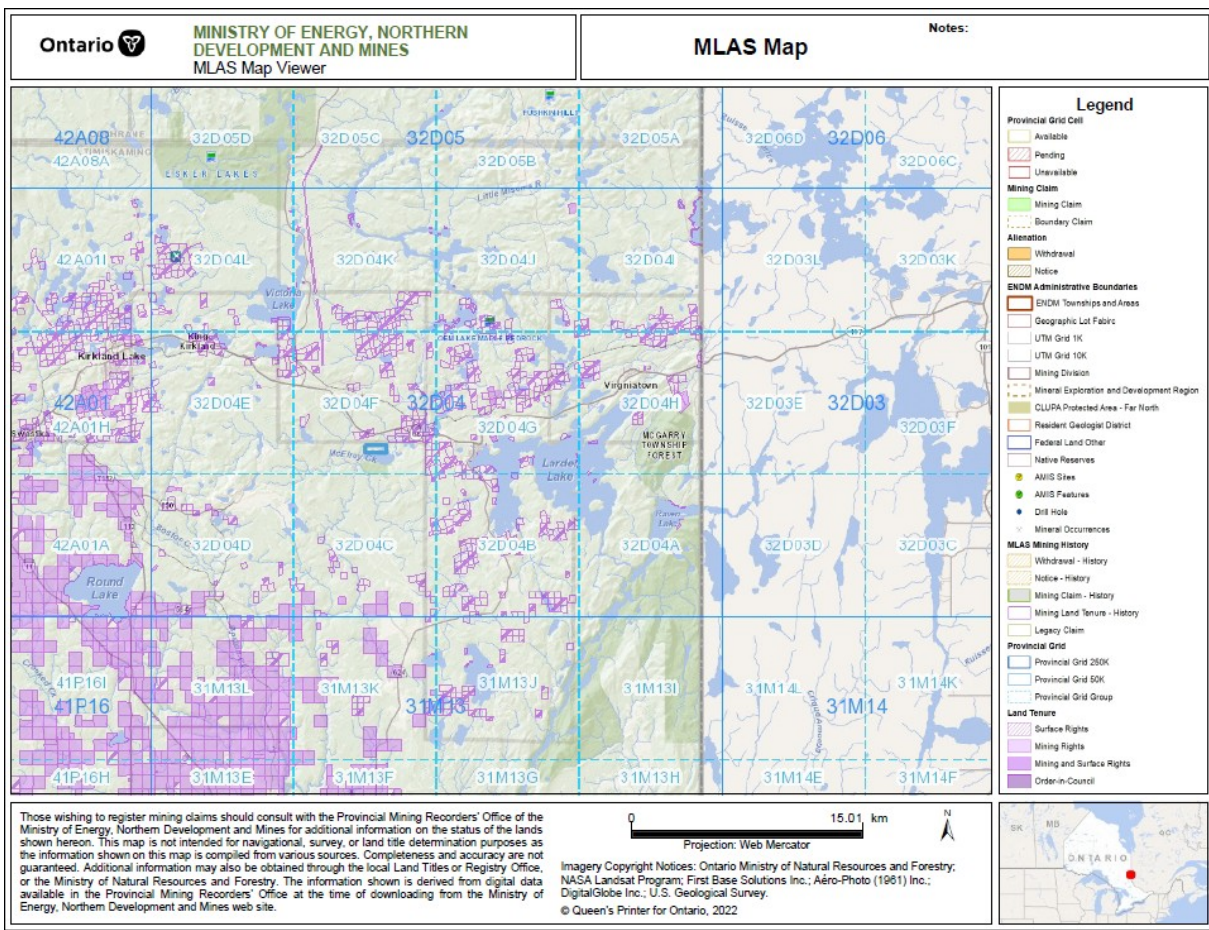


Figure 2: Property Location Map



## **Claim Logistics and Location of Work**

The Grassy Lake Property consists of 3 mining claim cells. The property covers an approximate area of 65.4 hectares (Figure 3).

All claims comprising the Grassy Lake Property are held by Jim Renaud of London, Ontario and Robert Dillman of Mount Brydges, Ontario.

