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Technical Report For Reporting Assessment Work On Claims 210008 and 312588

Whitney and Shaw Townships, Ontario Porcupine Mining Division

April 15th, 2022 Hamilton, Ontario Francois Fournier (BSc Eng) Client # 403792 78 Bridgeport Cres. Ancaster, ON L9K 1K4 (905) 308 – 1966

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1.0 Introduction:

The property that work was performed on consists of 2 unpatented mining claims, 312588 and 210008 in the Shaw and Whitney Townships, Porcupine Mining Division. Originally, both claims resided entirely in the Whitney township, but as the result of boundary claim expansions, they now reside in both Shaw and Whitney townships.

The claims are only readily accessible in the winter via snowmobile or in the summer via backpacking with hip waders or tracked light weight amphibious vehicles (Argo). There are a couple of swamps and muskegs along the route plus 3 creeks which make access in the summertime via all terrain vehicles (ATV) impossible.

Most of the previous work that was performed on these claims was undertaken via snowmobile in the wintertime. The problem with this method is that it does not allow access to the ground and rock outcrops as there are buried under 5 feet of snow. The author and owner of the property wishes to perform more ground work and prospecting on these claims in the summer months for geological work, geochemical work, grass route prospecting, manual work, collecting samples, assaying, core drilling, trenching, etc. Some basic prospecting was performed on the property in the summer of 2021 but no samples were collected as the terrain back to the main road is to difficult to walk back with samples.

2.0 Location:

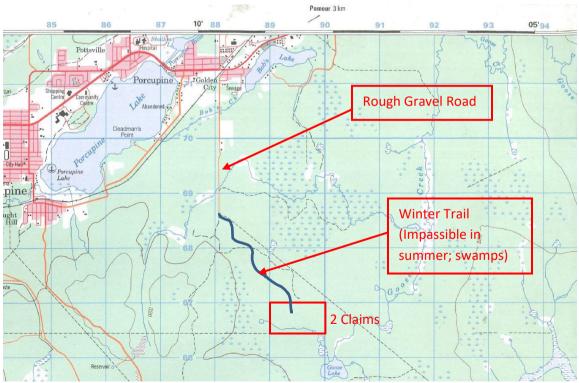
The property is located approximately 4.5 km South Southeast of the town of Porcupine, Ontario. A rough gravel road extends South from Gervais Street for approximately 2.8 km. From there, it is approximately a further 2.2 km to the North border of the property via a winter only trail, swamps and muskegs. Access in the summer via the last 2.2 km winter trail is very limited because of lowlands, swamps, muskegs and 3 creeks that must be traversed. Part of the work that was performed in the summer of 2021 was to:

- Find the best possible summer access route through the winter trail, swamps and muskegs
- Build a small "trial" creek crossing using a combination of PVC pipes, grating, rebar, chain link fence and used conveyor belts in order to better access the property in the summer. More on this later. The material had to be easily transported to the first creek via an ATV and wagon.

The property itself, once you get there, is 80% on dry lands with numerous rock outcrops which are ready for grass roots prospecting, sampling, geochemical, trenching and drilling programs. The remainder of the property is 10% low lying areas and 10% under water (2 beaver ponds plus one major creek (river) flowing West to East across the property, at the Southern border). The biggest obstacle for performing summer assessment work is access to the property in the summer time.



Map 1: Google satellite map imagery 2022



Map 2: Canadian Topographic Map Timmins 42 A/6 1:50 000

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Map 3: Ontario MLAS Map Viewer Claim Map

3.0 Prospector's Licence:

Ontario 😵	PROSPECTOR'S LICENCE					
Licence Number:	2001636					
Expiry Date:	2027-02-07					
Name:	FRANCOIS FOURNIER					

4.0 Background:

The area has a climate that is characterized by warm, moderately humid summers and cold, dry winters. Temperatures range from -45 degrees Celsius in winter to +30 degrees Celsius in summer. Mean annual rainfall is 600 millimeters and mean annual snowfall is 300 centimeters.

Timmins and the surrounding communities have a long history of mining and exploration. The economy is largely based on resource extraction, and the local population is generally in favor of economic development. Valuable commodities include gold, silver, nickel, copper, cadmium, indium, zinc, sulphur, selenium, serpentine, stone, talc, silica and platinum group metals. Non-metal mining included granite, marble, hedmanite and magnetite.

Services and manpower related to exploration and mining activities are readily available in the Timmins area. The Timmins area is served by scheduled airlines, railways and numerous truck transportation companies.

The property is of sufficient size to accommodate all facilities required to allow mining activities if economic mineralization in sufficient quantities is discovered on the property. Numerous milling operations nearby may be able to process ore on a contract basis.

5.0 Local Historical Work by Others:

The Ontario Geological Survey (OGS) Geophysical / Geochemical Series Map 81080 (1988) for Whitney Township shows the portion of electromagnetic conductors detected during an airborne geophysical survey flown for the OGS by Geoterrex Ltd. And contoured total field magnetic data acquired during the same survey. Three Southeast striking conductors were detected on the property. The geology of the property is shown on OGS map 2455 (Pyke, 1982) and on OGS Preliminary Map P 3172 (Piroscho and Kettles, 1990), and is discussed below.

