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# MCARTHUR LAKE PROPERTY

Timmins, ON  
McArthur twp

**Au**

## 2022 ASSESSMENT REPORT



## MCARTHUR LAKE PROJECT

November 23, 2022

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# MCARTHUR LAKE PROPERTY

Timmins, ON  
McArthur twp

**Au**

**Project Name:** McArthur Lake Property

**Target:** Au

**Claim units:** 12 mining cells covering 633 acres

**Location:** McArthur, Douglas, Geike, Bartlett townships, Porcupine Mining District of Ontario.

**Ownership:** 100% DH Exploration Inc.

**Highlights:**

Work program in 2021 consisted of access trail improvements and prospecting. Located a gabbro outcrop mineralized with pyrite.

Previous work in 2018-2019 consisted of prospecting and sampling. Results of sampling indicated the presence of gold in the Ogilvie trenches and shaft, and the Chouinard trench and pit with consistent gold values that may be suitable for mining.

**Ogilvie Vein:** Recent samples up to **21.6 g/t Au** along the vein, traced over a strike length of 61 m.

**Chouinard Vein:** Recent samples up to **3.14 g/t Au**, traced over a strike length of 91 m and intermediately for 380 m interesting the Ogilvie vein perpendicularly.

The presence of ultramafic and mafic volcanic rocks and associated iron formations underlying the property are favourable for a gold deposit. If the strike length can be increased with similar grade the property poses the possibility to be economically mined. Work programs to follow will delineate the known gold zones and optimistically tie into the newly discovered porphyry zone.

Gold zones on the property are associated with a feldspar-porphyry dike that is 2.4 m wide. Preliminary sampling of this dike yielded values of 7.2 g/t, 1.4 g/t, and 2.4 g/t out of the 3 samples sent.

**Summary:** The McArthur Property is located approximately 30 km south of the city of Timmins, ON. Access to the property is obtained traveling down Pine Street south on a well maintained all weather road. Travel distance on Pine Street is approximately 38 km, followed by another 14.6 km of logging/mine roads into the property (53 km from Timmins). The property consists of 12 mining claim cells in McArthur, Geike, Douglas, and Bartlett townships, in the Porcupine Mining District of Ontario. The property is located 2.5 km north of the former producing Textmont Nickel Mine.

### Location

The property is located in North Eastern Ontario, Canada, approximately 32 km south of Timmins, Ontario. The Timmins mining camp proves to be one of the most prolific mining districts of the world. Over 260M+ ounces of gold produced over the past 110+ years from many prolifically known gold mines and to this day mining is still the dominating industry in the region.

The former Nickel producing Textmont Nickel Mine is located 2.5 km south of the property. A location map is seen below in Figure 1.

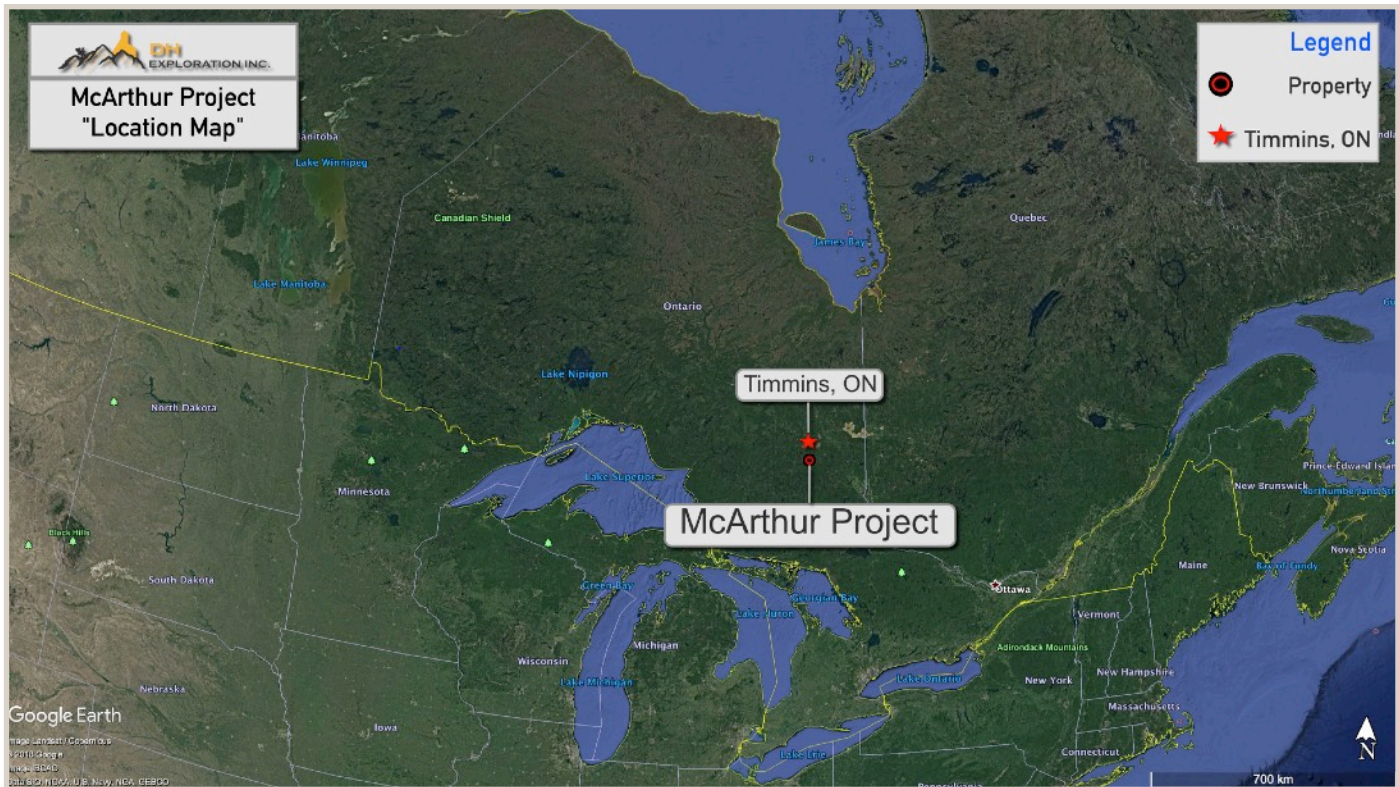


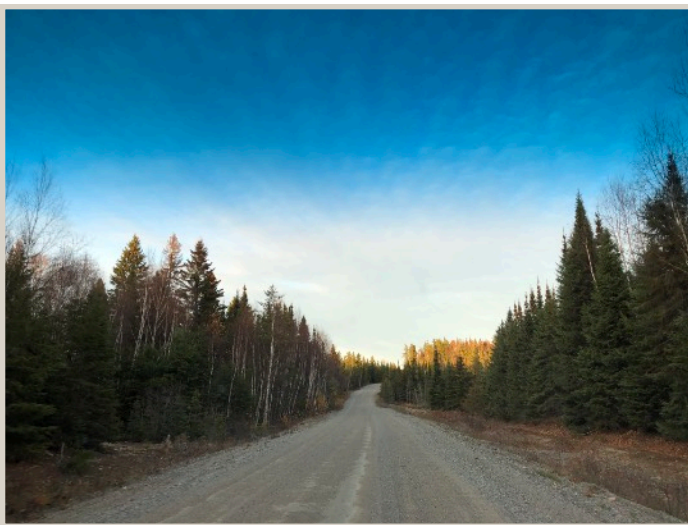
Figure 1: Location of the DH Exploration Inc - McArthur Property

