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Geology of the mining claims of Fern Elizabeth Exploration Ltd Atikokan, Ontario

Denver Stone

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Location and Access

The Elizabeth Mine area is located approximately 10 km northwest of Atikokan, Ontario. It is accessible by a secondary road (Valerie Falls Road) extending south from Highway 622 as shown in Figure 1.

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

Survey Details

The field work was done on a group of 12 mining claims and a block of patented mining claims held by Fern Elizabeth Exploration Ltd in the greater Righteye Lake area (Figure 2). Principal holder of the mining claims is Robert Moffatt of Box 13 Atikokan, ON, P0T 1C0. Other people hold one claim within the surveyed area (No. 4221518 of Figure 2) and several claims at margins of the surveyed area.

The survey was completed by Denver Stone (PhD, PEng) of RR#2 Bruce Mines, ON, P0R 1C0 and Wayne Cornel, a student at Cambrian College, between May 23 and August 29 2015. The report was written by Denver Stone and finished September 15 2015. Signature of the author is included as an appendix.

History of Exploration

Historic exploration for gold and development were focused on 3 principal areas including the Elizabeth Mine, Adit and Rebair Occurrence (see locations in Figure 2) within the Fern Elizabeth claim group. Shafts were sunk and no-doubt extensive prospecting was done in these areas with the most extensive early work done at the Elizabeth Mine. The following history, including the discovery and previous exploration work on the Elizabeth property by various owners is modified from Larouche and Clark (1988).

1900 Anglo Canadian Gold Estates
-discovery of gold
-minor trenching and diamond drilling

1902-13 Elizabeth Gold Mines Ltd
-2 shafts sunk to 270' and 110'
-1205 feet of lateral work on 2 levels
-10-stamp mill constructed
-411 ounces of gold produced
-total ore milled to reported gold produced is questionable

1923 Golden Mining Co. Ltd
-purchased property

1925 T.L. Tanton, Geological Survey of Canada
-visited the mine site and estimated 20,000 tons of reserves at 0.40 ounces gold per ton

1935-37 Elizabeth Gold Mines Ltd
-dewatered the workings and did 1591 feet of diamond drilling
-constructed a 25 ton per day mill

1937-70 Various reports with no detailed work

1973 University of Toronto
-seismic test in #2 shaft

1974 Cornel-Pope Exp. Co.
-405 feet of diamond drilling

1978 M. Wicheruk options property to Fern Elizabeth Gold Mining Co.
-trenching, stripping and geological mapping
-589 feet of diamond drilling

1981 Camflo Mines Ltd
-geological mapping, geochemical and geophysical work
-drilled 4 boreholes (2310 feet) see approximate locations of holes in Figure 3

1984 Bankit Resources Ltd
-14 boreholes totalling 1745 feet of diamond drilling

1985-88 Societe Miniere Mimiska Inc
-geological mapping, geochemical and geophysical work
-drilled approximately 66 boreholes (see locations of some holes in Figure 3)
-estimated possible reserves of 211,465 tons of ore grading 6.73 g/ton (Larouche and Clark 1988)

2007-13 VenCan Gold Corporation (renamed Red Pine Exploration Inc.)
-soil geochemistry and 8 boreholes (see locations of some holes in Figure 3)

2015 Fern Elizabeth Exploration (the present study)
-geologic mapping and spectrometer survey

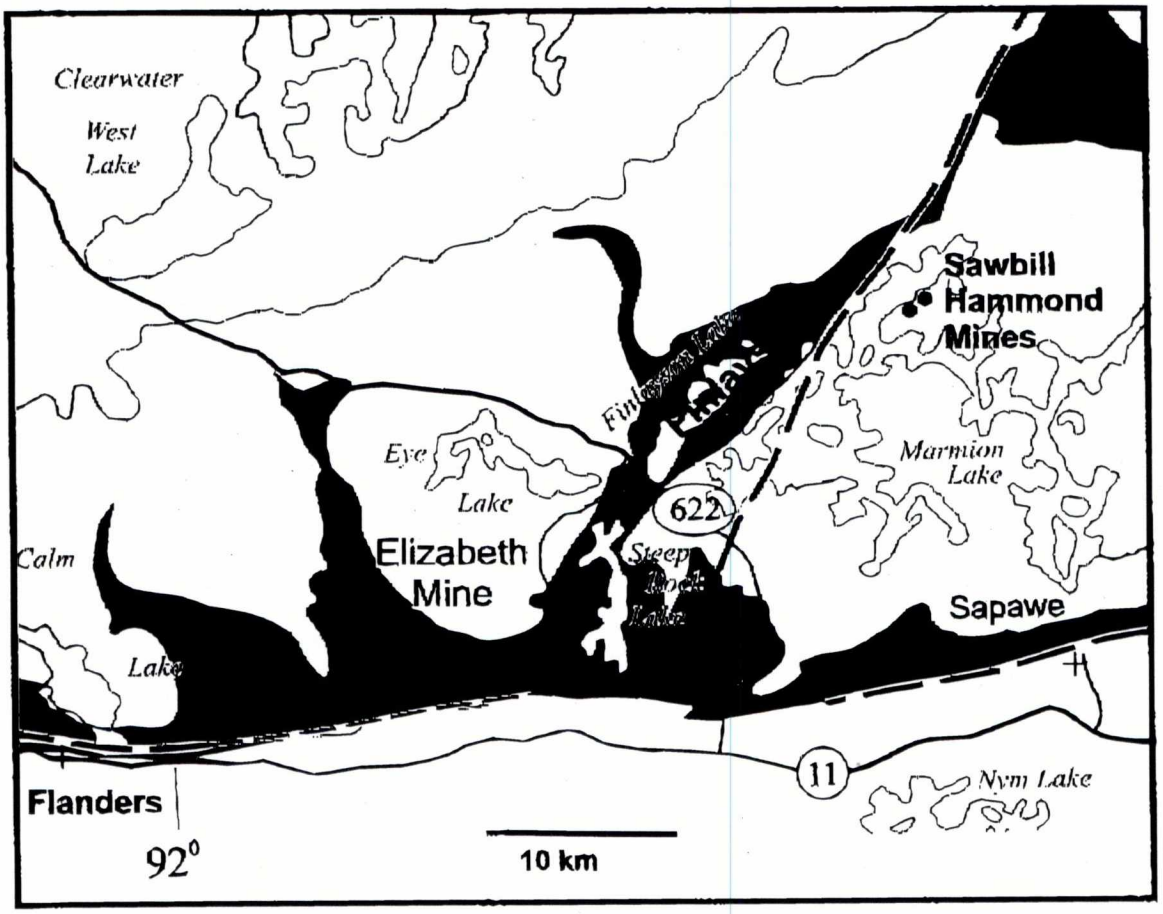

Figure 1: The Elizabeth Mine is located about 10 km NW of Atikokan, ON. It is situated at the west margin of the Steep Rock greenstone belt.

Summary of previous work and goals of the present study

Sighting of visible gold in quartz veins was the incentive for early prospecting and mining at the Elizabeth property. Although two early attempts at mining were made, these produced only a modest amount of gold probably due to a limited extent of the rich veins with the result that the property experienced periods of inactivity. In the late 1970s, a vein was discovered at the Bernie-Mitch showing (see location in Figure 3) and yielded further samples of visible gold such as in Figure 4. Considerable exploration work which included drilling of approximately 100 boreholes ensued in recent decades and was focused mainly on known veins and showings in vicinity of the original Elizabeth shafts (Figure 3). The most extensive work was done by Societe Miniere Mimiska Inc. who defined a possible reserve of 211, 465 tons of ore grading 6.73 g for 4 of the largest veins observed at surface (Larouche and Clark 1988). Discussions of drill-results (e.g. Perry 1982) typically cite a failure to trace any of the know veins over major distances. Sandberg and Cruickshank (2008) recommended further work to be focused on locating other gold occurrences which are larger than the known veins.

The present study includes geologic mapping and sampling for gold assay. A spectrometer survey using a hand-held instrument was made at the time of mapping and is described separately. The geologic and geophysical surveys were completed over the entire claim block of Fern Elizabeth Exploration (Figure 2) largely by traversing at 50 meter intervals. A Global Positioning Device was used to control the location of observational stations, typically with an accuracy of a few meters.

The main purpose of the geologic and geophysical surveys is to identify other gold mineralization outside of the known major occurrences. Results of the geologic and assay work are shown on maps in the back pocket of this report and are discussed below.

Geology

Ten principal types of rock were identified during the survey and are distinguished in the field on the basis of textural and mineralogical criteria as well as inferences as to the age of the rock (Mesoarchean or Neoarchean). These rock-types are shown by colour and a numeric code on the accompanying maps (for example, gabbro is blue and has a code of 10g). Criteria used to identify each type of rock are listed in Table 1. Each rock type is briefly described below.

