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2.58089

L4217652

Elliott Township
District of Cochrane
NTS - 32 D/5
79°47'18"W 48°22'44"N

August 2017

INDEX

FIGURES

Kirkland Lake Resident Geologists District

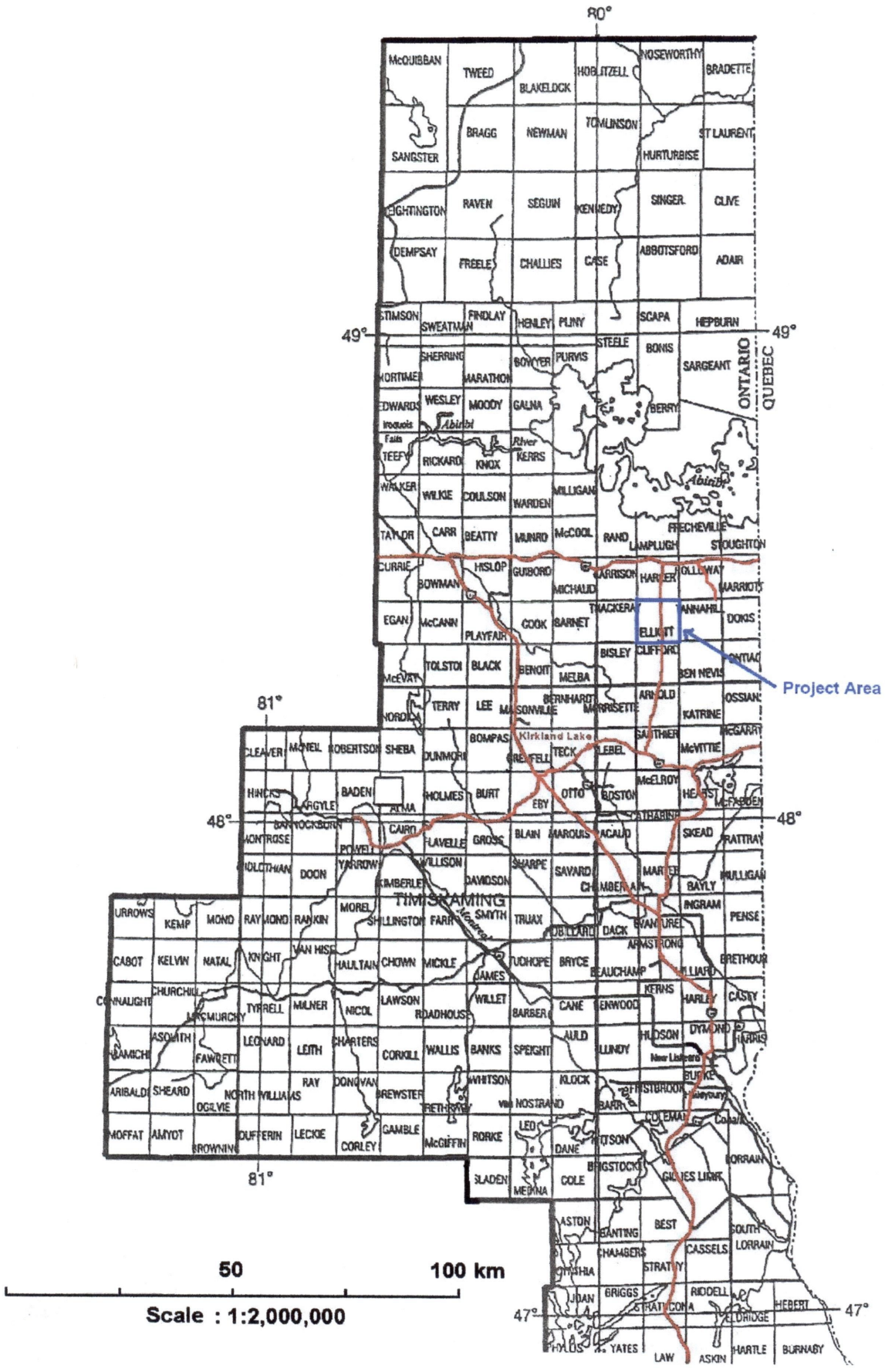
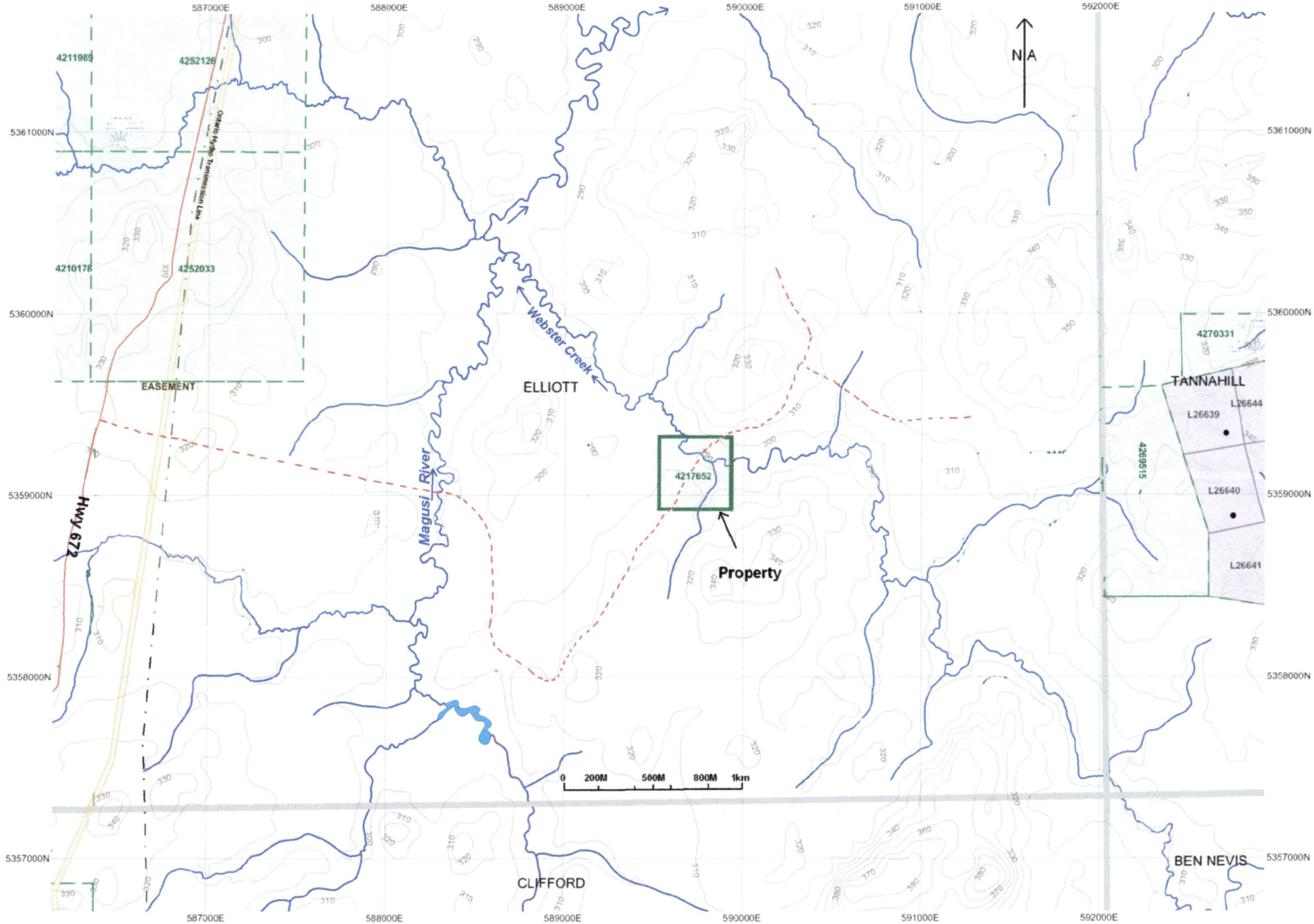


