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Geology and Gold Assays for claim 4282559 of Fern Elizabeth Gold Exploration Limited, Atikokan, Ontario

Denver Stone

Contents

Figures

Maps accompanying this report

Geology of claim 4282559 and other mining claims of Fern Elizabeth Gold Exploration Limited (central part)

Legend for the above map

Location and Access

The mining claims of Fern Elizabeth Gold Exploration Ltd span the area of the past-producing Elizabeth Mine, about 10 km northwest of Atikokan Ontario. The claims are accessible by the Valerie Falls Road, a secondary road extending south from Highway 622 (Figure 1).

Geologically, the Elizabeth Mine is situated at the west margin of the Steep Rock Lake greenstone belt. All rocks are Archean in age and part of the western Superior Province of the Canadian Shield.

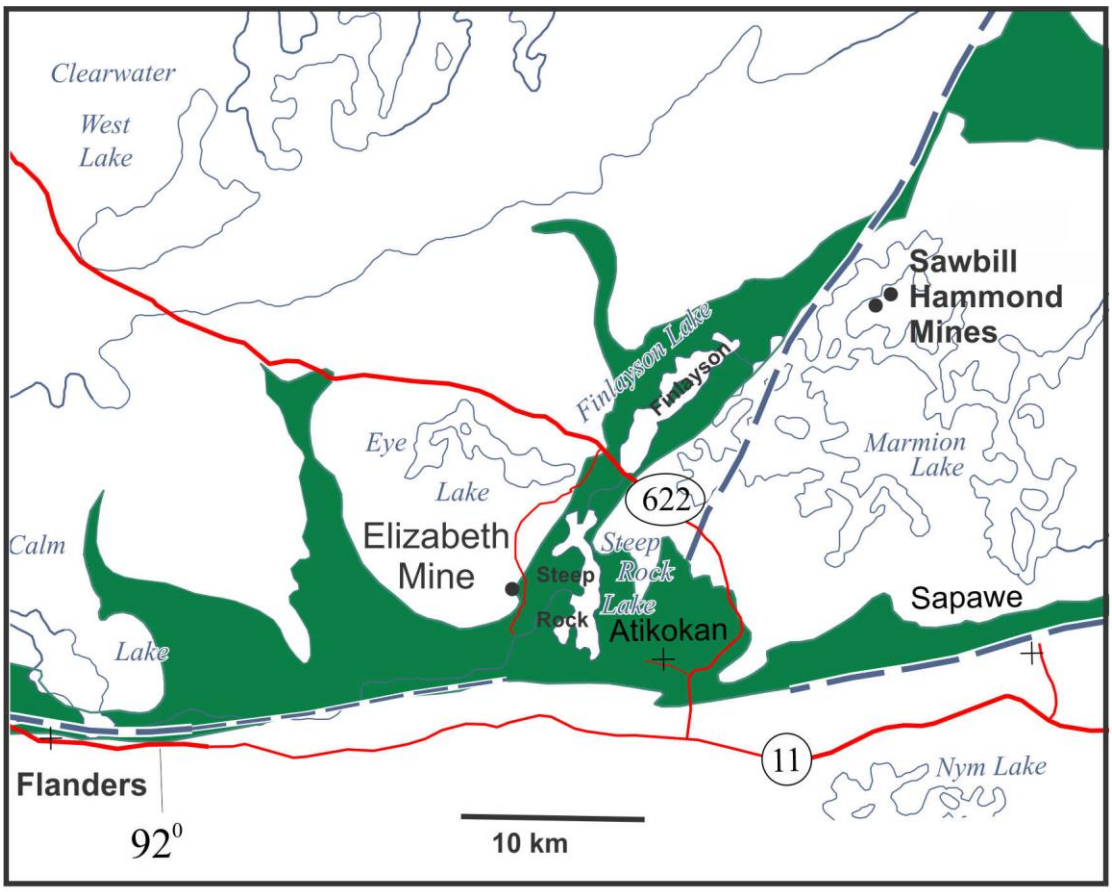


Figure 1: The Elizabeth Mine is located about 10 km NW of Atikokan, ON. It is situated at the west margin of the Steep Rock greenstone belt.