### Access

Access to the property is obtained by travelling south from Timmins, ON via Pine Street into a well-maintained gravel road, Naybob Road for approximately 38 km. An old mine road (Textmont) is travelled to the east for 5.8 km, followed by a N-S logging road for another 3.5 km directly into the property. The last 2.1 km of road is too overgrown for a truck and access is best suited by ATV. The northern and eastern boundary areas of the property can be accessed through various bush roads leading off the Naybob. McArthur Lake Road provides access to the boat launch at McArthur Lodge and a boat can be utilized to access the northern portions of the property. McArthur Lake is also suitable to land a float plane. The eastern portions of the property can be accessed from a logging road off the Naybob at km 10 and travelled directly to the eastern boundary. Access map is seen below in Figure 2 with the illustrated access route from Timmins, ON. Two photos below Figure 2 illustrate the conditions on Pine Street south in various seasons.



Figure 2: Access to the McArthur Property.



Naybob Road - Fall (Oct 25, 2019)



Naybob Road - Fall (Oct 29, 2019)

### McArthur Property Claims

The McArthur property is composed of 12 unpatented mining claim cells, located in McArthur, Geike, Douglas, and Bartlett townships, in the Porcupine Mining District of Ontario. A claim map of the property is seen below in Figure 3. Property is held solely by DH Exploration Inc.

### Assessment Schedule

The McArthur property requires a minimum of \$4800 of assessment work on a yearly basis.



Figure 3: Claim Map for McArthur

### Claim Abstract

DH Exploration Inc.					
Township	Unit Count	Owner	Claim Number	Work Required	Date Registered
MCARTHUR	1	DH Exploration Inc.	300729	\$400	November 23, 2017
MCARTHUR	2	DH Exploration Inc.	231986	\$400	November 23, 2017
MCARTHUR	3	DH Exploration Inc.	177384	\$400	November 23, 2017
MCARTHUR	4	DH Exploration Inc.	317367	\$400	November 23, 2017
MCARTHUR	5	DH Exploration Inc.	338954	\$400	November 23, 2017
MCARTHUR	6	DH Exploration Inc.	184160	\$400	November 23, 2017
MCARTHUR	7	DH Exploration Inc.	223942	\$400	November 23, 2017
MCARTHUR	8	DH Exploration Inc.	300730	\$400	November 23, 2017
MCARTHUR	9	DH Exploration Inc.	534091	\$400	November 1, 2021
MCARTHUR	10	DH Exploration Inc.	534092	\$400	November 1, 2021
MCARTHUR	11	DH Exploration Inc.	534093	\$400	November 1, 2021
MCARTHUR	12	DH Exploration Inc.	534094	\$400	November 1, 2021

Table 1: Caim Abstract



## ***Topography, Vegetation and Climate***

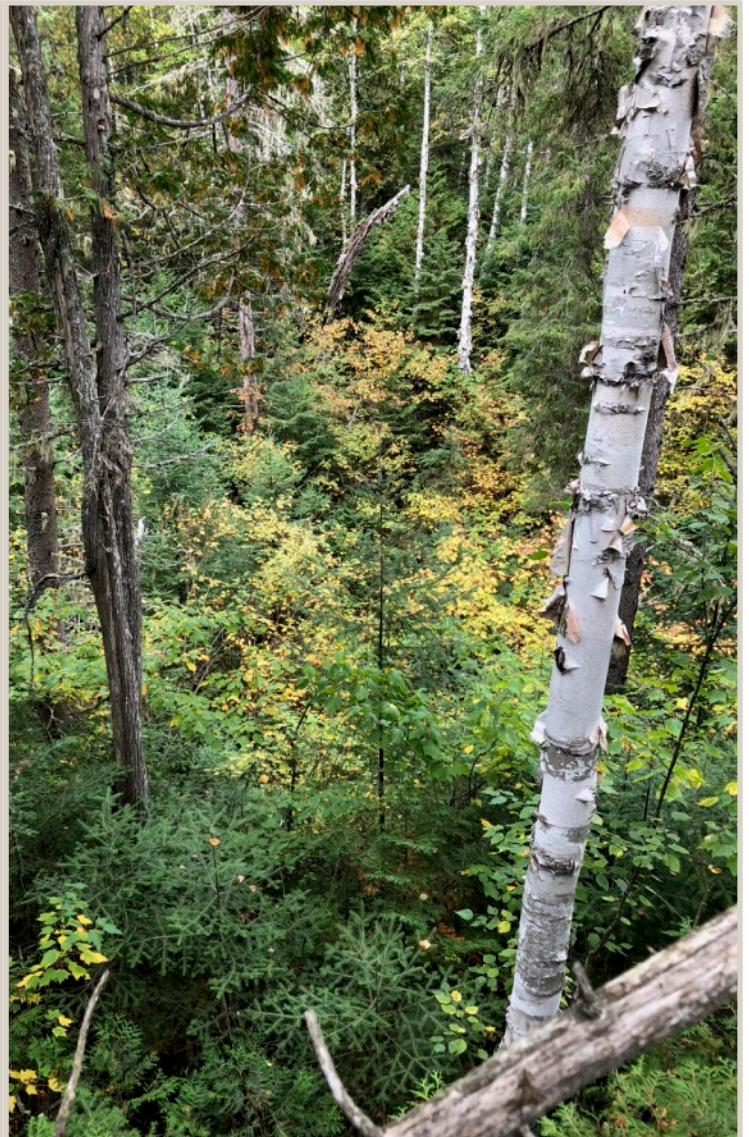
The topography consists of an array of conditions, from low-lying swamps to steep sided hillsides with the higher elevations in the southern portions of the property and the lower in the northern. The land generally slopes towards McArthur Lake in a consistent fashion. Outcrop exposure in the higher ground is good and a number of large ridge lines extend through the property with great exposure to prospect.

The vegetation is composed of typical northern species of trees: Cedar, Birch, Jack Pine, and Spruce are predominate in this Boreal forest region of Northern Ontario.

During the summer months the average temperature is between 15-25 degrees Celsius, while the winter months fall between -15 to -25 degrees Celsius with 122 cm of snowfall in 2018-2019 . The topography and vegetation can be seen in the photos below.



