

Anderson Lake Molybdenite Property

McTavish Township

NTS 52A10NW

District Of Thunder Bay

A Report Prepared For

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by

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## INTRODUCTION

Thunder Bay Geological Services was commissioned by Mr. Ken Fenwick, of Thunder Bay, Ontario, to undertake a sampling program and to provide a photographic record of certain sites and areas within the Anderson Lake Molybdenite Property. In order of priority, the areas to be visited were outlined by Mr Fenwick as follows:

1. Locate, sample and photograph any amethyst in Trench 5, 15, 17, and 18, and bring back representative samples.
2. Locate ferrocolumbite crystals in Trench 30; photograph and sample
3. Sample and photograph molybdenite crystals in Trench 2
4. Photograph and sample area of Sample 48295
5. If time permits, locate eastern molybdenite occurrences: see T. Page's Map for Briar Court Mines Ltd.
6. If time allows, investigate the magnetic anomaly west of the Thunder Bay Amethyst Mine Road and located on Mining Claims 4258416 and 4265434
7. If time allows, investigate the area south of the road to Anderson Lake along Anderson Creek

All of the above were accomplished with the exception of items 6 and 7. An attempt was made to locate the eastern molybdenite occurrences as depicted on the Briar Court Mines map. The first location (designated A on Figure 13) was traversed to, but questionable map locations, and no bar scale, coupled with bush characterized by blow down, and alder and balsam thickets, made searching impossible. Better opportunity might present itself once the leaves fall, thereby increasing visibility.

All UTM coordinates in this document are reported with NAD 83 and UTM Zone 16 parameters.

The dates on which this work was undertaken were September 14, 2012 and September 15, 2012.

## PROPERTY LOCATION

The Anderson Lake Molybdenite occurrence is located in McTavish Township, Thunder Bay District, Ontario, and is situated directly east of the long, narrow, north arm of Anderson Lake ( UTM 370056E, 5392864N). From location UTM 370144E, 5392802N, a series of blasted pits, trenches, and stripped outcrops expose the mineralized zone for about 685 meters at a bearing of 16 degrees. The main occurrences are on Mining Claim 4242905.

Anderson Lake is situated in the north central portion of NTS Sheet 52A10, Loon Sheet, about 2.5 kilometers north of the east end of Loon Lake. Figure 1 illustrates the location of Anderson Lake with respect to Loon Lake and the Highway 11/17.

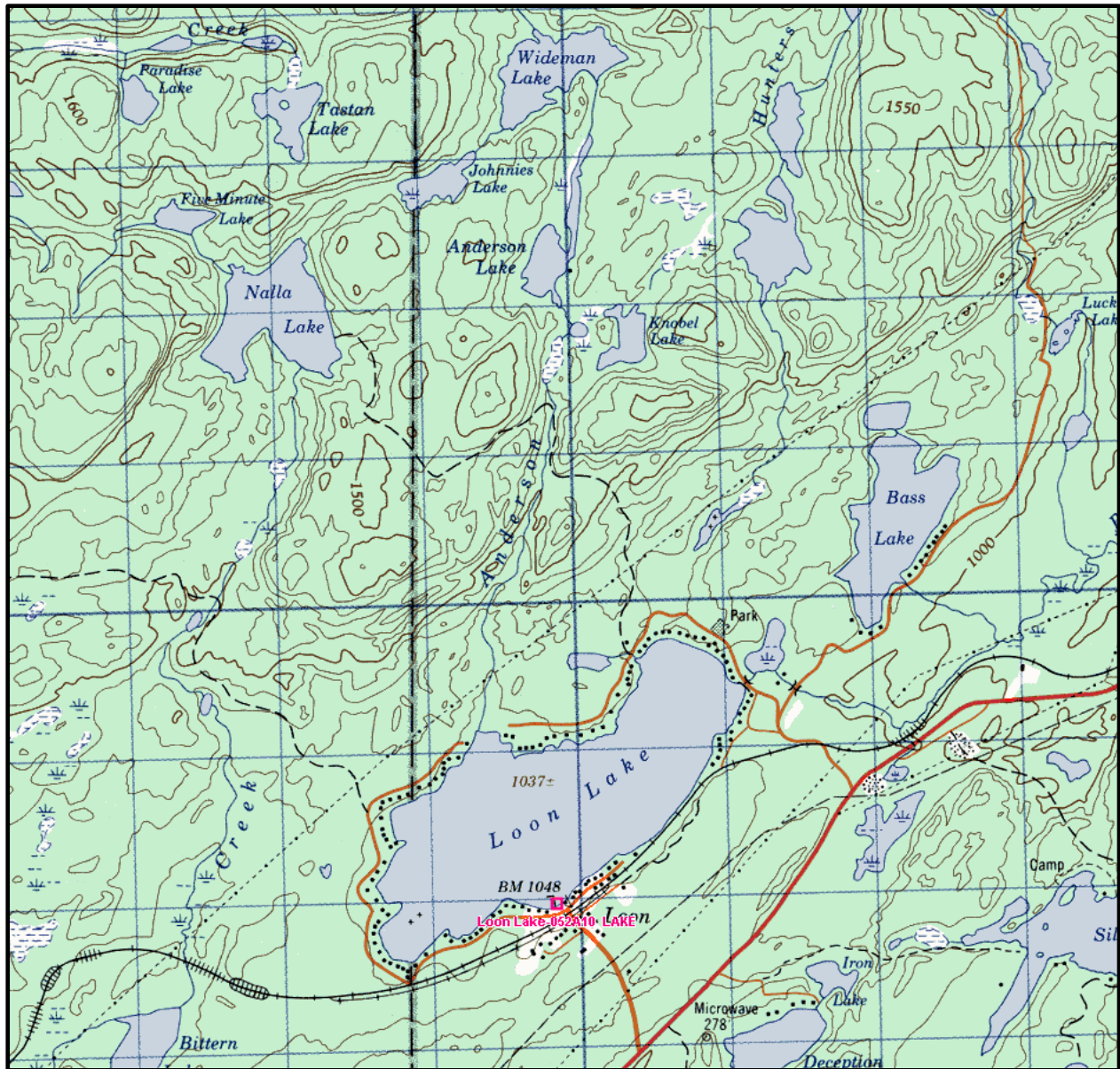


Figure 1: Anderson Lake Location (top central portion of map)

## ACCESS

From the Hodder Avenue/Highway 11-17 interchange in Thunder Bay, access to the property is via Highway 11/17 easterly to the East Loon Road, a distance of about 38.8 kilometers. Take the East Loon Road for 2.00 kilometers northwesterly, past the tennis courts, to a bush road that trends northerly. Take the bush road for 0.32 kilometers to the power line. From this point on it is best to proceed with an all terrain vehicle (ATV or Quad) or with a four wheel drive truck with high clearance, as the road, while firm, is very hilly with a loose boulder surface coupled with the occasional large rock that can high center a vehicle. At the only junction, take the right fork. The road narrows considerably after the isolated cottage. At a distance of approximately 3.2 kilometers from the power line, you will be directly west of one of the main stripped zones on the property.

## PROPERTY DESCRIPTION: MINING CLAIMS

The Anderson Lake Molybdenite Property consists of nine mining claims in one contiguous block. As of September 14, 2012, the MNM CLAIMS III website indicates that the ownership of the claims were as follows:

Claim Number	Claim Ownership
4258415	Ken Fenwick 85%; Karl Bjorkman 15%
4258416	Ken Fenwick 85%; Karl Bjorkman 15%
4242905	Allan Onchulenko 50%; Peter Gehrels 50%
4242908	Allan Onchulenko 50%; Peter Gehrels 50%
4254906	Allan Onchulenko 50%; Peter Gehrels 50%
4258014	Allan Onchulenko 50%; Peter Gehrels 50%
4265434	Allan Onchulenko 50%; Peter Gehrels 50%
4265435	Allan Onchulenko 50%; Peter Gehrels 50%
4265698	Allan Onchulenko 50%; Peter Gehrels 50%

The claim group contains 89 units, has an area of about 1438 Ha with a perimeter of about 17.67 kilometers. The claim group is depicted in Figure 2.



