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Technical Report for Grassroots Prospecting Activities on Mining Claims  
578816, 578817, 578818, 518819 and 578820

MacGregor Township  
Thunder Bay Mining Division  
Ontario, Canada

All work completed by claim holder

**Harley Pettit**

Report completed by claim holder

**Harley Pettit – 13 February 2022**

**Revised on 20 May 2022**

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## **Introduction**

### **1.1 Purpose**

This report has been produced to meet the requirements for filing Assessment Work under the Ontario Mining Act. This report covers the grassroots prospecting work performed on the property (adjoined claims 578816 – 578820) in September and October of 2021. The report includes the results of preliminary prospecting and access work.

### **1.2 Prospecting Overview**

The grassroots prospecting program was designed for 3 reasons

1. To create a initial walkable access route through crown land.
2. To identify and mark all claims and claim boundaries
3. Confirm OGS data and find prospective gold showings for further analysis

I, Harley Pettit, the author and claim holder was the sole proprietor of all the work conducted from Sept 17<sup>th</sup> to 21<sup>th</sup> and October 1<sup>st</sup> to 5<sup>th</sup> .

## **2.0 Accessibility, Geography and Climate**

### **2.1 Accessibility**

The group of claims consists of 5 single claims totaling 5 units. The group of claims forms a cross shape.

The group of claims is located in the Thunder Bay mining Division in the NW corner of Macgregor township. It is approximately 20km NNE of Thunder Bay and 3km West from the Northern Highway 527. The claims are located in the provincial cell blocks 52A11G376, 52A11G377, 52A11G378, 52A11G357, and 52A11G397