The area on the property where traverses were conducted is shown in Figure 4. Areas were prospected on claim # 539399 within the following cells:

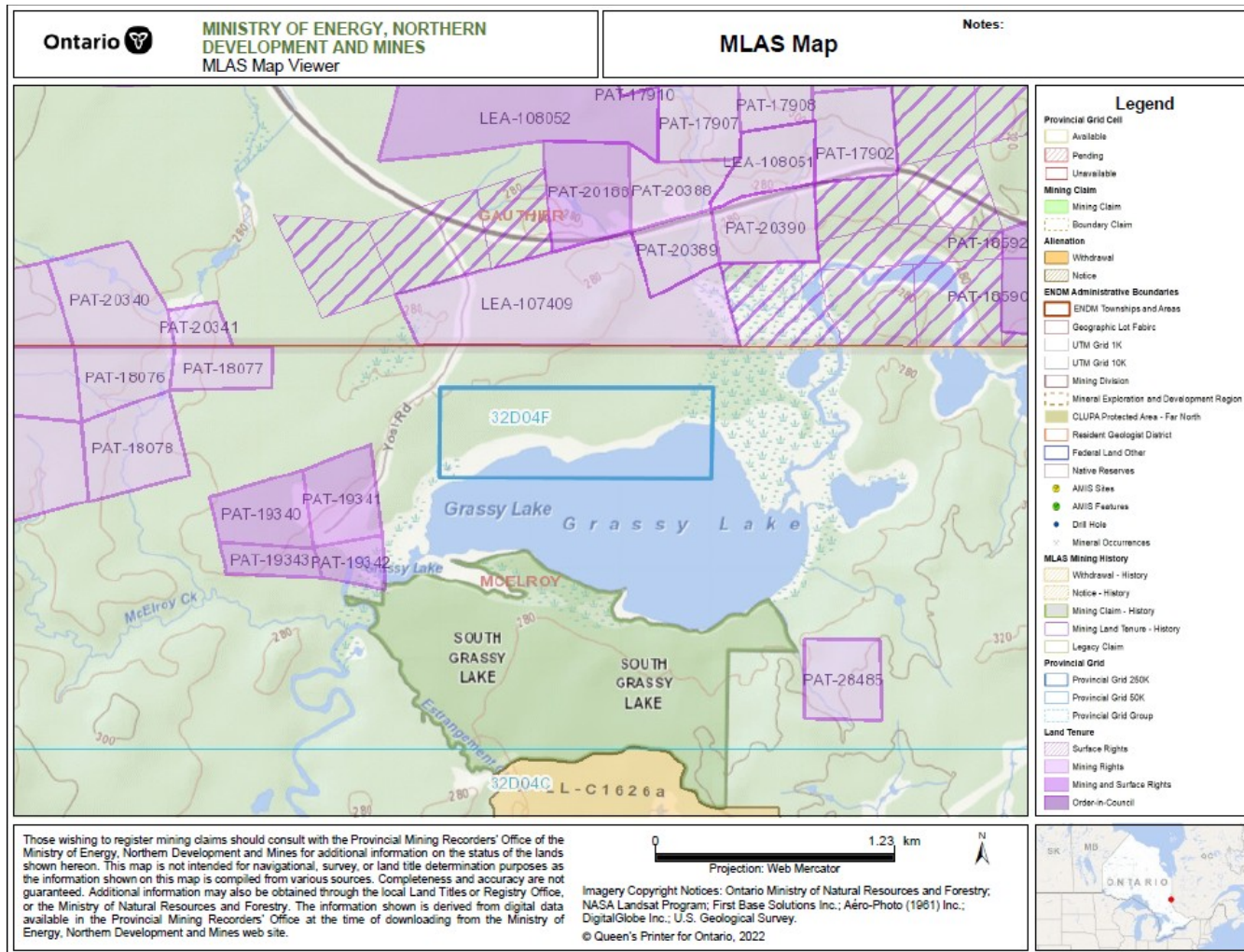
32D04F331,

32D04F332,

32D04F333

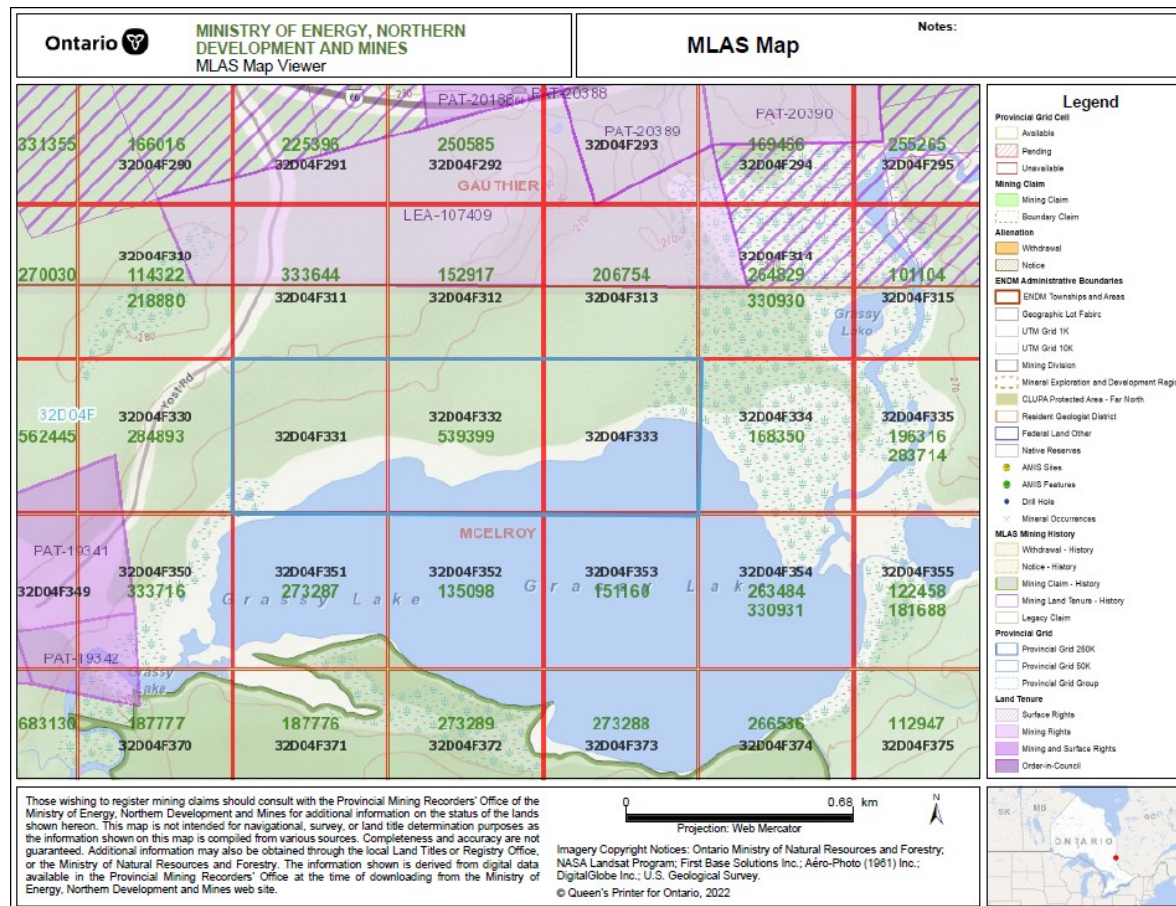
## **Land Status and Topography**

The Grassy Lake Property is situated entirely on Crown Land. The property is uninhabited. There are no buildings or habitats. Electricity is available along Highway 66 and along the Yost Road. There are homes/cottages located on the Yost Road. Part of the claim blocks sit over top Grassy Lake as illustrated in Figures 2 and 3. Elevation of the property ranges from just between 260m to about 290m. Outcrops are rare and the property is heavily covered.



**Figure 3:** The blue rectangle represents the Grassy Lake claim outline.





*Figure 4: Cell numbers outlined by blue rectangle.*

## Regional and Local Geology

The Grassy Lake North Property is covered by "Ontario Geological Survey Map 2628 Precambrian Geology – Larder Lake Area". A modified version of the map is presented below in Figure 5. Although the property is heavily covered with till and overburden, the regional geology suggests that the area is dominated by the McElroy, Larder Lake and Hearst Assemblages.

The McElroy assemblage is predominantly massive mafic volcanic flows with minor felsic fragmental units. Medium to coarse-grained hornblende gabbro, gabbro, leucogabbro and plagioclase-glomoporphyritic gabbro are associated with mafic