Biotite granodiorite to granite

Biotite granodiorite to granite(unit 15) is a coarse-grained, massive, white to pale pink rock that occurs as dikes and oval stocks and masses comprising about 12% of the area (Table 1 and maps in pocket). Biotite granodiorite to granite is one of the youngest rocks in the area and can contain inclusions of most other lithologies. Units of this rock can be foliated and altered to greenschist-facies minerals within a few meters of the contacts.

Biotite tonalite to granodiorite

Biotite tonalite to granodiorite (unit 12)is variably medium to coarse grained, foliated to massive and grey to white in colour occurring in complex forms ranging from dikes and irregular masses to large oval batholiths. Two types of tonalite are distinguished on the accompanying map based on their interpreted age. Early tonalite is thought to be Mesoarchean in age and at least some early tonalite is approximately coeval with intermediate to felsic metavolcanic rocks dated at 2999 Ma (Stone 2010). The early tonalite tends to be strongly foliated and occurs as complex folded dikes and irregular masses situated inside and adjacent to the greenstone belt. In contrast, late tonalite tends to be coarse grained and massive occurring in large external batholiths such as at Righteye Lake (see map in pocket). Late tonalite is cut only by granite and a few gabbro dikes.

Mafic Intrusive Rocks

Mafic intrusive rocks (unit 10) are mainly foliated to massive hornblende gabbro of variable grain-size occurring as dikes in the area. Crosscutting relations suggest that there can be many generations of gabbroic dikes and two main subdivisions (units 10g and 10d,l) are distinguished in Table 1 and on the accompanying maps. Unit 10g is mainly a dark-green, foliated, hornblende-gabbroic rock variably altered to chlorite-bearing mineral assemblages. Small outcrops of unit 10g can be very difficult to distinguish from mafic volcanic rocks; some units of 10g may be coeval with volcanic rocks whereas other dikes of 10g crosscut volcanic rocks. A particularly large gabbro dike crosscuts the area diagonally and is the main host for gold mineralization where it is in contact with felsic plutonic rocks at the Elizabeth Mine (see Figure 3).

Unit 10d is distinguished by subequal proportions of black amphibole and white plagioclase with a massive texture. Unit 10d probably represents late Neoarchean intrusive rocks that have been metamorphosed but only mildly deformed. Notably, unit 10l represents lamprophyre dikes which are too small to be shown on the accompanying map. The lamprophyre dikes are the youngest rock in the area crosscutting granite and some quartz veins.

Mafic metavolcanic rocks

Two principal subdivisions of mafic metavolcanic rocks (units 3 and 5) are recognized in the Elizabeth Mine area and are shown by separate colours on the accompanying maps. Metavolcanic rocks of unit 3 are typically massive and dark green amphibolite locally altered to chloritic schists. Unit 3 is closely associated with intermediate metavolcanic rocks of unit 2; both are interpreted to represent Mesoarchean volcanic extrusions. In contrast, mafic metavolcanic rocks of unit 5 are mainly pillowed lavas with a medium green colour and an assemblage of plagioclase +epidote/zoisite. Unit 5 is interpreted to be part of the Witch Bay Assemblage of Neoarchean lavas (Stone 2010). Possibly, the isolated enclaves of unit 5 are klippen.

Intermediate to felsic metavolcanic rocks

Intermediate to felsic metavolcanic rocks (unit 2) are widespread in southern parts of the area. They are distinguished by a pale green to white colour, generally fine to medium grain-size and a variety of massive to foliated, fragmental and laminated textures. Although fragmental varieties are easily recognized as volcanic rocks in the field, other more massive varieties are difficult to distinguish from intrusive tonalite. Intermediate to felsic metavolcanic rocks are the only unit known to have been dated in the Elizabeth area with a U-Pb zircon age of 2999 Ma (Stone 2010) and comprise one of the oldest rocks in the area.

Clastic metasedimentary rocks

Clastic metasedimentary rocks (units 1 and 7) occur as secondary components of many outcrops dominated by metavolcanic rocks and as map-scale units at east side of the area (see map in pocket). Most are made up of strongly foliated, fine grained schists probably representing metamorphosed siltstone although a few outcrops are distinguished as conglomerate due to recognizable pebbles. Clastic metasedimentary rocks of the Elizabeth Mine area can belong to either of two units recognized by regional mapping (unit 7 –Neoarchean and unit 1-Mesoarchean). Based on their continuity with dated sedimentary sequences to the east (Stone 2008), the metasedimentary units at east side of the Elizabeth Mine area are interpreted to be Mesoarchean in age (unit 1).

Metamorphism and Structure

Supracrustal rocks of the Elizabeth Mine area have mineral assemblages characteristic of amphibolite facies metamorphism possibly transitional to upper greenschist facies in eastern parts of the area. For example, mafic metavolcanic rocks are routinely dominated by plagioclase and hornblende whereas chlorite and epidote are common in similar rocks to the east. Pillow lavas of unit 5 are exceptional in that small units occur fairly widely and show plagioclase+epidote/zoisite assemblages. These observations may indicate that the pillow lavas of unit 5 were faulted into position on top of amphibole-bearing rocks after the peak of metamorphism had subsided.

Greenschist-facies minerals that could be recognized in the field (mainly chlorite+carbonate assemblages) occur at contacts or along mesoscopic faults and veins in rocks that are otherwise dominated by amphibole. Particular care was exercised to identify such local development of greenschist facies minerals because they might represent alteration zones potentially with associated gold mineralization. Although a few mesoscopic alteration zones (up to a few meters width) were identified, no large-scale zones were mapped by the survey.

Supracrustal rocks and most intrusive rocks show evidence of deformation manifest in a mineral fabric and development of mesoscopic folds and faults. These features allude to one or more early and largely ductile deformation events. Despite the widespread evidence for early ductile deformation, no large-scale and coherent folds or ductile faults could be clearly identified.

One or more late and predominantly brittle stages of deformation are evident through the area. These are marked by local development on an intense cleavage and crenulation cleavage, narrow brittle faults with cm-scale offset and quartz veins. Such, late brittle deformation is observed widely in many outcrops and tends to be concentrated at geologic contacts. The Elizabeth Mine area (Figure 3) is an example of a contact between gabbro and granite that has been sheared with local development of folds, narrow brittle faults and quartz veins. Evidently, the brittle discontinuities were conduits for fluid movement with attendant development of quartz veins and gold mineralization.

No regional-scale brittle faults were identified. An exception may be a possible thrust fault at the basal contact of unit 5 pillow lavas however, these contacts are not well exposed and associated faults could not be confirmed.

Table 1: Characteristics of supracrustal and plutonic suites, Elizabeth Mine area.

Suite/Map Unit No.	Rock type	Colour	Grain Size	Fabric	Form and Occurrence/approx. % of area	Inclusion type	Mineral Assemblage	Age*
Biotite Granite/15	Biotite granite to granodiorite	White to pale pink	Medium to coarse	Massive to weakly foliated	Stocks and dikes/12	Most other rock types	Pl+Kfeld+Qtz+Bt±Tnt±Ep±Ap±Aln±Ilm±Zrn	Late Neoarchean
Biotite tonalite/12 early and 12 late	biotite tonalite to granodiorite	white to grey	fine to coarse	Foliated to weakly gneissic; weakly quartz- and feldspar megacrystic	Irregular to crescentic and lobate bodies; scattered/28	amphibolite, supracrustal xenoliths	Pl+Qtz±Bt±Kfeld±Mag±Tnt±Ep±Ap±Aln±Ilm±Zrn	Mesoarchean and Neoarchean
Gabbro diorite, lamprophyre/10d, 10l	Amphibolite, leuco amphibolite; lamprophyre-tonalite	Dark grey to black	Fine to coarse	Massive; locally foliated and megacrystic	Dikes and masses/3		Hbl+Pl±Bt±Chl±Cbz±Qtz	Neoarchean
Gabbro/10g	Amphibolite, leuco amphibolite	Dark green	Fine to coarse	Massive to weakly foliated	Dikes and masses/15	Most other types of rock	Pl+Hbl±Qtz±Chl±Cb	Mesoarchean Neoarchean
Mafic metavolcanic rocks/3 and 5	Amphibolite, leuco amphibolite	Dark green to medium green	Fine to medium	Foliated to gneissic; locally pillowed with flow textures	Belt-like units/12		Pl+Hbl (unit 3) Pl+Ep±Chl (unit 5)	Mesoarchean Neoarchean
Intermediate metavolcanic rocks/2	Flows, tuffs and breccias	Grey to white and pale green	Fine to medium, locally megacrystic	Foliated; locally laminated or fragmental	Large masses, belts /28		Pl+Bt+Qtz±Hbl±Chl±Cb	2999 Ma
Clastic metasedimentary rocks /1 and 7	Siltstone, sandstone, conglomerate	Grey to brown	Fine to medium for siltstone and sandstone	Foliated; bedded; locally folded	Belt-like units/2		Pl+Qtz+Hbl±Bt±Hbl±Chl±Cb	Mesoarchean and Neoarchean

* source of age determination is Stone (2010). Mineral abbreviations are: bt-biotite, chl-chlorite, ep-epidote, hbl-hornblende, Kfeld-k feldspar, Cb-carbonate, pl-plagioclase, qtz-quartz.