McArthur Property - Steep Hill



McArthur Property - Vegetation

## Geology

The property is underlain predominantly by a suite of metavolcanic rocks that have been compressed between the Adams Pluton to the north, the Geikie Pluton to the east and the Peterlong Lake Complex to the west. These are described by Pyke (1978) as porphyritic granodiorites. The rock assemblages between these plutons strike generally northwest-southeast, dip steeply toward the northeast, and young generally to the northwest. From southwest to northeast across the property, the rocks consist of mafic, intermediate and felsic metavolcanic flows, tuffs, lapilli tuffs and tuff breccias (Deloro Assemblage), overlain by massive to spinifex-textured ultramafic flows (komatiitic), mafic flows, tuffs and tuff breccias, and syn-volcanic sills and dykes (Tisdale Assemblage) (Map 1). The Deloro Assemblage has been intruded by narrow sills and minor dykes of gabbro and quartz-gabbro and narrow iron formations occur near the top. Small semi-conformable plutons of trondhjemitic quartz feldspar porphyry and fine to medium grained equigranular trondhjemite intrude all of the rock units. The lithological package has been cut by latestage diabase and olivine-diabase dykes trending to the northwest (Sudbury Dike Swarm) and northeast (Abitibi Dike Swarm). The dominant structures are parallel and slightly oblique to the major stratigraphic trends (i.e., northwest). Several northeast-striking faults have been inferred from bedrock mapping and geophysical interpretations of the area. Pyke (1978) describes the sequence in this area as representing two cycles of volcanism with the boundary being the south contact of the ultramafic sequence. The first cycle of volcanism is evidenced by an ultramafic to felsic sequence exposed in the Peterlong Lake area (southwest of the property), which contains iron formation near the top. The second cycle of volcanism is marked by the ultramafic package in McArthur Township which is succeeded by approximately 3700m of pillowed mafic volcanic rocks which are themselves superseded by 900m of intermediate to felsic volcanics. (excerpt from <http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/20000003008/20004631.pdf>) A regional geology Map can be seen below in Figure 4.

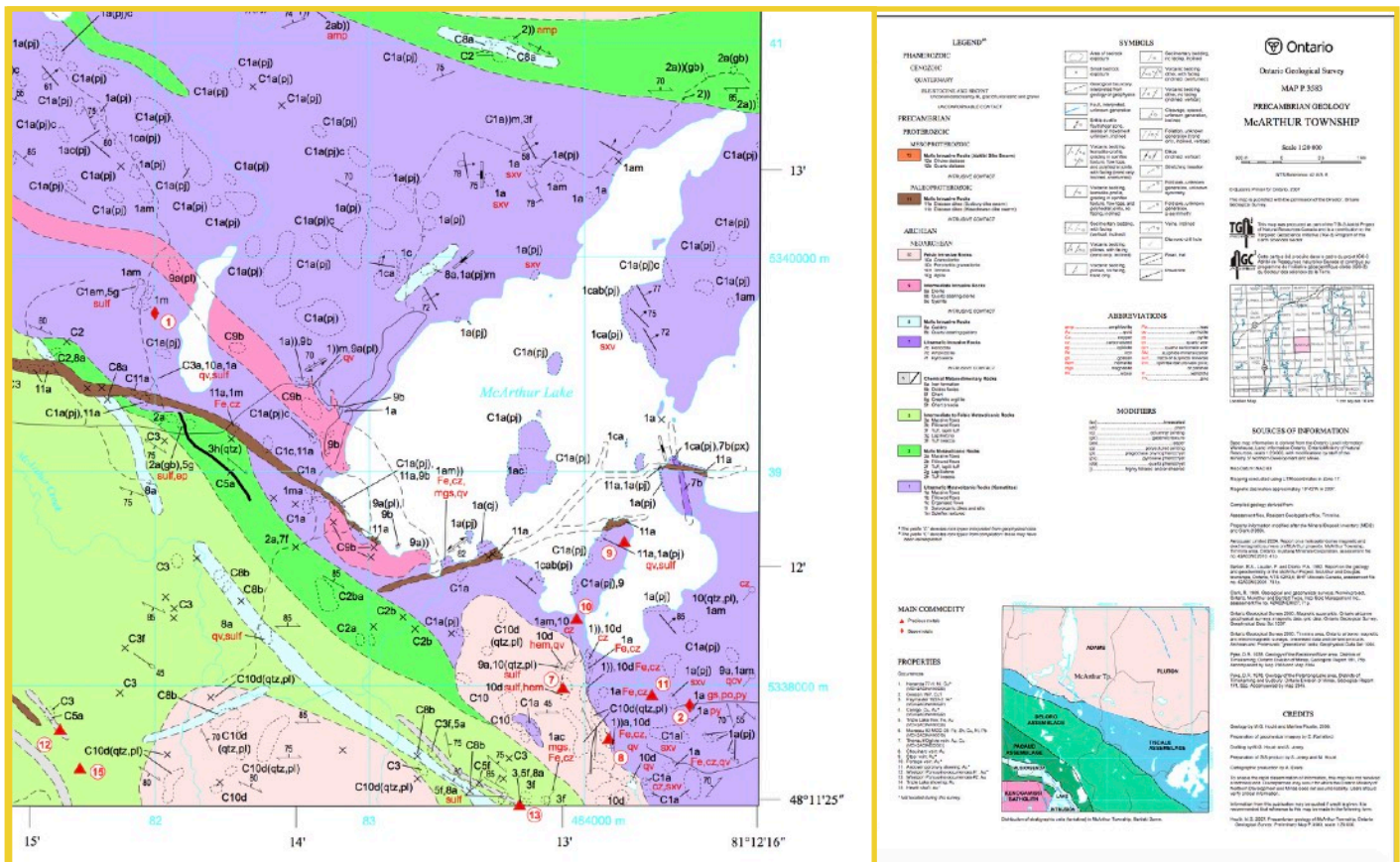


Figure 4: Geology Map (to view full size - <http://www.geologyontario.mndm.gov.on.ca/mndmfiles/pub/data/imaging/P3583/p3583.pdf>)

## Property Geology

The property is mainly underlain by Keewatin ultramafic to felsic metavolcanics, intruded by stocks of porphyritic trondhjemite, locally carbonized. A set of parallel quartz veins are associated with northeast-trending feldspar porphyry dikes which cut the metavolcanics and the intrusion.

Gold mineralization in the northern proton of property is associated with a feldspar-porphyry dike system that cut through the regional mafic and ultramafics and 4 major quartz veins: the Ogilvie, Chouinard, Steele, and Portage. In the southern parts of the property gold is associated with an interconnecting iron formation, intermediate to felsic metamorphosed pyroclastic rocks and the trondhjemitic stock extending throughout the property. As seen below in figure 4 previous sample locations have been layered over a property geology map.

