

41113SW2001 OP93-378 GILBERT

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1993 ONTARIO PROSPECTOR'S ASSISTANCE PROGRAM

FINAL REPORT

EXPLORATION ON THE WEST HALF, BENNY GREENSTONE BELT

CRAIG, GILBERT and HOTTE TOWNSHIPS

SUDBURY MINING DIVISION, ONTARIO

by

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2 - Project #1 and #2 Location Map

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Location and Access

The Benny Project is located in the west half of the Benny Greenstone Belt, approximately 65 kilometers northwest of Sudbury. Ontario. It consists of two areas of interest. Project #1 is located in northern Craig Township (Claim Map Plan G-2952), east of Bluewater Lake and is covered by Block Claim 1191407. The NTS map is 411/13, centered at Latitude 46° 46' North, Longitude 81° 46' West. Project #2 is located in the east half of Hotte Township and the west end of Gilbert townships in unstaked Crown Land. The area lies between Upper Shakwa Lake on the south, Landry Lake on the north, Wensley Lake on the west (all in Hotte Twp.) and Agnes River on the east (in Gilbert Twp.).

Project #1 is accessible all year by bush plane from Sudbury to Bluewater Lake, or by snowmobile trails in the winter. Project #2 is accessible all year by bush plane to Upper Shakwa, Wensley or Landry lakes in Hotte Township. In the summer a main line logging road runs north from Webbwood, just west of Espanola to the west boundary of Hotte Township. Branch lines are open from there east to Upper Shakwa Lake and Agnes River.