Survey Details

Claim 4282559 was staked on the west margin of the claim-group of Fern Elizabeth Gold Exploration Limited in March 2016 (Figure 2). Principal holder of the mining claims is Robert Moffatt of Box 13, Atikokan, Ontario, P0T 1C0.

A geological survey and sampling for gold analysis was completed on claim 4282559 in May-June of 2016 by Denver Stone (PhD, PEng) of RR#2 Bruce Mines, ON P0R 1C0. The survey was completed by

traversing the area and using a global positioning device for spatial control (typically to ± 3 m) of observation points. The map and report were prepared by Denver Stone in June 2016. Signature of the author is included as an appendix.

Goals of the Study

Previous geologic mapping and sampling showed modestly anomalous gold assays within plutonic rocks on the west side of the claim group of Fern Elizabeth Gold Exploration Ltd (Stone 2015). As a result, claim 4282559 was staked on the west margin of the claim group (see location of the claims in Figure 2); the new claim was mapped and sampled during the present season. Goals of the new work were to evaluate gold mineralization of the additional claim.

Geology

Claim 4282559 is underlain by mafic and felsic plutonic rocks (see the SW corner of the geologic map accompanying this report). Mafic rocks, probably representing metamorphosed gabbro (unit 10g) occupy about a third of the new claim and occur as irregular and dike-like masses. The gabbro is typically fine to medium-grained, massive to foliated and dark green to black; it is composed of sub equal proportions of hornblende and plagioclase. Several generations of gabbro intrusions are indicated by dikes of gabbro cutting other gabbroic material.

Two principal types of felsic plutonic rocks including tonalite (unit 12) and granite (unit 15) are recognized. Tonalite is generally medium-to-coarse grained, massive to weakly foliated and composed of plagioclase and quartz with up to 10% biotite and /or hornblende. Several varieties of tonalite are distinguished on the basis of variations in mafic mineral content or development of a gneissic texture with an attendant range of colors from white to grey. These varieties of tonalite are indicated by codes (e.g. 12a, 12b..) on the map and are described on the legend accompanying the map.

Granite is the youngest major type of rock in the area and is cut by only a few late gabbro dikes. The granite is coarse grained, massive and pink being composed largely of plagioclase, K feldspar and quartz with a few percent biotite. Granite typically occurs as oval masses with inclusions of other rock types.

Supracrustal rocks including remnants of mafic metavolcanic flows occur locally as inclusions in the above plutonic rocks and are extensive east of claim 4282559 (see the accompanying map and description of Stone 2015).

Plutonic rocks locally show development of a strong foliation with greenschist-facies minerals such as chlorite and carbonate at contacts. Quartz veins tend to be developed in highly strained contact areas. No major faults or zones of alteration are recognized within claim 4282559.