flows. The McElroy assemblage is distinct from the Larder Lake assemblage in the lack of pillowed flows and a distinct contact marked by the Lincoln-Nipissing shear zone and peridotite and Manor shear zone (Jackson and Fyon, 1991).

The Larder Lake assemblage is comprised of massive to pillowed tholeiitic basalt, komatiite basalt and ultramafic komatiite (Jensen, 1985). The assemblage is intruded by numerous small bodies of quartz and quartz-feldspar porphyry and larger syenite bodies such as the McElroy stock. Metasedimentary rocks in the area are interpreted to sit unconformably with the Larder Lake assemblage and are considered part of the Hearst assemblage (Jackson and Fyon, 1991).

The Hearst assemblage is composed of turbidites and matrix-supported conglomerates that are associated with metavolcanic rocks of the Larder Lake assemblage. The conglomerate clasts vary in size and composition and include green mica-bearing komatiite, rhyolite, chert, iron formation and carbonate fragments (Jensen, 1985). The relationship between the Hearst and Timiskaming sedimentary assemblages is still a matter of debate.

Intrusive suites related to the McElroy stock range from massive granites and syenite to gabbro, hornblendite and pyroxenite.

The Larder Lake Break trends across the north part of the area, typified by a wide zone of moderate to highly strained Timiskaming and Larder Lake assemblage rocks. Archaean lode gold and silver deposits occur along the Larder Lake Break and related structures.