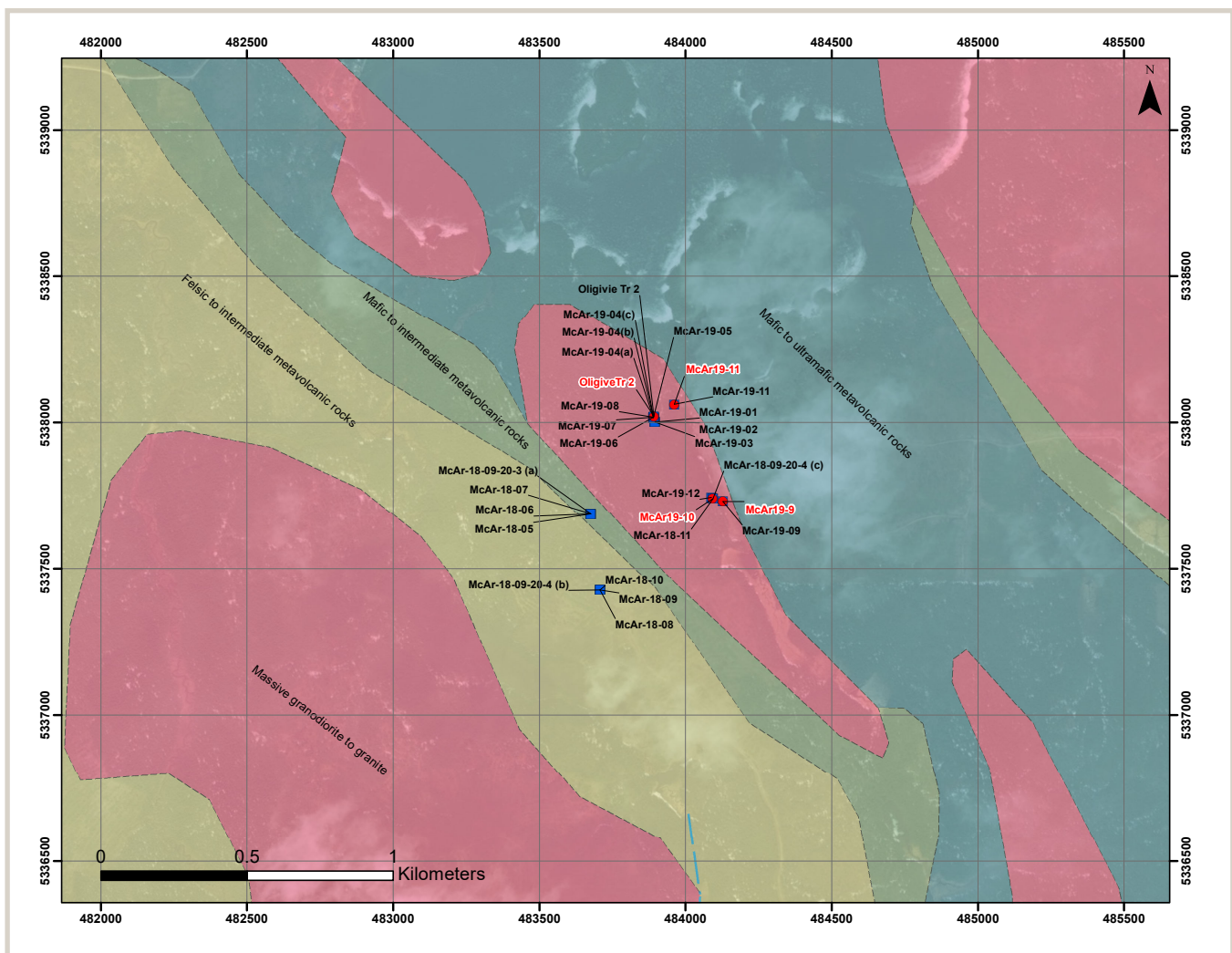


Figure 5: Property Geology Map

### Previous Work History

McArthur, Giekie, Douglass, and Bartlett townships have been subject to diverse exploration programs, though little work has been completed on the previously leased and patented land. Companies have worked the land adjoining the leases with good success in locating favourable geological units for gold and nickel. Over the years geophysics has played an important role in defining lithology, structure, and outlining areas of interest to follow-up. A number of geophysical programs carried out between 1957-2008 and performed by reputable companies with little focus on the historical gold showings due to the leases being tied up.

The work history on the majority of programs covers the surrounding area to the previously held leases. A detailed exploration history for the historical gold showings published by the Ministry of Northern Development and Mines in 1972 is best reference available - "Geology of the Redstone Area" by D.R. Pyke in 1978 (pg 62-67)

<http://www.geologyontario.mndmf.gov.on.ca/mndmfiles/pub/data/imaging/R161//R161.pDf>

An excerpt of this write-up is included on page 14-15 of this report.

The Ministry of Northern Development and Mines has a donated assessment report "(T139)" on file with the Regional Geologist that outlines performed work up to 1957. This report is not available online.

<b>EXPLORATION HISTORY</b>			
<b>Year</b>	<b>Operator</b>	<b>Type of Work</b>	<b>Results / Remarks</b>
<b>1911</b>	<b>J. Chouinard and D. Morrison</b>	<i>Property staked and sampled</i>	J. Chouinard staked six claims on south shore of McArthur Lake over gold showings associated with quartz veins and quartz feldspar dikes. Four veins: Steele, Portage, Chouinard, and Ogilvie were outlined by prospecting and sampling. The veins are intermittent lenticular quartz veins associated with quartz feldspar porphyry dikes that are likely aphophyses from one of the two thronhjemitite stocks in the area. The Chouinard vein is hosted by a trondhjemite stock, not associated with quartz feldspar.  The Ogilvie vein has produced the most consistent gold values returning 12 g/t over one meter through channel sampling.
<b>1920's</b>	<b>Clear Lake Porcupine Syndicate</b>	<i>Drilling</i>	J. Chouinard's claims were brought to lease in 1921 with Clear Lake Porcupine Syndicate formed under the direction of J Theriault.
<b>1936</b>	<b>Alcide Porcupine Mines Limited (J. Theriault)</b>		Alcide Porcupine Mines Limited acquired property and operated under the direction of J. Theriault. Little information is available during this time of ownership.
<b>1944</b>	<b>Aunor Gold mines</b>	<i>Sampling</i>	Sampling yielded values of 0.62 oz/t Au, 0.46 oz/t Au from the west extension cut. Channel sampling of the Ogilvie vein returned gold values of 0.37 opt over 98 cm (3.2'), 0.24 opt over 122 cm (4'), and 0.14 opt over 122 cm (4'). The Chouinard vein returned gold values of 1 opt.
<b>1957</b>	<b>A. Theriault</b>	<i>Geophysical Surveys</i>	A. Theriault acquired property
<b>1965</b>	<b>Textmont Mines</b>	<i>Geophysics</i>	Surveys carried out.  ( <a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/42A03NE0058/42A03NE0058.pdf">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/42A03NE0058/42A03NE0058.pdf</a> )
<b>1966</b>	<b>Acme Oil and Gas</b>	<i>Airborn Geophysics</i>	The survey covered multiple townships including: Price, Fripp, McArthur Bartlett and was successful outlining several geological features: iron formations, ultramafic intrusives, mafic intrusives, diabase dykes and Felix intrusive and meta volcanic rocks  ( <a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/42A03NE0020/42A03NE0020.pdf">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/42A03NE0020/42A03NE0020.pdf</a> )