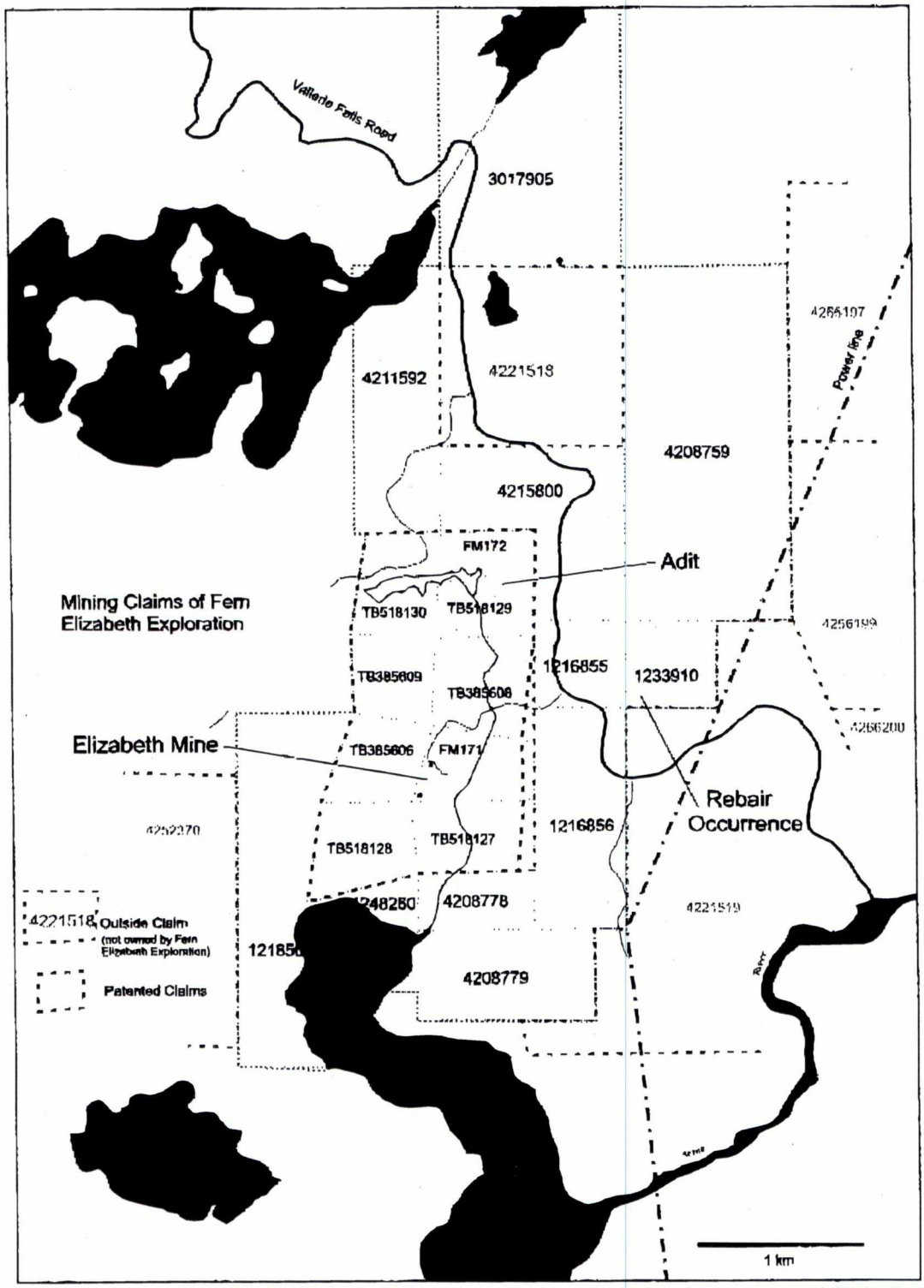

Figure 2: Mining claims of Fern Elizabeth Exploration in relation to historic gold occurrences (Elizabeth, Adit and Rebair).

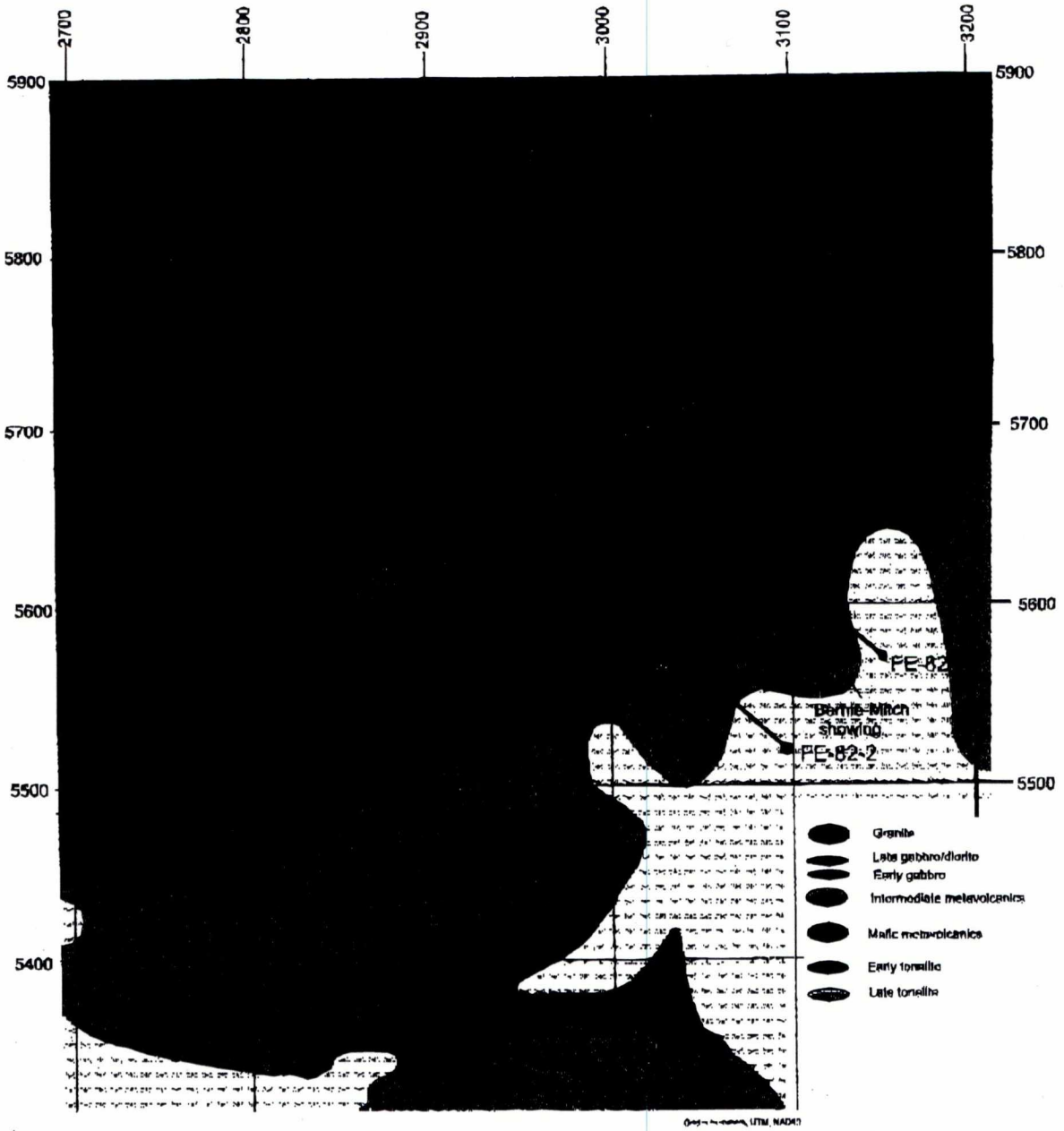

Figure 3: Detail geological map of the Elizabeth Mine area showing major shafts and veins. Drill holes by Vencan Gold Corporation (VC-series), Camflo Mines Ltd (FE-series) and some boreholes by Societe Miniere Mimiska Inc (green) are shown.