Figure - 1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A
4211989
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4210178
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EASEMENT
Ontario Hydro Transmission Line
Hwy 672
Webster Creek
ELLIOTT
Magusi River
4217652
Property
4270331
TANNAHILL
L26644
L26639
L26640
L26641
4269515
BEN NEVIS
CLIFFORD
0 200M 500M 800M 1km
UTM Zone 17
1000m grid

Figure - 2

PROPERTY LOCATION

The claim or "Property" is located in the Larder Lake Mining Division and is part of the Kirkland Lake Resident Geologist District. The Property is in the south central part of Elliott Township and can be found on map sheet NTS 32 - D/5, with the geographic center of the claims being at approximately 79°47'18"W 48°22'44"N. The Property lays about 19 kilometers west from the Ontario-Quebec interprovincial border.

ACCESS

To get the Property, one would drive east from the historic gold producing town of Kirkland Lake on Highway # 66 for 13km then turn north on Highway #672(locally known as Esker Park Road).Driving north for 33 kilometers will bring you to a reasonably well surfaced forestry road (Logging Road #39), which heads east. Following this for 6½ km will bring you onto the claim. The logging road runs across the Property from SW to NE.

CLAIMS

The Property consists of one staked 40 acre mining claim #L4217652 in Elliott Township Cochrane District, recorded on Plan M -0347 of Elliott Township. The claim lays about 65 kilometers north west of the historic Rouyn-Noranda base metal and gold mining Camp, about 35 kilometers north-north-east of the Kirkland Lake gold mining camp along the Larder Cadillac Break, and about 16 kilometers south-south-west from the Holt and Holloway mines on the regional Porcupine-Destor deformation zone.