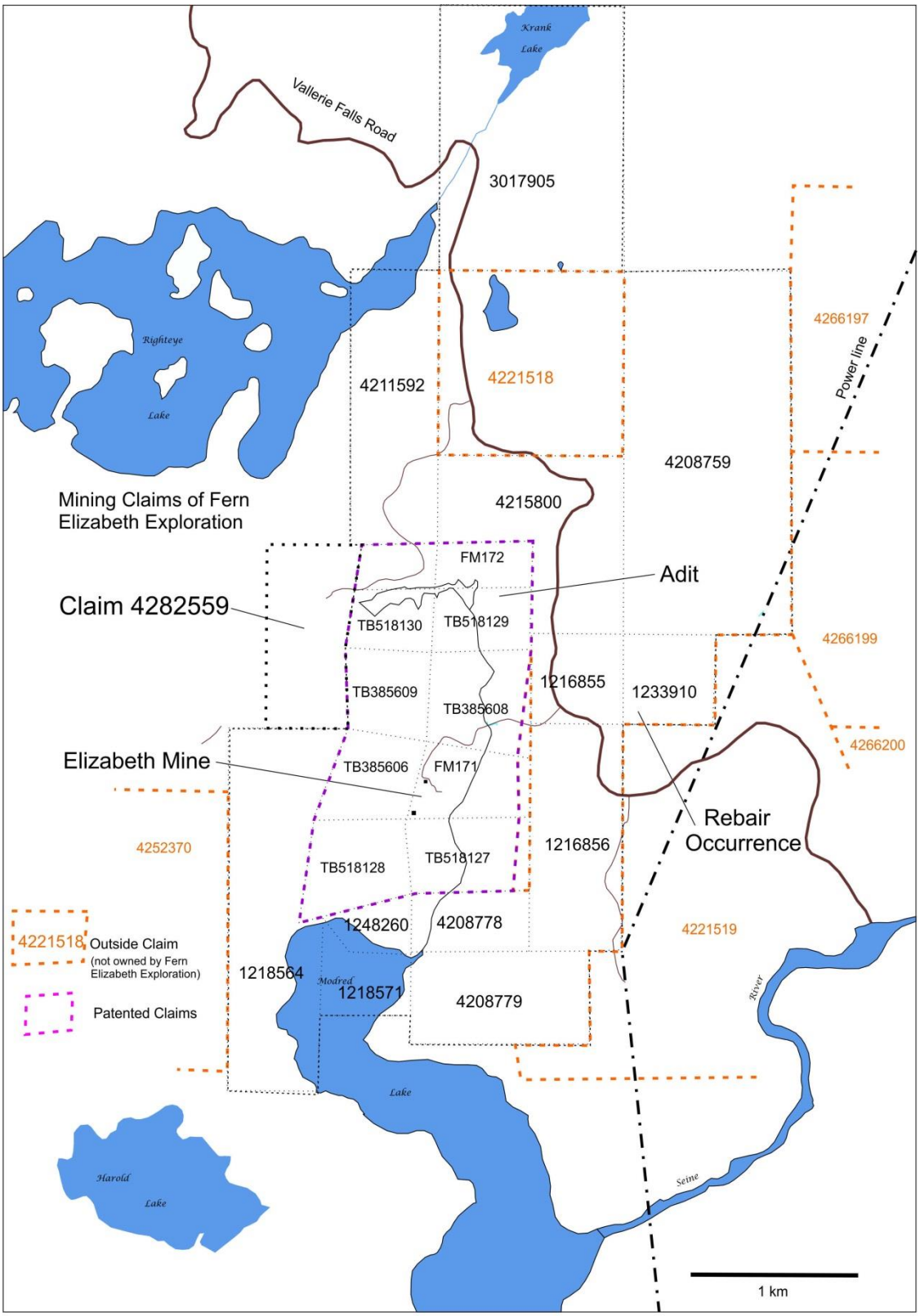


Figure 2: Mining claims including claim 4282559 of Fern Elizabeth Gold Exploration Ltd, Atikokan, Ontario.

Gold Assays

Ten samples were collected during the course of geologic mapping for analysis of gold content. The sampled material was quartz veins and in some instances included variably sheared and altered plutonic material from margins of the veins. Veins and wall rocks of veins containing accessory sulphide minerals such as pyrite were considered to be desirable and were sampled wherever possible.

Samples were submitted to Accurassay Ltd of Thunder Bay, ON for analysis of their gold content by the fire-assay method with a lower detection limit of .005 parts per million Au. The assay results for gold in claim 4282559 are listed in the appendix of this report and are shown in parts per million (ppm) with the sample number at the sample sites on the accompanying map. Also shown on the map are assay results for samples collected east of the present area during the 2015 mapping program.

The majority of samples collected in 2016 returned assay results with a content of gold near or below the detection limit of 5 ppm using the fire assay method (see assays listed in the appendix and shown on the accompanying map). Sample 328004, located in the NW corner of claim 4282559 has .072 ppm Au. This sample represents dark quartz with accessory pyrite developed at the sheared contact of a gabbro dike. Quartz veins are also present in granite near the gabbro dike but one sample of quartz from the granite has <.005 ppm Au (sample 328005).

Two samples collected in 2015 near the eastern margin of claim 4282559 and shown on the accompanying map had weakly anomalous gold content. These include sample 1154991 (.056 ppm Au) and sample 443264 (.012 ppm Au). Resampling in 2016 at or near these sites failed to produce a measureable amount of gold.