Table 2: Exploration History

### Previous Work History - continued

<b>1970-1972</b>	<b>Textmont Mines</b>	<i>Geophysics</i>	Textmont Mines carried out 2 electromagnetic surveys and a magnetometric survey outlining 5 conductors.  ( <a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/42A03NE0087.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/42A03NE0087.html</a> ) ( <a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/42A03NE0021/42A03NE0021.pdf">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/42A03NE0021/42A03NE0021.pdf</a> )
<b>1981</b>	<b>Amax Minerals Exploration</b>	<i>Geophysics</i>	Amax carried out an aeromagnetic survey over most of McArthur, Bartlett, and Fripp. Total of 1050 line kms flown outlining iron formations, ultramafics, mafic intrusive, diabase dikes, and felsic intrusive, and metavolcanics throughout the survey grid.  ( <a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/42A06SW0507.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/42A06SW0507.html</a> )
<b>1982</b>	<b>Noranda Exploration</b>	<i>Geophysics, Diamond drilling</i>	Magnetic and VLF surveys outlined several weak to medium conducive zones. Drilling  1982: Diamond drilling by Noranda totalled 427 with discouraging results. 1983 Diamond drilling of 2 holes: MCA-83-1 returned 318 ppb Au over 1.9 ft in quartz feldspar porphyry MCA-83-2 returned 0.01 oz/t Au  ( <a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/42A03NE1033.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/42A03NE1033.html</a> ) ( <a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/42A03NE0084/42A03NE0084.pdf">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/42A03NE0084/42A03NE0084.pdf</a> )
<b>1988</b>	<b>Norwin Resources Limited</b>	<i>Airborn Geophysics</i>	Airborne magnetic and VLF-Em severe conducted at 100m intervals . A number f VLF-EM conductor axes were found and associated with structural sources and a potential sulphide origin, recommended for additional investigation.  ( <a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/42A03NE0028/42A03NE0028.pdf">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/42A03NE0028/42A03NE0028.pdf</a> )
<b>2005</b>	<b>Eloro Resources</b>	<i>Line Cutting, Geophysics</i>	Eloro completed a total of 12.6 km of line cutting, then followed with a magnetometer survey that outlined a number of responses that mark geological units that are of interest. 2 zones have been established: Zone 1: approximately 100m made up of strong, erratic highs and lows that are several thousand Nt above background, indicating zones of an iron formation. Zone 2: magnetic high I northwest corner of the grid, remaining open to the west with approximately 2000nT. above background making a separate geological unit.  ( <a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/2000000252/20001039.pdf">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/2000000252/20001039.pdf</a> )
<b>2008</b>	<b>Fletcher Nickel / Eloro Resources</b>	<i>Surface Exploration</i>	Eloro and Fletcher Nickel engaged in a surface exploration program consisting of geological mapping and sampling with a total of 641 rocks samples taken and 409 sent for analysis. The program was mainly focused on a large body of peridotite.  Follow up work is warranted on the south western side of McArthur Lake with the mineralization in close proximity to the southern claim boundary.  It must be noted the program did not include the 6 leases that have the stent of encouraging results in the area. It was positioned to the west of the leases.  ( <a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/20000004211/20006297.pdf">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/20000004211/20006297.pdf</a> )

Table 2: Exploration History

**Excerpt from "Geology of the Redstone Area" by D.R. Pyke in 1978 (pg 62-67)**

The following excerpt published by the Ministry of Northern Development and Mines outlines the historical gold showings on the McArthur property.

Theriault, A. (12)

In 1972, A. Theriault held six patented claims, TRP2984, TRP2985, and TRP3026 to TRP3029 inclusive, near the south shore of McArthur Lake in McArthur Township. The claims were originally staked in 1911 by J. Chouinard and D. Morrison; subsequent leasing arrangements were completed by 1921. In the 1920s the Clear Lake Porcupine Syndicate was formed, under the direction of J. Theriault. In 1936, the property was acquired by Alcide Porcupine Mines Limited, who received their charter the same year; J. Theriault was president. The company's charter was cancelled in 1957, and A. Theriault acquired the property.

The property is mainly underlain by ultramafic metavolcanics, intruded by small stocks of porphyritic trondhjemite; locally the contact zones are highly carbonatized. The largest outcrop area of trondhjemite is an elliptical-shaped northwest trending mass in the southeast part of the property, and this has been the focus of most of the exploration work. The property was examined by N.

<sup>1</sup>Regional Geologist's Files, Ontario Ministry of Natural Resources, Timmins

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Hogg in 1947, who at that time was the Resident Geologist in Timmins, and much of the following information is taken from his report<sup>1</sup>.

Gold mineralization is associated with four major quartz veins (Figure 10); the Ogilvie, Steel and Portage veins which strike about N50E and the Chouinard vein which strikes N30W. Coarse-grained dikes of feldspar porphyry are associated with the northeast-trending dikes.

The Ogilvie vein (Figures 10 and 11) has received the most attention and appears to be the most important economically in that the gold values are the most consistent. The vein has been exposed over a strike length of 69 m (225 feet) in three large rock cuts. The quartz does not form a continuous vein, but rather a series of lenses up to 60 cm (2 feet) wide along the northwest wall of a dike of feldspar porphyry up to 2.4 m (8 feet) wide. Minor pyrite and traces of chalcopyrite and galena occur as fine disseminations and fracture fillings both in the quartz and the enclosing trondhjemite. The best channel samples reported<sup>1</sup> in ounces of gold per ton, from the Ogilvie vein are 0.37 over 98 cm (3.2 feet), 0.24 over 122 cm (4 feet) and 0.14 over 122 cm (4 feet). More than 600 m (2,000 feet) of diamond drilling has been done on the property, but property records have only been kept for two holes (Figure 11), drilled to lengths of 53 m and 152 m (175 feet and 500 feet) respectively. One 1.5 m (5 feet) length of core across the Ogilvie vein assayed 0.06 ounces of gold per ton<sup>1</sup>.

The Portage and Steel veins (Figure 10) occur in the serpentinized ultramafic metavolcanics, and are similar to the Ogilvie in that both veins contain quartz-filled fractures and lenses associated with a feldspar porphyry dike. Hopkins (1924) reported the occurrence of visible gold in the Steel vein. A quartz stockwork (Photo 11) outcrops near the north central boundary of the claims in the ultramafic metavolcanics on the south shore of McArthur Lake, but no gold values have been reported.

The Chouinard vein (Figures 10 and 11) is a quartz vein with no associated feldspar porphyry, varies in width from about 10 cm to 1.5 m (5 feet), and has been traced continuously for a strike length of 91 m (300 feet), and intermittently as far as the Ogilvie vein (Figure 11). Although a few selected samples have assayed up to about 1 ounce of gold per ton<sup>1</sup>, most have contained only traces, and the vein in general has not proved interesting. Minor pyrite and traces of galena and chalcopyrite have been reported in the trondhjemitic wall rocks.

Little or no work appears to have been done on the property since N. Hogg (1947) examined the claims. In his report he concluded that the property warranted further exploration. The author concurs with this especially in view of the close spatial association of the gold occurrence with ultramafic volcanic rocks, which may have an important bearing on the genesis of gold deposits (Pyke 1975b). Of additional interest is that disseminated pyrite was reported throughout the trondhjemite in the two diamond-drill holes for which records are available. As minor chalcopyrite is known to occur with the gold mineralization, it may be worthwhile assaying some of the trondhjemite for copper, with a view to possible porphyry-type mineralization. Two copper assays<sup>1</sup> reported from samples from the Ogilvie vein gave 1.68 and 2.26 percent copper respectively.