GENERAL GEOLOGY

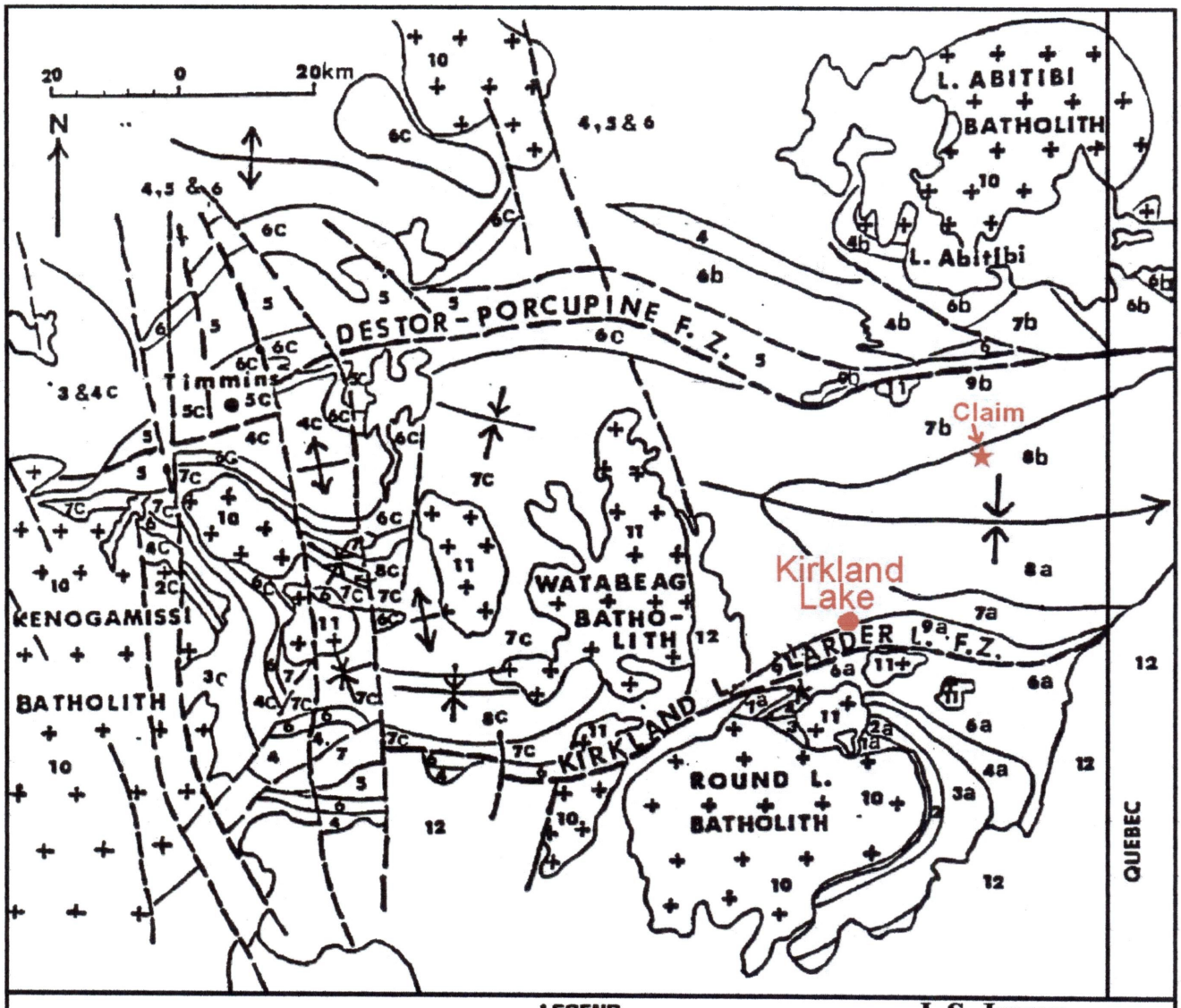
This property lies in the Blake River Group volcanic sequences in the southern area of the Abitibi Greenstone Belt. The Abitibi greenstone belt was formed over a period that spans approximately 150 m.y. (2790-2640 Ma). It has been subdivided into eight episodes of major submarine volcanic activity based on recent regional and detailed mapping and compilation. 1) ~2790 Ma; 2) ~2758 Ma; 3) 2750-2735 Ma; 4) 2734-2724 Ma; 5) 2723-2720 Ma; 6) 2719-2711 Ma; 7) 2710-2704 Ma; 8) 2704-2695 Ma. However, the 2704-2695 Ma volcanic episode represents the richest in terms of total accumulation of metals. The Blake River Group with its ~375 million tonnes including production, reserves and resources, contains almost half of the entire Abitibi greenstone belt VMS tonnage The Rouyn-Noranda mining district in the eastern portion of the Blake River Group represents one of Canada's most important mining districts. Over the past 85 years, there has been discovery and mining of over 20 economic volcanogenic massive sulphide deposits in that district. Although numerous major faults and high-strain corridors cut across the Abitibi greenstone belt, stratigraphic sections are commonly well preserved.

The Blake River Group (or BRG), locally comformably overlies the volcanic rocks of the 2710-2704 Ma Tisdale volcanic episode in the western part. No such comformable contacts are present in the eastern part of the BRG. The Blake River Group is also locally unconformably overlain by the polymictic conglomerates and alkalic volcanic rocks of the Timiskaming Group (~ 2680 to 2669Ma), and by the Proterozoic conglomerates of the Cobalt Group. Some Archean synvolcanic (gabbro, diorite, tonalite) and syntectonic intrusions (syenite, diorite, granodiorite, granite), and Proterozoic gabbro dykes (diabase) cut the Blake River Group volcanic rocks.

The BRG consists of a number of submarine volcanic and volcaniclastic sequences. The volcanic rocks are predominantly bimodal in composition (basalt – basaltic andesite – andesite versus rhyodacite – rhyolite). Some volcaniclastic units are pyroclastic in origin but most result from flow fragmentation with varying importance of transport processes during brecciation.

For most of their areal extent, the BRG is bounded by two major fault zones: the Porcupine-Destor fault to the north, and the Larder Lake-Cadillac fault to the south. Rocks of the BRG were subjected to major north-south shortening events (regional D2). However, the deformation is heterogeneously distributed within the BRG; the central part is characterized by tilting of the strata and by the presence of major folds, whereas the northern and southern margins are characterized

General Geology of the Kirkland Lake Area



LEGEND L.S. Jensen

Proterozoic

Keweenawan diabase (not shown)

12 Cobalt Group

Archean

Matachewan diabase (not shown)

Granitic rocks

11 Granodiorite, monzonite, quartz monzonite, syenite

10 Massive to gneissic quartz diorite, tonalite, trondhjemite

Upper Supergroup

9 9a* Timiskaming Group, 9b** Destor-Porcupine Complex

8 8a, 8n, Blake River Group, 8c*** Blake River (Upper Fm., Tisdale Group)

7 7a, 7b, Kinojevis Group, 7c Kinojevis Group, (Middle Fm., Tisdale Group)

6 6a Larder Lake Group, 6b Staughton Roquemaure Group, 6c Lower Fm., Tisdale Group

5 5c Porcupine Group

Lower Supergroups

4 4a Skead Group, 4b Hunter Mine Group, 4c Upper Fm., Deloro Group

3 3a Catherine Group, 3c Middle Fm. Deloro Group

2 2a Wabewawa Group, 2c Lower Fm. Deloro Group

1 1a Pacaud tuffs****

*a refers to Kirkland Lake Area, south limb of synclinorium (Jensen 1978c, 1979).
**b refers to Kirkland Lake Area, north limb of synclinorium (Jensen 1976, 1978b).
***c refers to Timmins Area (Pyke, 1980).
**** (Goodwin, 1965).

Figure - 3

by the presence of laterally extensive shears and tight folds. The BRG rocks are affected by lower greenschist (north) to lower amphibolite (south) grade metamorphism

About 70 kilometers east-south-east of this claim area is the prolific Rouyn-Noranda base metal - gold camp. Volcanic rocks of the Noranda area constitiute the youngest central volcano complex in the Archean Blake River Group of the Abitibi greenstone belt. The 7 to 9 kilometer thick Noranda complex is interpreted to be a large shield volcano approximately 35 kilometers in diameter. It is composed of rhyolitic, andesitic and basaltic flows with minor pyroclastic rocks. The complex has been divided into five sequences which young to the east. Each cycle typically consists of an andesitic/basaltic basal unit and a bimodal upper unit composed of andesite-basalt and rhyolite.