Recommendations

Two areas within claim 4282559 are recommended for further work. These include the sheared contact of the gabbro dike at the north side of the claim (area of sample 328004 on the accompanying map) and the area of a large but poorly exposed quartz vein in the southeast corner of the claim (area of samples 443264 and 328009 on the accompanying map).

The sheared contact of the gabbro dike at the northern locality evidently extends north easterly under a swamp where nearby granite outcrops are cut by numerous quartz veins. Further work should include stripping and sampling to determine extent and gold-content of the sheared zone.

The large quartz vein in the southeast corner of the claim is not well exposed and further work should attempt to define the extent of and also the wall-rock characteristics (rock type and alteration) of the vein. The work should include stripping and sampling.

References

Stone, D. 2015. Geology of the mining claims of Fern Elizabeth Exploration Ltd, Atikokan, Ontario; report submitted to the assessment office of the Ontario Ministry of Northern Development and Mines, 28 pages.

Appendices

ACCURASSAY LABORATORIES
1046 Gorham Street
Thunder Bay, ON
Canada P7B 5K5
Tel: (807) 626-1630
Fax: (807) 622-7571
www.accurassay.com
assay@accurassay.com

Monday, June 13, 2016

Final Certificate

Fern Elizabeth Exploration
Box 13
Atikokan, ON, CAN
P0T1C0
Ph#: (807) 597-6293
Email: nymlake@live.com

Date Received: 06/07/2016
Date Completed: 06/13/2016
Job #: 201641168
Reference:
Sample #: 10

Acc #	Client ID	Au g/t (ppm)
124498	328001	<0.005
124499	328002	<0.005
124500	328003	<0.005
124501	328004	0.072
124502	328005	<0.005
124503	328006	0.010
124504	328007	<0.005
124505	328008	<0.005
124506	328009	<0.005
124507	328010	<0.005
124508	328010 Dup	<0.005

APPLIED SCOPES: ALP1, ALFA1

Validated By:
Shawn Rask
Laboratory Assistant Manager

Certified By:
Andrew Oleski
Lab Manager - Thunder Bay

Authorized By:
Derek Demianiuk, VP Quality

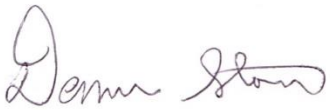
The results included on this report relate only to the items tested.
The Certificate of Analysis should not be reproduced except in full, without the written approval of the laboratory.