The Grassy Lake Property is located approximately 3 km south of the Larder Lake-Cadillac Break. The Break shows evidence of changing from dominantly east-west to northwest about 2km north of the northeastern corner of the property. The splay/ fault may have developed westward from this bend and may have extended well into the property. This kind of splay-fault

is known to host gold mineralization in the region. Overburden drilling in areas north of the property host kimberlite indicator minerals. Thus, kimberlites are also possible within the property.

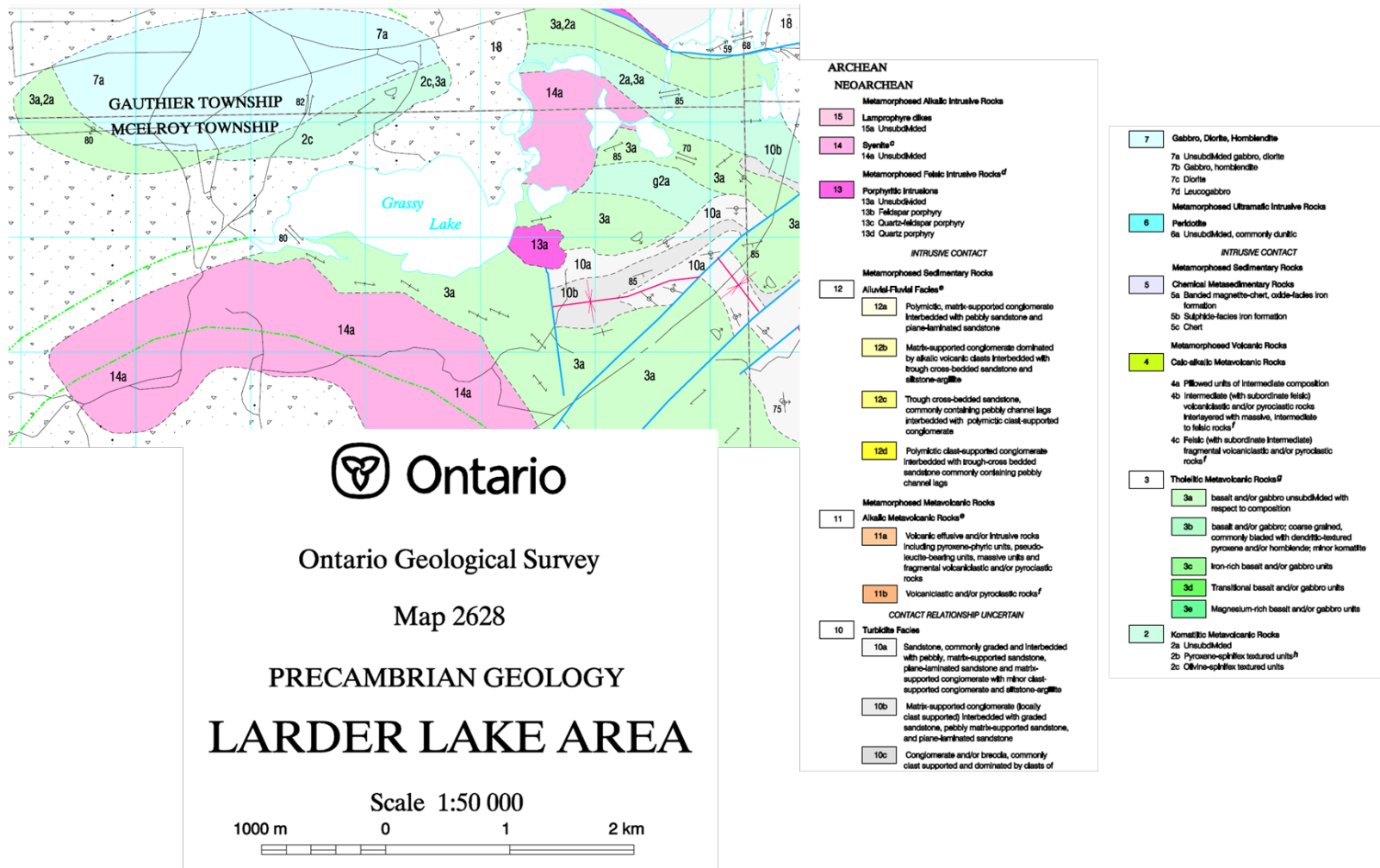


Figure 5: Regional geology map cropped from Map 2628 to illustrate the geology around Grassy Lake.

## History of Exploration

Gold in the Kirkland Lake-Larder Lake District was originally discovered near Larder Lake and at Swastika in 1906 by prospectors that moved northward from the Cobalt camp. During the 20th Century the Kirkland Lake-Larder Lake district developed into one of the world's premier gold mining areas with production of approximately 1,200 tonnes or over 35 million ounces of gold, at an average recovered grade of 0.345 oz Au/ton or 11.82 g Au/tonne.