Although mafic to intermediate volcanic rocks make up 65 to 90 percent of the cycles, the majority of massive sulphide deposits in the Rouyn - Noranda area are associated with rhyolite and andesite flows occuring within a volcanic subsidence structure related to the partial emptying of the underlying magma chamber termed the Noranda Cauldron. Most of these deposits are under 5 million tonnes and are Cu Zn rich concordant mounds associated with interflow horizons structurally linked to vent dome areas providing hydrothermal fluids.

Mafic intrusions in the Blake River Group volcanics have been either host to, or related to, gold deposits in the Beauchastel, Dasserrat, and Montbray townships of Quebec, two of these being the Francoeur (Diorite in the hanging wall) and El Coco (mineralized shear zone breaking through the Dioritic intrusion). The exposed mafic intrusives in the claim area are quite limited and available descriptions reveal little layering or zonation.

The three major Horne deposits formed by extensive sub-seafloor sulphide precipitation, are signifigantly larger being 20 to 150 million tonnes and are Au-Cu rich but Zn poor.These deposits formed on the flank of a rhyolitic vent complex in a fault bounded, sediment filled graben. Recent continued drilling work in 2015 indicates good mineralization continues beyond previous study and mined area.*(Ref:Falco Resources- http://uk.reuters.com/article/idUKnCCN7TyMl+ea+MKW20150916)*

The Rouyn - Noranda intracauldron sulphide deposits lie within a bimodal, flow dominated sequence consisting mainly of andesite/basalt and high silica rhyolite, with a small percent of pyroclastic rocks whereas the Horne orebodies occur in felsic fragmental rocks and rhyolite flows in a sequence almost devoid of mafic volcanic rocks. Compared to the smaller intra cauldron deposits, the rhyolites of the Horne sequence show a marked depletion of incompatible trace elements such as high fiueld strength and rare earth elements possibly indicating different magmatic evolutions between the two areas.

These differences in deposit characteristics, paleoenvironment of formation, the physical and geochemical volcanology of their host volcanic rocks suggest that the smaller intracauldron deposits and the larger Horne mine deposits may have formed at different stages of the evolution of the Noranda cauldron. *(ref:Ker & Gibson 1993)*

About 15 kilometers north of the claim area is the Porcupine-Destor Deformation Zone (PDDZ), an major east-west deformation zone which is a prolific host to gold deposits in the region. The Holt McDermott and Holloway (Teddy Bear) mines in Holloway Township are situate only 14 kilometers north-north-east of this claim with the Garrison Twp, Ross, Glimmer and Stock mines further along strike to the west. Literally tens of advanced stage projects and defined resources also occur along this regional deformation corridor. South-west trending splays of the PDDZ are proven to be gold bearing and are being mined at both Holloway Twp. mines.

Numerous strike faults, possibly PDDZ congugate splays dominantly at 60° to 65° cross the area. Many of these appear to begin at the PDDZ and run all the way to the Larder-Cadillac Break, a regional feature similar to the PDDZ, about 30 miles to the south and running parallel allong a sinuous belt of Temiskaming sediments.

About 33 kilometers to the south of the claim is the Larder-Cadillac Deformation Zone (LCDZ), a major east-west structural control on gold bearing alteration and mineralization, which in much of its length coincides with a folded and deformed sinuous belt of sedimentary rocks of conglomerate, sandstone and volcanic tuffs. The LCDZ is a carbonatized shear zone characterized in some places by the presence of quartz stockwork, and green mica. It is