<sup>1</sup>On file (T-139) with the Regional Geologist, Ontario Ministry of Natural Resources, Timmins.

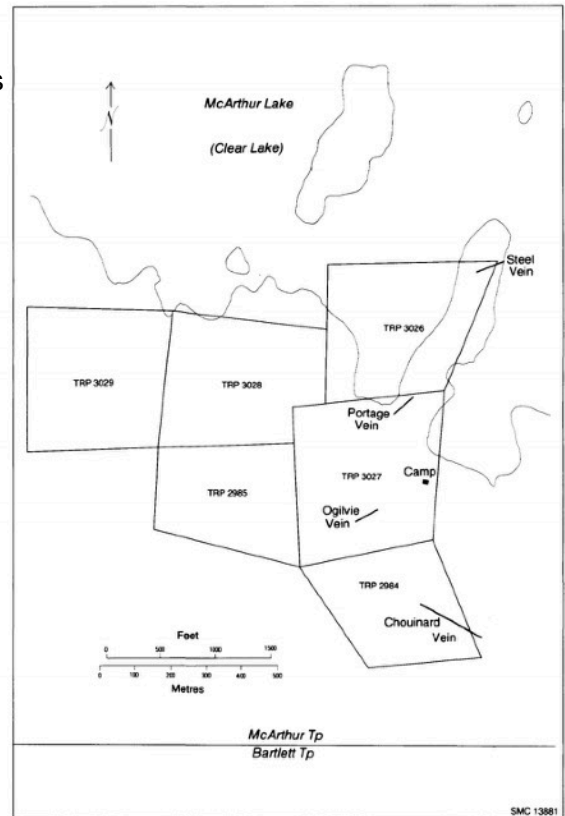


Figure 10—Patented claims of Theriault property showing location of main gold-bearing veins (information from Regional Geologist's files, Ontario Ministry Natural Resources, Timmins)

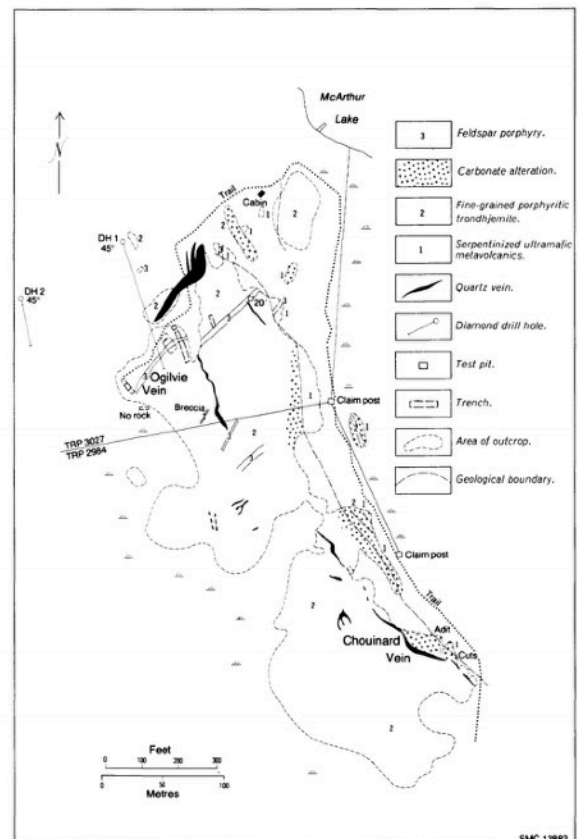


Figure 11—General geology of the gold showing on the property of A. Theriault. Included are parts of patented claims TRP 3027 and TRP 2984. Geology modified after N. Hogg (1947).

*Excerpt from "Geology of the Redstone Area" by D.R. Pyke in 1978 (pg 62-67) - continued*

Westport Porcupine Gold Mines Limited [1938] (13)

Westport Porcupine Gold Mines Limited formerly held a group of claims extending southeast from McArthur Lake to the northern part of Bartlett Township. The northern extremity of the area of the claims contains the basal position of the ultramafic metavolcanics. The remaining part of the area is largely underlain by intermediate to felsic, metamorphosed pyroclastic rocks and intercalated iron formation; the northern margin of a trondhjemitic stock extends into the south part of the area. Exploration work was confined to the southern part of the claims, and the following information is taken from a report<sup>1</sup> by Erie Canadian Mines Limited in 1938.

Two main showings occurred near the southern boundary of McArthur Township; one about 400 m (1,300 feet) northeast of the 2-mile post, the other about 1150 m (3,800 feet) west of the southeast corner of McArthur Township. The first showing contained minor pyrite and a few discontinuous quartz veinlets in an intermediate to felsic breccia. Exploration work consisted of two trenches and six diamond-drill holes totalling 513 m (1,684 feet). Only trace amounts of gold were found<sup>1</sup>. The second showing, near the township line, is associated with two narrow bands of iron formation (shown as one band on ac-

companying Map 2363, back pocket), separated by about 38 m (127 feet). Gold occurs both in the iron formation and narrow parallel sills of feldspar porphyry. A number of trenches, two small shafts (about 6 m (20 feet) deep) and six diamond-drill holes totalling 282 m (924 feet) constituted much of the exploration work completed by 1938. Prior to the examination of the property by Erie Canadian, gold values up to \$11.20 per ton (gold probably at \$20.67 per ounce) were reported. The best channel sample by Erie Canadian, in 1938, returned \$6.40 per ton (gold probably at \$35.00 per ounce) over 67 cm (2.2 feet)<sup>1</sup>.

<sup>1</sup>Regional Geologist's Files, Ontario Ministry of Natural Resources, Timmins.

**Excerpt from “Geological and Mineral Potential of McArthur Township in the Bartlett Dome, Abitibi Greenstone Belt”, p. 6-1-6-14**

The following excerpt published by the Ministry of Northern Development and Mines outlines the historical gold showings on the McArthur property.

**Economic Geology of McArthur Township**

Diverse commodities were reported in McArthur Township following bedrock mapping and mineral exploration programs conducted since the early 1900s. Numerous pits, trenches and small shafts are located throughout McArthur Township (15 occurrences). Half of those are gold occurrences (8) and occurred near the south shore of McArthur Lake and on the east shore of Triple Lake (1 occurrence) (see Figure 6.2). Table 6.1 summarizes the main characteristics of the gold showings. Other mineral occurrences include iron, gold, copper and zinc associated with iron formations, copper and gold associated with mafic intrusions and nickel associated with komatiites.

**Recommendation for Explorations - 2006**

Few mineral occurrences have been found to date in McArthur Township. However, a number of favourable geological settings representing a variety of mineralization types may be present in this area.