Historic exploration work on the current property is limited. Assessment files indicate that the west central portion of the property was once covered by old claims 511955 (1975) and 511393 (1979) belonging to Utah Larder Gold Mines Ltd and its successor Rita Yost Past work on the group included: several old trenches and pits of indeterminate age. Ploeger (1993) describes the following previous work: an airborne electromagnetic and magnetic survey flown by the OGS (1979); a report by R. Bennett (1981) with geological, VLF-EM, magnetometer and radiometric surveys; stripping and diamond drilling (1983) in the northeast corner of claim 30263; clear cutting, diamond drilling by R. Hill and sampling and investigation by Gokffields and Inco geologists 1988-89; stripping, float tracing and sampling 1990 (OP90-566); mapping, boulder mapping, and dimension stone potential investigation (OP91-364).

In 1995, F.R. Ploeger drilled several holes in the vicinity of Grassy Lake. Hole MC95-1 was drilled on the lake close to the south boundary of the Grassy Lake Property. The hole was abandoned at a depth of 104 feet before entering bedrock.

In 1996, F.R. Ploeger completed ground magnetometer VLF electromagnetic surveys over Grassy Lake. Several magnetic "high" were detected close to the north shore of the lake.

In 2008, Aung Myint Thein and property owners W. Metherall & D. Zabudsky, completed prospecting traverses north of Grassy Lake.

In 2010, W. Metherall & D. Zabudsky contracted Larder Geophysics Limited to complete a ground magnetometer survey over their claims which are now partially covered by the Grassy Lake Property. A series of northeast-southwest trending magnetic "highs" were delineated across the property.

In 2013, Orefinders Resources Inc. excavated 9 trenches on their Southbreak Property which is partially covered now by the Grassy Lake Property. All the trenches were excavated in areas west of the Grassy Lake Property.



## **Survey Date and Personnel**

Field work for this report was completed in over a 2 day period on June 6 and June 7, 2020. The traverses were completed by: Jim Renaud of London, Ontario and Robert Dillman of Mount Brydges, Ontario.

## **Survey Logistics**

The traverse was initiated to prospect the Grassy Lake Property in search for outcrop and gossanous horizons or boulders in the area. The purpose of the traverses was an effort to ground-truth the theory that the Larder Lake Break splays/faults below the overburden on the Grassy Lake Property. The traverse is plotted at a scale of 1 :10,000 in Figure 6 and as a map at a scale of 1 :5,000 is appended to this report. A total of 4.2 km was traversed.

A compass and a Garmin GPS model GPSMAP 66st were used to navigate. The GPS unit was set to NAD83, Zone 17. Waypoints (WP) for the traverse were periodically recorded and are listed in Table 1.

Due to the limited outcrop exposure, only six rock samples (float) were collected during the traverses and four samples were submitted assay. The rock samples from the property were delivered to AGAT Laboratory for analyses. The lab is in Mississauga, Ontario. All rock samples were Fire Assayed for gold using a 50 gram charge and finished by Inductively Coupled Plasma – Optical Emission Spectroscopy (ICP-OES) to measure the gold concentration. Assay certificates from the lab are appended to this report.

Rock sample locations, descriptions and assay results are also presented in Table 1 and plotted with geology and surface features on the appended map at a scale of 1:5,000.