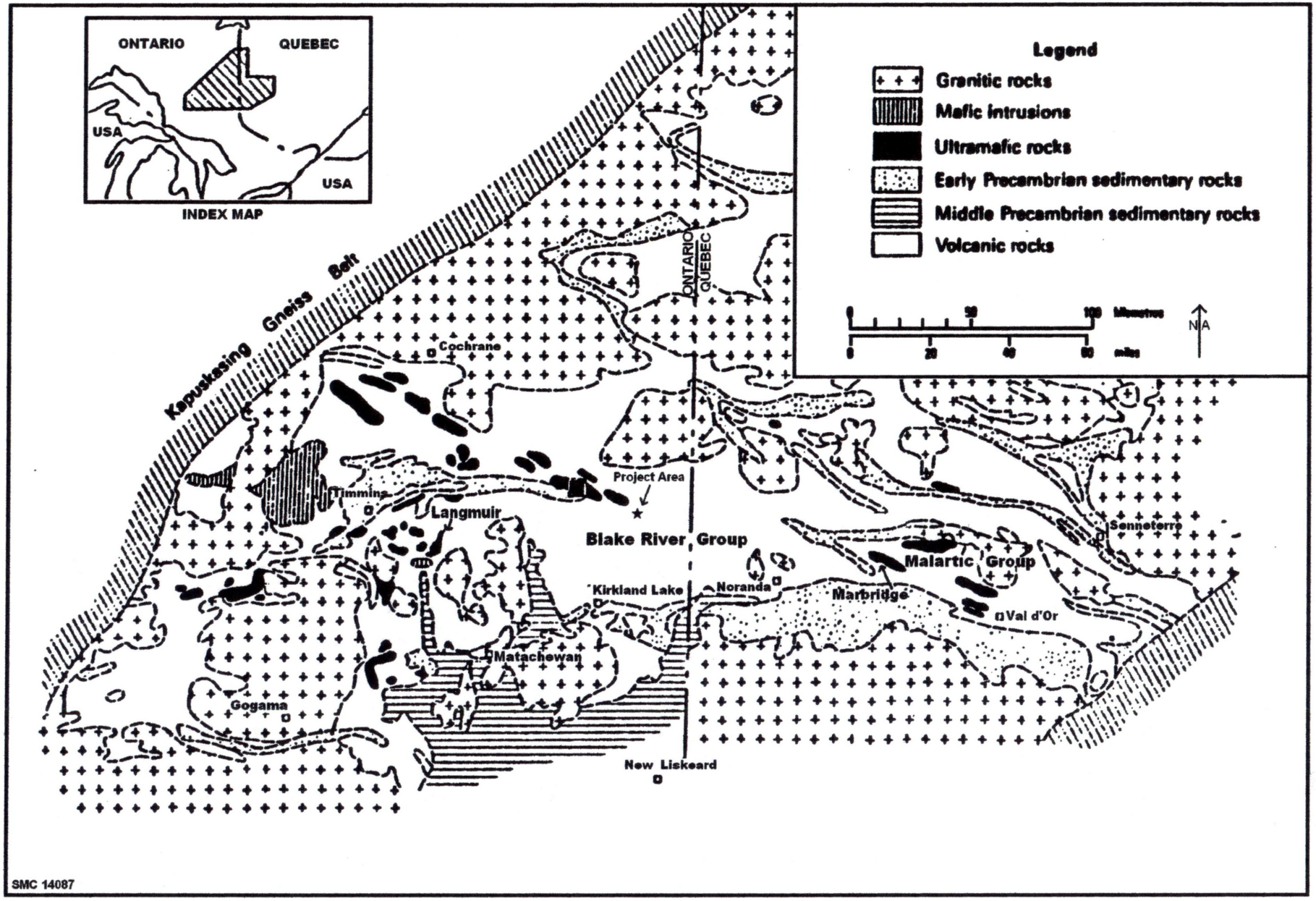


Figure - 4

Map of Part of the Abitibi Greenstone Belt, after Goodwin and Ridler (1970)

considered to be the western extension of the Malartic-Cadillac Deformation Zone, a more than 160 km long. The deformation zone is a south-dipping reverse fault, the south side of which seems to have moved upward and eastward relative to the north side.

Locally, the Larder Lake Deformation Zone has been traced at intervals from east of Kerr Addison mine near the Quebec border to west of Kenogami Lake with several probable splays continuing on west to the Matachewan gold mines. The shearing and alteration is exposed about two kilometers south of the gold mines of Kirkland Lake. The Kirkland Lake "main break" is a fault zone branching northeastward from the LCDZ in the vicinity of Kenogami Lake. It passes through all the gold mines at Kirkland Lake, and has been identified to a depth of more than 2 km. Relative to the north side, its south side moved up 460 m almost vertically. The fault zone varies from a single plane to multiple bifurcating planes.

Several cross faults trending west of north are also present in the general region. The Temiskaming Rift is a regional graben feature striking at about 330° across this part of Ontario. This young rift system is believed to control and have an association with diamond bearing intrusives such as kimberlites. Several NNW-SSE trending fault features passing through the area have been identified as probable Temiskaming Rift associated features. The eastern most of these, the Quinze Dam Fault, is a feature belonging to the Timiskaming Rift System is extrapolated to pass about 20 kilometers to the east of L4217652. On strike in the province of Quebec this fault has spatially associated diamondiferous kimberlitic rock which doubtless adds to the diamond potential of the area. Another of these Temiskaming Fault features appears to pass just to the west of the claim area and is believed to have a control on the numerous kimberlites in the "Kirkland Lake Kimberle Cluster". Earlier exploration work among these parallel faults west of the Quinze Dam fault as early as the 1970's resulted in the discovery of kimberlite in Ontario north east of Kirkland Lake. Eventually the diamond bearing C-14 kimberlite in Clifford Township at a location 10 kilometers due south of the claim was discovered by drilling magnetic "bulls eye" targets. Numerous other kimberlite pipes and dikes have been discovered in the area west and south west of the claim area but economic diamond has not yet been encountered. Aerial geophysical work performed in 2003 by the Ontario Geological survey and its interpretation has generated compilation maps with "Keating" anomolies identified as being higher priority magnetic features of possible kimberlitic origin. Numerous of these Keating anomaly targets remain untested in Elliott Township.

CLAIM AREA GEOLOGY

About 9 kilometers to the south east is what has been interpreted to be a volcanic vental area, which has a sequence of lava flows and pyroclastic units that are mafic and intermediate at the base of the sequence, and felsic at the top of the sequence with an overall calc-alkaline affinity. An intrusive complex of granitic stocks and a rhyolitic body cut the sequence. Chalcopyrite, galena, and sphalerite are replacement type deposits along shear zones in the felsic volcanic rocks. Gold and molybdenite occur with sulphide minerals near the granitic rocks. Away from the stocks, gold and silver are associated with the sulphides in felsic volcanic rocks. The rocks in the surrounding region are folded in a series of synclines and anticlines which orientations tend to reflect these domal areas.

Relatively small mafic intrusive stocks and dikes are present through out the township area and limited exploration by previous companies on these mafic plugs was conducted.(*sub cropping mag features were tested as kimberlitic targets*) . A small gabbro exposure is mapped as occurring roughly 2km east of the property.

Ryolitic rocks, though quite abundant in the vental areas to the south, are limited to a few mapped exposures in the north west quarter of Elliott Twp. These are interpreted to be part of the interlayered mafic to felsic flows of the Tisdale Group (lower Blake River Group) which have a quite visually evident high-low alternating pattern striking at about 060°ast across the north west corner of Elliott Township on the government mag maps.