In addition to the government surveys, the following exploration work is recorded in assessment files.

Goose Lake Iron Mines Ltd. (T-776)

During 1957, a comprehensive sampling, assaying and metallurgical testing of iron formations were completed on a 57-claim group of which the applicant's claim were a part to evaluate the potential for iron ore.

Rosario Resources Canada Ltd. (T-776)

Geological mapping was completed in 1976 on north-south lines spaced 400 feet apart over a large property in southern Whitney and northern Shaw townships of which the applicant's claims were a part. Rosario Resources was mainly interested in the potential for magnesite deposits in ultramafic rocks but took some grab samples to check felsic volcanic and sedimentary rocks for base metal mineralization. Five samples were collected on the applicant's claims, but no significant results were reported.

Also, in 1976, a magnetometer survey was completed on the same grid lines over the entire Rosario Resources property. There was no discussion of the readings taken in the applicant's claims.

In 1977, a Max Min electromagnetic survey was completed over the same grid lines. Two conductors were detected, one of which was tested with a 275 foot drill hole on claim P 1190948 that intersected graphite. The other conductor was not tested.

Another geological map of the Rosario Resources ground, including the applicant's claims was completed in 1979. The 1'' = 200' map produced was more detailed and showed more outcrop than the 1976 map.

Also, in 1979, a dipole induced polarization survey was completed over the Rosario Resources property. A Crone 250 transmitter and a Scintrex IP-R8 receiver were used. Two broad chargeability anomalies were detected that were located in part on the northwest portion of the applicant's claim group. These were tested with two drill holes totaling 997 feet in length which were drilled partially on claim P1190948. It was concluded that the chargeability anomalies were caused by pyrite and pyrrhotite in shallowly dipping graphitic and cherty sedimentary units.

H.H. Sutherland (T-2985)

Line cutting and geological mapping were completed during 1988. The geology map shows less detail and less outcrop than an earlier map produced by Rosario Resources Canada Ltd. East-northeast striking contacts conflict with southeast strikes shown on published governments maps, and on the Rosario Resources Ltd. Map.

A magnetometer survey was completed with a McPhar M700 magnetometer on northsouth lines spaced 400 feet apart with 100 foot station spacing during 1989. An area of anomalously low readings in the northwest corner of the claim group was interpreted as a porphyry stock, but felsic volcanic rocks were mapped here by Rosario Resources Canada Ltd. In 1990, a VLF-EM survey was carried out using a Crone Radem instrument and the transmitter station at Cutler, Maine. Readings were taken at 25 foot spacing on north-south lines spaced 400 feet apart. Two northeast striking conductors and one southeast striking conductor were detected.

<u>Summary</u>

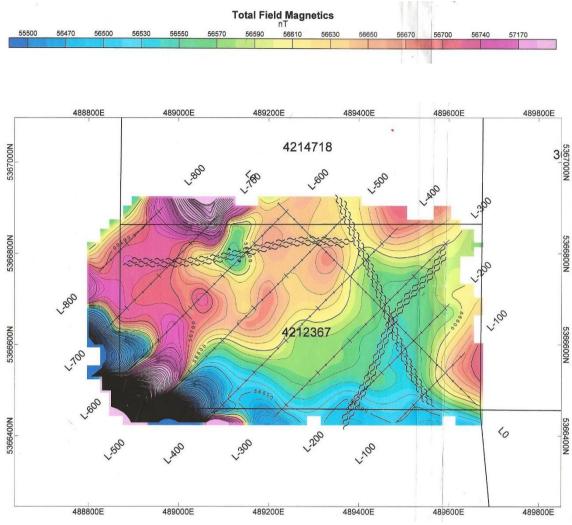
Only a limited amount of geochemical and assay sampling and three short diamond drill holes have been completed on the property despite the presence of several electromagnetic conductors and potential for base metal and gold mineralization (see below).

6.0 Historical Work by Registered Owners and Author's Father:

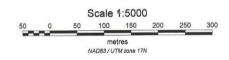
- Over the course of numerous years (2005 to 2015), the author's father made numerous attempts to build sections of corduroy trails across the swamps, muskegs and creeks to access the property in the summer time. All of these trials proved to be ineffective as either the logs would sink in the swamps and muskegs or float away during spring thaws when the water was really high. Access to the property in the summer continued to be very limited due to the inability to bring tools and machinery to the property and or return with adequate samples.
- Feb 11, 2009: Magnetic Geophysical Survey and Line Cutting;
 Matthew Johnston, Consulting Geophysicist, Timmins ON

The line cutting and chaining on the grid totalled 4.0 kilometers. The grid consisted of a 625 meter long baseline striking at Azimuth 135 degrees. The gridlines were chained and marked every 100 meters along this baseline between 0W and 800W and ranged in length between 200 meters and 850 meters. The gridlines were marked at 25-meter intervals along all base lines and traverse lines.

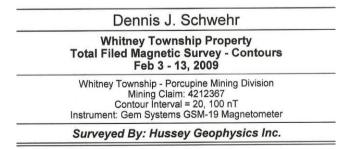
The geophysical program consisted of total field magnetic surveying. The total magnetic field survey, using a GEM GSM-19 magnetometer, totalled 4 kilometers with readings collected every 12.5 meters along all lines.