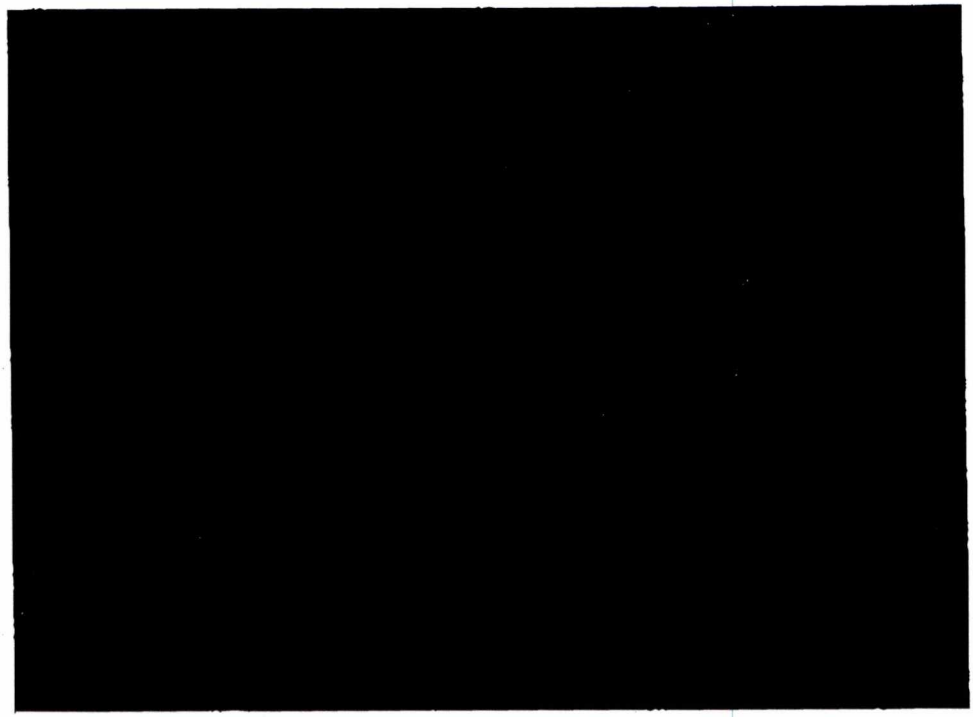

Figure 4: Visible gold from the Bernie Mitch showing.

Figure 5: No 1 shaft at the Elizabeth Mine was sunk in a quartz vein in sheared gabbro. See location of the shaft and vein in Figure 3.

Gold sampling

During the course of geologic mapping, samples were collected for analysis of their gold-content. In the majority of cases, the sampled material was quartz veins and a record was made of the mineral assemblage adjacent to the vein as well as the presence of accessory sulphide minerals. In some cases, strongly sheared, altered or pyritic rock was sampled for analysis. An effort was made to collect samples more-or-less evenly through the area without concentrating on historic gold occurrences.

Samples were submitted to Accurassay Ltd of Thunder Bay, ON for analysis by the fire-assay method with a detection limit of 5 ppb. Results are listed in Table 2 together with geologic information and the location. The locational data (UTM coordinate) was saved as a waypoint on a GPS and downloaded to an Excel file. Certificates of analyses are included as appendices of this report.

Figure 6: Example of a rusty quartz vein in tonalite from west of the adit.

Table 2: Gold assays, Elizabeth Mine area.

Waypoint	Northing (UTM, NAD83 m)	Easting	Rock Code See explanation of codes on map legend	Alteration mineral See explanation of codes on Table 1	Alteration Intensity 1-low;2-moderate 3-high	Pyrite 0-no;1-yes	Sample No.	Au (ppm)
72	5408030	593066	12a,10g	bt, rust	2	Rust	1154851	<.005
94	5408222	593144	12f,10g	hb-chl	1	Rusty	1154852	<.005
110	5408303	593122	12c,15p	hb,cl	2	0	1154853	<.005
158	5409007	593023	12c	bt	1	rusty spots by qv	1154854	<.005
170	5408442	593224	10d	hb,cl	2	rusty zones	1154855	<.005
171	5408526	593243	12c	hb,cl	2	1 rusty	1154856	<.005
179	5408564	593261	12c	bt,cl	2	0		
180	5408635	593309	12a?		2	1	1154857	<.005
181	5408598	593303	10g	cl	2	1	1154858	<.005
182	5408594	593305	10g	cl	2	1	1154859	<.005
							1154860	<.005
206	5408483	593641	12c,10g,qv		2	1	1154861	<.005
							1154862	<.005
207	5408492	593624	10g,12c	cl	2	1	1154863	<.005
208	5408485	593613	12c,10g	cl	2	1	1154864	<.005
							1154865	<.005
209	5408566	593525	10g,15d	cl cb	2	1	1154866	<.005
218	5408522	594000	10g	hb	1	1	1154867	<.005
231	5408726	593824	12c,10g		Iron stain	0	1154868	<.005
253	5409008	593689	12c	bt	1	0	1154869	<.005
280	5408486	593843	12c	bt	1	1	1154871	<.005
288	5408277	593874	10g	hb	1	1	1154872	0.05
302	5408456	593663	quartz				1154885	<.005
309	5408269	593641	10g,12c	cl	2	0	1154873	<.005
351	5408109	593819	10g		1	0	1154874	0.011
373	5408059	593872	3a,12c	?	1	Rusty	1154875	<.005
379	5407958	593295	12b,10g	se	1 or 2	rusty spots	1154876	<.005
380	5408018	593233	12p	bt,se	1	Mo	1154877	<.005
392	5407975	593165	10g,12c	bt	1	0	1154878	<.005
397	5407955	593379	15c	?	rusty	0	1154879	<.005
							1154880	<.005
406	5407936	593371	12c	cl-se	2	0	1154884	<.005
417	5407891	593189	10g leuco	?	1	0	1154881	<.005
426	5408012	593221	15q	se	2	1	1154882	<.005
428	5407963	593262	12c		1	1	1154883	<.005
494	5407743	594092	10g	hb	1	1	1154889	<.005
495	5407741	594254	10g?	cl-amp?	1	1	1154890	<.005
S01	5407699	593870	10g-3a	hb	1	1	1154891	<.005
526	5407659	593876	3a		1	0	1154894	<.005
541	5407552	594124	5a	act-ep?	1	0	1154897	<.005
544	5407605	594689	5s	cl		0	1154898	<.005
556	5407378	592636	12c,10g	cl	2	1	1154900	<.005
559	5407448	593848	3a-2a	bt?	1	0	1154951	<.005
564	5407392	593861	3a	hb?ep	1	0	1154952	0.016
569	5407075	593382	3s	cl,cb	2	1	1154954	<.005
576	5406668	592913	12c	bt	1	0	1154955	0.006

585	5407309	593216	3a	cl		2	1	1154957	<.005
592	5407017	593464	3s	cl,cb		2	1	1154959	0.015
628	5406866	593193	12c	bt	2 rusty		0	1154969	<.005
	5406930	593580	3a				0	1154961	<.005
	5406895	593440	12q				0	1154962	<.005
643	5406873	593242	12c	rusty zone		2	1	1154693	<.005
644	5406548	593386	10g,12b			1	1	1154964	<.005
646	5406578	593196	12r,15p			2	1	1154965	<.005
647	5406621	593197	12r				1	1154960	0.016
650	5406898	593181	12r		rusty		1	1154967	<.005
651	5406849	593207	12r	?	2 rusty		1	1154969	<.005
652	5406666	593388	2a?	cl,cb rusty		3	1	1154970	0.006
655	5406678	592975	12c,10g	cl?		1	1	1154971	<.005
656	5406758	592944	12c	cl		2	0	1154972	<.005
657	5406826	593042	12,10g	cl		1	1	1154973	<.005
658	5406750	593073	10g	cl?		2	0	1154974	<.005
659	5406700	593116	12c	cb with qtz		2	1	1154975	<.005
660	5406653	593029	12c,10g	cb,cl		2	1	1154976	<.005
662	5406500	592972	12c	rusty zone		1	0	1154977	<.005
663	5406506	592768	12c			1	0	1154978	<.005
669	5406328	593174	12c,10g	cb,cl		2	0	1154979	<.005
672	5406370	593162	12c,10g	cl,cb		2	0	1154980	<.005
676	5406452	593233	15c	pk		2	1	1154981	<.005
681	5406663	594144	10g	cb,cl		2	1	1154982	0.033
686	5406402	594404	10g	cb,cl		2	1	1154983	0.01
708	5406328	593892	2a	cb,cl		2	1	1154984	0.021
712	5406520	593352	10g	hb		1	0	1154985	0.011
								1154986	2.976
713	5406481	593308	10d,2a,12q			1	1	1154987	0.011
715	5406512	593269	10g,15c	cl		2	1	1154988	<.005
719	5406482	593077	12r	bt		2	1	1154989	1.804
723	5406424	592690	15c	bt			0	1154990	0.005
724	5406423	592625	15a	rusty		2	0	1154991	0.056
725	5406405	592563	12r	rusty		2	1	1154992	<.005
726	5406341	592499	?	rusty cl		2	1	1154993	0.006
740	5406290	593084	12r	cl,cb		2	1	1154994	0.008
741	5406331	592962	12f-15t	cl,cb		3	1	1154995	0.006
744	5406283	592698	12r-15c			1	1	1154996	0.009
754	5406196	593021	15a rusty			2	1	1154997	<.005
766	5406008	593950	2a	cb,cl		2	1	1154998	0.006
								1154999	0.023
767	5405992	593915	2a	cl		1	1	443260	0.116
775	5406572	593628	12q	cb,cl		2	1	443261	0.012
782	5406171	593204	15c	?	2 rusty			443262	<.005
786	5406161	592901	12r	rusty		2	1 gn	443263	9.84
789	5405987	592528	12c	cb		2	0	443264	0.012
790	5406014	592684	12c	rusty		2	Rusty	443265	0.009
792	5406019	593099	15c	pk		2		443266	2.885
809	5405875	593241	10g	cl?		2	?	443267	0.029
811	5405911	593117	12r			2	0	443268	0.078
824	5405650	592570	15b	cb,cl		2	1	443269	0.01