Two patent surface rights only mining claims, TB891739 and TB891756, are located in the northeast corner of current claim 4265698. The private cottage at Anderson Lake is situated on these old claims.

A Wind Power Zone area has been designated by the Ministry of Natural Resources as file WP2008-280 and it covers a portion the claim block. The area affected within the claim block is shown in yellow in Figure 2.

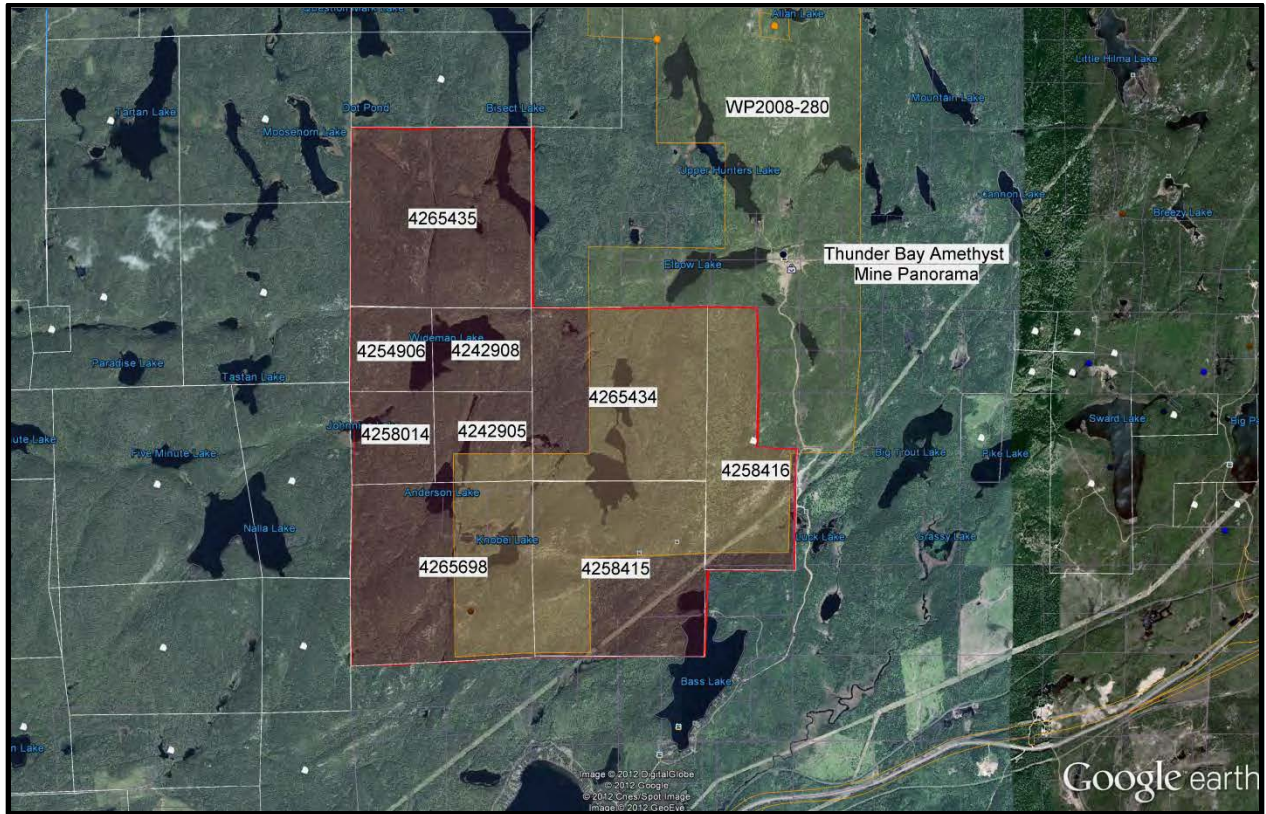


Figure 2: Claim group (red) and Wind Power area (yellow) superimposed on Google Earth image

## PREVIOUS WORK

The previous history of work done on the property has been described by Bjorkman (2005), Buck and Tims (2007, 2008), and Fenwick (2012), and the following is summarized, with additions by the author, from these reports.

It is not clear when the molybdenite at Anderson Lake was discovered, but the property has been explored intermittently since around 1918, when claims owned by J. A. Johnson at the site were

explored by stripping, test pitting and trenching (Johnston,1968). A 502 pound bulk sample with a head grade of 2.14 % Mo was shipped for concentrate testing that resulted in a concentrate grading 85.5% , indicating a recovery of 92% (Buck and Tims,2007).

Minor work by prospectors continued through 1935, until the period between 1937-1938, when Molydor Mines removed a 150 ton bulk sample from an open cut that measured up to 10 feet deep; as well, 4 trenches averaging 5 feet deep were opened up to further assess the showing. 25 tons of ore was shipped that had an average grade of 0.49% that resulted in an 85.7% MoS<sub>2</sub> concentrate. A 90% recovery was indicated (Buck and Tims, 2007).

During the period between 1958 and 1959, Lindsay Exploration stripped shallow overburden from sections of the showing with a bulldozer for a total length of 2200 feet. Fifty rock trenches and pits were developed over a distance of 2600 feet. The pits ranged in size from just mere blast pits to trenches over 120 feet long and 5 feet deep.

Between 1959 and 1960, N. V. Billiton Maatschappij conducted an unknown amount of diamond drilling coupled with a program of large diameter ( ~4 inches) bore holes (percussion drilling?). No results from this program are available.

Briar Court Mines Ltd., engaged in a program of geological mapping, stripping, trenching and diamond drilling in 1966 to 1967. A 1 ton bulk sample was hand cobbled from the muck extracted from the trenches. Assessment work report for Lindsay Exploration 52A10NW0005.pdf indicates that between 1959 and 1967, 38 diamond drill holes were drilled for a total footage of 3235.1 feet. It would appear that Lindsay Exploration and Briar Court Mines Ltd., might have working the property together, as the reports overlap in time.

McIlwaine (1971), mapped McTavish Township for the Ontario Department of Mines and Northern Affairs

El Nino Ventures Ltd., optioned the property in February 2005. In order to assess the property, El Nino Ventures obtained the services of Karl Bjorkman, who with his team, relocated all of the older pits along the entire strike length of more than 716 meters. Forty trenches were located, mapped, and other wise documented. A total of forty-six samples were taken of insitu mineralization as well as mineralized material in the muck piles adjacent to the trenches. This program of locating and mapping in the trenches was completed November 25, 2005.

Amador Gold Corp acquired the property in June 2006, and according to their press release dated June 23, 2006, plans to reopen historical trenches and strip new areas to map and sample in order to produce an average grade for the zone. Drilling to define a resource will be considered based on the results of surface sampling. Three zones were selected to be stripped, mapped and sampled.

The Anderson Lake Molybdenite property has now reverted to the claim holders listed on page 5 of this report.

A staking history of McTavish Township is appended on the CD that is attached to this report. This history is depicted by images of the claim map to the 1940's.

## METHODOLOGY - THIS REPORT

All assessment work related to the property was reviewed. The Bjorkman (2005) map as well the older Briar Court Mines map were scanned, georeferenced and imported into MapInfo. The Briar Court Map lacked suitable reference points and did not register correctly. No bar scale accompanied the map so it is not known whether the map has been enlarged or photo reduced; there were no suitable detailed landmarks such as lakes and ponds with which to derive registration points from.

Mr. Karl Bjorkman was contacted and he kindly supplied a list of sample sites with their UTM coordinates. This list was entered into an Excel spreadsheet and from there was imported into MapInfo. Once in MapInfo, the Bjorkman (2005) map was digitized, carefully transferring all the pit and trench information. Sample sites were layered on to the map.

