

We are committed to providing [accessible customer service](#).

If you need accessible formats or communications supports, please [contact us](#).

Nous tenons à améliorer [l'accessibilité des services à la clientèle](#).

Si vous avez besoin de formats accessibles ou d'aide à la communication, veuillez [nous contacter](#).

Grass Roots Prospecting Report
for the
West Lake Mining Claims

Haavisto, Ben
bhaavisto1@gmail.com
Claim Holder

Haavisto, Aaron
aaron.haavisto@gmail.com

November 17, 2022

Contents

Table of Contents	ii
List of Figures	iii
Preamble	1
Abbreviations Used	1
1 Claims	1
2 Coordinate System	1
3 Location and Access	2
4 Personnel	3
5 Regional and Property Geology	3
6 Prior Work	3
7 Description of Exploration Activities	4
7.1 Overview	4
7.2 Logs	4
7.2.2 August 14, 2022	4
7.2.3 October 01, 2022	5
8 Rock samples collected	7
References	8
Appendix A - Regional Map (1:50000 scale)	9
Appendix B - Activities Map (1:15000 scale)	10

List of Figures

1	View of a 1:50,000 scale key map showing the cell claims in which the grass roots prospecting was done in relation to townships, major highways, First Nation lands, mining claims and bodies of water. Full sized map in Appendix A.	2
2	Map centered on area of all activities of grass roots exploration on August 14, 2022 as listed in Table 3. Bodies of water, forest cover and marsh extents compiled from interpretations of aerial photography, satellite imagery and field logs. Clear areas represent exposed bedrock.	5
3	Map centered on area of all activities of grass roots exploration on October 01, 2022 as listed in Table 4. Bodies of water, forest cover and marsh extents compiled from interpretations of aerial photography, satellite imagery and field logs. Clear areas represent exposed bedrock.	6

List of Tables

1	Initials and abbreviations used in this report.	1
2	Complete list of all personnel participating in grass roots exploration activities.	3
3	Waypoints added from grass roots exploration on August 14, 2022. Collected on Magellan eXplorist 310 GPS unit. Points displayed in Figure 2.	4
4	Waypoints added from grass roots exploration on October 01, 2022. Collected on Garmin Instinct GPS unit. Points displayed in Figure 3.	7
5	Rock samples collected as part of grass roots prospecting of the West Lake claims. Codes are those listed in Tables 3-5.	7

Preamble

A technical report applied to grass roots prospecting assessment work that is required as part of an assessment work report submission pursuant to the Mining Act, R.S.O. 1990, C. M.14 and the Assessment Work Regulation (O. Reg. 65/18). This technical report includes a detailed explanation of the geoscience work done, maps or plans, where required and details of the expenses claimed for the work, together with supporting receipts, invoices and other documents for those expenses.

Abbreviations Used

Table 1: Initials and abbreviations used in this report.

SRO	Surface Rights Owner
MLAS	Mining Land Administration System
ATV	All Terrain Vehicle
DDH	Diamond Drill Hole
IP	Induced Polarization
VLF	Very Low Frequency
EM	Electromagnetic
GPS	Global Positioning System

1 Claims

Mining Division: **Sudbury**

Township: **Louise** (MNDM# G-4076)

Cell Numbers:

522463 522464 564291 564292 564294 564469
564470 564471 564472 663216 663217 663218
663247 663248

2 Coordinate System

All maps displayed in: UTM NAD83 17N

3 Location and Access

Access to the property claim blocks is by taking Highway 55 from Sudbury, Ontario for 30.3 km to west of the town of Walden. Then South onto Panache Lake Road (Regional Road 10) for a distance of 7.2 km, north on Grassy Lake Road for .95 km, and finally, 1.9 km on Tower Road (a gravel road), until it ends at West Lake. The claims are accessed from foot from this point on.