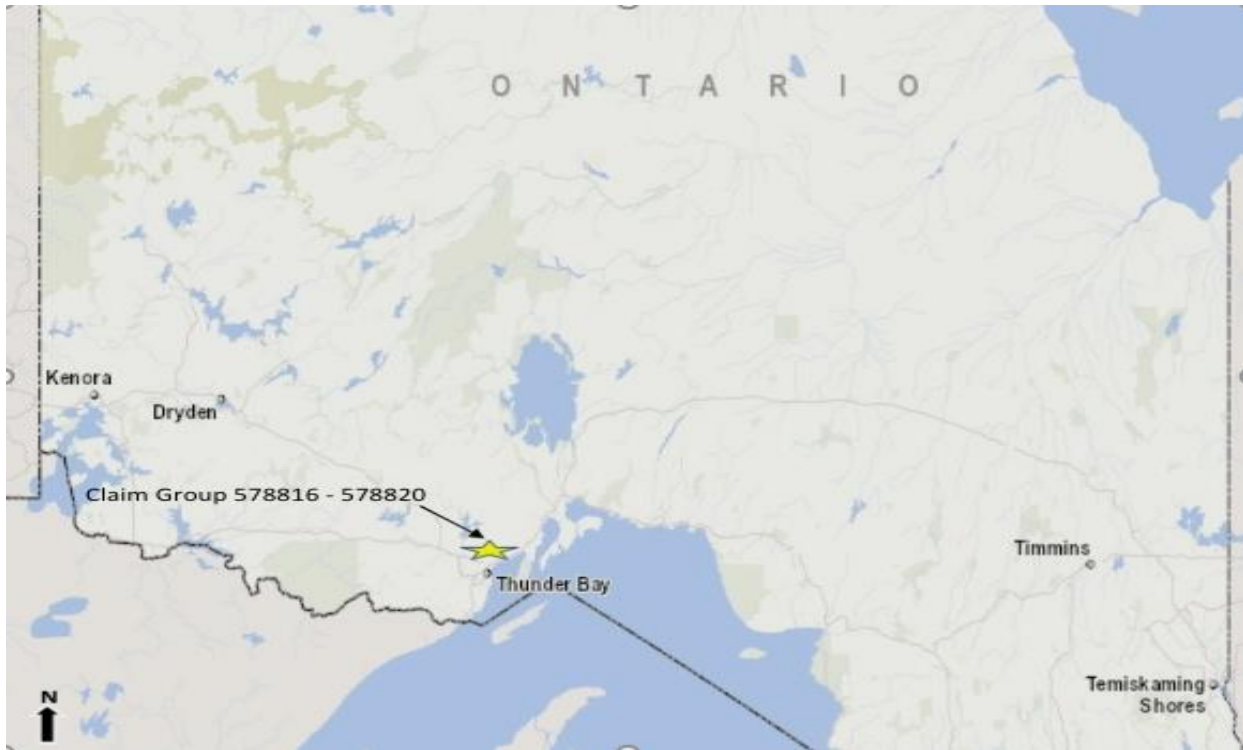


Figure 1 – Provincial View of Claim Group 578816-578820

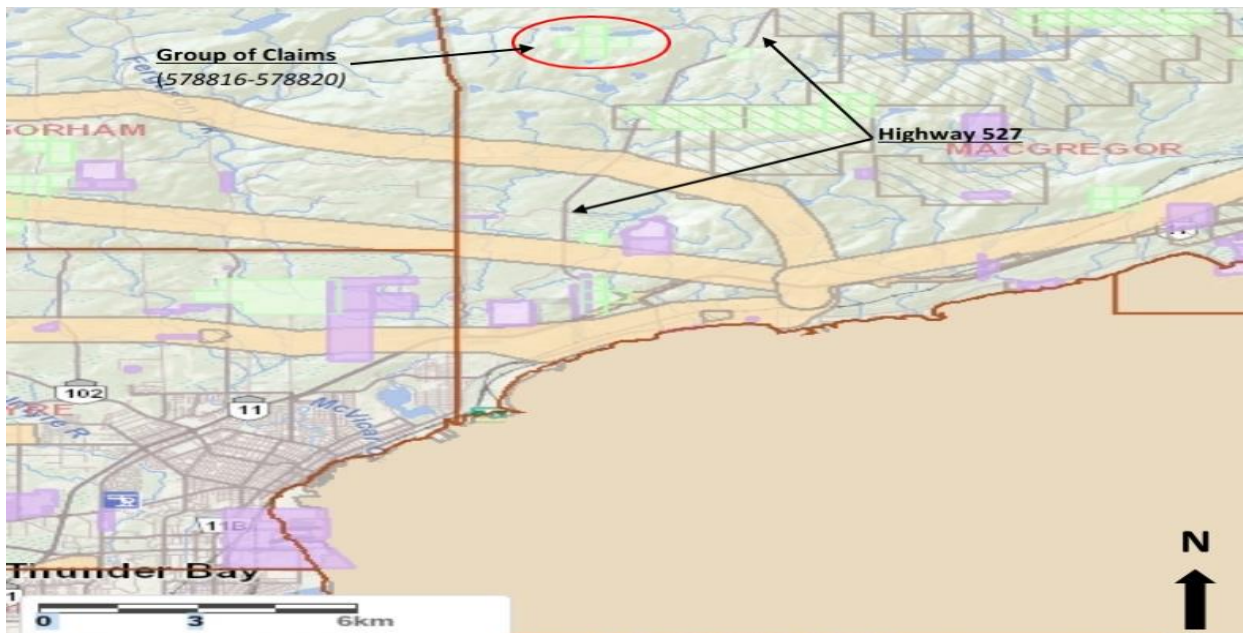


Figure 2 – Local view of Claim Group 578816-578820

The property has no direct public road access but is located adjacent on the west to a privately owned lake with seasonal trailer sites and cabin rentals. It is called “Scott and Rohnda’s Resort”. Access would be easiest from the resort road system, but to avoid any disagreements. It was decided to instead create an access point from the nearest crown land access point. As seen in figure 3 below, an access trail has been created from the terminus of a unnamed stub road off of a logging road (Bentley Road). Bentley road is located on the west side of highway 527. Bentley road is located ~ 9.5km up the 527 highway from Thunder Bay.

The access trail is roughly 1.5km into the center block (5778816). It has been cleared by hand and flagged for easier travel.