-0328-06/13/2016 1:08 PM

Assay results, claim 4282559 2016

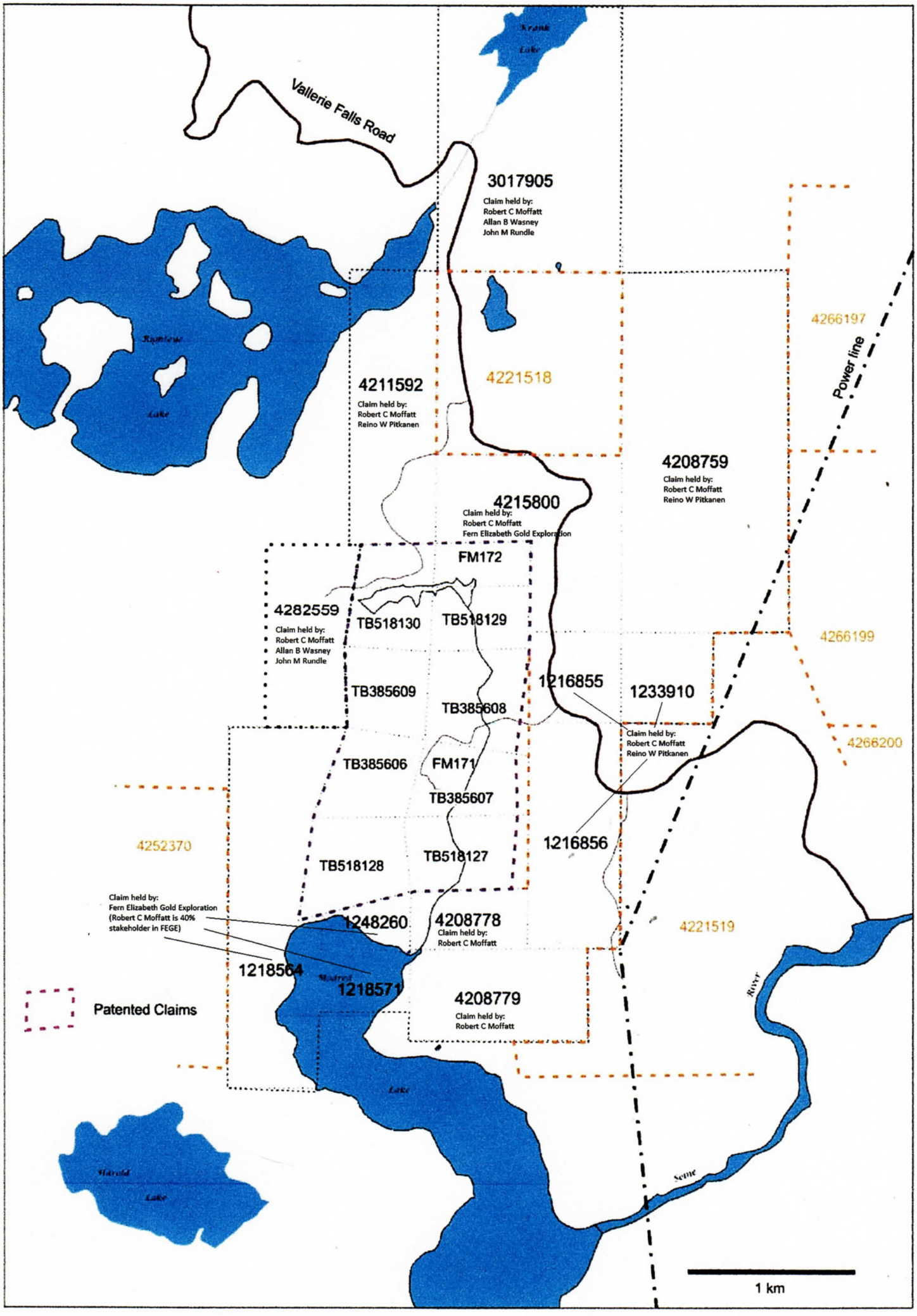
Waypoint	Northing	Easting	depth	Rock Code	Alteration mineral	Quartz Veins	Pyrite	Sample	Au g/t
105	5406387	592305.2	442.1204	12cg,10g	bt	1	0	328001	<.005
106	5406428	592275	452.8885	12r	se	1	0	328002	<.005
107	5406492	592338.8	454.3994	10g	hb	1	0	328003	<.005
108	5406610	592385	430.8908	10g	cbcl	1	1	328004	0.072
109	5406613	592380.7	437.3947	15c	se,cl	1	1	328005	<.005
110	5406538	592423.2	440.9615	15b	se,cl	1	0	328006	0.01
111	5406238	592392.2	452.9188	10g	cl	1	0	328007	<.005
112	5406277	592491.1	449.0808	12r	rusty	1	1	328008	<.005
113	5405996	592518.5	439.3866	12a-15a	cb	1	0	328009	<.005
114	5406452	592525.1	432.9006	15a	cb,cl	1	1	328010	<.005

The survey work was performed by and the report was written by the undersigned:



Denver Stone

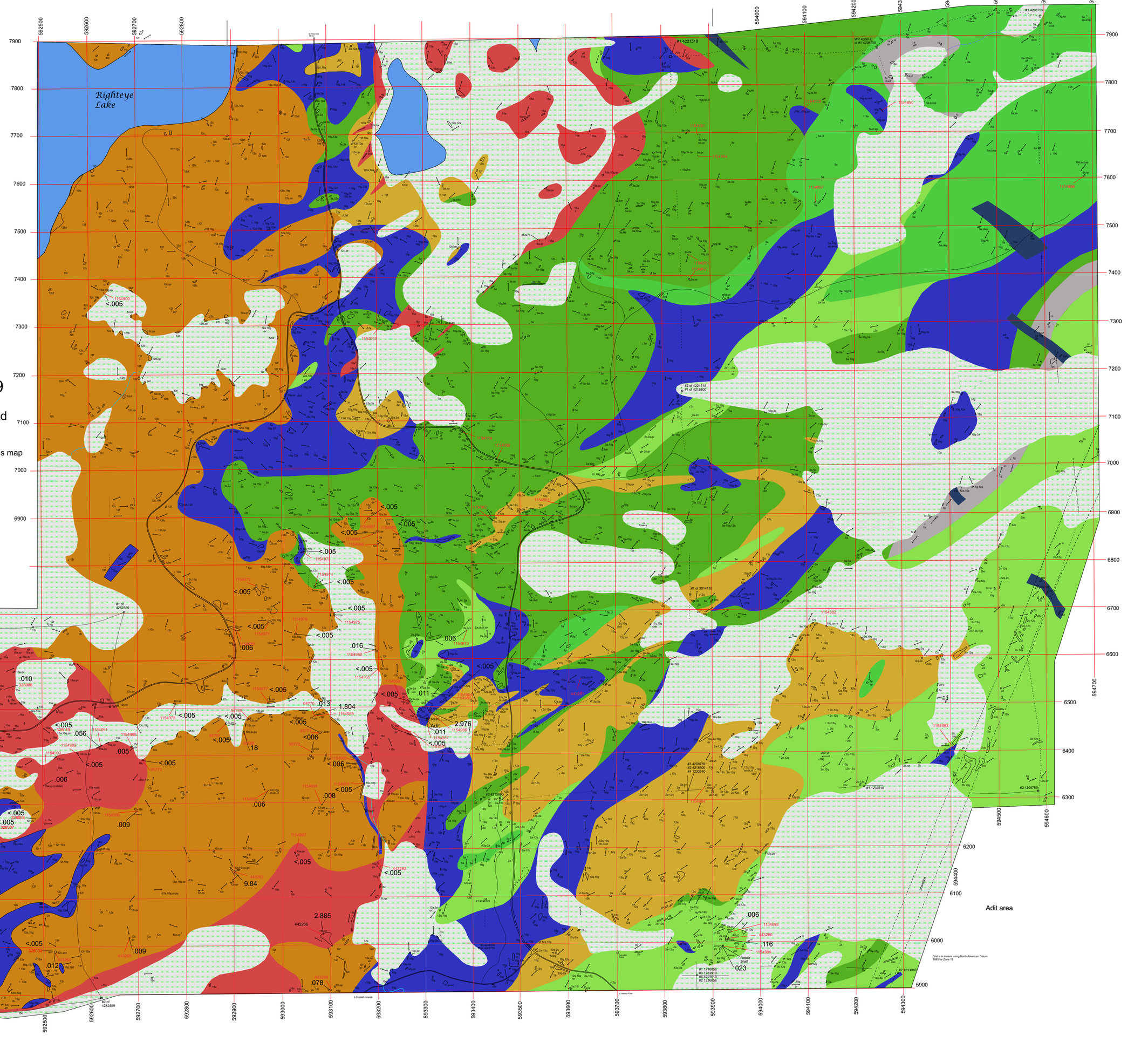
PhD, PEng


Frank Lake
Vallerie Falls Road
3017905
Claim held by:
Robert C Moffatt
Allan B Wasney
John M Rundle
Rainbow Lake
4211592
Claim held by:
Robert C Moffatt
Reino W Pitkanen
4221518
4266197
Power line
4208759
Claim held by:
Robert C Moffatt
Reino W Pitkanen
4215800
Claim held by:
Robert C Moffatt
Fern Elizabeth Gold Exploration
FM172
4282559
Claim held by:
Robert C Moffatt
Allan B Wasney
John M Rundle
TB518130
TB518129
4266199
TB385609
TB385608
1216855
1233910
Claim held by:
Robert C Moffatt
Reino W Pitkanen
4266200
TB385606
FM171
TB385607
4252370
TB518128
TB518127
1216856
Claim held by:
Fern Elizabeth Gold Exploration
(Robert C Moffatt is 40%
stakeholder in FEGE)
1248260
4208778
Claim held by:
Robert C Moffatt
4221519
1218564
Marrel
1218571
4208779
Claim held by:
Robert C Moffatt
Patented Claims
Lake
Seine River
Harold Lake
1 km