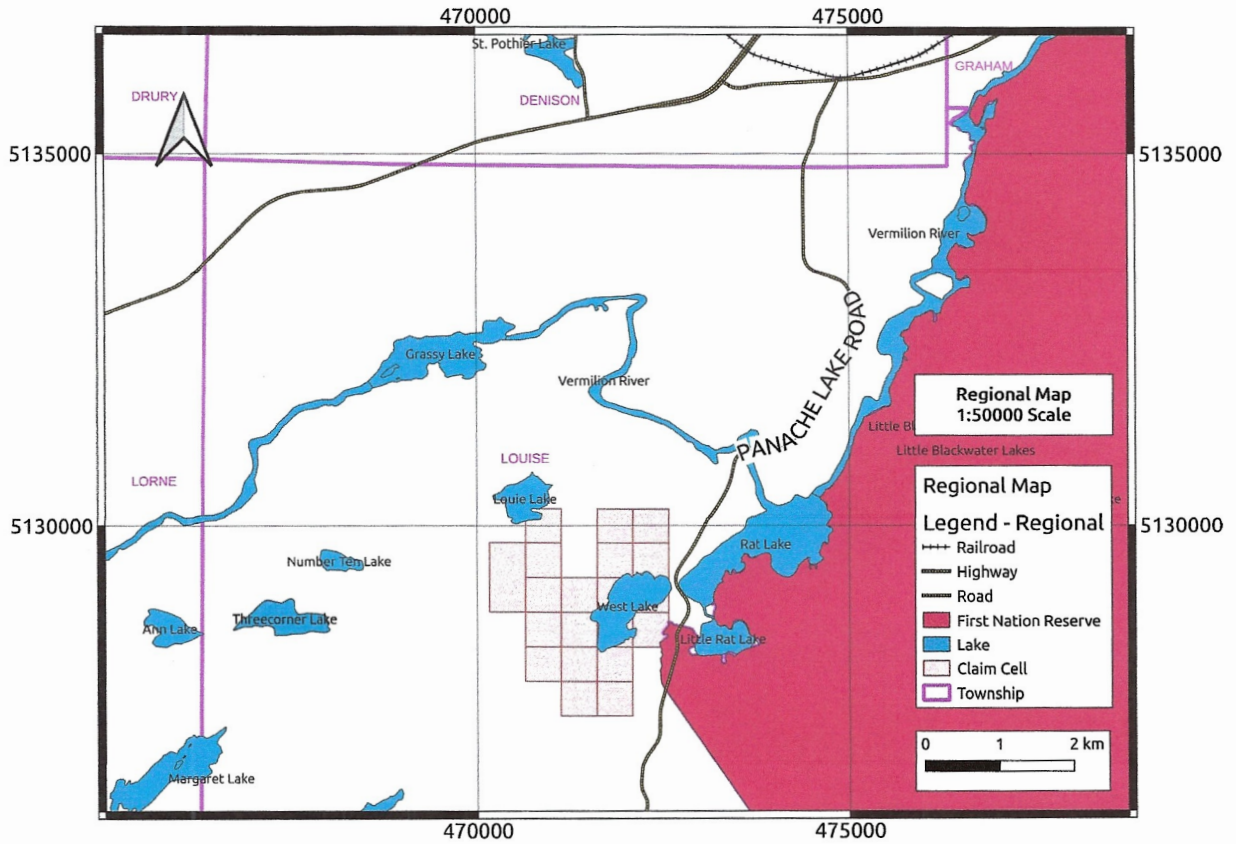


Figure 1: View of a 1:50,000 scale key map showing the cell claims in which the grass roots prospecting was done in relation to townships, major highways, First Nation lands, mining claims and bodies of water. Full sized map in Appendix A.

4 Personnel

First Name	Last Name	Phone	Email	Days Worked
Ben	Haavisto	705-918-1281	bhaavisto1@gmail.com	1
Aaron	Haavisto	705-207-5764	aaron.haavisto@gmail.com	2
Christopher	Mancuso	204-962-0359	cmancuso@laurentian.ca	2
John	Morgan	705-698-2053	john.morgan@imscanada.com	1
Philip	Wall	249-360-4465	philipprestonwall@gmail.com	2

Table 2: Complete list of all personnel participating in grass roots exploration activities.