826	5405788	592773	15b	pk		1	0	443270	<.005
828	5405808	592941	15b quartz stock			2	0	443271	7.214
831	5405783	593097	15b	qtz stock		1	1	443272	0.069
832	5405587	593121	10g,12a,10l?	cl		2	1	443273	0.007
834	5405884	592096	12g,10g	cl		2	1	443274	0.008
839	5405722	592458	12fc			1	0	443275	<.005
840	5405612	592504	15b	se	2 Fe		1	443276	0.276
843	5405469	592008	12b			1	0	443277	0.006
888	5405257	592265	15b	se		2	1	443288	<.005
890	5404985	592138	15b	sehe		2	galena?	443289	0.086
895	5405080	592211	15bc	se,cb		2		443290	0.006
899	5405196	592285	15b	se,cb		2	1	443291	0.007
901	5405308	592332	15b	se		2	0	443292	0.593
914	5404986	592227	15b			2	1	443293	0.006
3	5404491	591955	10g			1	0	443294	0.006
7	5404615	592114	2a	cl		1	0	443295	<.005
10	5405210	592135	15b	pk		1	0	443296	<.005
15	5404707	592371	2a,10g			1	0	443297	<.005
18	5405035	592358	15a,10g	cl		1	0	443298	<.005
29	5405188	592413	15a	cl?		2	0	443299	0.006
32	5405551	592856	10d	hb		1	0	443300	<.005
34	5405561	593645	2s	cbcl		2	0	95754	<0.005
40	5405374	593062	10g-3a	cl		2	0	95755	<0.005
41	5405388	593018	3a,10g			2	0	95756	<0.005
45	5404938	593369	10g	clcb		2	0	95757	<0.005
54	5405017	593824	2a	cl		1	0	95758	<0.005
56	5405533	592842	3a-10g	hb?		1	1	95759	3.573
61	5405646	592914	15a,10g	cbcl		2	1	95760	0.007
68	5405666	592940	10g,12a			2	1	95761	0.041
69	5405628	592971	10g,12a			2	1	95762	38.785
74	5405529	592894	10g	cl		2	1	95763	1.959
77	5405076	592956	10g			1	0	95764	0.022
79	5404864	593060	2a				0	95765	0.048
90	5404670	593149	2a,10g	clcb		2	0	95766	0.01
91	5406459	592878	12r			1	0	95767	<0.005
92	5406455	592919	12r			1	1	95768	0.18
93	5406483	592938	12r			1	1	95769	<0.005
94	5406485	593078	12r	rusty zone		2	1	95770	0.013
95	5406456	593073	12r			2	0	95771	<0.005
96	5406411	593063	12r	rusty fracs		1	1	95772	0.006
97	5406387	592708	15c	rusty fracs and qv		1	0	95773	<0.005
98	5405760	592927	15c			1	0	95774	0.006

Approximately half of the analyses of Table 2 have a gold content below the detection limit of .005 ppm and are listed as <.005. A large proportion of samples have a gold content in the range of .005 to .05 ppm Au and only a small number of samples have more than 1.0 ppm Au. The highest gold values come from samples taken at known gold occurrences such as the Elizabeth, Rebair and Adit localities.

Generalities can be made by examining the data of Table 2. For example, most gold-bearing quartz veins are hosted in intrusive rocks such as gabbro (10g), tonalite (12) and granite (15) whereas metavolcanic rocks (units 2 and 3) are less well represented. Likewise, accessory sulphide such as pyrite is commonly associated with mineralized quartz veins. Typically, rocks adjacent to the quartz veins show an assemblage of greenschist facies silicate minerals such as chlorite and a carbonate which is probably ankerite.

The proportional-dot diagram (Figure 7) illustrates the distribution of gold assays of Table 2. Anomalously high gold values (>.05 ppm Au) are shown by large dots in Figure 7. Anomalously high gold is present not-only at the historic occurrences such as the Elizabeth but large dots are also concentrated within a zone extending SSW from immediately west of the adit to northern Modred Lake (see ellipse in Figure 7). The zone of anomalous gold lies within mainly tonalitic to granitic intrusive rocks adjacent to the greenstone belt. Although the zone from west of the adit to Modred Lake shows some trenches, it lies largely outside the areas of intense historic exploration such as at the Elizabeth.

Recommendations

Results of the present work provide insight on the location and type of future exploration work with the goal of finding gold new mineralization and adding to previously-know occurrences in the Elizabeth Mine area. Future work should be concentrated in areas of plutonic rock west and southwest of the Elizabeth Mine (within and adjacent to the elliptical area of Figure 7). The work should include detailed mapping and sampling focused on identifying zones of alteration and deformation. Such zones have assemblages of greenschist-facies minerals (chlorite +carbonate) and accessory sulphide minerals (mainly pyrite, chalcopyrite and galena) and can show a strong foliation or schistosity. The alteration/deformation zones and associated quartz veins should be sampled for gold content. A portable rock-saw will be useful for obtaining samples from many outcrops. Finally, assay results should be plotted on a detailed map to identify areas worthy of further work; ensuing work might include trenching and drilling.

Available records suggest about 100 boreholes and numerous assays have been made in the immediate area of the Elizabeth Mine and yet no complete record of this work is available. A careful office-study should be made of existing records to assemble a map of boreholes and assays in the area of the Elizabeth Mine. Possibly, the ore-reserve calculation of Larouche and Clark (1988) can be updated.

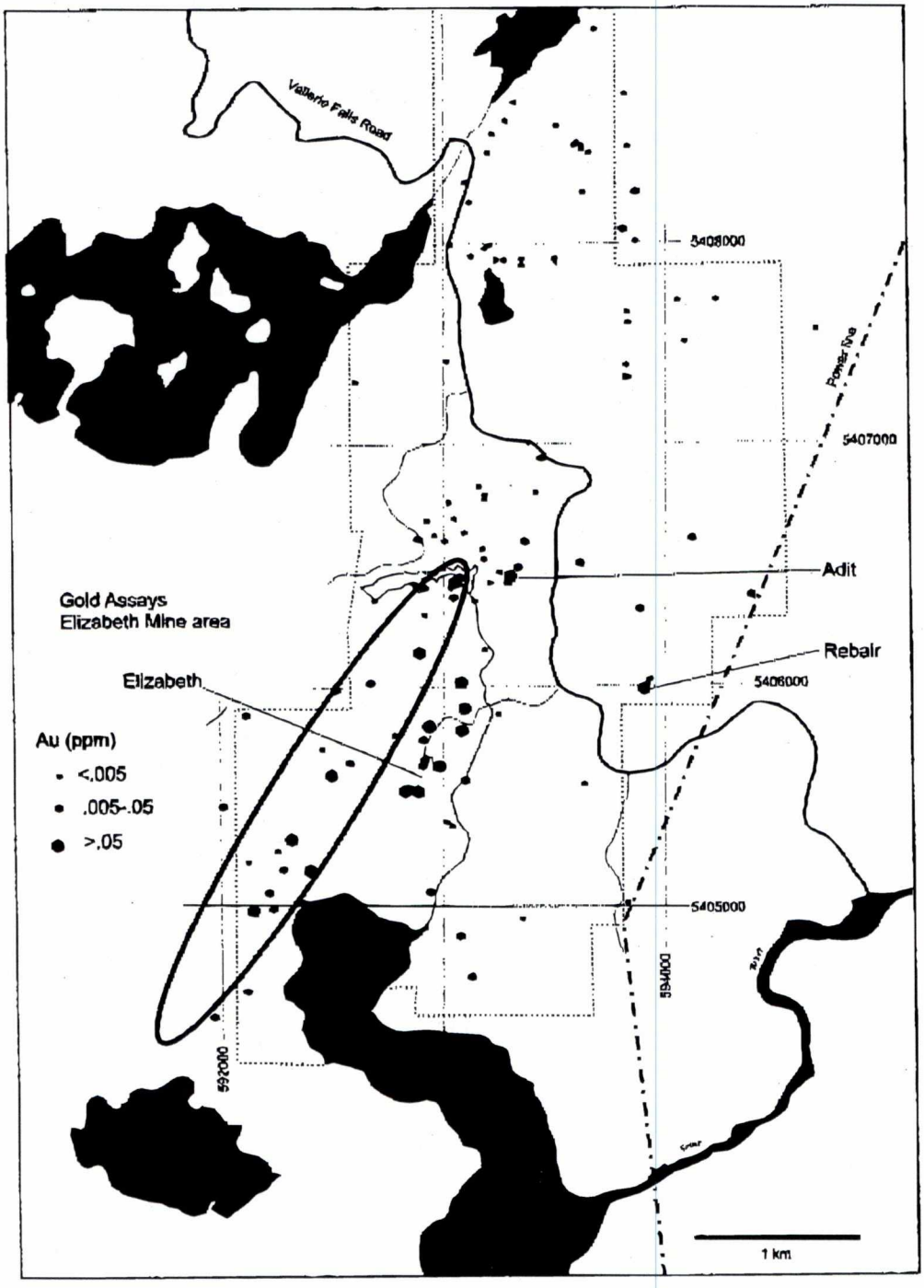

Figure 7: Proportional dot diagram of gold assays, Elizabeth Mine area. The ellipse represents a zone of anomalous gold assays outside of historic gold occurrences.