The contact between the tonalite stocks and the surrounding metavolcanic and sedimentary rocks south of McArthur Lake is a prospective zone for gold mineralization. Several showings at, or near, this contact indicate the entire zone along the felsic intrusion should be re-examined. The association between gold and iron formation is also well established in greenstone belts. The Carshaw–Malga Mine in the Shaw Dome area represents a good example of this type of association between gold and iron formation. Numerous and relatively continuous iron formations in McArthur Township could represent an interesting target for this type of mineralization. Furthermore, rusty zones on exposures of the middle iron formation horizon observed during the mapping should be tested for gold and base metal content. A close spatial relationship between komatiites and sedimentary rocks (banded iron formation and sulphidic graphitic argillite), abundant olivine cumulates, and spinifex-textured sills hosted within komatiite flows in the map area, provides a favourable location for nickel sulphide mineralization associated with the komatiites. Observations during mapping indicate high volumes of magma were associated with these komatiites and, thus, are potentially sufficient to dissolve sulphur and precipitate sulphide minerals that carry the nickel, copper and platinum group elements. During this bedrock mapping project, a small gossan was observed southeast of McArthur Lake. It exhibits some disseminated, blebby and millimetre-scale sulphides veinlets (pyrrhotite, pyrite) (see Figure 6.2). Furthermore, the komatiites in the map area are along strike from the former Texmont Mine, a komatiite-associated nickel sulphide deposit.

**Table 6.1.** Main characteristic of gold showings in McArthur Township.

<b>Occurrence</b>	<b>Best Historic Value</b>	<b>Hosted Units</b>
Ogilvie vein	Up to 12 g/t Au 1.68% and 2.26% Cu	Quartz vein hosted by tonalite and associated with feldspar porphyry
Chouinard vein	Up to 1 oz/t Au	Quartz vein hosted by tonalite
Steel vein	Visible gold	Quartz vein hosted by komatiite and associated with feldspar porphyry
Portage vein	Unknown	Quartz vein hosted by komatiite and associated with feldspar porphyry
Andover porphyry showing	Visible gold	Quartz stringer hosted in a feldspar porphyry
Hewitt shaft	Visible gold	Quartz stringer occupying cross fractures in iron formation
Westport Porcupine occurrence #1	Visible gold occur in pannings	Quartz veinlets hosted by felsic to intermediate breccia
Westport Porcupine occurrence #2	Up to 10 g/t Au	Iron formation associated with feldspar porphyry
Triple Lake showing	Unknown	Quartz vein hosted by felsic metavolcanic rocks

The reader is referred to Pyke (1978a) and Clark (1989) for a more detailed description on these occurrences.



### **Prospecting and Work Log**

Daily Travel: 103 km round trip

Daily Work Day: 12 hrs

Mobilization to the property is a distance 53 km drive which takes approximately 1.0 hr of travel time. From the truck parking an ATV provides access into the property.

Truck Parking / ATV Drop Off:           E: 483343  
  N: 5335345

Prospecting Schedule	Activity	Work Completed
2021-10-01 to 2021-10-03	Trail Improvement	Three days spent improving the access trail.
2021-10-28	Prospecting	Mobilized to property. Traversed and prospected path as outlined on map below. Located gabbro outcrop mineralized with pyrite - (UTM: 483831 E, 5337477 N). Manually removed overburden.
2021-10-29	Prospecting	Mobilized to property. Traversed and prospected path as outlined on map below. Manually removed overburden at showing located the previous day. Stripped area approximately 10 m x 2-3 m. Samples collected for further analyzation.
2022-11-22	Report	Drafting report in office.
2022-11-23	Report	Drafting report in office