Map 4: Magnetic Geophysical Survey and Line Cutting



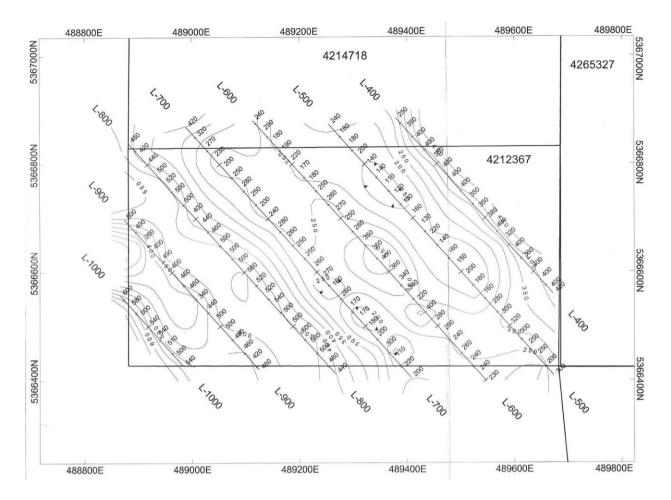
Line Kilometers Surveyed: 4



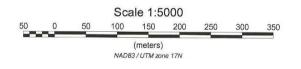
- Jan 26, 2013: VLF-EM Geophysical Survey and Line Cutting; Matthew Johnston, Consulting Geophysicist, Timmins ON

The line cutting and chaining on the grid totalled 4.0 kilometers, all of which occurred within the claim boundary. The grid consisted of a 668 meter long baseline striking at azimuth 42 degrees. The grid lines were chained and marked every 100 meters along this baseline and ranged in length between approximately 175 and 650 meters. These grid lines were marked at 25-meter intervals along all the base lines and traverse lines.

The geophysical program consisted of VLF-EM surveying. The VLF-EM field survey, using a Phoenix VLF-2 receiver, totalled 3.5 kilometers with readings of dip angle and relative field strength collected every 25 meters along all lines.



Map 5 - VLF-EM Geophysical Survey and Line Cutting



Line Kilometers Surveyed: 3.5

	Dennis J. Schwehr
VLF-	Whitney Township Property EM Survey - 24.0 kHz. Field Strength Contours March 25 - 28, 2013
	Whitney Twp Porcupine Mining Divsion Claim: 4212367
	Contour Interval = 50, 250
	Instrument: Phoenix VLF-2 Receiver
	Surveyed By: Hussey Geophysics Inc.

Both of the above surveys were conducted in the winter due to the difficulty in accessing the property in the summer. The magnetic geophysical survey did map several magnetic responses that may be significant. It was the authors recommendation that grass roots prospecting, trenching, and drilling programs be commenced on the property in order to determine the source lithology of the anomalies identified in the report.

7.0 Area History:

Gold mineralization in the Timmins area was reported as early as 1896, and in 1908, A.G. Hunter staked claims on an occurrence of gold in a silicified shear zone on the east shore of Porcupine Lake (Carlson, 1967).

With the discovery of the Dome Mine in 1909 by Jack Wilson, a member of the Harry Preston crew, the area became known as an important gold camp. Benny Hollinger and his partner Alex Gillies were not far behind the Wilson party; they were to discover the Hollinger Gold Mine. The McIntyre Mine, discovered by Alexander Olifant (alias Sandy McIntyre), completed the string of important gold discoveries in the camp. Many other gold mines would open up in the area around the Porcupine Camp in the next 60 years, but no gold mine discovered to date has equaled the importance of these three mines known as the "Big Three" (Timmins Community Portal – http://portal.timmins.ca Sept 3, 2008).

Mining in the Timmins area diversified beyond gold in 1964 with the announcement by Texas Gulf Sulphur Company of the discovery of a major copper-zinc-silver ore body in Kidd township, about 20km north of Timmins (Carlson, 1967).

8.0 Area Geological Setting

The Timmins-Porcupine gold camp lies within the Abitibi Subprovince of the Archeanaged Superior Craton. The gold deposits of the Abitibi Subprovince comprise one of the largest concentrations of gold on Earth and have been continuously mined for almost 100 years. Over 60 million ounces of gold have been mined from over 60 operations in the Timmins area, which represents about 45% of all gold mined in Ontario. (Pressacco, 1999).

The Porcupine-Destor deformation zone and the Larder Lake-Cadillac deformation zone are the most important deformation zones within the Abitibi Subprovince in terms of both structural effect and gold production. In addition to the major mines (Dome, Pamour and Hollinger McIntyre), there are numerous other deposits over 35km of strike including Hoyle Pond and Aunor-Delnite mines, which have produced nearly 140 tonnes or 4.5M oz of gold (Bateman et al, 2005).

Geologically, the gold deposits of the Timmins-Porcupine camp can be divided into several categories according to relationships between vein parageneses, metal inventory, proximity to the Porcupine-Destor deformation zone, host rock (Timiskaming sediments, Tisdale basalts, felsic porphyry intrusive stocks), geometry and kinematics of vein opening and chronology of the mineralization relative to the different phases or increments of deformations (Bateman et al, 2005).