References

Larouche, C. and Clark, G. 1988. Results of the exploration work on the Elizabeth Mine property owned by Societe Miniere Mimiska Inc. in Freeborn and Baker Townships Thunder Bay area, Ontario; unpublished report by Societe Miniere Mimiska Inc., files of Fern Elizabeth Exploration, Atikokan.

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Appendix

Lab certificates for assays and signature of the author

ACCURASSAY LABORATORIES

Tuesday, September 8, 2015

Final Certificate

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

Date Received: 09/31/2015
Date Completed: 09/08/2015
Job #: 201544047
Reference:
Sample #: 21

Acc #	Client ID	Au gA (ppm)	Ag Grav ppm
361168	095781	6.04*	
361169	095782	>10,000	38,785
361170	095783	1.959	
361171	095784	0.022	
361172	095785	0.048	
361173	095786	0.010	
361174	095787	<0.005	
361175	095788	0.180	
361176	095789	<0.005	
361177	095770	0.013	
361178	095770 Dup	0.014	
361179	095771	<0.005	
361180	095772	0.006	
361181	095773	<0.005	
361182	095774	0.008	
363216	095754	<0.005	
363217	095755	<0.005	
363218	095756	<0.005	
363219	095757	<0.005	
363220	095758	<0.005	
363221	095759	3.573	
363222	095760	0.007	

APPLIED SCOPES: ALP1. ALFA1. ALFA7

Validated By:

Certified By:

Jason Moore, VP Operations, Assayer

Authorized By:

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Page 1 of 2

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Ph#: (807) 597-6293
Email: nymlake@live.com

Date Received: 08/21/2015
Date Completed: 09/08/2015
Job #: 201543668
Reference:
Sample #: 39

Analyte	Client ID	Au gpt (ppm)	Au Grav gpm
329561	443262	<0.005	
329562	443263	<0.005	9.840
329563	443264	0.017	
329564	443265	0.009	
329565	443266	2.885	
329566	443267	0.029	
329567	443268	0.071	
329568	443269	0.010	
329569	443270	<0.005	
329570	443271	7.214	
329571	443271 Dup	5.178	
329572	443272	0.009	
329573	443273	0.007	
329574	443274	0.007	
329575	443275	0.007	
329576	443276	0.009	
329577	443277	<0.005	
329578	443278	<0.005	
329579	443279	<0.005	
329580	443280	0.006	
329581	443281	0.006	
329582	443281 Dup	<0.005	
329583	443282	0.065	
329584	443283	0.007	
329585	443284	0.009	

APPLIED SCOPES: ALP1, ALFA1, ALFA7

Validated By:

Certified By:

Andrew Oleski
Lab Manager - Thunder Bay

Authorized By:

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Tuesday, September 8, 2015

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Email: nymlake@live.com

Date Received: 08/21/2015
Date Completed: 09/08/2015
Job #: 201543886
Reference:
Sample #: 39

Acc #	Client ID	Au g/t (ppm)	Au Grav itsm
329586	443285	<0.005	
329587	443286	0.277	
329588	443287	0.008	
329589	443288	<0.005	
329590	443289	0.006	
329591	443290	0.000	
329592	443291	0.007	
329593	443291: Dup	0.008	
329594	443292	0.593	
329595	443293	0.006	
329596	443294	0.008	
329597	443295	<0.005	
329598	443296	<0.005	
329599	443297	<0.005	
329600	443298	<0.005	
329601	443299	0.008	
329602	443300	<0.005	

APPLIED SCOPES: ALP1, ALFA1, ALFA7

Validated By:

Certified By:

Andrew Mask
Lab Manager - Thunder Bay

Authorized By:

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Wednesday, August 12, 2015

Final Certificate

Fern Elizabeth Exploration
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Ph#: (807) 597-8293
Email: nymlake@live.com

Date Received: 07/15/2015
Date Completed: 08/04/2015
Job #: 2015a3002
Reference:
Sample #: 44

Acc #	Client ID	Au gpt (ppm)
267308	1154959	0.015
267310	1154960	0.016
267311	1154961	<0.005
267312	1154962	<0.005
267313	1154963	<0.005
267314	1154964	<0.005
267315	1154965	<0.005
267316	1154966	<0.005
267317	1154967	<0.005
267318	1154968	<0.005
267319	1154968 Dup	<0.005
267320	1154969	<0.005
267321	1154970	0.006
267322	1154971	<0.005
267323	1154972	<0.005
267324	1154973	<0.005
267325	1154974	<0.005
267326	1154975	<0.005
267327	1154976	<0.005
267328	1154977	<0.005
267329	1154978	<0.005
267330	1154978 Dup	<0.005
267331	1154979	<0.005
267332	1154980	<0.005
267333	1154981	<0.005

APPLIED SCOPES: ALP1, ALFA1

Validated By:
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Assistant Manager - Thunder Bay

Certified By:
Derek Demianuk, VP Quality

Authorized By:
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-0328-08/12/2015 2:40 PM

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Date Received: 07/15/2015
Date Completed: 08/04/2015
Job #: 2D1543002
Reference:
Sample #: 44

Acc #	Client ID	Au g/t (ppm)
267334	1154982	0.030
267335	1154983	0.010
267336	1154984	0.021
267337	1154985	0.011
267338	1154986	2.976
267339	1154987	0.011
267340	1154988	<0.005
267341	1154988 Dup	<0.005
267342	1154989	1.804
267343	1154990	0.003
267344	1154991	0.056
267345	1154992	<0.005
267346	1154993	0.006
267347	1154994	0.008
267348	1154995	0.005
267349	1154996	0.009
267350	1154997	<0.005
267351	1154998	0.006
267352	1154998 Dup	0.022
267353	1154999	0.023
267354	1155000	0.070
267355	443280	0.116
267356	443281	0.012

APPLIED SCOPES: ALP1, ALFA1

Validated By:
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Assistant Manager - Thunder Bay

Certified By:
Derek Demeniuk, VP Quality

Authorized By:
Derek Demeniuk, VP Quality

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Date Received: 06/23/2015
Date Completed: 07/14/2015
Job #: 201542508
Reference:
Sample #: 22

Acc #	Client ID	Au gr/t (ppm)
218743	1154887	0.048
218744	1154888	0.180
218745	1154889	<0.005
218746	1154890	<0.005
218747	1154891	<0.005
218748	1154892	<0.005
218749	1154893	0.296
218750	1154894	<0.005
218751	1154895	<0.005
218752	1154896	<0.005
218753	1154896 Dup	<0.005
218754	1154897	<0.005
218755	1154898	<0.005
218756	1154899	<0.005
218757	1154900	<0.005
218758	1154951	<0.005
218759	1154952	0.016
218760	1154953	<0.005
218761	1154954	<0.005
218762	1154955	0.006
218763	1154956	<0.005
218764	1154956 Dup	<0.005
218765	1154957	<0.005
218766	1154958	<0.005

APPLIED SCOPES: ALP1, ALFA1

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Lab Manager - Thunder Bay

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Thursday, July 9, 2015

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Date Received: 06/15/2015
Date Completed: 06/30/2015
Job #: 201542255
Reference:
Sample #: 35

Acc #	Client ID	Au gpt (ppm)
195749	1154851	0.001
195750	1154852	0.002
195751	1154853	0.001
195752	1154854	0.002
195753	1154855	0.001
195754	1154856	0.002
195755	1154857	0.000
195756	1154858	0.000
195757	1154859	0.002
195758	1154860	-0.001
195759	1154860 Dup	0.001
195760	1154861	0.002
195761	1154862	0.002
195762	1154863	0.000
195763	1154864	-0.001
195764	1154865	0.004
195765	1154866	-0.001
195766	1154867	0.002
195767	1154868	-0.001
195768	1154869	-0.001
195769	1154871	-0.003
195770	1154871 Dup	0.000
195771	1154872	0.050
195772	1154873	0.001
195773	1154874	0.011

APPLIED SCOPES: ALP1, ALFA1

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Date Received: 06/15/2015
Date Completed: 06/30/2015
Job #: 201542255
Reference:
Sample #: 35

Acc #	Client ID	Au g/t (ppm)
195774	1154875	-0.000
195775	1154876	-0.000
195776	1154877	0.001
195777	1154878	-0.000
195778	1154879	0.001
195779	1154880	0.004
195780	1154881	-0.002
195781	1154881 Dup	-0.001
195782	1154882	0.002
195783	1154883	-0.002
195784	1154884	-0.002
195785	1154885	-0.002
195786	1154886	-0.001