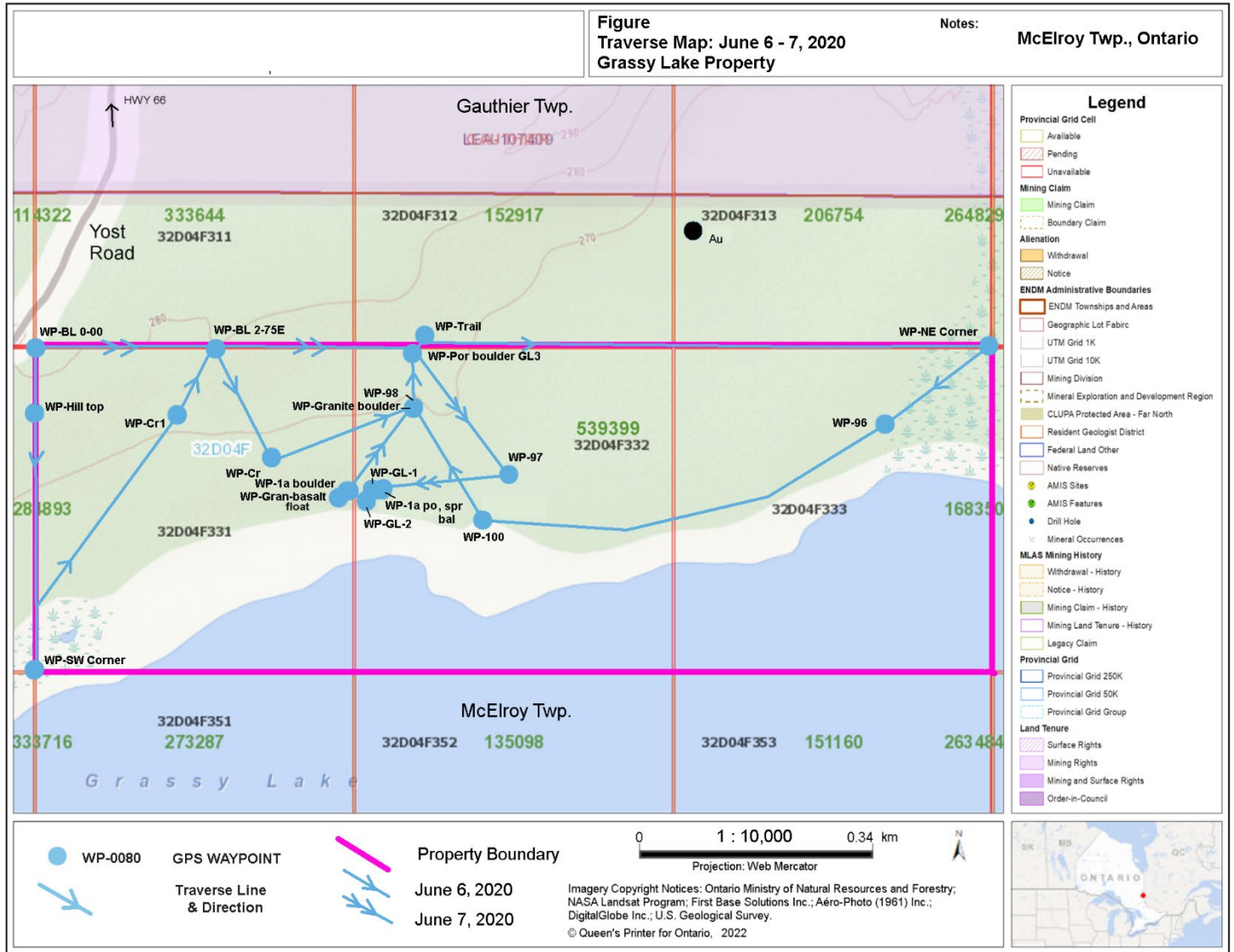


Figure 6: Grassy Lake traverse map and waypoint locations.

Waypoint	Easting	Northing	Claim Cell	Rock Sample Number	Assays Gold ppm	Notes
BL 0-00E	588407	5328092	539399 32D04F331			Flat, sand, cedar, balsam. No outcrop.
Hill Top	588398	5328003	539399 32D04F331			Hill top, moderate slope south-southeast, cedar, spruce, balsam. No outcrop
SW Corner	588415	5327633	539399 32D04F331			Swamp, wet. Open, alders.
Cr1	588619	5328013	539399 32D04F331			Creek, flows south. No outcrop.
Bl 2-75e	588673	5328097	539399 32D04F331			Top of hill. Flat, sand, cedar, balsam. No outcrop. Moderate slope southeast.
Cr	588757	5327944	539399 32D04F331			Creek, flows southeast. Alders, spruce, balsam. No outcrop in area.
1a boulder	588857	5327888	539399 32D04F331			Basalt boulder, mixed forest, flat. No outcrop.
Gran basalt float	588868	5327898	539399 32D04F331			Basalt and granite boulders, mixed forest, flat
GL-2	588896	5327884	539399 32D04F332	GL-2	0.001	Basalt boulder with FeC, trace pyrite rounded <0.35 m. No outcrop.
Carb boulder GL-1	588910	5327900	539399 32D04F332	GL-1	0.002	Basalt boulder with FeC, trace pyrite rounded <0.35 m. No outcrop.
Basalt boulder pop spr	588919	5327905	539399 32D04F331			Basalt boulder, mixed forest, flat. No outcrop
Granite boulder	588964	5328003	539399 32D04F332			Granite boulder on trail, mixed forest, flat. No outcrop.
Basalt boulder po	588919	5327905	539399 32D04F332	GL-4	0.003	Basalt boulder, trace pyrrhotite, mixed forest, flat. No outcrop
97	589103	5327925	539399 32D04F332			No outcrop. Flat. Poplar, hemlocks, spruce, balsam.
098	588963	5328019				Trail. No outcrop. Slight rise to north. Poplar, hemlocks, spruce, balsam
100	589066	5327860	539399 32D04F332			No outcrop. Flat. Poplar, hemlocks, spruce, balsam.
NE corner	589804	5328119	539399 32D04F333			Wet. Lots of cedar and alders. No outcrop.
096	589652	5328009	539399 32D04F333			Edge of cedar swamp. Drier. No outcrop. Lots of deadfall. No outcrop. Flat.
Por boulder GL3	588960	5328096	539399 32D04F332	GL-3	0.003	Feldspar porphyry boulder, weak Fe carb alteration. Close to trail. No outcrop.
Trail	588978	5328121	539399 32D04F331			Trail goes north off property and bends to the west.