The road into the property was mapped with a Trimble GeoXH mapping grade GPS unit, northwards to the edge of the Bjorkman (2005) map. Several trench locations were mapped in using the Trimble unit to compare these results with the results depicted on the Bjorkman (2005) map. As well, a few of the sample locations, marked with numbered flagging tape strip tied to a rock, were located with the Trimble, again to compare the Bjorkman results to the results obtained with the Trimble.

According to Karl Bjorkman (personal communication by e-mail) the GPS used for the survey was an older Garmin 12 unit with no WAAS ( Wide Area Augmentation System) capability and of questionable accuracy, but thought to be +/- 10 meters. The WAAS system reduces the induced error by the United States Dept of Defense from about 100 yards to 10 yards. The GeoXH has the capability of determining locations to under 10 cm. All sample locations documented with the GeoXH and when compared to those obtained by the Garmin 12, were within the error parameters of the Garmin 12. Discrepancies of up to 5 meters were noted in some cases, but still within the error limits of the Garmin 12 GPS unit.

The Geo XH was used to map in some trench outlines and this information was also compared to the trench outlines developed by Bjorkman (2005). The GeoXH can record a position information at 1 sec intervals, and when used in this mode and the trench perimeter is followed, a true location, shape and size of the trench can be determined. The shape and size recorded with the GeoXH will depend on the course traveled around the trench. In many instances the safest route is not always at the trench edge.

Amador Gold Corp. stripped three zones along the pegmatite trend. Each of the mapped zones had only one UTM point to identify the stripped area. This generally considered reasonable if the location is used to navigate to the stripped zone, however, a one point location does not geographically orient the zone in its correct earth position. This is because the map can be rotated about that point in any one of 360 degrees and be located wrong. To alleviate that, the GeoXH was used to locate and document the three stripped zones thereby placing them in their correct geographic position on the map.

Flagged trails to rock trenches were mapped in with the GeoXH unit and plotted on the map.



All the raw data from the GeoXH was differentially corrected using a Cansel base station located in Thunder Bay.

After differentially correcting the data, the data was imported into MapInfo where it was examined and edited. Roads, trails and trench data was plotted on the map produced by Bjorkman (2005). This map was imported into MapInfo and digitized and was used as a background map for the data collected by the author.

## **REGIONAL GEOLOGY**

All rocks within McTavish Township are Precambrian in age and either have been placed within the Superior Province or the Southern Province of the Canadian Shield. Rocks ascribed to the Southern Province generally, with the exception of diabase dikes, lie unconformably on the Superior Province rocks. Within McTavish Township the Southern Province rocks are represented by the Animikie Group and the Sibley Group, both sedimentary packages. The diabase dikes are the youngest rocks in McTavish Township and intrude all other rocks. In a general sense, Superior Province rocks in McTavish Township are represented by plutonic rocks of various granitic compositions, ranging from quartz monzonite to trondhjemite in composition. The oldest rocks in McTavish are metamorphosed sedimentary rocks and amphibolites of the Superior Province and these are confined to a fault bounded block in the Anderson Lake - Hunters Lake area.

Economic mineral assemblages associated with the Southern Province rock suit within McTavish Township, include deposits of iron, lead, zinc, copper, barite, uranium and amethyst. In McTavish Township, economic mineral assemblages associated with the Superior Province rocks include molybdenite and granite. Granite was quarried for bridge abutments along the Canadian Pacific Railroad and is currently quarried for bedrock-sourced aggregate.

The reader is referred to McIlwaine (1971) for further details regarding the general geology of McTavish Township.

## **PROPERTY GEOLOGY**

McIlwaine (1971) mapped the geology in the vicinity of the Anderson Lake Molybdenite Occurrence. The area of the occurrence is situated in a fault bound block of Archean migmatites, biotite schist, layered metasedimentary rocks, and amphibolites (presumable volcanics). This sequence has been intruded by granitic pegmatitic containing coarse molybdenite. Subsequently, a Proterozoic mineralization event affected the pegmatite. This event, which was fault controlled, introduced veins of amethyst, barite and galena.

No scintillometer was available to determine if there was a radioactive component to the pegmatite dike.

A diabase dike has intruded along the west bounding fault of the metasedimentary block along the north arm of Anderson Lake. The dike is exposed south of the trail into the property along the creek as well as north of Anderson Lake along the same trend. The dike has a weak magnetic signature and can be followed using this geophysical response.

The geology of the property area is shown in Figure 3; the map has been derived from McIlwaine (1971).