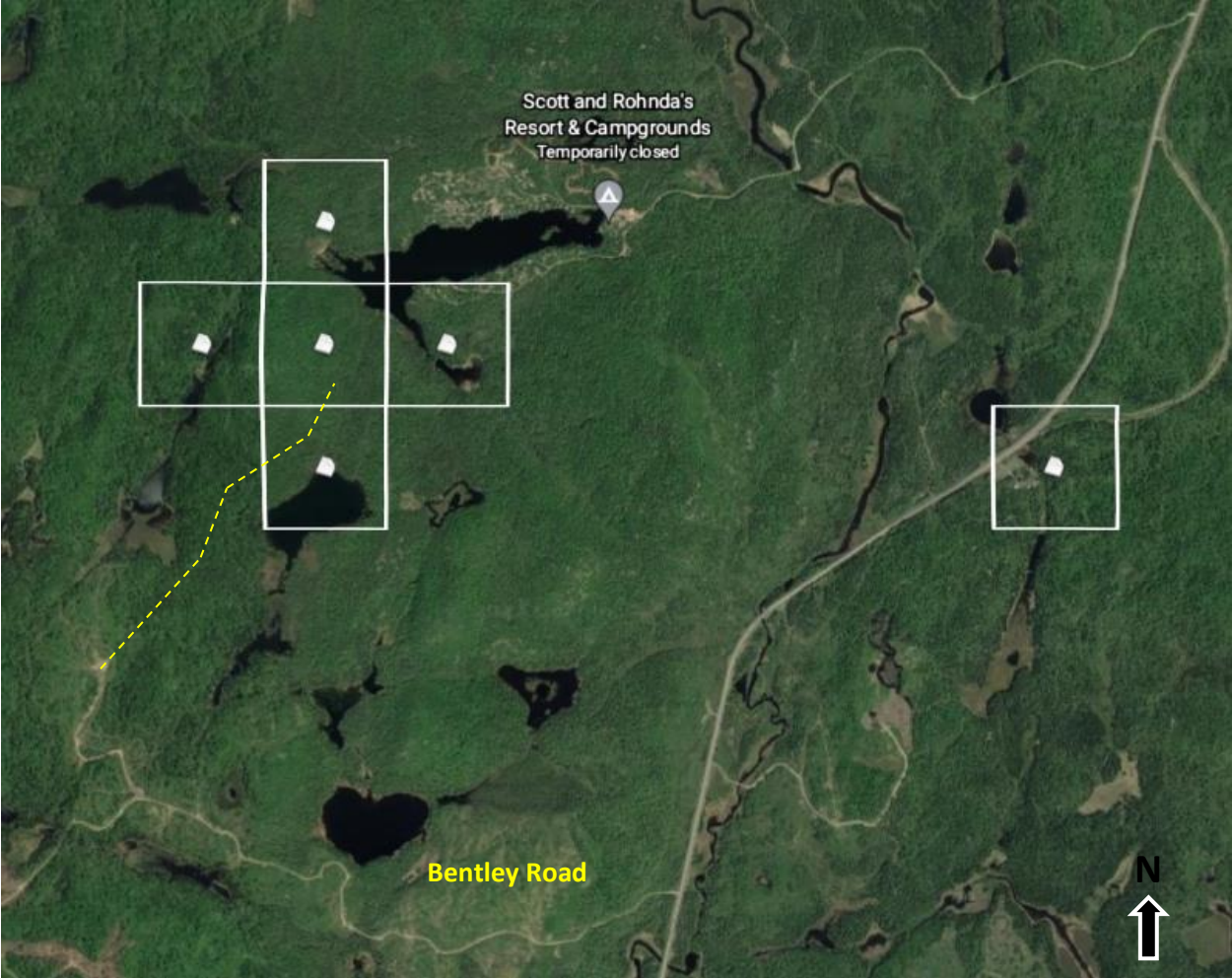


Figure 3 – Access Trail location

## 2.2 Geography and Climate

The climate on the this group of claims mirrors closely that of Thunder Bay, due to its close proximity, albeit without the moderating effect from lake superior that can extend inland up to 16km . Thunder Bay experiences a humid continental climate, with continental subarctic influences. Average daily temperatures can range from 18C in July to -14C in January. Maximum values can range from almost -40C to +40C. As mentioned above, this group of claims is further than 16km in land from Lake Superior and would be outside its moderating affect. Due to this, this group of claims would experience more of a continental subarctic influence. The average precipitation is 698mm.

The group of claims is typical of the Canadian Shield. The area is surrounded by large rock outcroppings, lakes and swamps. Mature boreal forest covers the majority of the property, with swamps and some small lakes on claim edges. Logging operations have occurred around the area, predominantly to the north and south, but not in the group of claims itself. The past logging operations has resulted in younger regeneration to the south of the claims.