***Table 1. Waypoint and Rock Sample Locations***  
Grassy Lake Property NAD 83 Zone 17 June 6 -7, 2020

## Survey Results

No outcrops were found during the course of the traverses on the Grassy Lake Property. However, six grab samples of float were collected over the 2 day period. The samples were labelled GL1 to GL6. The samples collected were mineralized gossanous boulders comprise of quartz-carbonate alteration with disseminated pyrite. Four rock samples (GL1-GL4) from the property were submitted for assay and Au values ranged between 0.001-0.003 ppm Au. The more quartz-carbonate-pyrite alteration was noted near the north property boundary. The alteration style is promising as it mimics much of the alteration style along the Larder-Cadillac Break system. There is a gold showing approximately 165 meters to the north of the property called the Potter occurrence. More follow-up work is required to access structure and mineral potential along strike of the Potter occurrence onto the Grassy Lake Property.

## Conclusions and Recommendations

Further prospecting and mapping are required on the property to establish the mineral potential of the area. A ground magnetometer and VLF survey are recommended over the property and the lake. Trenching is recommended just south of the north property boundary and just west of where the trail crosses the property boundary.

An estimated cost for proposed work as described below is approximately \$16,000:

Geological Mapping and Prospecting.....	\$5000
Assays.....	\$2000
Magnetometer Survey.....	\$2000
VLF Survey.....	\$2000
Trenching.....	\$5000

Dr. Jim Renaud      PhD, P.Geo.

January 5, 2022

## References

- Jackson, S.L. and Fyon, J.A., 1991. The Western Abitibi Subprovince in Ontario: in Geology of Ontario, Ontario Geological Survey, Special Volume 4, Part 1.
- Jensen, L.S., 1985. Synoptic Mapping of the Kirkland Lake - Larder Lake Areas, District of Timiskaming; OGS MP 126.
- Ploeger, F. R., 1993. AFRI 32D04SW0084 OPAP-Final Submission, Technical Report 1993, File No. OP93-264
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- Ploeger, F.R., 1995. Geophysical Survey of Grassy Lake Area, Moose Crossing Group, McElroy Twp. District of Timiskaming. Unpublished assessment report. 32D04SW0093
- Ploeger, J.C. 2010. Walter Metherall & David Zabudsky, Magnetometer Survey Over the Grassy Lake Property, McElroy Township, Ontario. Unpublished assessment report. 20000006060/ 20008598
- Riopel, P., 2013. Southbreak Property Technical Report Trenching 2013, Gauthier and McElroy Township Ontario, Canada SNRC 32. Presented to Orefinders Resources Inc. Unpublished assessment report. 20000009131
- Thein, A. M., 2008. Assessment Report On The Grassy Lake North Property, Mc Elroy Township, Larder Lake Mining Division, Ontario, January 07, 2008, Toronto, Ontario, Canada, MPH Consulting Limited, CLAIM 3013936, for Walter Metherall and David Zabudsky. Unpublished assessment report. 20000002617/ 20004080



**Dr. Jim A. Renaud, P.Ge, Ph.D**  
**Renaud Geological Consulting Ltd.**  
**21272 Denfield Rd, London, Ontario, Canada, N6H 5L2**  
**renaudgeological@execulink.com**

### **CERTIFICATE of AUTHOR**

I, Jim A. Renaud, **Professional Geologist**, do certify that:

1. I am the President and the holder of a Certificate of Authorization for:

**Renaud Geological Consulting Ltd.**  
**21272 Denfield Rd**  
**London, Ontario, Canada,**  
**N6H 5L2**

2. I am President and CEO of Renaud Geological Consulting Ltd.;
3. That I have the degree of Bachelor of Science (Chemistry and Geology), 1999, from Western University; the degree of Honors Standing in Geology, 2000, from Western University; Masters of Science (Economic Geology), 2003, from Western University; and Doctor of Philosophy in Geology, 2014, from Western University;
4. I am an active member of:  
**Association of Professional Geoscientists of Ontario, APGO, #2211**
5. I have been a licensed Prospector in Ontario since 2000;
6. I have worked continuously as a Geologist for 19 years;
7. That I am the author of this report entitled:

**REPORT ON PROSPECTING TRAVRSES: GRASSY LAKE NORTH AREA,  
LARDER LAKE MINING DIVISION, McELROY TOWNSHIP, ONTARIO**

8. That I am jointly responsible for all sections of the Technical Report;
9. That I visited the property claims on the dates specified in this report;
10. That, as of the date of this certificate, to the best of my knowledge, information and belief, the report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
11. I hereby consent to the filing of the report

Dated at London, Ontario, Canada  
This 3rd day of January, 2022  
Jim A. Renaud, Ph.D., P.Ge.