According to Pyke, 1982, "virtually all the production from the area has been from the metavolcanics north of the Destor-Porcupine fault. Most of the auriferous quartz veins tend to be along anticlinal axes and most are in close proximity to stocks of quartz-feldspar porphyry."

9.0 Property Geology and Exploration Targets:

The claim group is underlain by similar-aged rocks to those that host the prolific Timmins area gold deposits which have produced in excess of 65 million ounces. The Nighthawk Lake Gold deposit (Goldcorp Inc.) lies to the east while the Pamour, Hallnor and Hoyle Pond Mines (Goldcorp Inc.) lie to the north. The prolific Dome Mine as well as a host of other significant past producing gold deposits are situated to the west of the Property.

The property is located on the Northeast side of a large structural uplift known as the Shaw Dome, 5 kilometers South of the Destor Porcupine Fault and 1.5 km South of the Whitney Trust. OGS Preliminary Map P3172 (Piroscho and Kettles, 1990), and an unpublished geology map and report produced by staff of Rosario Resources Canada Ltd. (Assessment file T-1052) indicate the property to be underlain by Southeast striking, intercalated ultramafic, mafic, and felsic volcanic rocks, graphitic sedimentary rocks, and mixed sulphide -oxide facies cherty iron formations (Figure 1).

Dips of contacts are interpreted to be less than 45 degrees to the Northeast. The ultramafic volcanic rocks are carbonatized adjacent two small quartz feldspar porphyry intrusions. The rocks described above are of Archean age, have been metamorphosed, and are intruded by North striking Proterozoic diabase dykes.

Three deposit types which may be present on the property and the manner in which they will be explored for are listed below:

- The proximity to a major fault, the Whitney Thrust, and the presence of carbonatization adjacent small porphyry intrusions suggest that vein-type gold mineralization similar to that present in the Porcupine camp to the Northwest may be present (Figure 2). Geological mapping, sampling and assaying will be the main prospecting techniques followed by a drilling program.
- The association of felsic volcanic rocks and sulphidic cherts suggest that the potential exists for a volcanogenic massive sulphide (VMS) copper – zinc deposit (figure 3). Geological mapping will be supplemented by geochemical sampling to explore for alterations typically associated with VMS deposits. This would be followed by a drilling and assaying program.
- 3. Nickel deposits such as those hosted in ultramafic volcanic rocks at the Langmuir and Redstone mines in the Langmuir Township approximately 15 kilometers Southeast of the property may be present. Those deposits occur where volcanic rocks that host the ore are in contact with iron formations (sulphidic cherts) on the Southeast side of the Shaw Dome. The same geological units that host these orebodies are present on the property (figure 4). A combination of geological mapping and geochemical sampling will be used to explore for this target. This would be followed by a drilling and assaying program.

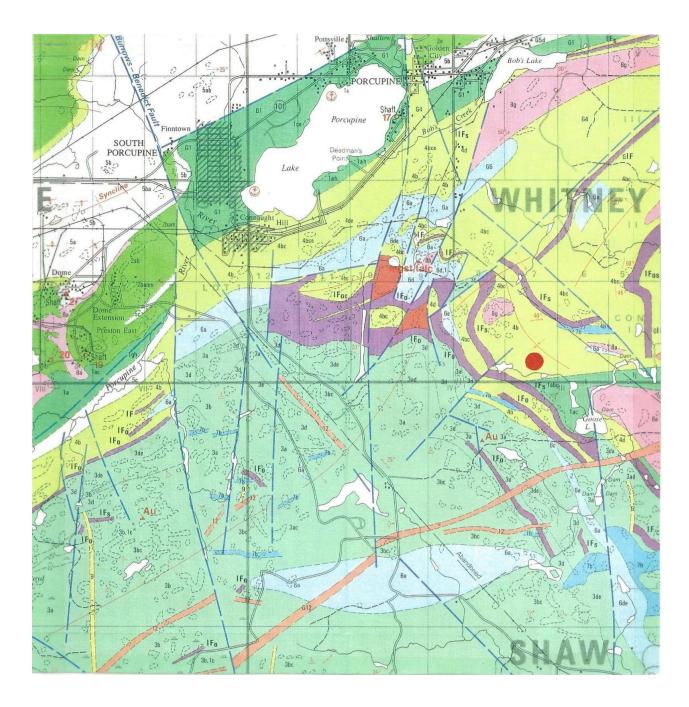


Figure 1. Portion of OGS Map 2455 (Pyke, 1982) showing the geology of the area East of Timmins, Ontario in which the author's claim are located. The property location is marked with an orange dot.