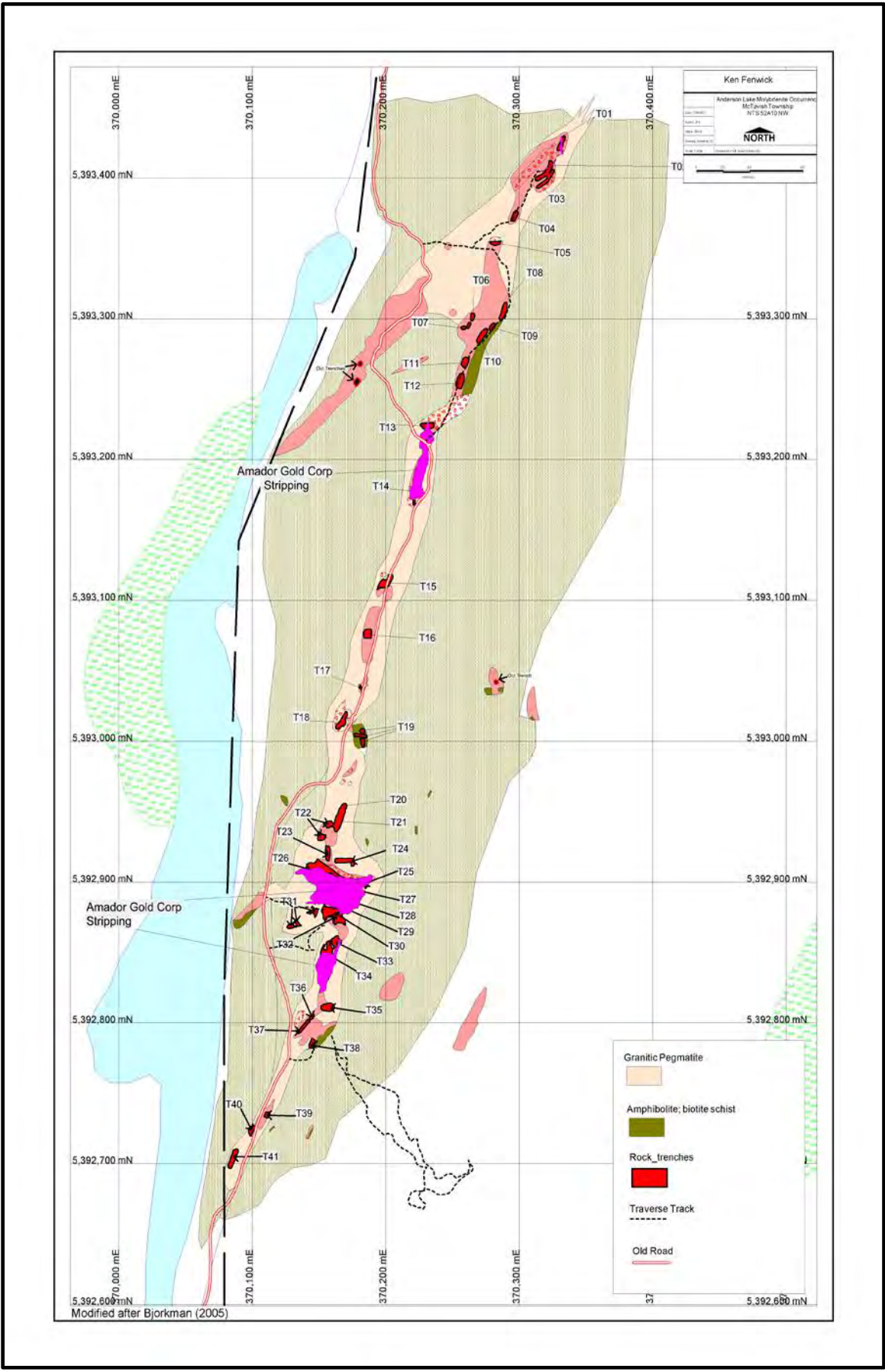


Figure 4: Geology of the Anderson Lake Molybdenite Occurrence



## RESULTS OF THIS INVESTIGATION

Using the map that was produced by Bjorkman (2005), Trenches 3, 15, 17, and 18 were located and investigated for amethyst veins. The amethyst encountered was restricted to relatively small fracture related systems that trended for the most part, at between 040 and 060 degrees. The granite proximal to the veins was generally hematized. The vein depicted in Bjorkman's collection of photographic images in trench 5 was not located, but loose pieces of amethystine bearing rock are prevalent on the rubble pile. Some veins were located in the side of the small north-facing scarp. Several samples of this material was brought back. With a few exceptions the amethystine quartz was either a very pale purple or was a whitish drusy variety of quartz. Larger crystals had a hematite layer just beneath the crystal face. One of Bjorkman's images depicted what looks like a vein with galena. This vein was not located.

Buck and Tims (2007), table a list of trenches in which amethyst was reported and did a quick assessment of the quality of the material. This table is reproduced below.

Appendix		Ornamental Material			Comments
Trench	Drusy quartz crystals		Amethyst crystals		
	Poor	Okay	Poor	Okay	
#2	X				
#4			X		Veins to 2 cm wide
#5				X	Limited quantity, most smokey quartz, second best locality at Anderson Lake noted
#8	X				Very rare
#9			X		Very minor
#10	X				Very poor
#13	X		X		Very poor and rare
#14	X				Very poor and rare
#15		X		X	1 m vein spacing, best is smokey, to 2 cm wide veins, best locality at Anderson Lake noted
#16	X				Very poor
#17	X		X	X	Some of the better quartz
#18	X			X	Rare amethyst, most smokey quartz, hematite in amethyst tips, best after Trench 5 and 15
#19	X		X		Rare
#23	X				On fracture surfaces, rare
#25	X				Rare
#34	X				1 mm tips associated with quartz core
#41	X				Rare

The Trench 5 location has the appearance of a small north facing scarp on the north end of a ridge trending sub-parallel to the main pegmatite body. Host rock is a medium to coarse grained granite. Amethyst veins strike across the face at about 040 degrees and the veins are vertical. The veins within the system are narrow with limited smaller vugs, within which crystal size has increased marginally. Figure 5 depicts some of the aspects of the amethyst at the Trench 5 location. The photos are identified by photographer; JFS indicates that the image was captured by the author of this report, and those designated KEB were taken by Karl Bjorkman.



Figure 5: Amethyst at Trench 05 Location. A: Small vug with white crystals (JFS); B: Hematized amethyst vein (KEB); C: Loose amethyst on dump (JFS); D: Amethyst vein in hematized granite (JFS)



Trenches 15, 17, 18 and 30 all have indications that amethyst veins are present because of the amethystine rubble in the muck piles. Trench 15 had an exposed hematized amethyst vein with relatively small crystals. Trench 17 had some decent amethystine crystals lying in the rock pile, but the color was rather pale. Not too much was seen in the Trench 18 area, but there were some rough amethystine quartz material found on the rock pile.

Trench 34, although not described in Buck and Tims (2007), does have two sub-parallel systems of amethystine quartz associated with late fault zones. Amethyst also occurs in small vugs adjacent to the primary quartz veins that carry molybdenite. Massive, radiating barite plates were seen in a 23 cm wide vein associated with an amethystine vein system crosscutting the granitic host rock.



Figure 6: Upper left: Amethystine vein breccia Trench 34 (JFS);

Lower left: Good quality, but pale crystals, Trench 17 (JFS):

Upper Right: Drusy quartz crystals on a loose slab, Trench 18 (JFS);

Lower Right: Hematized amethyst vein, small crystals Trench 15 (KEB)

In the Amador Gold Corp "A" stripped zone that covered the Trench 34 area, amethystine vein systems occupy two sub-parallel fault/fracture zones; these are shown in Figure 7A and 7D. The zones contain anastomosing amethystine veinlets and vugs approaching 16 cm x 8 cm in size. These vugs are lined with quartz crystals. The granite / pegmatite host rock has been hematized in the vicinity of these fracture systems. In one section of the vein system, and illustrated in Figure 7B, radiating platy barite crystals were found cementing a fracture system within the granite. In the coarser phases of the pegmatite, large mica crystals, several centimeters wide, were seen in the old Trench 34 (Figure 7C). Small amethyst lined cavities in the cross cutting molybdenite-bearing quartz veins are typical of this section of Trench 30 (Figure 7E). Figure 7F illustrates the vein breccia that is always associated with the amethystine systems; the wider the fault breccia system, the better is the chance of the development of open space cavities that are required for the development of large crystals. Figure 7G illustrates a fault zone, evidenced by slickensides on the fault surface, that strikes 044 degrees and has a dip of 60 degrees east.