About 1917, gold was discovered about 12 kilometers west of L4217652 in Thackery Township by the Howey Brothers, D Williams W Couchenour and others. Since that time

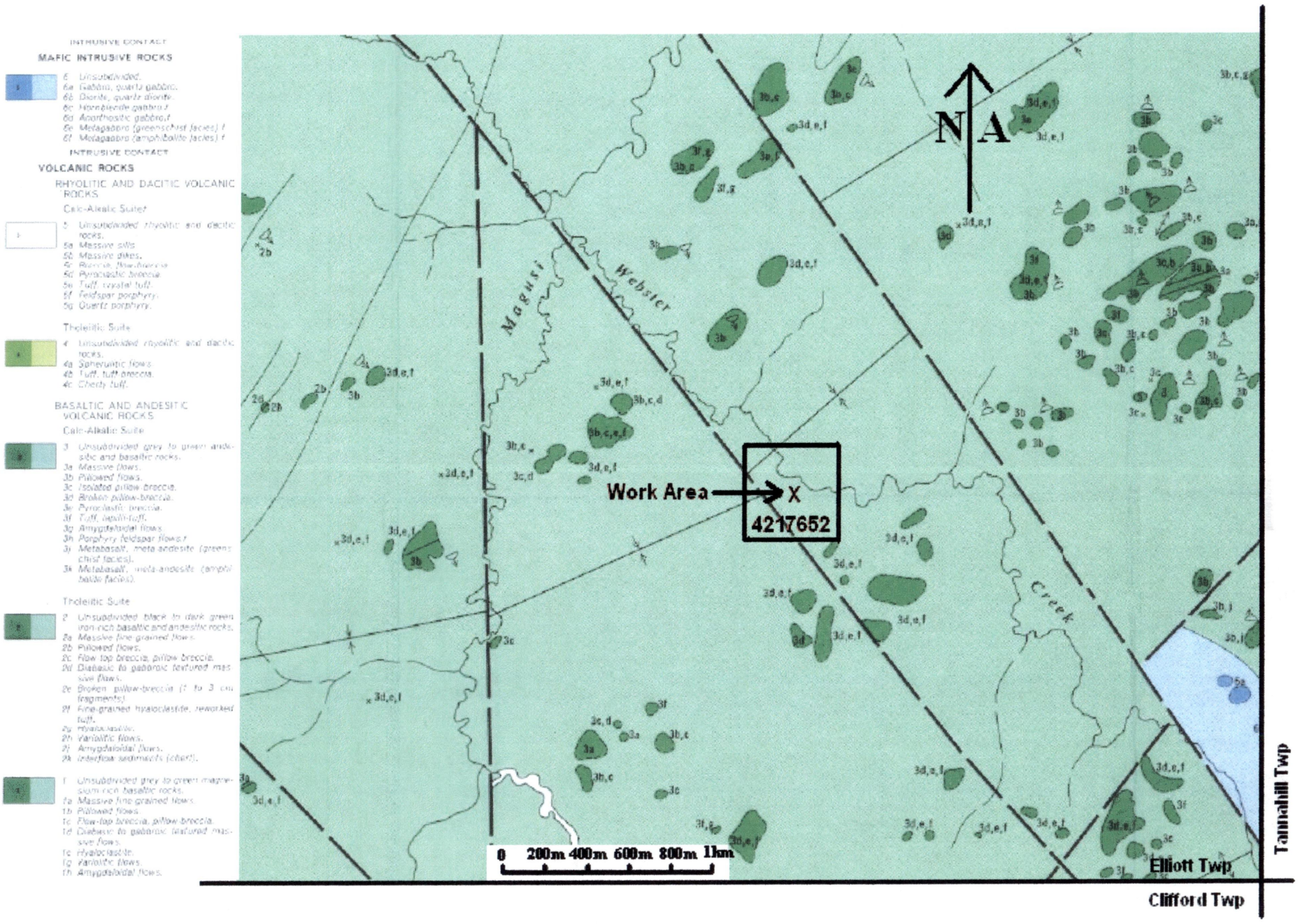

INTRUSIVE CONTACT
MAFIC INTRUSIVE ROCKS
6 Undivided.
6a Gabbro, quartz gabbro.
6b Diorite, quartz diorite.
6c Hornblende gabbro.†
6d Anorthositic gabbro.†
6e Metagabbro (greenschist facies).†
6f Metagabbro (amphibolite facies).†
INTRUSIVE CONTACT
VOLCANIC ROCKS
RHYOLITIC AND DACITIC VOLCANIC ROCKS
Calc-Alkalic Suite†
5 Undivided rhyolitic and dacitic rocks.
5a Massive sills.
5b Massive dikes.
5c Breccia, flow-breccia.
5d Pyroclastic breccia.
5e Tuff, crystal tuff.
5f Feldspar porphyry.
5g Quartz porphyry.
Tholeiitic Suite
4 Undivided rhyolitic and dacitic rocks.
4a Spherulitic flows.
4b Tuff, tuff breccia.
4c Cherty tuff.
BASALTIC AND ANDESITIC VOLCANIC ROCKS
Calc-Alkalic Suite
3 Undivided grey to green andesitic and basaltic rocks.
3a Massive flows.
3b Pillowed flows.
3c Isolated pillow breccia.
3d Broken pillow-breccia.
3e Pyroclastic breccia.
3f Tuff, lapilli-tuff.
3g Amygdaloidal flows.
3h Porphyry feldspar flows.†
3j Metabasalt, meta-andesite (greenschist facies).
3k Metabasalt, meta-andesite (amphibolite facies).
Tholeiitic Suite
2 Undivided black to dark green iron-rich basaltic and andesitic rocks.
2a Massive fine-grained flows.
2b Pillowed flows.
2c Flow top breccia, pillow breccia.
2d Diabasic to gabbroic textured massive flows.
2e Broken pillow-breccia (1 to 3 cm fragments).
2f Fine-grained hyaloclastite, reworked tuff.
2g Rhyolitic.
2h Variolitic flows.
2j Amygdaloidal flows.
2k Interflow sediments (chert).
1 Undivided grey to green magnesium-rich basaltic rocks.
1a Massive fine-grained flows.
1b Pillowed flows.
1c Flow-top breccia, pillow breccia.
1d Diabasic to gabbroic textured massive flows.
1e Hyaloclastite.
1g Variolitic flows.
1h Amygdaloidal flows.
N
A
Magusi
Webster
Work Area
X
4217652
Creek
0 200m 400m 600m 800m 1km
Elliott Twp
Tannahill Twp
Clifford Twp

Figure - 5

exploration has been performed intermittantly. About 7 separate gold occurances are located within the mafic to felsic volcanic sequence pretty much on strike of the Ghost Lake occurance.