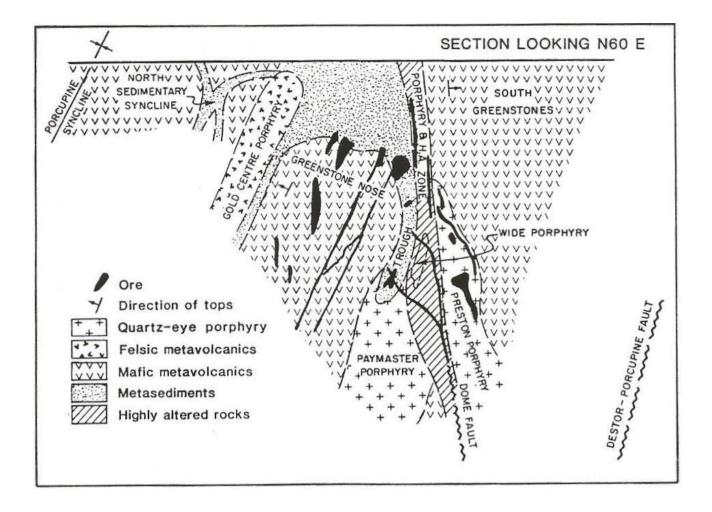


Figure 2. Association of gold orebodies with porphyry intrusions and the Dome Fault at the Dome Mine. Porphyries are present on the author's claims and a major fault is only 1.5 km away.

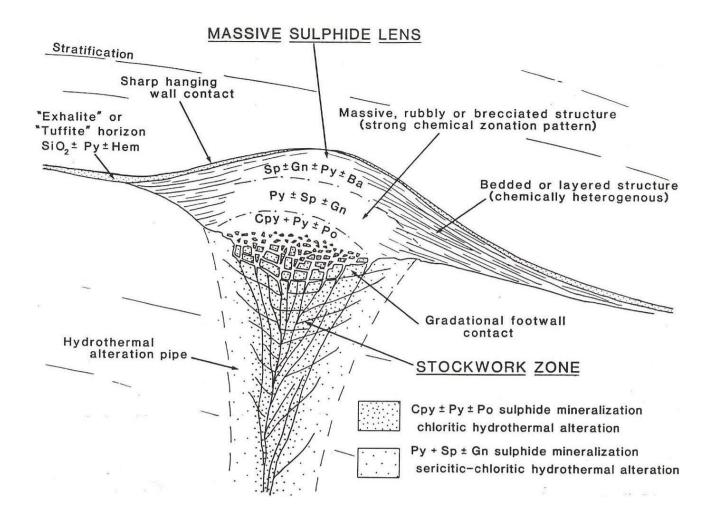


Figure 3. Diagram of a typical VMS deposit. Felsic volcanic rocks that commonly host these deposits and iron-rich graphitic and cherty sedimentary rocks that often occur along strike or dip of massive sulphide orebodies are present on the author's claim.

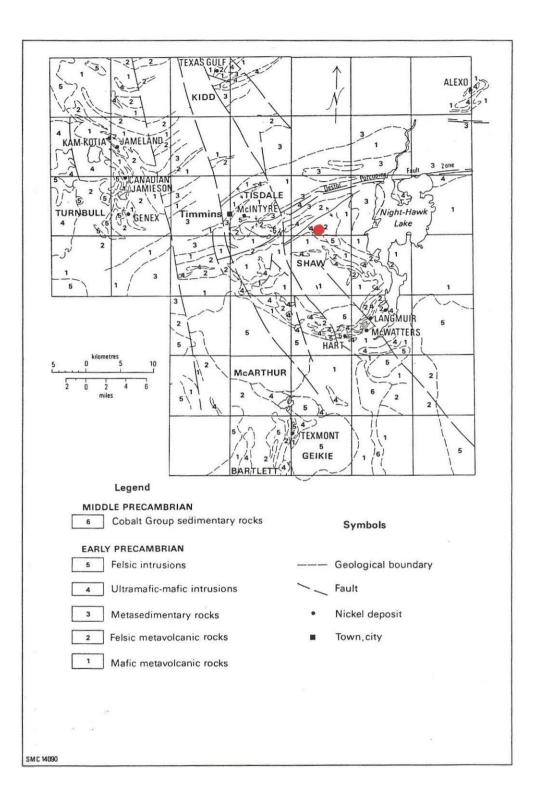


Figure 4. Distribution of ultramafic volcanic rocks and nickel deposits near Timmins. The location of the author's property is marked by an orange dot.

10.0 Work Performed:

A total of four separate trips were taken to the property in the summer of 2021 to explore the best suitable route to build a rough summer ATV trail to access the North side of the property. Once through the swamps, muskegs and after traversing 3 creeks, the property itself is mainly on higher dry ground with numerous rock outcrops available for grass roots prospecting, trenching, drilling, assaying, etc. Some time was also spent on the property looking at the geology of some of these rock outcrops and the property in general. Numerous rock outcrops were noted, GPS georeferenced and pictures were taken but no samples were returned due to the difficulty of the terrain walking back (pictures and GPS data unavailable at time of report writing).

May 7th to May 10th

- May 7th, travel to Timmins.
- May 8th and 9th, scout swamps & winter access trail for best summer route to property. The thought was to find the highest ground through or around the swamps where a summer ATV access trail could be cut and built. One afternoon field trip was hiked to the property to make some observations on some of the rock outcrops on the property and to take some field notes (pictures and notes unavailable at time of report writing).
- May 10th, travel back to Hamilton.

June 4th to June 8th

- June 4th, travel to Timmins.
- June 5th to June 7th, continued to scout and prepare the best possible route to the property (cut tag alders, fill in low spots, etc.). As well, 3/4 of a day was spent walking the property and making notes of the basic physical properties of the claims in question georeferencing the beaver ponds, beaver dams and creeks at the Southern border of the property (pictures and notes taken are not available at time of report writing).
- June 8th, travel back to Hamilton.