## 3.0 Property Description

This group of claims is comprised of 5 individual mining claims totaling 5 units, covering an area of 80ha

<u>Claims</u>	<u>Due Date</u>	<u>Units</u>	<u>Work Required</u>	<u>Record Holder</u>	<u>Client ID</u>
<u>578816</u> <u>578817</u> <u>578818</u> <u>578819</u> <u>578820</u>	<u>16/02/2022</u>	<u>5</u>	<u>\$2000</u>	<u>Harley Pettit</u>	<a href="#"><u>10002409</u></a>



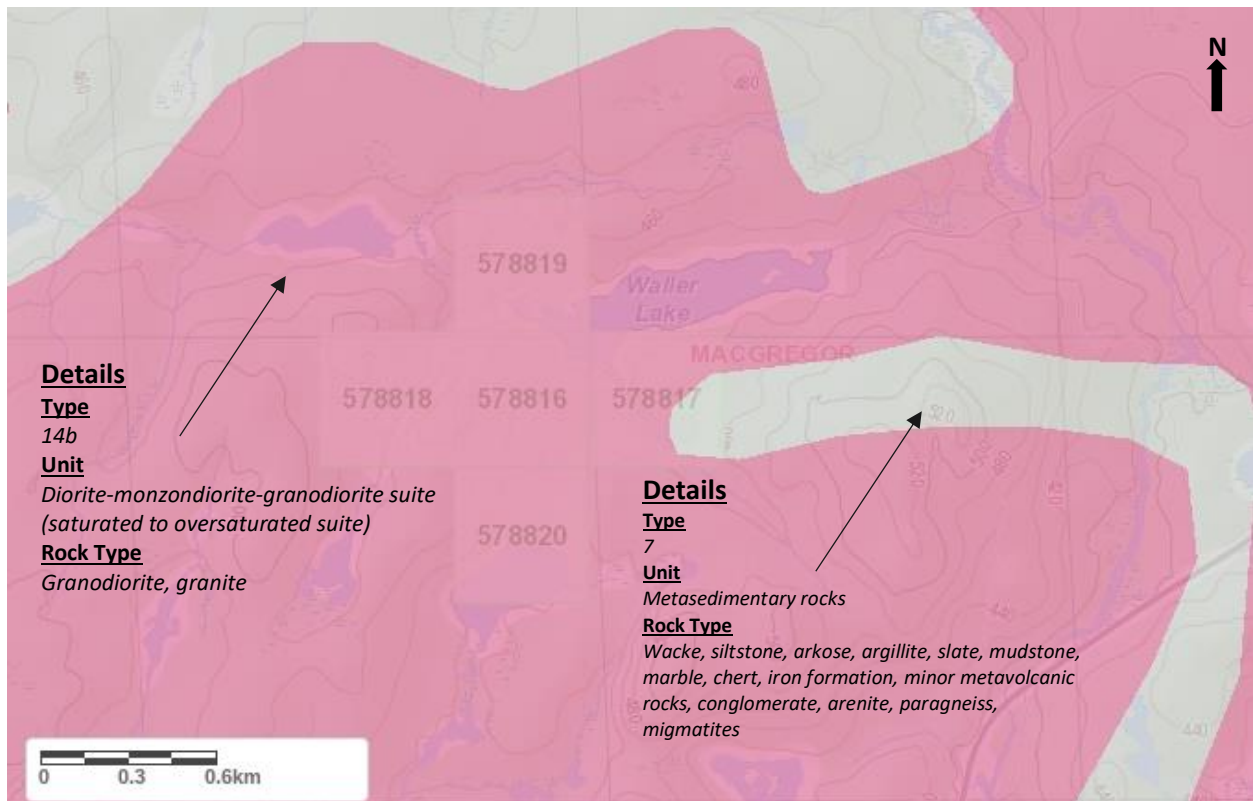
## **4.0 Geological Setting**

### **4.1 Regional Geology**

A variety of Archean and Proterozoic rocks are found in MacGregor Township. The Archean rocks form part of the Abitibi-Wawa Subprovince, and consist of metavolcanics and associated metasediments, mafic to ultramafic intrusions, hornblende syenites, porphyritic diorites, granites, quartz, quartz monzonites, and quartz-feldspar porphyries. (J.F Scott and J.M Sequin, 1984, 1985)

### **4.2 Local Geology**

As per MLAS Geology map data, the majority of all 5 claims are encompassed in a Diorite-monzonite-granodiorite suite, with a small incursion of Metasedimentary rocks on the SE quadrant of claim 578817 as shown on map below



**Figure 4 – OGS Bedrock Geology**

All 5 claims have frequent exposed bedrock outcroppings with shallow soils with deep organic swamps in low lying areas.

## **5.0 Previous Exploration**

There are no indications of any prior historical exploration in the location of the claims. This is based off of publicly available MNM data.