5 Regional and Property Geology

The West Lake property is located in the Southern Province of the Canadian Shield, near the Grenville Front to the south and the Sudbury basin to the north, and is underlain by Precambrian age rocks of the Nipissing Magmatic Province. This province is part of the Proterozoic Huronian Supergroup and stretches nearly 450 kilometres east-west and 350 kilometres north-south (Lightfoot and Naldrett, 1996). Gabbroic, tholeiitic, intrusive rocks collectively known as Nipissing Diabase cover more than 20% of this region and are intruding a sequence of quartzites arkoses and greywackes of the Mississaugi, Lorraine and Bruce formation. Nipissing Diabase intrusions created undulating sills, cone sheets or lopoliths, and dykes between Cobalt and Sault Ste. Marie and are likely the remains of an eroded Continental Flood Basalt system that occurred between 2206 Ma and 2223 Ma (Corfu and Andrews, 1986; Lightfoot et al., 1986).

Moreover, Nipissing Diabase intrusions are suggestive of an extensional environment favorable for the formation of significant concentrations of magmatic sulphide minerals rich in Cu-Ni-PGE (Jobin-Bevans, 2016). The Nipissing Diabase and the sills and intrusions that hold the rich Ni-Cu-PGE deposits in Noril'sk, Russia, share numerous geochemical and structural similarities (Lightfoot and Naldrett, 1996).

Additionally, this area host the best exposed bodies of fenite in Canada: The Nemag Lake and Kusk lake bodies. Each is approximately 0.5 km in diameter and irregularly shaped. They occur 5 km apart in the quartzites of the Mississagi Formation of the Huronian Supergroup, and consist of brecciated quartzite fragments cemented and extensively replaced by aegirine, riebeckite, and alkali feldspar. Carbonites associated with fenitisation emplace into extensional settings and range in age from Archean to recent. The fenitisation-type halos near West Lake are associated alkaline silicate igneous rocks and are prospective for rare earth elements (REE).

At property scale, the east-west Espanola Fault, dominates the length of the grid and is visible in outcrop along the length of the West Lake property. It is the area's primary structural feature and there are many splays that run north-east, the most notable of which being the break through tower mountain to Louie Lake.

6 Prior Work

- 1987 BP resources collected airborne magnetic and VLF data with a 125 m nominal line spacing (Report 2.11050).
- 1997 Ralph Huggins, P.Geo retained Timmins Geophysics to perform line cutting followed by magnetic and IP surveys.
- 1998 Ken Germundson PhD, P.Geo performed geochemical assays. Results reveal anomalous levels Pt, Pd, Ni and Cu elements.
- 2009 Ralph Huggins, P.Geo submits plan for further IP and EM prospecting (max/min). Data or results not recovered.
- 2018 BH reserves first claim cells in the West Lake property and grass roots prospecting begins (see previous reports).

- 2019 BH stakes 10 claims on property.
- 2021 BH stakes 6 claims on property.
- 2022 BH stakes 2 claims on property.

7 Description of Exploration Activities

7.1 Overview

In the third and fourth quarters of 2022, the West Lake claims were explored two separate times. The activities of each day are detailed below with individual maps and tables. A 1:15000 scale map encompassing all activities is included in Appendix B.

7.2 Logs

7.2.2 August 14, 2022

- 09:15 Philip W., Aaron H. and Chris M. depart Sudbury, ON.
- 10:08 Philip W., Chris M. and Aaron H. arrive at parking spot near West Lake (BA). Begin to hike west to ore showing.
- 11:14 Crew digs test pit through overburden at point (BB).
- 11:42 Crew digs test pit through overburden at point (BC).
- 12:13 Crew digs test pit through overburden at point (BD).
- 13:35 Crew arrives at outcrop at BE.
- 14:06 Crew arrives at outcrop at BF.
- 14:13 Crew arrives at outcrop at BG.
- 14:19 Crew arrives at outcrop at BH and takes rock sample (No. 01).
- 15:40 Crew arrives at parking spot (BA/BI) and departs.
- 16:31 Chris M., Aaron H. and Philip W. arrive in Sudbury, ON.

time	code	comment
2022/08/14 10:08:45	BA	Parking Spot
2022/08/14 11:14:58	BB	OB Test Pit No. 01
2022/08/14 11:42:08	BC	OB Test Pit No. 02
2022/08/14 12:13:58	BD	OB Test Pit No. 03
2022/08/14 13:35:03	BE	Outcrop
2022/08/14 14:06:24	BF	Outcrop
2022/08/14 14:13:30	BG	Outcrop
2022/08/14 14:19:02	BH	Sample No. 01
2022/08/14 15:40:19	BI	Parking Spot

Table 3: Waypoints added from grass roots exploration on August 14, 2022. Collected on Magellan eXplorist 310 GPS unit. Points displayed in Figure 2.