Geology of claim 4282559

and other mining claims of
Fern Elizabeth Gold Exploration Ltd
(central part)

Claim 4282559 is shown in the southwest corner of this map



PRECAMBRIAN GEOLOGY

of

claim 4282559 and other Mining claims of Fern Elizabeth Gold Exploration Limited

Atikokan, northwestern Ontario
NTS Reference: 52 B/13

LEGEND[a]

ARCHEAN
NEOARCHEAN (2.5 to 2.9 Ga)

Biotite Granite Suite

15 Biotite Granodiorite to Granite
15a Unsubdivided
15b Leucocratic; <6% biotite; inequigranular; white to pink; massive to weakly foliated
15c Mesocratic; >5% biotite
15d Dikes
15q Quartz megacrystic
15t Aplite

INTRUSIVE CONTACT

NEOARCHEAN TO MESOARCHEAN (2.5 to 3.4 Ga)

Biotite Tonalite Suite

12 Biotite Tonalite to Granodiorite
12a Unsubdivided
12b Leucocratic; <7% mafic minerals; white to grey; fine to coarse grained; foliated to massive
12c Mesocratic; 7 to 20% biotite; grey to white; medium grained; foliated to massive
12d Dikes
12g Weakly gneissic, gradational to gneissic suite
12m Mafic; >20% hornblende+biotite; typically heterogeneous and gradational to quartz diorite
12q Quartz megacrystic
12r Granodioritic; gradational to granite suite

Early: probably Mesoarchean

Late: probably Neoarchean

INTRUSIVE CONTACT

Mafic Suite

10 Mafic Intrusive Rocks
10a Unsubdivided
10d Late massive gabbro to diorite
10l Lamprophye
10g Hornblende gabbro, pyroxene-hornblende gabbro (plagioclase+hornblende+pyroxene)
10s Sheared or schistose gabbro

7 Metasedimentary Rocks
7a Unsubdivided
7b Sandstone, minor siltstone
7c Conglomerate
7f Iron Formation
7g Siltstone, minor sandstone

5 Mafic Metavolcanic Rocks
5a Unsubdivided
5p Pillowed
5s Schistose, typically feldspar+chlorite

MESOARCHEAN (2.9 to 3.4 Ga)

3 Mafic to Ultramafic Metavolcanic Rocks (>35% and >90% mafic minerals, respectively)
3a Unsubdivided
3m Massive flow
3p Pillowed
3s Schistose, typically feldspar+chlorite

2 Intermediate to Felsic Metavolcanic Rocks (15 to 35% and <15% mafic minerals, respectively)
2a Unsubdivided
2b Breccia, tuff breccia (pyroclastic and/or volcaniclastic)
2c Crystal bearing (feldspar, quartz)
2f flow
2s Schistose
2t Tuff, lapilli tuff, lapillistone (pyroclastic and/or volcaniclastic)

1 Clastic metasedimentary Rocks
1a Unsubdivided
1b Sandstone, minor siltstone
1c Conglomerate
1g Siltstone, minor sandstone

Note: Isolated outcrops of one rock type (for example, gabbro-10g) can occur within a coloured domain representative of another rock type (for example, tonalite-12a).

[a]This legend is common several maps of various scales. Not all rock types and symbols occur on every map.

Symbols

Outcrop (observed)

Area of outcrop (observed)

Foliation (trend only, inclined, vertical)

Mineral lineation with plunge

Roads (secondary, trail)

Electric transmission line

Mining claim line and post (observed)

1154851 .015 Sample Number, gold assay (ppm)

Swamp

Abbreviations

amp	amphibole	ep	epidote
act	actinolite	gn	galena
bt	biotite	hb	hornblende
cb	carbonate	py	pyrite
cl	chlorite	qcv	quartz+carbonate vein
cp	chalcopyrite	qv	quartz vein
		se	sericite

SOURCES OF INFORMATION

Base map information assembled during geologic mapping. Mapping conducted using a global positioning device with UTM co-ordinates in North American Datum 1983 (NAD83), Zone 15.

In 2007, magnetic north was 0°53 W of True North.

Geology and compilation by D. Stone 2015-16.
Digital drafting by D. Stone.