## **6.0 Work Completed**

The majority of prospecting work involved the initial assessment of the claims. This included creating an access trail from the nearest road on crown land, and traversing the claims in order to identify outcrops for further study.

### **6.1 Activity Log**

#### **September 17<sup>th</sup>, 2021**

Using MLAS contour/topography maps and google earth, I plotted a access trail that I believe would offer the easiest access to the group of mining claims. I also marked potential points of interest for on site examination ( bedrock outcrops, steep contours/cliffs, water/swamp edges). 3 Hours work

#### **September 18<sup>th</sup>, 2021**

Depart Thunder Bay at 7am, and travel north up Hwy527, then approx. 2.5km west down Bentley rd to junction of old block logging road that heads north. Block road is grown in, and is easier walked then driven. Walk roughly 700m north on logging road until it ends. Traversed forest via compass/gps well following preplanned access route in as guidance. Flagged trail in, and followed easiest route to center of claim 578816. Took approx. 2 hours to blaze and mark initial trail. Brush was thick through majority of trail. Once the main trail was fully marked, I started working my way back down the trail in order to clear and widen trail. Using a machete and loppers I started clearing the trail to be passable via ATV. Cleared roughly half of the trail. Day ended at 19:00 (12 Hours work)

#### **September 19<sup>th</sup>, 2021**

Depart Thunder Bay at 7am. Arrive on sight and complete clearing trail at 12:00. From center of claim 578816, run traverse north in zig zag pattern to claim 578819, well conducting

preliminary scouting for areas of interest. Record and flag areas of interest for future study. Day ended at 19:00 ( 12 Hours work)