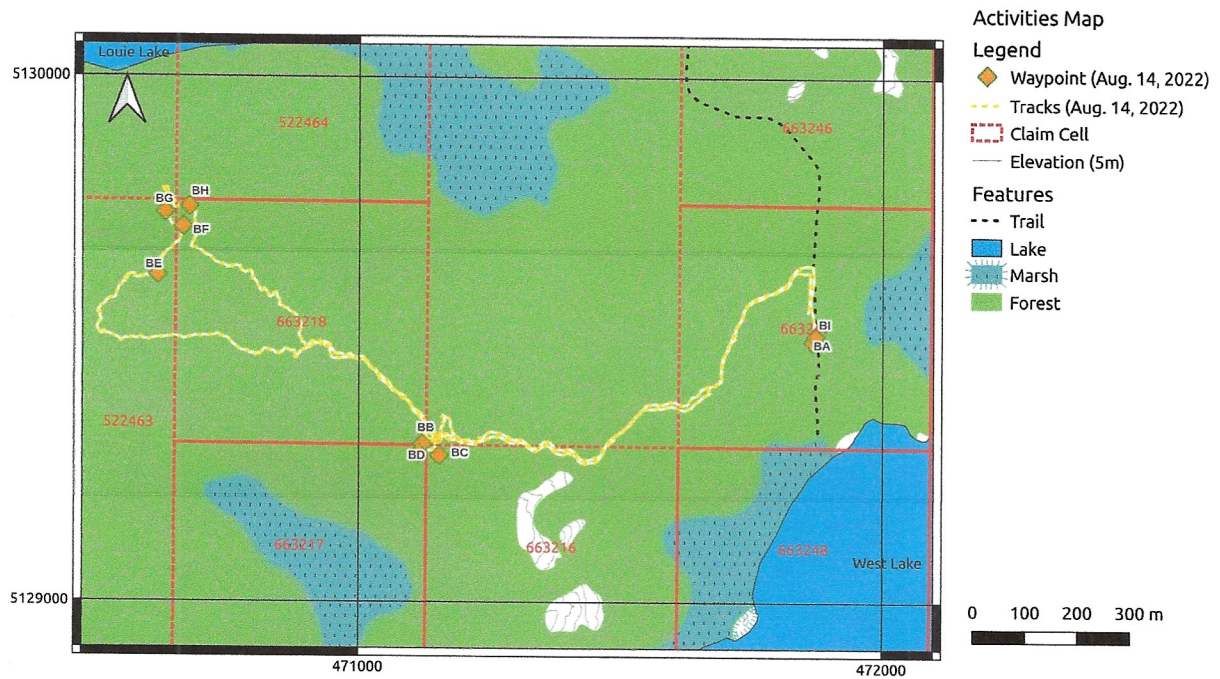


Figure 2: Map centered on area of all activities of grass roots exploration on August 14, 2022 as listed in Table 3. Bodies of water, forest cover and marsh extents compiled from interpretations of aerial photography, satellite imagery and field logs. Clear areas represent exposed bedrock.