Date January 3, 2022

## APPENDIX







**Plates 1 and 2:** These are images of Grassy Lake with evidence of alders in the foreground and more mature trees in the background including balsam, poplar, spruce, and hemlock.





Plate 3: An image of sample location GL2 and the rock sample collected.



CLIENT NAME: MISC AGAT CLIENT ON, ON

ATTENTION TO: Robert Dillman

PROJECT:

AGAT WORK ORDER: 20T614963

SOLID ANALYSIS REVIEWED BY: Jing Xiao, Data Reviewer

DATE REPORTED: Jun 30, 2020

PAGES (INCLUDING COVER): 8

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 20T614963

PROJECT:

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Robert Dillman

### (200-) Sample Login Weight

DATE SAMPLED: Jun 17, 2020      DATE RECEIVED: Jun 18, 2020      DATE REPORTED: Jun 30, 2020      SAMPLE TYPE: Rock

Sample ID (AGAT ID)	Analyte:	Sample Login Weight
	Unit:	kg
	RDL:	0.01
GL1 (1208674)		1.2333
GL2 (1208675)		2.0753
GL3 (1208676)		2.0854
GL4 (1208677)		1.3484
GL5 (1208678)		
GL6 (1208679)		

Comments: RDL - Reported Detection Limit  
 Analysis performed at AGAT 5623 McAdam Rd., Mississauga, ON (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 20T614963

PROJECT:

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Robert Dillman

(202-552) Fire Assay - Trace Au, ICP-OES finish (50g charge) (ppm)

DATE SAMPLED: Jun 17, 2020

DATE RECEIVED: Jun 18, 2020

DATE REPORTED: Jun 30, 2020

SAMPLE TYPE: Rock

Analyte:	Unit:	RDL:
Au	ppm	0.001
Sample ID (AGAT ID)		
GL1 (1208674)		0.002
GL2 (1208675)		0.001
GL3 (1208676)		0.003
GL4 (1208677)		0.003
GL5 (1208678)		
GL6 (1208679)		

Comments: RDL - Reported Detection Limit

Analysis performed at AGAT 5623 McAdam Rd., Mississauga, ON (unless marked by \*)

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 20T614963

PROJECT:

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Robert Dillman

## Sieving - % Passing (Crushing)

DATE SAMPLED: Jun 17, 2020

DATE RECEIVED: Jun 18, 2020

DATE REPORTED: Jun 30, 2020

SAMPLE TYPE: Rock

Analyte:	Pass %
Unit:	%
Sample ID (AGAT ID)	RDL: 0.01
GL1 (1208674)	78.01

Comments: RDL - Reported Detection Limit

Analysis performed at AGAT 5623 McAdam Rd., Mississauga, ON (unless marked by \*)

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 20T614963

PROJECT:

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Robert Dillman

## Sieving - % Passing (Pulverizing)

DATE SAMPLED: Jun 17, 2020	DATE RECEIVED: Jun 18, 2020	DATE REPORTED: Jun 30, 2020	SAMPLE TYPE: Rock
----------------------------	-----------------------------	-----------------------------	-------------------

Analyte:	Pass %
Unit:	%
Sample ID (AGAT ID)	RDL: 0.01
GL1 (1208674)	89.15

Comments: RDL - Reported Detection Limit

Analysis performed at AGAT 5623 McAdam Rd., Mississauga, ON (unless marked by \*)

Certified By:



CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Robert Dillman

(202-552) Fire Assay - Trace Au, ICP-OES finish (50g charge) (ppm)

Parameter	REPLICATE #1				REPLICATE #2											
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD								
Au	1208674	0.002	0.002	0.0%	1208679	0.0027	0.0022	20.4%								



**AGAT** Laboratories

Quality Assurance - Certified Reference materials  
 AGAT WORK ORDER: 20T614963  
 PROJECT:

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Robert Dillman

(202-552) Fire Assay - Trace Au, ICP-OES finish (50g charge) (ppm)

Parameter	CRM #1 (ref.GS4E)													
	Expect	Actual	Recovery	Limits										
Au	4.19	4.02	96%	90% - 110%										





## Method Summary

CLIENT NAME: MISC AGAT CLIENT ON

AGAT WORK ORDER: 20T614963

PROJECT:

ATTENTION TO: Robert Dillman

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Au	MIN-12006, MIN-12004		ICP/OES
Pass %			BALANCE