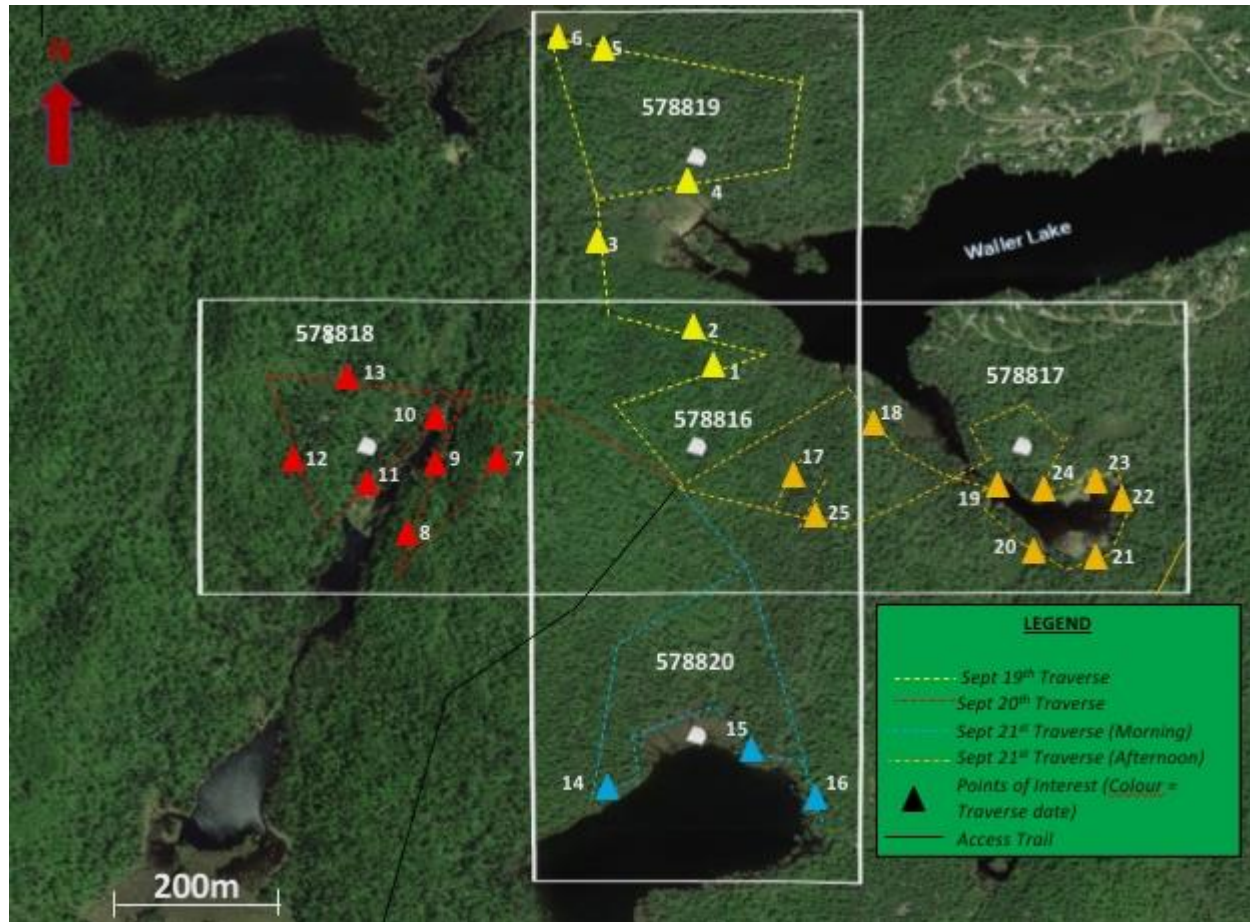
#### September 20<sup>th</sup>, 2021

Depart Thunder Bay at 7am. Arrive on sight and travel into site by foot. From centre of claim 578816, Traverse west in a zig zag pattern to claim 578818. Altered traverse to follow steep hills around narrow swamp with NE bearing. Record and flag areas of interest for further study. Day ended at 19:00 (12 hours work)

#### September 21<sup>st</sup>, 2021

Depart thunder Bay at 7am. Arrive on to access trail and travel into site by foot. From center of claim 578816, traverse south in zig zag pattern into claim 578820. Record and flag areas of interest for further study. Head back to center of claim 578816

At noon, traverse east, in a zig zag pattern east into claim 578817. Focused around beaver pond in southern portion of claim. Avoided northern 1/3 of claim due to camps present. Record and flag areas of interest for further study. Day ended at 19:00 (12 hours work)



**Figure 4 – Summary of September Traverses completed**

<b><u>Point of Interest</u></b>	<b><u>Latitude</u></b>	<b><u>Longitude</u></b>
1	48°35'24" N	89°08'45" W
2	48°35'25" N	89°08'52" W
3	48°35'34" N	89°08'56" W
4	48°35'36" N	89°08'50" W
5	48°35'43" N	89°09'00" W
6	48°35'42" N	89°09'03" W
7	48°35'19" N	89°09'00" W
8	48°35'16" N	89°09'10" W
9	48°35'20" N	89°09'06" W
10	48°35'23" N	89°09'08" W
11	48°35'18" N	89°09'13" W
12	48°35'23" N	89°09'17" W
13	48°35'27" N	89°09'11" W
14	48°35'03" N	89°08'55" W
15	48°35'06" N	89°08'45" W
16	48°35'05" N	89°08'41" W
17	48°35'20" N	89°08'42" W
18	48°35'23" N	89°08'35" W
19	48°35'20" N	89°08'28" W
20	48°35'17" N	89°08'25" W
21	48°35'16" N	89°08'21" W
22	48°35'19" N	89°08'19" W
23	48°35'20" N	89°08'22" W
24	48°35'19" N	89°08'26" W
25	48°35'18" N	89°08'38" W

**Figure 5 – Points of Interest - GPS Locations**

October 1<sup>st</sup> 2021

Depart Thunder Bay at 8am, arrive on site and hike into claims via access trail. Further investigated “Points of Interest” 1-6 and 14-16. Used hand tools to remove rock for samples and study. Points 14-16, study of nearby shoreline and shoreline. Use of hand tools and gold pan. Work Day ended at 18:00 (10 Hours of work)