Table 3: Prospecting and Work Log

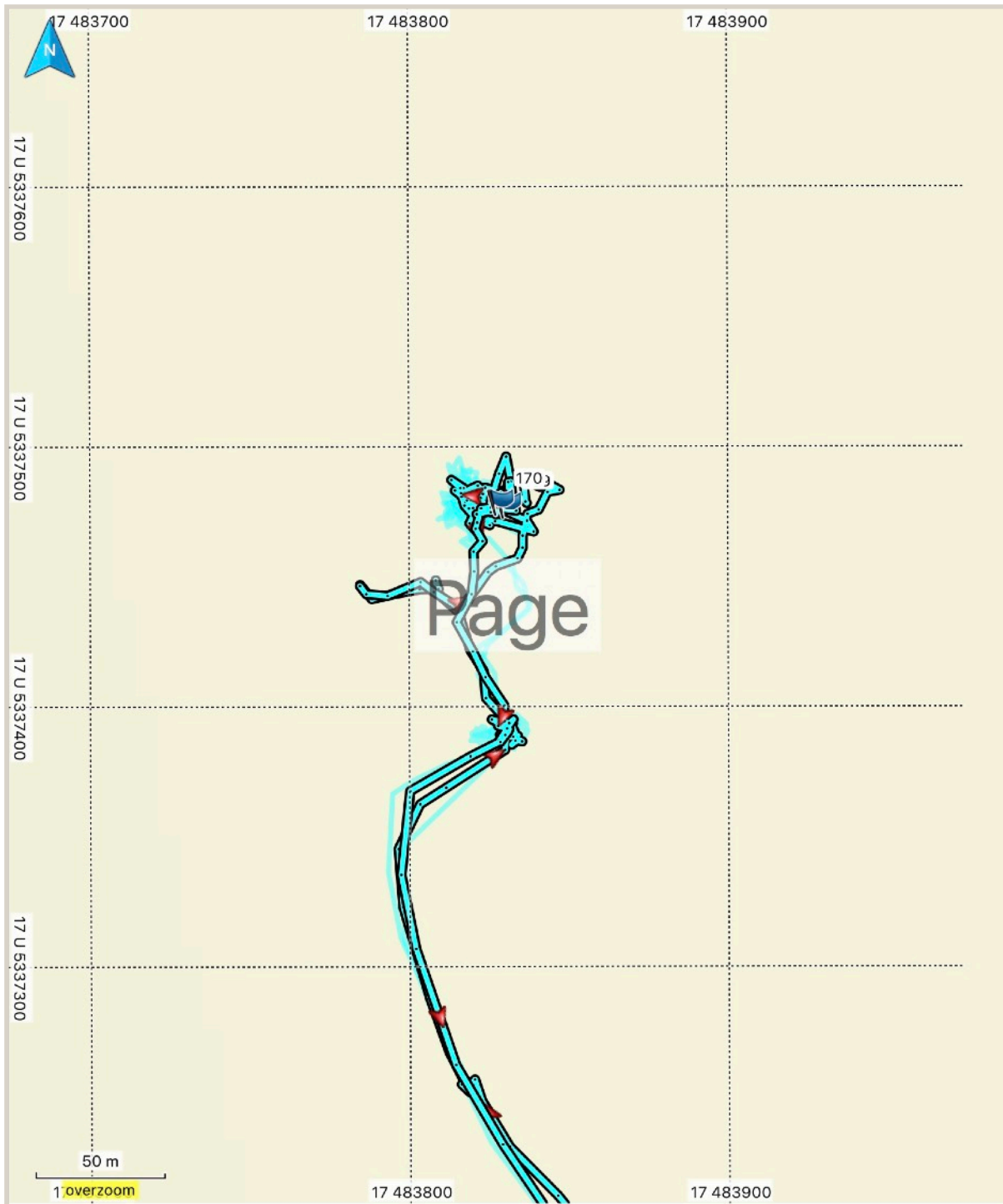


Figure 6: Prospecting Route - 2021-10-28

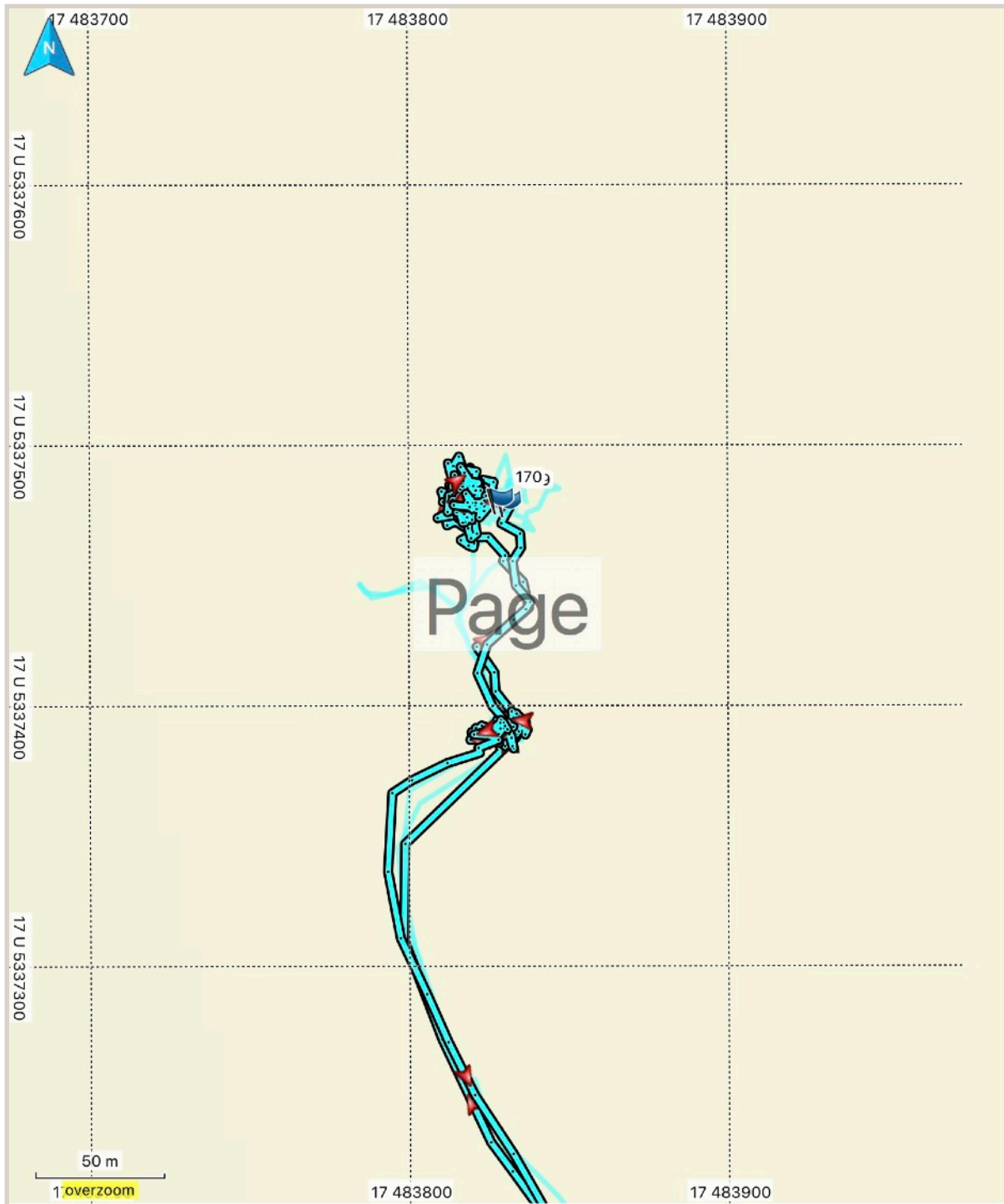


Figure 7: Prospecting Route - 2021-10-29















## **Conclusions and Recommendations**

It is recommended that prospecting efforts be continued on the McArthur property. Further work programs will identify the economic importance of the property.

The work program in 2021 was successful in improving the access trail to travel with an ATV as well as locating a mineralized outcrop to be examined further.

Previous work in 2018-2019 was very encouraging. Prospecting and sampling identified multiple historical gold zones and results of sampling indicated the presence of gold that may be suitable for mining. Positive values were obtained in the Ogilvie and Chouinard veins with all samples containing gold and yielding consistent values.

**Ogilvie Vein:** Recent samples up to **21.6 g/t Au** along the vein, traced over a strike length of 61 m.

**Chouinard Vein:** Recent samples up to **3.14 g/t Au**, traced over a strike length of 91 m and intermediately for 380 m interesting perpendicular to the Ogilvie vein.

The presence of ultramafic and mafic volcanic rocks and associated iron formations underlying the property are favourable for a gold deposit. The property may pose the possibility to be economically viable to mine if the strike length can be increased and proven at depth with similar grade.

Gold zones on the property are associated with a feldspar-porphyry dike that is 2.4 m wide. Preliminary sampling of this dike yielded values of **7.2 g/t**, 1.4 g/t, and 2.4 g/t out of the 3 samples sent. There is possibility of an economic resource should the dike be continuous with the recently made Porphyry Discovery 450 m south.

### Work Program Expenditures

Prospecting Schedule	Activity	Personel	Location	Assessment Credit	Travel Credit \$0.50 / km
2021-10-01	Trail Improvement	Darren Heath, Dustin Gannon, Doug Heath	Field	1550	106
2021-10-02	Trail Improvement	Darren Heath, Dustin Gannon, Doug Heath	Field	1550	106
2021-10-03	Trail Improvement	Darren Heath, Dustin Gannon, Doug Heath	Field	1550	106
2021-10-28	Prospecting (200%)	Darren Heath, Natahsa Gaudet	Field	2200	106
2021-10-29	Prospecting (200%)	Darren Heath, Doug Heath	Field	2200	106
2022-11-22	Report	Darren Heath	Office	500	0
2022-11-23	Report	Darren Heath	Office	500	0
7 days			Total	10050	265

Table 4: Work Schedule and Assessment Credit Index

### Work Program Evaluation - Cost Per Day

Item Cost per day	Crew of 2	Crew of 3
1 Leader - 500 (12 hrs)	500	500
1 Helper - 400 (12 hrs)	400	800
ATV - 50	50	50
Chainsaw / Brush cutter- 50 (each)	100	150
Prospecting Equipment - 50	50	50
Total	1100	1550

Table 5: Credit Breakdown

### Expenditure Breakdown

Work Program	\$10,050
Transportation	\$265
<b>Total Credit</b>	<b>\$10,315</b>