June 30th to July 4th

- June 30th, travel to Timmins with first load of supplies loaded on a truck and trailer.

- July 1st to July 3rd, unloaded supplies which consisted of grating, 6 and 8 inch PVC pipes, galvanized fencing and used conveyor belts. Reload part of supplies in a small ATV wagon. Tie down securely and transport to the first creek (pictures unavailable at time of report writing).
- A total of 5 ATV trips were taking in this way and all of supplies were left hidden in the bush at the first creek. The rest of the trip was split between continuing to prepare the summer ATV trail to the property and scouting the actual property proper and observing rock outcrops (GPS data and pictures unavailable at time of report writing)
- July 4th, travel back to Hamilton.

July 30th to Aug 3rd

- July 30th, travel to Timmins with second load of supplies loaded on a truck and trailer.
- August 1st to August 2nd, unloaded supplies which consisted of more grating, 6 and 8 inch PVC pipes, galvanized fencing, 12 lengths of ½ inch rebar and used conveyor belts. Reload part of supplies in a small ATV wagon. Tie down securely and transport to the first creek (pictures unavailable at time of report writing). A total of 4 more ATV trips were taking in this way and all of supplies were dropped off at the first creek.
- We were lucky that particular weekend as it had not rained for over a week and the creek bed, albeit muddy was absent of water. This made completing the first creek crossing project a lot easier. Mud was excavated by hand (shovel) out of the bottom of the creek channel. This was replaced with sand from a nearby sand pit using wheelbarrows and shovels (pictures unavailable at time of report writing).
- Fiberglass grating was initially laid across the creek bed to facilitate waking across the bottom soft muddy bed without sinking down (see figure 5). The pipes were then temporarily laid across the creek bed, longitudinally and in line with the natural flow of the creek, Westerly to Easterly flow, (see figure 6). The pipes were later removed to allow exposing the natural bottom of the creek bed (see figure 7).
- The entire creek bed plus both North and South slopes were overlaid with a total of 4 large rolls of galvanized fencing to prevent the pipes from sinking down in the soft bottom of the creek bed and to prevent the North and South slopes from eroding. All this fencing was anchored down with rebar which was bent over in a "U Shape" (180 degrees on itself). The rebar was driven down 6 feet below with sledge hammers to really anchor the grating and the fencing securely to prevent being washed out by the creek during spring thaws or during times of heavy precipitations (See figures 7, 8, 9, 10, 11 and 12)

- A total of 28 PVC pipes were laid parallel to the creek bed with the larger 8 inch diameter PVC pipes in the middle and the smaller 6 inch diameter PVC pipes on either side of the 8" pipes. The ends of the pipes were also secure down with rebar, pounded 6 feet down with sledge hammers.
- Two rolls of used heavy duty conveyor belting reinforced with steel wire meshing were laid down over top the pipes to further secure the pipes down (see figures 13, 14 and 15). A third roll of extra wide heavy-duty conveyor belting reinforced with steel wire meshing was laid over the initial two rolls and centered across the ATV path (pictures unavailable at time of report writing). This was all to allow a lightly to medium loaded ATV and wagon (or small drill rig) to be able to roll over the completed assembly without damaging the PVC pipes below. The heavy-duty conveyor belting will also act as an anchor to keep everything secured and in place during heavy creek flows such as springs thaws and during heavy precipitation.
- Aug 3rd, travel back to Hamilton.

Additional Note (no work performed):

A site visit in mid November by the author's and owner's partner later confirmed that the project's planning, methodology and field construction proved sound. The creek crossing was intact, and nothing moved or got dislodged even during the heavy October rains. The crossing traditionally completely floods over in the spring and fall.



Figure 5. Shows initial site with fiberglass grating being initially and temporarily laid down to allow walking across the creek bed without sinking down.



Figure 6. Shows initial and temporary laying of pipes longitudinally and in line with the natural flow of the creek (Westerly to Easterly flow). Pipes later removed to allow exposing the natural bottom of the creek bed.



Figure 7. Shows some of pipes removed to allow exposing the bottom of the creek bed. Also shows the initial laying of the galvanized fence on both the North and South slopes of the creek to prevent erosion.