October 2<sup>nd</sup> 2021

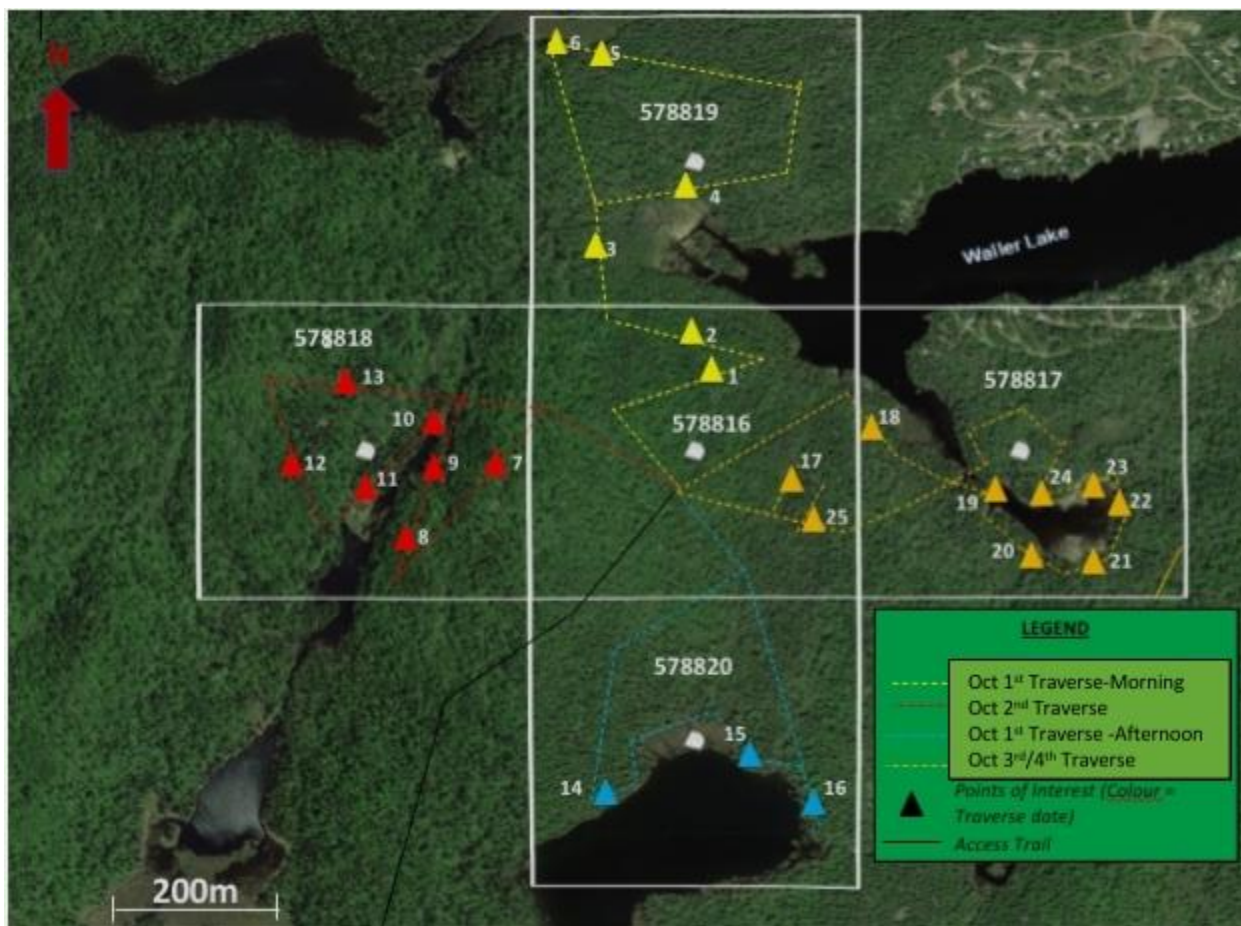
Depart Thunder Bay at 8am, arrive on site and hike into claims via access trail. Further investigated “Points of Interest” 7-13, 17 and 25. Used hand tools to remove rock for samples and study. Day ended at 18:00 (10 Hours of work)

### October 3<sup>rd</sup> 2021

Depart Thunder Bay at 8am, arrive on site and hike into claims via access trail. Further investigated “Points of Interest” 18-24. Used hand tools to remove rock for samples and study. Use of gold pan along beaver dam. Day ended at 18:00 (10 Hours of work)

### October 4<sup>th</sup> 2021

Depart Thunder Bay at 8am. Further investigate area around beaver dam in claim 578817. Use of hand tools to extensively break rocks for examinations. Day ended at 18:00 (10 Hours of work)



**Figure 6 – Summary of October Traverses Completed**

## **6.2 Results**

Preliminary results of study based on individual geology knowledge.

The points of interest that were identified during the initial traverses in September were studied more in depth during the October work.

Grab samples were collected from the most promising points interest. The majority of samples are believed to be Iron/Pyrite stained quartz veins in a granite host rock.

There was a total of 16 grab samples taken. None of the samples have been assayed at this point in time.

### **Claim 578816**

Points 1 and 2 showed outcropping with rusty quartz veins, most likely iron and pyrite leakage.

Point 17 was located in a narrow patch of swamp with a NW strike, consistent with glacier striations. Iron-stained quartz vein in granite host rock.