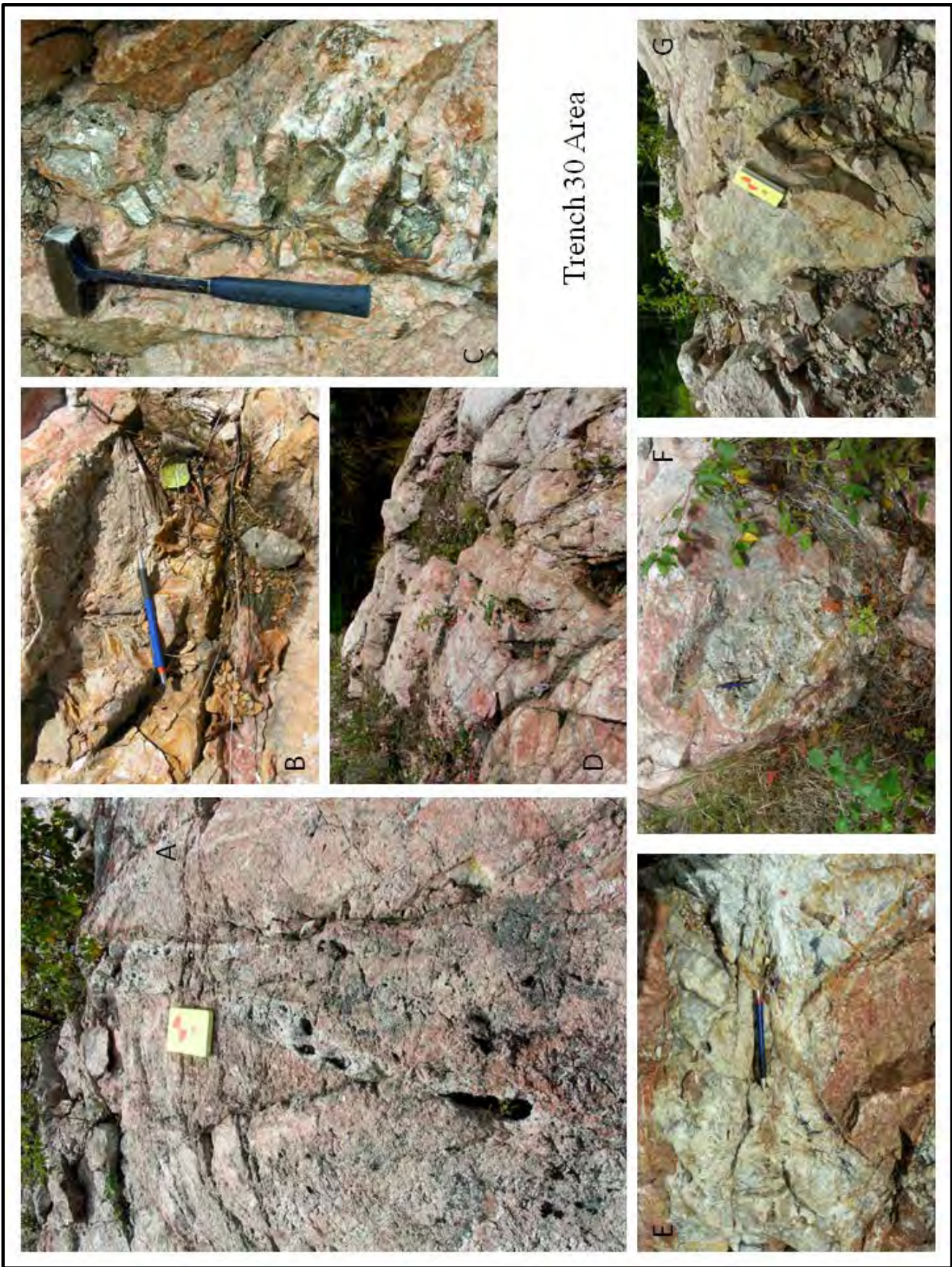


Figure 7: Trench 34 Area



## DISCUSSION: AMETHYST

The occurrences of amethyst associated with younger faults that cross cut the pegmatite are clearly a superimposed event on the pegmatite system. Late faults offset features within the pegmatite. The most readily apparent of these are internal quartz veins that are themselves a late stage event associated with the pegmatite, that are offset by the younger faults. This is illustrated in Figure 8.

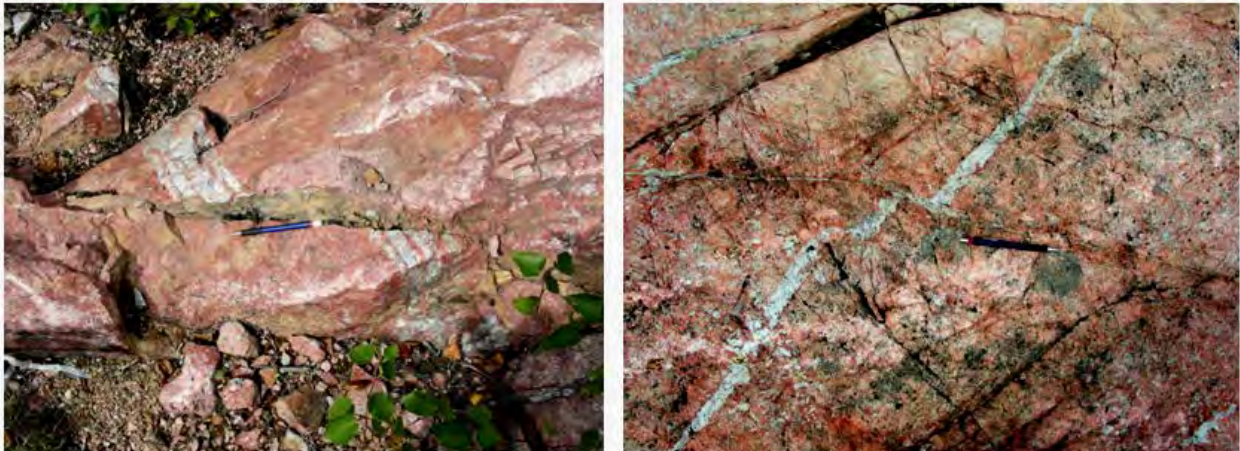


Figure 8: Late faults in the granite pegmatite. Note that the left image shows a fault with left lateral displacement and the right image shows a fault with a right lateral displacement. Trench 34 area.

The presence of amethyst at the Anderson Lake Molybdenite occurrence was not mentioned in the literature until Bjorkman (2005), determined that there was an amethyst component to the system. So far the amethyst documented by Bjorkman (2005) and Buck and Tim (2007) seem to have developed in a constrained fault system, thereby not allowing sufficient brecciation and the opening up of cavities that would serve as deposition sites for the amethystine quartz.

By comparing these occurrences to that of the vein system at the Thunder Bay Amethyst Mine, one is left with the concept of what is required in a vein system for commercial amethyst extraction and therefore what to look for in the field.

Figure 9 illustrates the brecciated nature of the Thunder Bay Amethyst Mine vein system, the large vugs that are lined with purple amethyst, and general scale of the vein system. The closer photos illustrate the preferred color of the amethyst.



Thunder Bay Amethyst Mine  
McTavish Township

Showing the scale required  
for a profitable operation

Figure 9: Thunder Bay Amethyst Mine



No features at the Thunder Bay Amethyst Mine scale were noted at the Anderson Lake Molybdenite occurrence. Nevertheless, the property has excellent potential in locating more occurrences of amethyst. The main structural feature that hosts the Thunder Bay Amethyst Mine transects the northern claim in the block. Geophysics (Figure 15) might also suggest a southerly offset of the Thunder Bay Amethyst Mine horizon through Hunters Lake. The mine structure shows up as a magnetic low that is truncated west of Elbow Lake and continues westerly south of Hunter Lake and Anderson Lake. The amethyst occurrences southeast of Hunter Lake and south of Anderson Lake may reflect this structure offset. Prospecting should concentrate on known fault zones. A quick method to look at cliff sides would be to examine the talus pile at the cliff's base for amethystine material in the talus.

Alteration associate with amethyst veins include hematization and chloritization in close proximity of the vein systems. Wide fault breccias, if present , provide good targets.

Known occurrences close to Anderson Lake including those associated with the granitic pegmatite that hosts the molybdenite, are shown in Figure 10.