7.2.3 October 01, 2022

- 08:15 Aaron H. depart Sudbury, ON with Philip W.
- 09:00 Aaron H., Philip W meet Ben H. and John M. at Whitefish, ON.
- 09:54 Aaron H., Ben H., John M., Philip W. arrive at Parking Spot (CA). Unload boat. Drive south across West Lake.
- 10:39 Crew brings boat on shore (CB).
- 10:50 Crew visits outcrop (CC). Traverse south-southwest on foot.
- 11:01 Arrive at outcrop (CD). Continue south.
- 11:21 Outcrop (CE). Photograph striation, bands (No. 01).
- 11:30 Outcrop (CF). Photograph texture (No. 02).
- 11:39 Pond with soil at CG (for soil sampling).
- 12:05 Lunch break (CH).
- 12:45 Finish lunch (CH).
- 12:52 Outcrop (CI). Take photograph (No. 03).
- 12:56 Outcrop (CJ). Take hand sample (No. 02).
- 13:01 Outcrop (CK). Photograph (No. 04).

- 13:11 Outcrop (CL)
- 13:21 Brecciated outcrop (CM).
- 13:22 Outcrop (CN)
- 13:27 Old exploration pit (CO). Take hand sample (No. 03).
- 13:40 Outcrop with quartz-sulphide contact (CP).
- 14:06 Arrive at tree stand and outcrop of Mississauga quartz (CQ).
- 14:10 Pass through wetland at CR (tag alder swamp).
- 14:42 Arrive at outcrop (CS). Take hand sample (No. 04). Return to boat and depart north through West Lake.
- 16:05 Arrive at landing (CT).
- 16:33 Arrive at parking spot (CU). Load boat on trailer. Crew departs to Sudbury, ON.
- 17:12 Aaron H. and Philip W. arrive in Sudbury, ON.

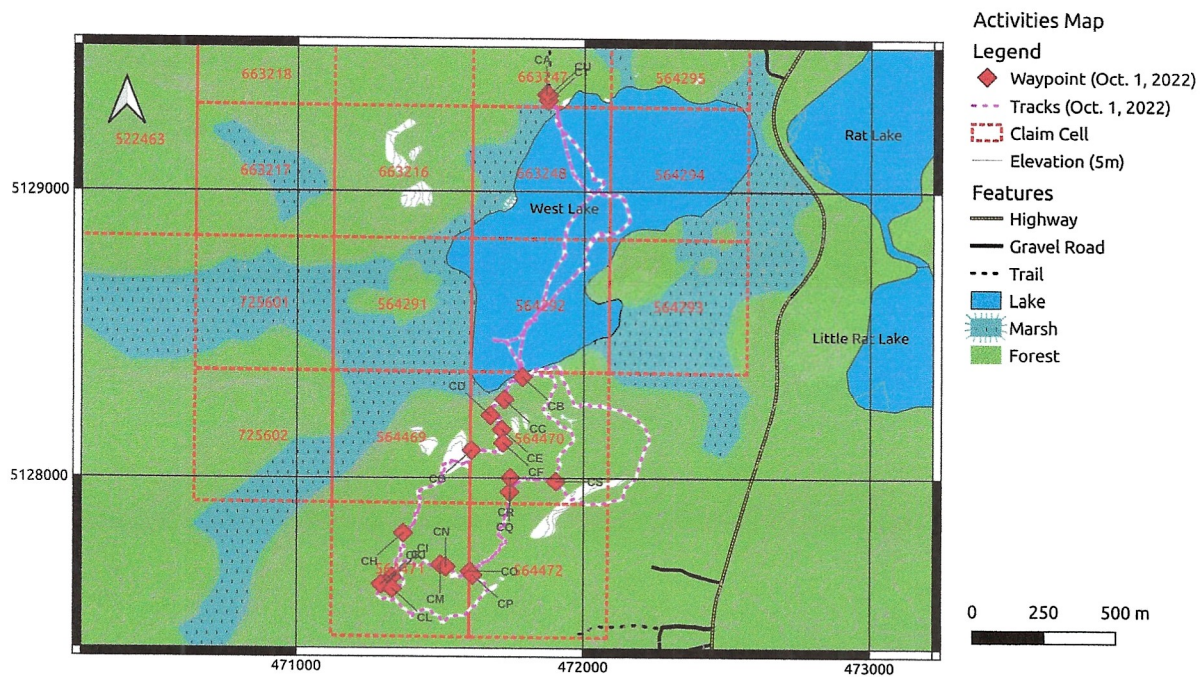


Figure 3: Map centered on area of all activities of grass roots exploration on October 01, 2022 as listed in Table 4. Bodies of water, forest cover and marsh extents compiled from interpretations of aerial photography, satellite imagery and field logs. Clear areas represent exposed bedrock.