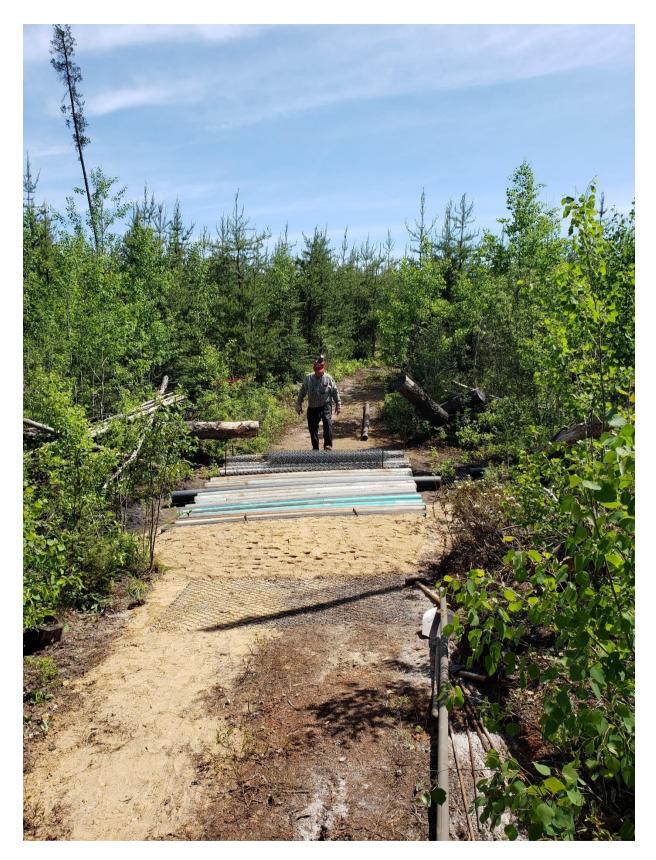


Figure 8. Shows the continued laying of the galvanized fence across the bed and slopes.

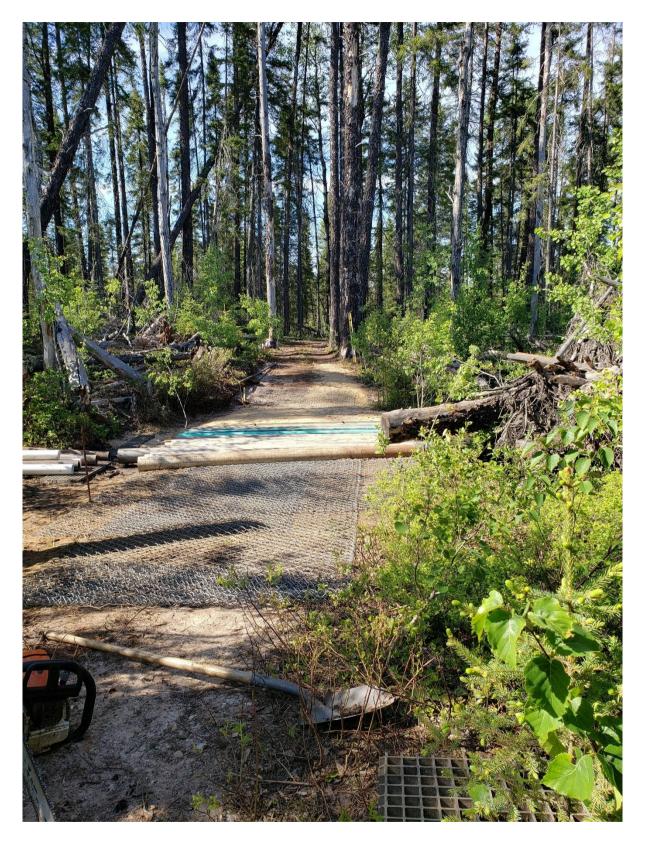


Figure 9. Shows the continued laying of the galvanized fence across the bed and slopes.



Figure 10. Shows the continued laying of the galvanized fence across the bed and slopes. Sand from a nearby sand pit was continuously added to the approach slopes.



Figure 11. Shows the galvanized fence being pulled taught under the PVC pipes via a come-a-long and slings.



Figure 12. Shows the galvanized fence being secured down with 6' lengths of ½ inch rebar (already down 4' in picture).



Figure 13. Shows the initial unrolling of the first conveyor belt.



Figure 14. Shows the continued placement of the conveyor belts.



Figure 15. Testing the creek crossing. A third much wider conveyor belt was later added over top of the first two conveyor belts (picture unavailable during time of report writing)

11.0 Expenses:

A total of 4 separate trips were undertaken to the property from the owner's residence in Hamilton, ON. All supplies were purchased in Hamilton with the exception of a few small items, more gasoline and some food which was purchased in Timmins. The owner and author was accompanied by a helper on each of the 4 trips. Material and supplies were trailered from Hamilton to the property on each of the four trips. An ATV with an all-terrain wagon further brought the material to the site of the first creek. It took a total of 9 ATV trips to bring all the material in this fashion to the first creek.

There is no cost for lodging on any of the trips as the author and helper either stayed with the property's co-owners in Porcupine, ON or tent camped nearby.

Date	Work performed	Km	Food Meals	Owner	Helper	Tools Supplies	ATV Rental Eq	Sub- total
2021/05/07	Travel to Timmins	765	\$75.00					\$534.00
2021/05/08	Scout swamps & winter access trail for best summer route to property		\$50.00	\$250.00	\$200.00	\$196.14		\$696.14
2021/05/09	Scout swamps & winter access trail for best summer route to property. Afternoon prospecting on property		\$50.00	\$250.00	\$200.00			\$500.00
2021/05/10	Travel back to Hamilton	765	\$75.00					\$534.00
2021/06/04	Travel to Timmins	765	\$75.00					\$534.00
2021/06/05	Prepare route to property (cut tag alders, fill in low spots, etc)		\$50.00	\$250.00	\$200.00	\$268.35		\$768.3
2021/06/06	Continue to prepare route to property (cut tag alders, fill in low spots, etc) 3/4 day also spent walking property & georeferencing the beaver ponds Southern border		\$50.00	\$250.00	\$200.00			\$500.00
2021/06/07	Continue to prepare route to property (cut tag alders, fill in low spots, etc)		\$50.00	\$250.00	\$200.00			\$500.00
2021/06/08	Travel back to Hamilton	765	\$75.00					\$534.00