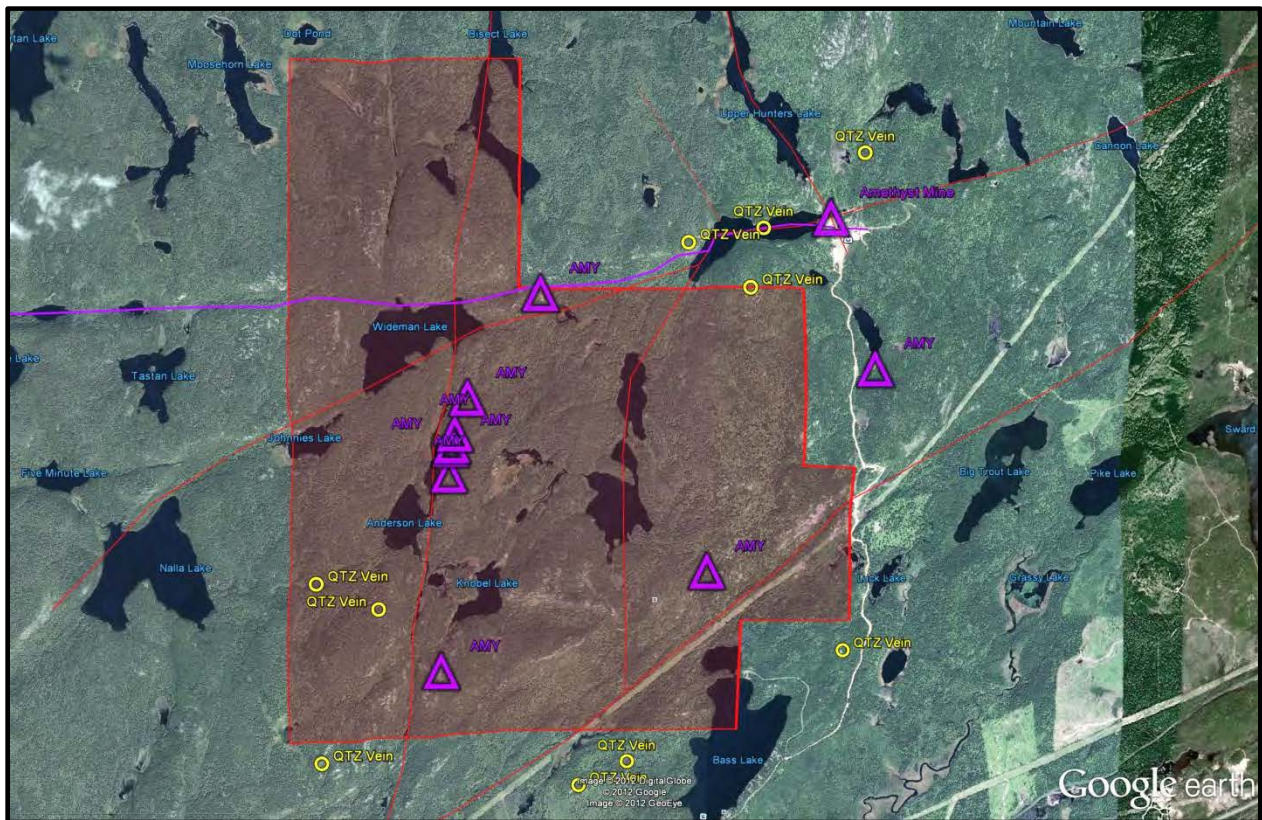


Figure 10: Amethyst occurrences near Anderson Lake. Magenta line: Thunder Bay Amethyst mine structure; Red lines: faults; Purple triangles: amethyst occurrences; Yellow circles: quartz veins. Data from McIlwaine (1971) and Bjorkman (2005).



## MOLYBDENITE

Molybdenite occurs as small to large flakes within the body of the pegmatite as well as large flakes within quartz veins that cut across the main pegmatite body. Coarse molybdenite was seen in Trench 2, and in the area of Trench 30 and Trench 34.

In Trench 2, the molybdenite occurs as sparsely disseminated coarse rosettes within the body of the pegmatite. In Figure 11, coarse crystals of molybdenite occur within the pegmatite and along cross fractures that cut across the pegmatite.



Figure 11: Upper Left: Coarse molybdenite in the wall rock of the trench; Upper Right: Coarse molybdenite from the dump; Bottom: Trench 02 looking south and looking north.



Coarse molybdenite was also encountered in the Trench 30 and Trench 34 areas . These two areas were stripped off in 2008 by Amador Gold Corp., and have been designated stripped area B and A respectively.

Molybdenite in the Trench 34 area generally appears to be associated with cross cutting quartz veins, although some molybdenite does occur within the body of the pegmatite itself. Very coarse molybdenite can be found in large blocks within the rock pile.



Figure 12: Coarse molybdenite Trench 34 area Upper Left: Molybdenite in quartz vein as well as in rusty wall rock; Upper Right: Coarse molybdenite streaks in quartz vein; Lower left: Molybdenite in quartz vein with amethyst lined vugs; Lower Left: very coarse molybdenite associated with quartz vein in loose block.

Because of the coarse nature of the molybdenite mineralization and its non-homogeneous distribution within the pegmatite dike, drilling the occurrence to assess for tonnage and grade, with small diameter diamond drill core would lead to erroneous results because of a potential "nugget effect" error. Large mineralized areas might be missed by the small diameter drill. This might be mitigated by a program of percussion drilling where the pulverized rock is collected and analyzed. This should be followed by a program of bulk sampling to confirm the percussion drill results.

This may have been attempted in the past because there are numerous large boreholes throughout the pegmatite. These were probably drilled by in 1960 by , N. V. Billiton Maatschappij but unfortunately no records of this work has been found to date.

Several old trenches are shown on the Briar Court Mines Ltd. map. The area was mapped by T. Page and D. D. Campbell in 1967 and is reproduced below. An attempt was made to seek out area A, and if time permitted, area B as well.

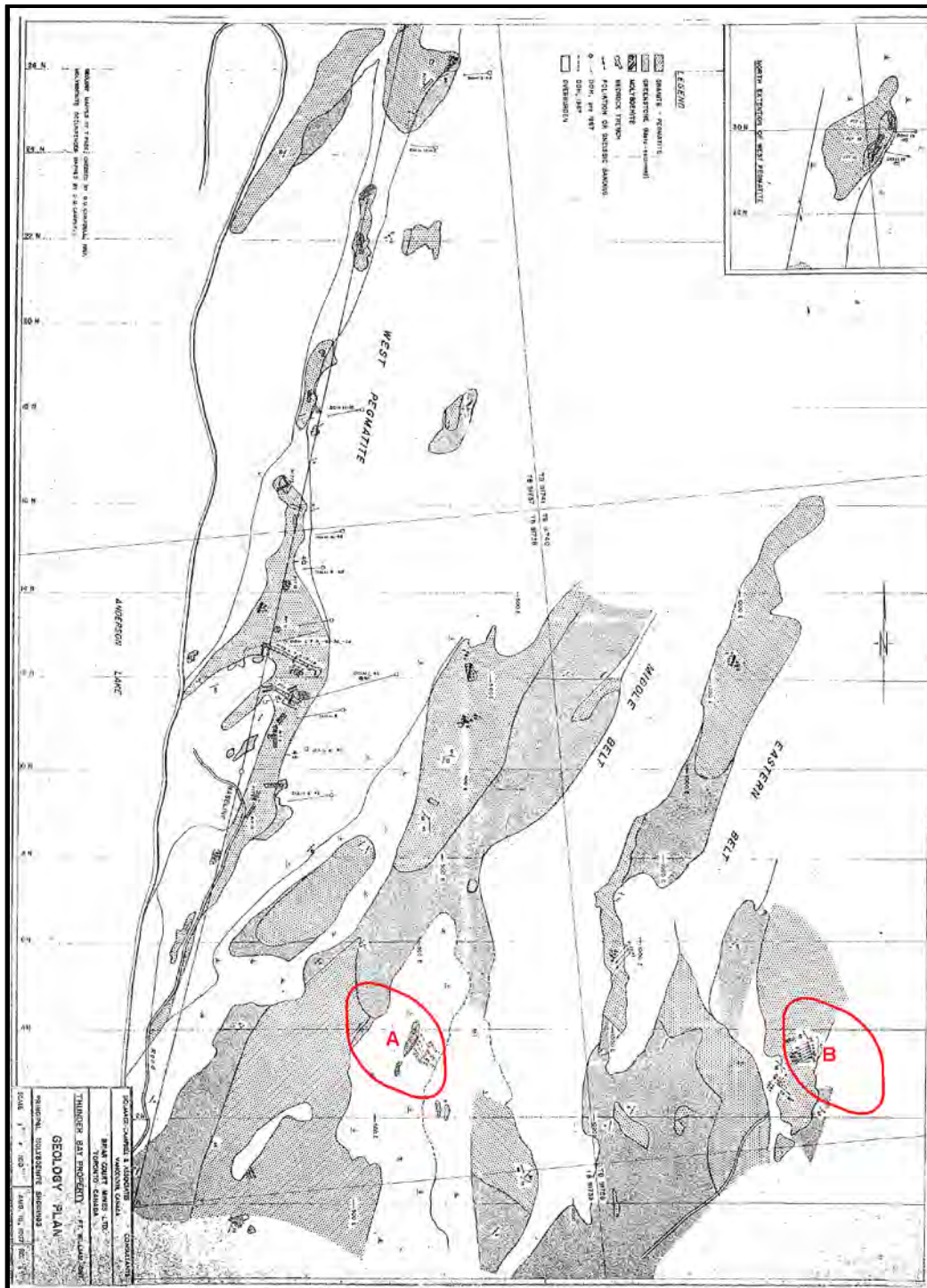


Figure 13: Anderson Lake Molybdenite after Page and Campbell (1967)

A traverse was started from the outcrop with the busted blue fiberglass canoe (UTM 370157E, 5392794N), and based on information taken from the Briar Court map a traverse was planned to intersect the showing area at about 216 meters. An error, not apparent at the time, was made in



obtaining the UTM coordinates of the occurrence from the Briar Court Mines Ltd. map. The erroneous UTM coordinates were entered into the GPS resulting in a traverse that was about 50 meters too short.