time	code	comment
2022/10/01 09:54:28	CA	Parking Spot
2022/10/01 10:39:51	CB	Landing on shore
2022/10/01 10:50:32	CC	Mineralized outcrop
2022/10/01 11:01:56	CD	Flyrock and outcrop
2022/10/01 11:21:35	CE	Outcrop and photo No. 01
2022/10/01 11:30:20	CF	Outcrop and photo No. 02
2022/10/01 11:39:03	CG	Pond with soil
2022/10/01 12:08:32	CH	Lunch spot
2022/10/01 12:52:30	CI	Outcrop and photo No. 03
2022/10/01 12:56:52	CJ	Outcrop and sample No. 02
2022/10/01 13:01:20	CK	Outcrop and photo No. 04
2022/10/01 13:10:56	CL	Outcrop
2022/10/01 13:21:41	CM	Outcrop
2022/10/01 13:22:59	CN	Outcrop
2022/10/01 13:27:58	CO	Outcrop and sample No. 03
2022/10/01 13:40:37	CP	Outcrop
2022/10/01 14:06:46	CQ	Tree stand and outcrop
2022/10/01 14:10:07	CR	Wetland
2022/10/01 14:42:41	CS	Outcrop and sample No. 04
2022/10/01 16:05:42	CT	Boat landing on shore
2022/10/01 16:33:29	CU	Parking Spot

Table 4: Waypoints added from grass roots exploration on October 01, 2022. Collected on Garmin Instinct GPS unit. Points displayed in Figure 3.

8 Rock samples collected

Hand samples were collected from unweathered faces of outcrops by removing them with a rock hammer. These were sealed in labelled polyethylene bags. Care was taken not to contaminate the samples with precious metals from jewellery.

ID	X	Y	Date	Time	Code	Comment
1	470629	5129760	2022/08/14	18:19:02	BH	Coarse grained leucocratic with sulphide blebs
2	471313	5127628	2022/10/01	12:56:52	CJ	Leucocratic with silver-colored metallic blebs
3	471605	5127673	2022/10/01	13:27:58	CO	Dark-colored rock with iron staining and chalcopyrite
4	471904	5127988	2022/10/01	14:42:41	CS	Dark-colored fine-grained rock

Table 5: Rock samples collected as part of grass roots prospecting of the West Lake claims. Codes are those listed in Tables 3-5.

References

- Corfu, F., and A. Andrews, 1986, Au–pb age for mineralized nipissing diabase, gowganda, ontario: Canadian Journal of Earth Sciences, **23**, 107–109.
- Jobin-Bevans, L., 2016, Geochemical data related to a study of platinum group element mineralization in nipissing gabbro intrusions and the river valley intrusion, sudbury region, southern province: Ontario Geological Survey, Miscellaneous Release--Data, **336**.
- Lightfoot, P., D. Conrod, A. Naldrett, and N. Evensen, 1986, Petrologic, chemical, isotopic, and economic potential studies of the nipissing diabase: Ontario Geological Survey Miscellaneous Paper, **130**, 87–106.
- Lightfoot, P., and A. Naldrett, 1996, Petrology and geochemistry of the nipissing gabbro: Exploration strategies for ni, cu and pge in a large igneous province: Ontario Geological Survey Study 58, 80.

470000

475000

DRURY

DENISON

GRAHAM

5135000

5135000

LORNE

LOUISE

Regional Map
1:50000 Scale

5130000

5130000

Regional Map
Legend - Regional

- ++++ Railroad
- Highway
- Road
- First Nation Reserve
- Lake
- Claim Cell
- Township

0 1 2 km



470000

475000

St. Pothier Lake



Vermilion River

Grassy Lake

Vermilion River

PANACHE LAKE ROAD

Little Bl

Little Blackwater Lakes

Louie Lake

Number Ten Lake

Rat Lake

Ann Lake

Threecorner Lake

West Lake

Little Rat Lake

Margaret Lake