							Total	\$13,739.09
Multi	Geological research and technical report writing (4 days equivalent)			\$250.00				\$1,000.00
2021/08/03	Travel back to Hamilton	765	\$75.00					\$534.00
2021/08/02	ATV material in, complete building first creek crossing		\$50.00	\$250.00	\$200.00		\$200.00	\$700.00
2021/08/01	ATV material in, continue to build first creek crossing		\$50.00	\$250.00	\$200.00		\$200.00	\$700.0
2021/07/31	ATV material in, start to build first creek crossing		\$50.00	\$250.00	\$200.00	\$244.72	\$200.00	\$944.7
2021/07/30	Travel to Timmins	765	\$75.00					\$534.00
2021/07/04	Travel back to Hamilton	765	\$75.00					\$534.0
2021/07/03	ATV material in, continue to cut and prepare trail to property		\$50.00	\$250.00	\$200.00		\$200.00	\$700.0
2021/07/02	ATV material in, walk to property and note more rock outcrops		\$50.00	\$250.00	\$200.00		\$200.00	\$700.00
2021/07/02	ATV material in, continue to cut and prepare trail to property		\$50.00	\$250.00	\$200.00		\$200.00	\$700.0
2021/07/01	ATV material in, continue to cut and prepare trail to property		\$50.00	\$250.00	\$200.00	\$357.88	\$200.00	\$1,057.8
2021/06/30	Travel to Timmins	765	\$75.00					\$534.0

Per the above expense summary, a total of \$11,402.74 was spent on this project. The bridge was inspected in the late fall of 2021, just before the onset of snow, and after the heavy fall rains. The bridge was found intact with no wash outs. This proves the fundamental and economical construction strategy and methodology of the designed temporary creek bridge.

12.0 Conclusion and Recommendations:

The main registered owner of the property is retiring from his present full time Project Engineer occupation in Hamilton ON in the fall of 2022 and his intention is to fully explore and potentially develop the property for commercial mineralization. Once a rough all terrain vehicle (ATV) access road is built to better access the property, a program of grass roots prospecting, geological mapping, geochemical sampling, trenching, drilling, and assaying will be extensively undertaken on the property. The owner plans on acquiring a small portable drill rig than can be towed behind an ATV (please see figure 12 below). With this equipment, a costeffective drilling program can be undertaken.



Figure 12. A portable drilling rig which can be towed behind an ATV which the owner plans on acquiring in the near future to commence a drilling program on the property.

13.0 References, Readings and Research:

Atkinson, B. 2002. A virtual field trip to the geology of Timmins, Ontario. Ontario Geological Survey, Ministry of Northern Development and Mines.

Ayer, J.A. and Trowell, N.F. 1998. Geological Compilation of the Timmins area, Abitibi greenstone belt, Ontario Geological Survey, Preliminary Map P .3379, scale 1: 100,000.

Bateman, R., Ayer, J.A., Dube, B. and Hamilton, M.A. 2005. The Timmins-Porcupine gold camp, northern Ontario: The Anatomy of an Archaean Greenstone Belt and Its Gold Mineralization: Discover Abitibi Initiative; Ontario Geological Survey, Open File Report 6158, 90p.

Carlson, H.D. 1967. The Geology of Ogden, Deloro and Shaw Townships, District of Cochrane, Ontario; Ontario Development of Mines Geological Branch, Open File Report 5012, 117p.

Dube, B., Gosselin, P., 2007. Greenstone-hosted quartz-carbonate vein deposits, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, The Evolution of Geological Provinces and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 49-73.

Hunt, D.S. and Maharaj, Deosaran, 1980., Shaw Township, District of Cochrane; Ontario Geological Survey Preliminary Map P. 2091. Timmins Data Series. Scale 1:15 840 or 1 inch to ¼ mile. Data compiled 1980.

Hunt, D.S., MacRae, B.A., and Maharaj, Deosaran, 1981: Whitney Township, District of Cochrane; Ontario Geological Survey Preliminary Map P. 2123, Timmins Data Series. Scale 1:15 840 or 1 inch to ¼ mile. Data compiled 1979.

Hunt, O.S., and Maharaj, Deosaran, 1980: Cody Township, District of Cochrane; Ontario Geological Survey Preliminary Map P.2090, Timmins Data Series. Scale 1:15 840 or 1 inch to ¼ mile. Data compiled 1980.

Hunt, D.S., and Maharaj, Deosaran, 1980: Cody Township, District of Cochrane; Ontario Geological Survey Preliminary Map P.2092, Timmins Data Series. Scale 1:15 840 or 1 inch to ¼ mile.

Pressacco, R., ed. 1999. Special Project: Timmins ore deposit Descriptions; Ontario Geological Survey, Open File Report 5985, 189p.

Pyke, D.R., 1982: Timmins Area, Ontario Geological Survey Map 2455, Synoptic Series scale 1:50000. Geology and compilation, 1973.