The bush was very thick with alder and young balsam thickets hiding dead trees that had been blown down by winds ; visibility was limited. Another attempt to locate the eastern showing should be made after the leaves drop later on in the Fall. The map in Figure 4 shows the location of the traverse. Two rock ridges were walked over, each with some pegmatite as well as metasedimentary rocks. The last ridge had a north facing edge that was about 4 meters high.

## FERROCOLUMBITE

The area in which the ferrocolumbite crystal was found was located and examined. Sparsely disseminated black oxide crystals were located in a small area. This area was photographed and a sample taken. Previous sampling, as reflected in the fresh rock scar (Figure 14a), may have removed the crystal reported by Bjorkman (2005). Judging from the Bjorkman (2005) photograph, the crystal appears to be magnetic, based on the particles adhering to the pencil magnet used for scale purposes.



Figure 14a: Ferro columbite location



Figure 14b: Ferrocolumbite crystal from Bjorkman (2005)

## GEOPHYSICS

No outcrops of diabase were noted along the trail where the trail paralleled Anderson Creek. Cliff like outcrops on the east side of the trail near Anderson Creek, were medium to coarse grained granitic rocks. All the outcrops along the trail south of where the trail departs the Anderson Creek trend were granitic in aspect.

The diabase dike mapped by McIlwaine (1971), has a weak magnetic signature associated with it. The magnetic expression of this dike can be traced northward to the edge of the total magnetic field map shown in Figure 15. As well, the larger magnetic high west of the Thunder Bay Amethyst Mine Panorama Road, seems to be associated with either a small stock of granitic rock intruding other granitic rocks, or is a phase of granite that contains slightly more magnetite than the surrounding granites. Magnetite bearing granitic stocks are common in the area north and east of Thunder Bay (Trout Lake, Barnum Lake, White Lily Lake ).

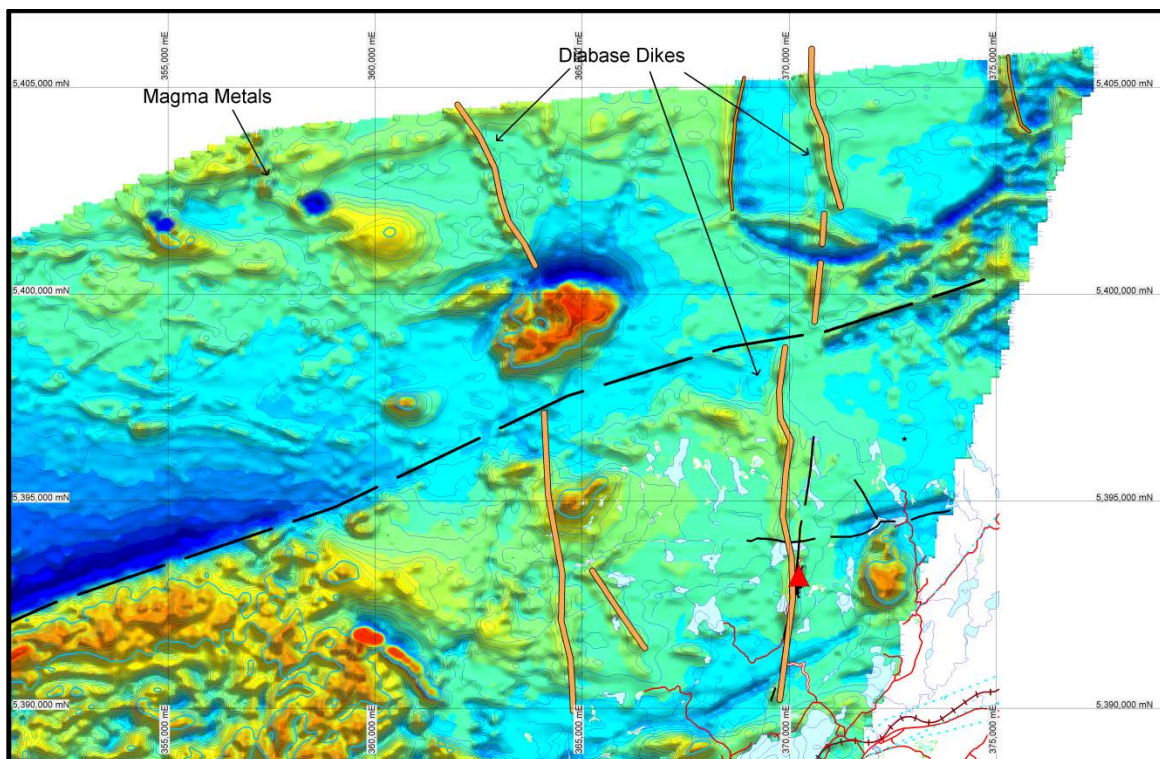


Figure 15: Regional Total Magnetic Field



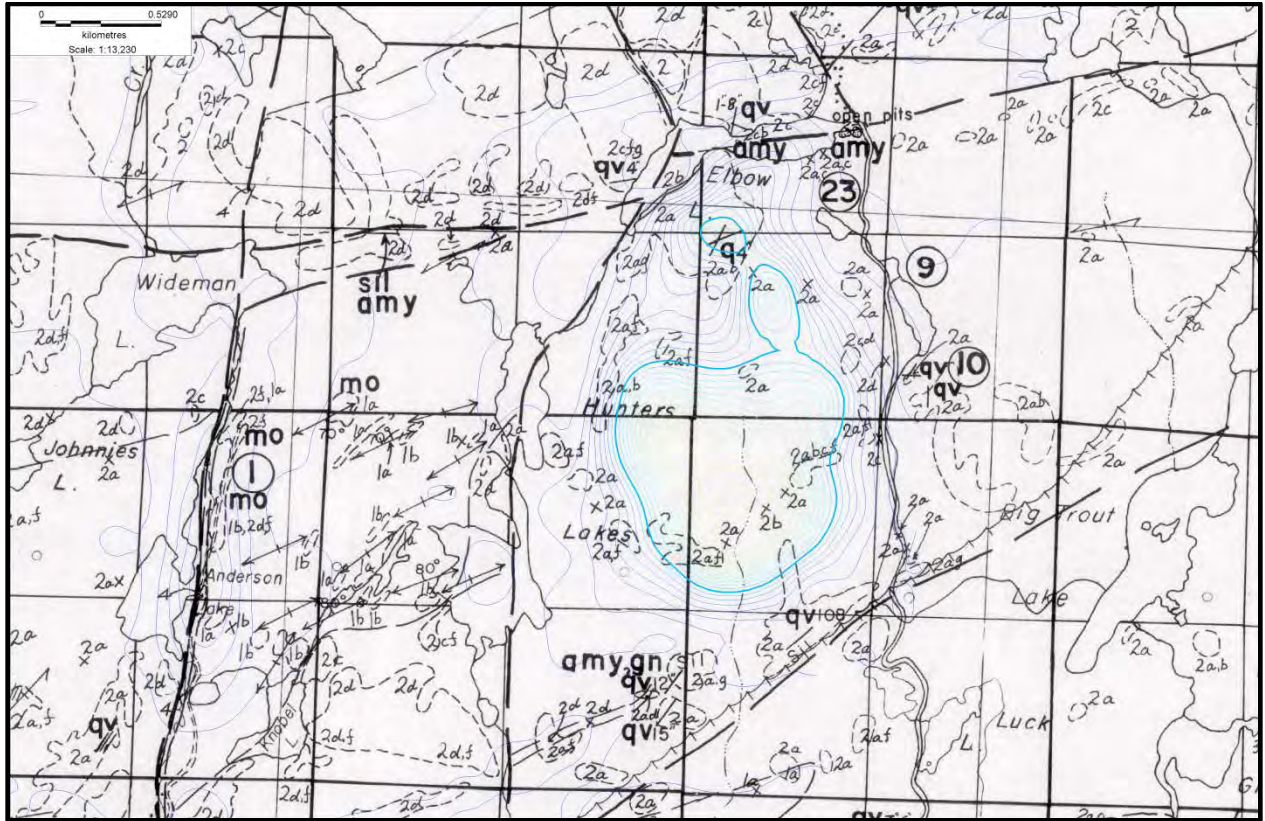


Figure 16: Geology at the magnetic anomaly, after McIlwaine (1971)