APPLIED SCOPES: ALP1, ALFA1

Validated By:
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Assistant Manager - Thunder Bay

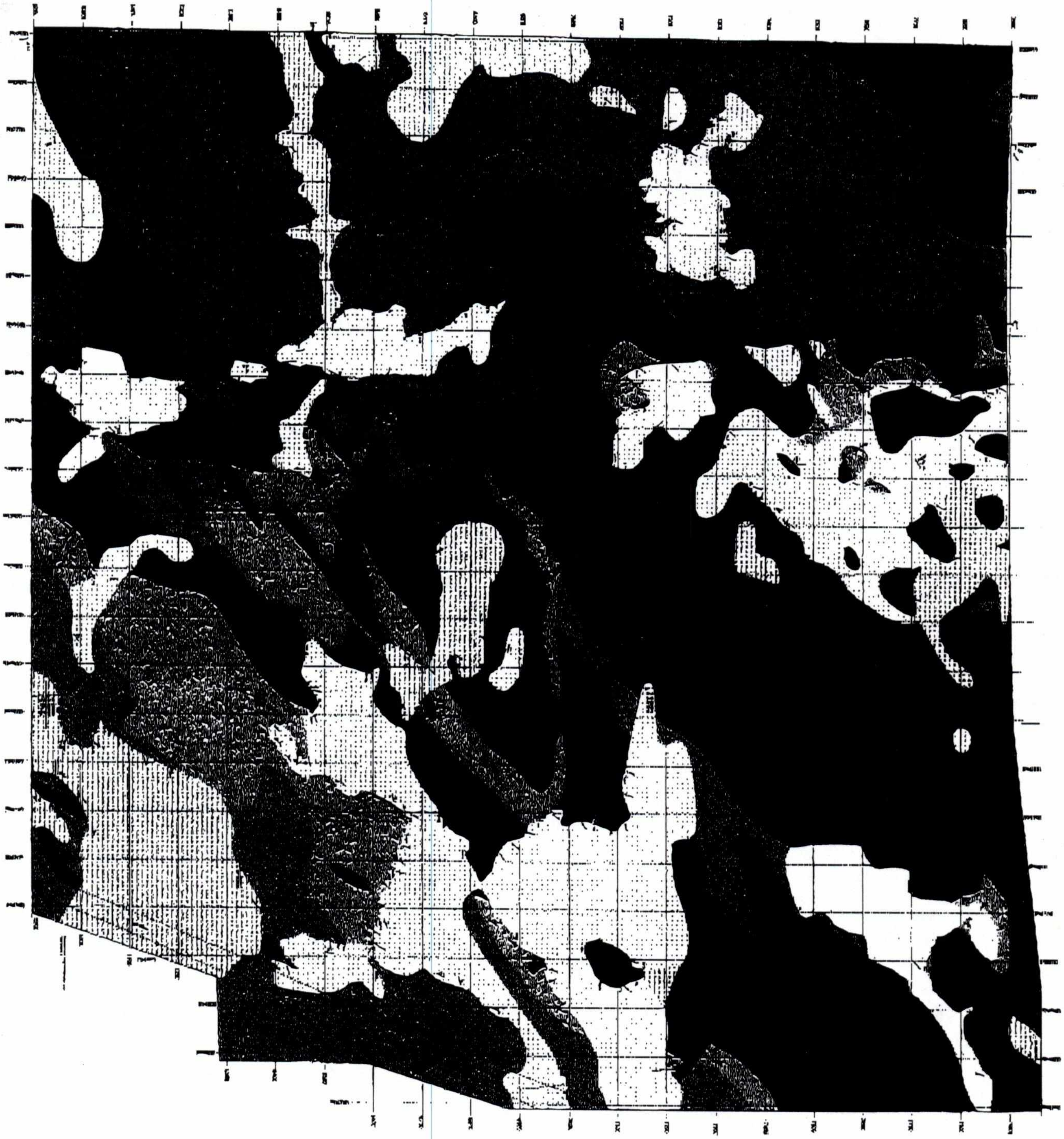
Certified By:
Andrew Cieski
Lab Manager - Thunder Bay

Authorized By:
Derek Demeniuk, VP Quality

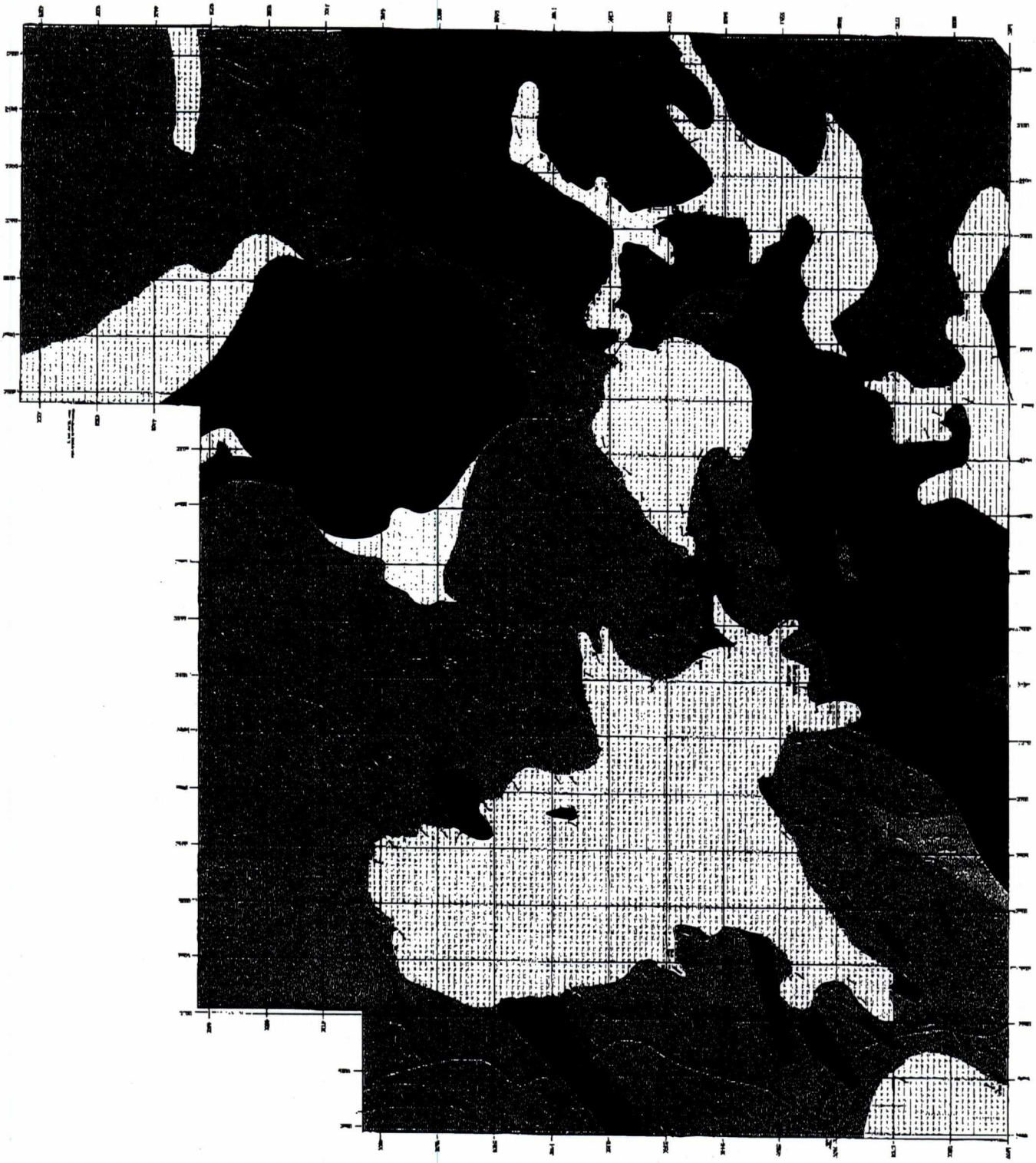
The survey work was performed by and the report was written by the undersigned:

Denver Stone

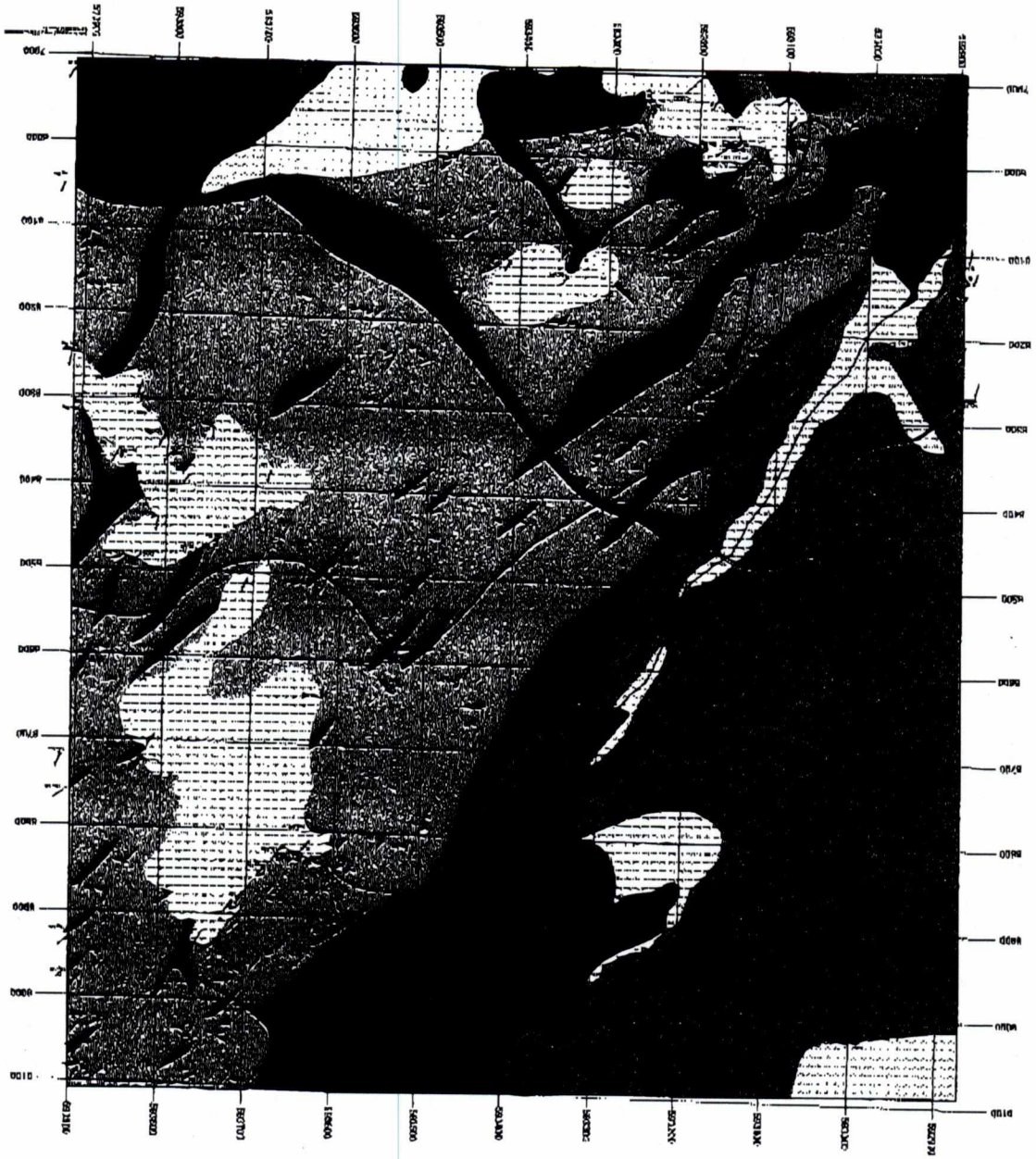
PhD, PEng



Adit



Elizabeth



Kranckle Lake area

PRECAMBRIAN GEOLOGY

of

Mining claims of Fern Elizabeth Exploration Limited

Aikelan, northwestern Ontario
NTS Reference 52 B/13

LEGEND*

ARCHEAN

NEOARCHEAN (2.5 to 2.9 Ga)

Biotite Granite Suite

15 **Biotite Granodiorite to Granite**
- 15a Unsubdivided
- 15b Leucocratic; <5% biotite; inequigranular; white to pink; massive to weakly foliated
- 15c Melanocratic; >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 gray; fine to coarse grained; foliated to massive
- 12c Melanocratic; 7 to 20% biotite; gray to white; medium grained; foliated to massive
- 12d Dikes
- 12g Weakly gneissic, gradational to gneissic suite
- 12h Mafic; >20% hornblende±biotite; typically heterogeneous and gradational to quartz diorite
- 12q Quartz megacrystic
- 12r Granodiorite; gradational to granite suite

INTRUSIVE CONTACT

Mafic Suite

10 **Mafic Intrusive Rocks**
- 10a Unsubdivided
- 10d Late massive gabbro to diorite
- 10l Lamprophyre

- 10g Hornblende gabbro, hornblende-clinopyroxene gabbro (plagioclase-hornblende-pyroxene)
- 10s Sheared or schistose gabbro

7 **Metasedimentary Rocks**
- 7w Unsubdivided
- 7b Semipelites, minor siltstone
- 7c Conglomerate
- 7f Iron Formation
- 7g Siltstone, minor sandstone

6 **Mafic Metavolcanic Rocks**
- 6a Unsubdivided
- 6p Pillowed
- 6s Schistose, typically feldspar phyric

MESOARCHEAN (2.9 to 3.4 Ga)

3 **Mafic to Ultramafic Metavolcanic Rocks (>35% and >45% mafic minerals, respectively)**
- 3a Unsubdivided
- 3m Massive flow
- 3p Pillowed
- 3s Schistose, typically feldspar-phyric

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

1 **Clastic metasedimentary Rocks**
- 1a Unsubdivided
- 1b Semipelites, minor siltstone
- 1c Conglomerate
- 1g Siltstone, minor sandstone

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

*This legend represents 3 adjoining map areas by this author.

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)
- Gold assay (parts per million)
- Swamp

Abbreviations

actp	actinolite	ep	epidote
act	actinolite	gn	galena
bt	biotite	hb	hornblende
cb	carbonate	py	pyrite
cl	chlorite	qtw	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 16.

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

Geology and compilation by D. Stone and W. Carroll 2015.
Digital drafting by D. Stone.

PRODIGY
GOLD INCORPORATED
TODAY'S DISCOVERY, TOMORROW'S FUTURE

October 24, 2015

Geoscience Assessment Office
Willet Green Miller Centre
933 Ramsey Lake Road, 3rd Floor
Sudbury Ontario P3E 6B5

Geoscience Assessors:

Re: Application to Distribute Banked Assessment Credits from Kaby Lake Project to Sleeping Giant Project and Hercules Project, Thunder Bay Mining Division

Please find attached, one assessment form to distribute banked credits from claim TB4213688 to claim TB4213680, TB4213681 and TB4204274. These claims are registered in the name of Prodigy Gold Inc.

I trust you will find everything in order.

Yours sincerely,

R. Sedore

Randy Sedore

PRODIGY GOLD INC.
Land Manager
194 Leeland Way
Killarney Road, NB
E3A 5M7

? HELP ? Clear Form Print Form

Ontario Ministry of Northern Development and Mines

Application to Distribute Banked Assessment Work Credits

Mining Act, Assessment Work Regulation Section 4

Office Use Only

Personal information collected on this form is obtained under the authority of subsection 66(1) of the *Mining Act*. Under section 8 of the *Mining Act*, the information is used to maintain a public record. Questions about this collection should be directed to a Provincial Mining Recorder, Ministry of Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury ON P3E 6B5. Telephone 1 888 415-9845.

Note: All correspondence will be sent to the address on file in the Provincial Recording Office, per *Mining Act* subsections 19(6) and (8).

1. **Recorded holder(s).** Please type or print in ink. Attach a list if necessary.

Name	Client Number	Telephone Number	Fax Number
PRODIGY GOLD INC.	401568	(705) 717-8506	(905) 248-5003

2. **Distribution of Work Credits From Bank.** Attach a sketch which shows the contiguous link of mining claims to where the work was performed.

1. Work Declaration Number. This is the transaction number of the original assessment work form where original banked amounts are listed.		2. List the Mining Claim number(s), for unpatented mining claims. For other eligible Mining Land, indicate the proper identifier: * For Mining lease: lease number * For Patents: parcel number	3. Number of Claim Units. For other types of mining land, list hectares.	4. Total value of work to be drawn from the bank of the mining claim or other mining land listed in column 2.	5. Value of work to be applied to the mining claim.
W 1240.00608	1	TB4213688	16	$76,457	$0
	2	TB4213680	16	$0	$28,504
	3	TB4213681	16	$0	$32,000
	4	TB4204274	8	$0	$15,953
	5				
	6				
	7				
	8				
	9				
		Column Totals	56	$76,457	$76,457

3. **Certification by Recorded Holder or Agent**

I, Randy Sedore (Print Name), do hereby certify that the above work credits are eligible for assignment to contiguous claims under subsection 7 (1) of the Assessment Work Regulation 6/96.

Signature of Recorded Holder or Agent (authorized in writing) R. Sedore — Date (yyyy/mm/dd) 2015/10/24

Agent's Telephone Number (if agent signed above) (705) 717-8506 — Agent's Fax Number (905) 248-5003

For questions on completing this form, contact the Geoscience Assessment Office at 1 888 415-9845.

"Mining Lands Website: http://www.mndm.gov.on.ca/mndm/mines/lands/default_e.asp"

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