Since about 1920, the western occurance of rhyolite noted previously above was worked periodically by pitting diamond drilling and sampling. Finely disseminated gold occurs in a cherty grey to reddish rhyolite tuff. In 1947, core drilling of a finely pyritized rhyolite by Sylvanite Gold Mines in the vicinity of Ghost Lake showed up to .034opt over 35 feet of core, and sampling of a syenodiorite gave up to .22opt across 3 feet. This is located about 7km north west of the L4217652 along the fault which underlies Webster Creek.(*ref: report 165, Geology of Thackery, Elliott, Tannahill and Dokis Twps, pg 58-59, Ghost Lake Occurance*).

In 1931, V. Jordan discovered gold in south-west Tannahill Township at a location about 5 kilometers due east of the Property. The porphyritic intrusive rocks contain sufficient magnetite to show up as a ~1km magnetic high on the aerial magnetometer surveys. The showings were exposed by pitting and trenching. Gold bearing ½" to 2" quartz veins and thin syenite porphyry dikes trending with shearing at 45° to 70° astronomic were noted cutting the volcanic rocks. In a second area west of this, a mineralized porphyry flatly north dipping, east west trending, gave assays across the width of the dike up to .33opt. This dike aparantly was tracable for 800 meters.

Claim L4217652 itself is mapped as underlain mainly pillowed and flow calc-alkaline basalt/andesite with agglomeratic and breccia phases. The geology has previously been interpreted from arial geophysics (magnetometer) performed at various times by the Ministry of Mines. No outcrop has been mapped as occuring on the Property prior to the outcrop uncovered by handstripping in 2009 by the author.

PREVIOUS WORK

The earliest published information on the area was written in 1901 by W.J. Wilson. He had examined the rocks and topography along the canoe route from Webster Lake along the Magusi River to the interprovincial border.

In 1919, C.W. Knight did a reconnaissance of the area for the Ontario Department of Mines. Geological map No. 29e of the Ben Nevis Gold Area was produced from this work.

A second map of the Ben Nevis Gold Area, map No. 37g was produced by Tom .L. Gledhill and released in 1928.

In 1968, a geochemical study of the volcanic rocks surrounding the volcanic vent areas, including Elliott Township was conducted by W.H. Barager and published in the Canadian Journal of Earth Sciences.

In 1971, L.S. Jensen performed mapping and geochemical studies in Thackery, Elliott, Tannahill and Dokis Townships with the Ontario Geological Survey. From this work Jensen produced geological Report #165, accompanied by colored map M2368 of Thackery and Elliott Townships and map M2367 of Tannahill and Dokis Townships, at a scale of 1 inch to a half mile.

No prospecting is recorded in the area prior to 1917 but it is likely that the rocks along the Magusi River, which has been part of a regular fur trading route since the 1700's, were prospected along the river system to some degree for a consideral length of time. The earliest recorded notation of assessment of the area was in the late 1800's to early 1900's as the railroad pushed north from Cobalt and the Timmins and Kirkland Lake gold camps opened up. (Wilson 1901 p120a, Baker 1909, p268).

Starting in 1982 and continuing to 1988, a government sponsored iniative called the BRIM program, was carried out across the region of the Property. A series of back-hoe pits were dug and sonic drill holes were put down and sampled. The sonic holes appear to have followed Hwy 672 with a hole every one mile or so across the township from north to south. Many of these samples had elevated to anomolous gold grain counts, some with delicate grains, suggesting a proximal source. None were performed on or near this Property.

The closest submitted assessment work available was performed about 200 meters north and east of this claim from 4 to eight years ago. Line cutting and various geophysics had been done. No significant results have been disclosed. All the claims have now reverted to the crown.

In 2009-2010, hand stripping and outcrop cleaning by the author exposed quartz veins cutting andesitic agglomerate showing weak alteration and thinly divided pyrites.

PRESENT WORK

During the early June of 2017, twenty seven 55cm deep gas plugger holes were used by the author and assistant L Despres to put in a 0.9 meter by 0.8 meter wide by 0.6 meter deep pit at roughly the geographic center of the claim or about 200 meters west and 200 meters south of the #1 post of the claim. The services of 7247915 Canada Inc were used for the pitting aspect of the project. The work was done to open up a fresh section of quartz vein filled fractures cutting agglomeratic volcanic rock which had been exposed by hand stripping in the fall of 2009 where the exposed rock is smooth and competant.

RESULTS/CONCLUSIONS

All rock exposed in the pit was non magnetic medium to light grey-green agglomeratic tuff, composed mostly of small grains and fragments of up to 1.5mm in a matrix of mostly chlorite, calcite?, and greyish fine grain particles probably ash or dust. Rounded grains up to 1.5mm in size are visible throughout the rock, and in places the grains appear to be rimmed with fine grain light colored ash? or carbonate material. Rocks in the surrounding area are previously mapped as andesitic in composition so it is presumed that these fall within that classification also. Random angular silicified glass shards up to 1.5mm are abundant is patches and are easiest to see in the areas immediately surrounding the clasts where they appear to be in a mostly finer grain lighter groundmass. Chloritization of the tuff occurs as diffuse fine grain masses and replacement throughout. The clasts do not appear to have been as greatly affected by chloritie. Fine pyrite in aggregates and cubes up to .5mm in size was noted throughout the rock, both in the tuff and fragments, but generally less than 1%. No bedding or grading in the tuffs is evident. Dilute HCL bubbles weakly on calcitic wisps but generally little reaction is noted.

The dacitic? fragments are from 2 to 30 centimeters in size, and are more felsic, harder and lighter colored than the matrix. They range from angular to sub rounded. Some of the clasts have a porphyritic appearance with many whitish rounded feldspars from 1mm to 2mm in size. From the surface, relict volcanic textures were not noted on the fragments. On outcrop the various agglomeratic "clasts" show as the lighter weathering spots on the darker tuffaceous groundmass. There is no differential erosional weathering of the clasts or matrix on the surface of the newly exposed outcrop so when the outcrop is dry, the agglomeratic nature of the exposure is not very evident. There appears to be some lateral displacement along the shears marked by the veins, indicated by areas of many clasts on one side of the vein with none directly adjacent on the other side of the vein.