McIlwaine (1971) describes the geology associated with the tear-drop shape magnetic anomaly to be biotite-quartz monzonite (2a), granodiorite (2a), porphyritic biotite-quartz monzonite (2a,b), and biotite-muscovite quartz monzonite (2a,b,c,f), all plutonic rocks with a general granitic character. The magnetic response is a weak one ( compare to other granitic stocks in Figure 15 ) and is probably caused by the presence of small amounts of magnetite in the central core of the stock.

The stock presents itself forms a discrete hill that also leads credence to it being a separate intrusion or a different phase of granitic rock, within the granitic background of McTavish Township.

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## SIGNATURE PAGE

I, John Scott, of the City of Thunder Bay, in the Province of Ontario certify that

I am the sole proprietor of Thunder Bay Geological Services, a company that provides geological services to companies, government and the general public,

I am a graduate of Lakehead University with an Honours Bachelor of Science degree, majoring in geology,

I was employed for forty years with the Ontario Geological Survey, and have recently retired as the Regional Resident Geologist for the Thunder Bay South District ,

I am a member of the Northwestern Ontario Prospector's Association and hold a current membership in the Association of Professional Geologists of Ontario, membership number 0435,

I have no financial interest in the properties visited,

The information reported on was collected by myself during a visit to the property on September 14, 2012 and September 15, 2012. Aspects of the report are based on background information collected from assessment reports filed with MNDM and those submitted by the client for my use.

John Scott, P.Ge

Thunder Bay Geological Services

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## APPENDIX 1

### COLOR PLATE 1

#### TRENCH 02

Coarse Molybdenite





Plate 1  
Trench 02  
Anderson Lake Molybdenite Occurrence





COLOR PLATE 2

TRENCH 02

Molybdenite in Rock Dump





Bjorkman (2005)



Bjorkman (2005)

Plate 2  
Trench 02  
Anderson Lake Molybdenite Occurrence

COLOR PLATE 3

TRENCH 05

Amethyst veins and loose pieces  
in rock dump





Plate 03  
Trench 05 Amethyst  
Anderson Lake  
Molybdenite Occurrence





COLOR PLATE 4

TRENCH 05 (TOP)

AND

TRENCH 15 (BOTTOM)

Hematized amethyst veins





Bjorkman (2005)



Bjorkman (2005)



COLOR PLATE 5

TRENCH 17 (TOP)

AND

TRENCH 18 (BOTTOM)

Loose amethyst and drusy quartz

in rock dump





Plate  
Loose amethyst  
Trench 17 (top)  
Trench 18 (bottom)

## COLOR PLATE 6

### TRENCH 34 AREA

Top: small amethyst vugs at granite contact

Middle: 23 cm wide barite vein in amethyst vein structure

Bottom: Amethyst vein breccia, cross sectional view





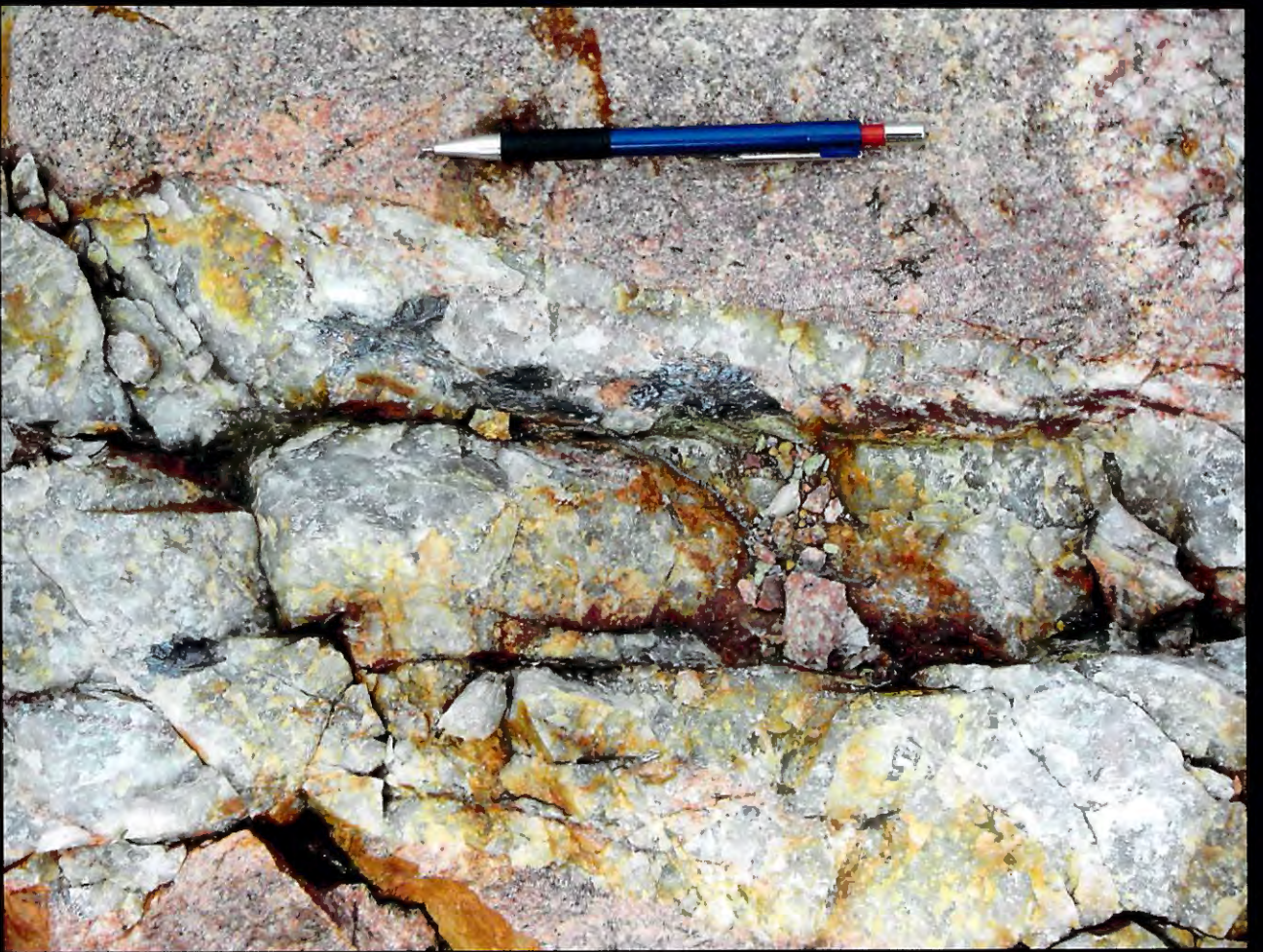


COLOR PLATE 7

TRENCH 34 AREA

Molybdenite associated with quartz veining







COLOR PLATE 8

TOP: TRENCH 30 AREA COARSE MOLYBDENITE

BOTTOM: MOLYBDENITE ASSOCIATED WITH QUARTZ VEINS