### **Claim 578817**

Most promising of all the claims. Majority of points are located around drop into beaver pond. Low water levels allowed better access to beaver pond bed (lose rocks and small boulders) Point 19 located at base of beaver dam appeared to show pyrite flakes in the mud that was pushed onto the base of the dam by beavers. Sample taken home for further study and future assay

Points 20-25 were all points around the beaver pond were loose rocks were broke, showing varying degree of pyrite and iron staining in a granite host rock. Multiple samples were taken for further study and future assay

### **Claim 578818**

Outcroppings located on steep decent into narrow pond/swamp with NW strike showed signs of quartz veins with iron leakage in granite host rock.

### **Claim 578819**

Point 6 showed similar quartz veins as commonly observed throughout area.

### **Claim 278820**

Points of interest 14-16 yielded minimal interesting results when studied more thoroughly

## **6.3 – Grab Sample Summary**

A list of all grab samples taken is provided below. A total of 16 grab samples were collected during the prospecting work. All grab samples were placed in plastic sample bag, and closed with a twist tie. Sample sizes ranged from approximately 1-3lbs each. At this time, none have the samples have been assayed due to fund restraints.



<b><u>Grab Samples</u></b>	<b><u>Latitude / Longitude</u></b>	<b><u>Sample Description</u></b>
1	48°35'24" N 89°08'45" W	Outcropping with "rusty" quartz veins, appears to show iron and pyrite leakage.
2	48°35'25" N 89°08'52" W	Outcropping with "rusty" quartz veins, appears to show iron and pyrite leakage.
3	48°35'42" N 89°09'03" W	<i>Yellow stained/rusty grante host rock</i>
4	48°35'16" N 89°09'10" W	<i>Iron stained quartz vein ~ 12cm wide</i>
5	48°35'20" N 89°09'06" W	<i>Iron stained quartz vein, ~12cm wide</i>
6	48°35'23" N 89°09'08" W	<i>Appears to be dark coloured oxidized quartz or grante outcropping, easily crumbles/flakes off</i>
7	48°35'18" N 89°09'13" W	<i>Appears to be dark coloured oxidized quartz or grante outcropping, easily crumbles/flakes off</i>
8	48°35'06" N 89°08'45" W	<i>Dark coloured granite with uniform consistency, taken to help confirm areas host rock</i>
9	48°35'20" N 89°08'42" W	Iron-stained quartz vein in granite host rock. NW Strike
10	48°35'20" N 89°08'28" W	<i>Soil on base of beaver dam, appears to have visible pyrite particles</i>
11	48°35'17" N 89°08'25" W	<i>Loose rock, appears to be granite/diorite host with iron staining</i>
12	48°35'16" N 89°08'21" W	<i>Loose rock, appears to be granite/diorite host with small amounts of pyrite</i>
13	48°35'19" N 89°08'19" W	<i>Loose rock, appears to be granite/diorite host with iron staining</i>
14	48°35'20" N 89°08'22" W	<i>Loose rock, appears to be granite/diorite host with heavy iron staining</i>
15	48°35'19" N 89°08'26" W	<i>Loose rock, appears to be granite/diorite host with iron staining</i>
16	48°35'18" N 89°08'38" W	<i>Loose rock, appears to be granite/diorite host with iron stained band</i>

**Figure 7 – Summary of Grab Samples Collected – Locations and Descriptions**

## **7.0 Expenditures and Cost**

All work was completed by myself and charged at a rate of \$20/h

<b><u>Date</u></b>	<b><u>Hours</u></b>	<b><u>Cost (\$)</u></b>
Sept 17 <sup>th</sup> 2021	12	\$240
Sept 18 <sup>th</sup> 2021	12	\$240
Sept 19 <sup>th</sup> 2021	12	\$240
Sept 20 <sup>th</sup> 2021	12	\$240
Sept 21 <sup>th</sup> 2021	12	\$240
Oct 1 <sup>st</sup> 2021	10	\$200
Oct 2 <sup>nd</sup> 2021	10	\$200
Oct 3 <sup>rd</sup> 2021	10	\$200
Oct 4 <sup>th</sup> 2021	10	\$200
<b><u>Total</u></b>	<b><u>100</u></b>	<b><u>\$2000</u></b>

## **8.0 Future Plans**

During the 2022 field season I plan to further explore all claims to further map all outcroppings identified in 2021. I also plan to take more samples from claim 578817 and have them assayed.