The quartz vein material that was pitted ranges from whitish to transparent with some patches with a visible light pinkish red hue. There may be several quartz events as the latter mentioned quartz seems to cut across the others, and the transparant quartz cutting the whitish quartz. Odd pyrite as fine points and up to 1/2mm grains occurs in minor amounts in the quartz veining, and pyrite was noted in the wallrock adjacent. Under the caprock, the veins appear to thicken and some coalesce, with little noticable increase in mineralization. All pit muck was piled in cairn like mounds upon the exposed bedrock around the south side immediately adjacent to the pit. About 30 pounds of pit muck was retained for further observations and testing, the results of which will be included in a subsequent submission thereafter.

Further work such as geochemical surveys to define metal anomolies or tightly spaced geophysics directed at locating conductive areas may define concentrations of pyrite should be considered to furher assess the claim area.

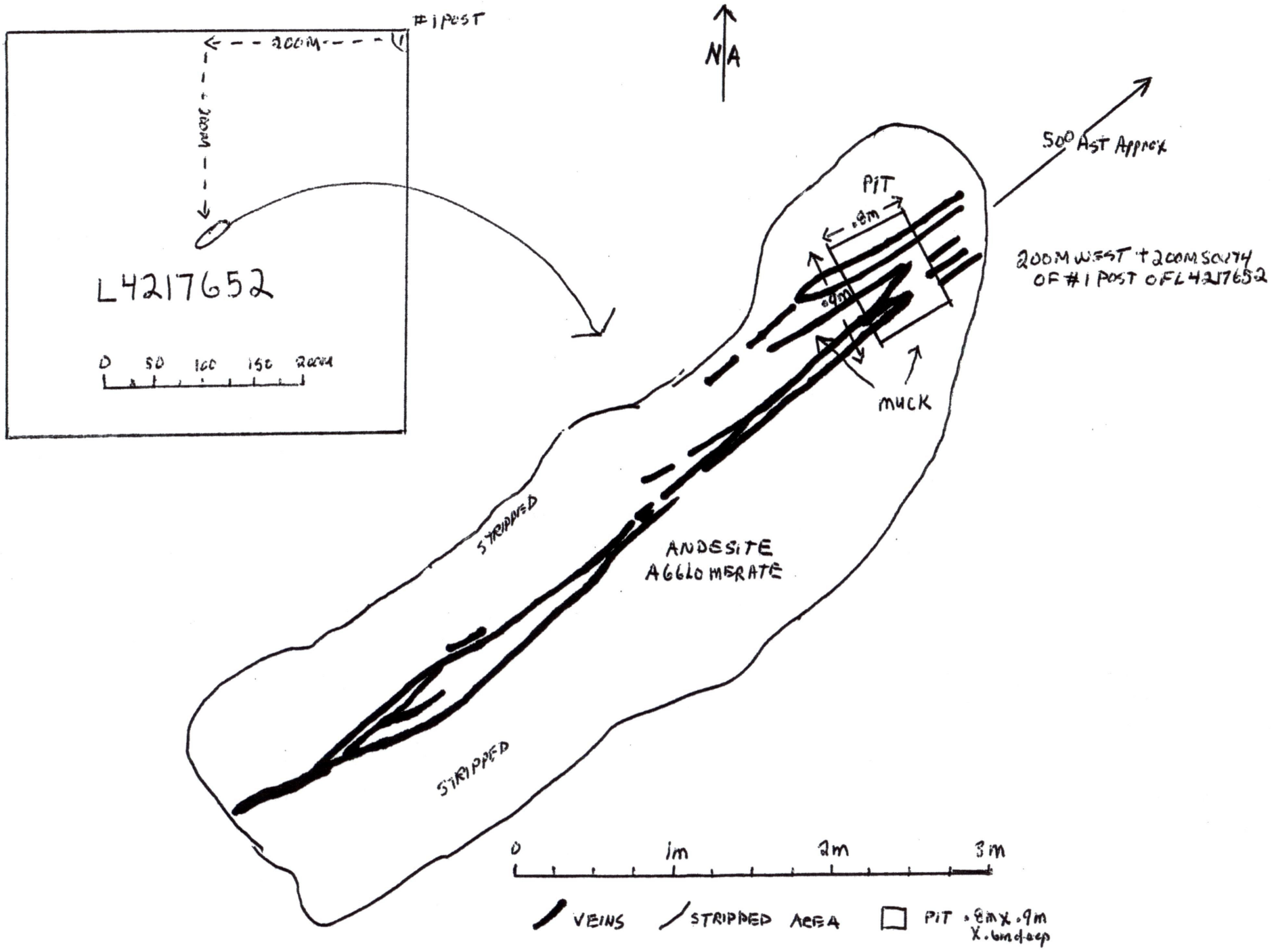

#1 POST
200M
200M
L4217652
0 50 100 150 200M
N A
500 Ast Approx
PIT
.8m
.9m
muck
200M WEST + 200M SOUTH
OF #1 POST OF L4217652
STRIPPED
ANDESITE
AGGLOMERATE
STRIPPED
0 1m 2m 3m
VEINS
STRIPPED AREA
PIT .8m X .9m
X .6m deep

Figure - 6

Statement of Qualifications

I, Eric Marion, with the mailing address of Box 792 in the Town of Kirkland Lake, P2N 3K4 do certify that:

1. I have worked in the exploration industry in various capacities continuously since 1977, mostly within Canada, and particularly in Ontario.
2. I am a prospector/explorationist and have been practicing my profession for twenty two years.
3. I have participated in several MNDM run prospecting techniques and geophysical prospecting techniques courses. (1990's)
4. I have gained knowledge and skills by committed research, hands on training, and application.
5. I have made use of the records and publications of the Ontario Geological Survey and the Kirkland Lake Resident Geologists Files for technical data and nomenclature, as well as field observations and personal knowledge of the area in the preparation of this report.
6. I am a Director of the Northern Prospectors Association.
7. I am the recorded holder and have an beneficial interest in the subject mining lands.
8. I have completed the Mining Act Awareness Program and have been assigned the verification number of EA32-082F-D9F7-0433

2017/08/15

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