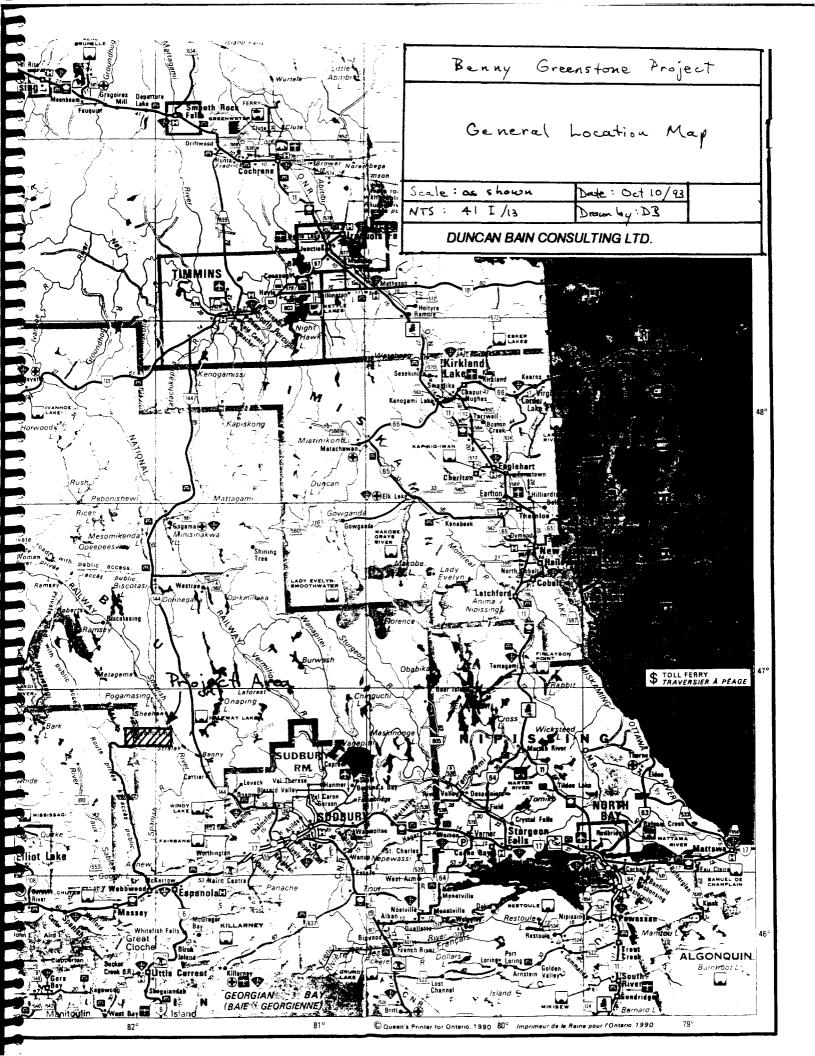
Prospecting Targets

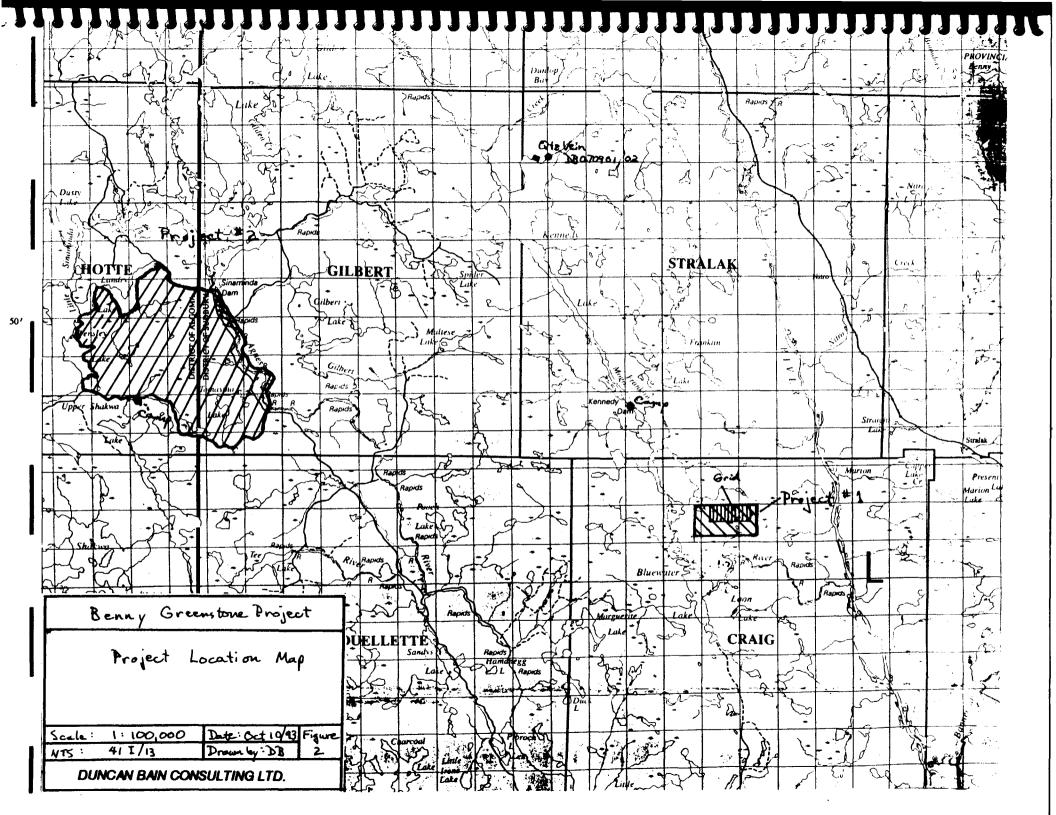
The Benny Greenstone Project is being initiated to explore for copper, lead, zinc, gold and silver.

Geology

The project area covers the west half of the Benny Greenstone Belt (DGS Report 206, Card and Innis, 1981). This is a belt of Archean-age metavolcanic rocks and volcanically derived metasedimentary rocks which trends eastwest for approximately 50 kilometres. The volcanic rocks consist of

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tholeiitic and calcalkaline basalt and andesite flows, and intermediate to felsic pyroclastics. Some of the pyroclastics are lapilli and crystal tuffs, suggesting some proximity to a volcanic center. Associated metasediments consist of wacke, siltstone and chert. The chert may be a chemical precipitate associated with an exhalative event, or it may represent recrystallized highly siliceous tuffs. Several cycles of volcanic activity are present within the belt, generally dipping south at a moderate to steep angle and striking generally east-west. All cycles contain some stratiform sulphide mineralization, mainly as pyrite and pyrrhotite, although there are local concentrations of chalcopyrite, galena and sphalerite as disseminations, veins and lenses. All of these rocks have been metamorphosed to upper greenschist/lower amphibolite facies.

There are three deposit types that were explored for. The main interest was for volcanogenic massive sulphide deposits which may contain chalcopyrite (copper), galena (lead) and sphalerite (zinc), as well as minor gold and silver mineralization. The second deposit type was exhalative chert-hosted gold mineralization. The third type of deposit was vein-hosted gold mineralization associated with major fault systems. Exploration has been carried out in the past for zinc, lead, copper, silver and gold. The Geneva Lake Mine in Hess Township (east half of the Benny belt) has produced zinc, lead and silver. Other deposits include the Stralak East and West, in northeastern Craig Township and northwestern Ulster Township, and the Straight Lake Occurrence in southwestern Ulster Township. The project covers two areas. Project #1, covering Block Claim 1191407, is underlain by basalt, andesite and mafic tuff, intermediate tuff breccia and lapilli tuff, felsic tuff, lapilli tuff and crystal tuff,

-2-

tuffaceous wacke, siltstone, schistose micaceous chloritic metasediments (alteration halo?) and chert. Stratiform sulphide showings, including at least one containing chalcopyrite mineralization, have been reported on the claims. An oxide facies iron formation (silica-magnetite) lies along strike to the east, in Block Claim 1177294. These formations are cut by gabbro dykes and two major northwest-striking fault zones. Project #2 is situated in eastern Hotte and western Gilbert townships, where the belt has not mapped in detail (only 1:250,000). Along the western boundary of the area mapped in detail (east half of Gilbert Twp.) the geology consists of basalt, pillow basalt, andesite and mafic tuff, with only narrow lenses of intermediate and felsic volcanic rocks. The mafic units are cut by several northwest striking gabbro dykes. The only other information available is from OGS Bedrock Geology Map 2544, at 1:1,000,000, indicating a continuation of the Benny Greenstone Belt through Hotte Township, mainly as intermediate to mafic volcanic rocks. However, the map legend indicates the possibility of chert and iron formation within this unit. A sulphide showing containing chalcopyrite and sphalerite mineralization was noted in the southeast corner of Gilbert Township, east of this project area.

FREVIOUS WORK

Project #1 was examined in 1959 by Min-Ore Mines Ltd. At that time a ground EM survey was conducted and four anomalies were noted within the present property boundary. These were drilled the same year by Min-Ore (DDH# 14 to 19). Chalcopyrite was noted in all of the holes but no assay data was included in the drill report. In 1973 J. Descarreaux and Associates conducted an airborne EM survey over the entire belt, including this area. Tex-Sol also did an airborne survey that year. In 1981 Rio Tinto conducted

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an airborne EM and magnetometer survey over the belt, including the project area. No further work has been reported from GDIF 242, for Craig Township. In 1991 an airborne EM and magnetometer survey was performed by the Ontario government over the entire belt (OGS Geophysical/Geochemical Series 81538 to 81542). Project #2 covers a section of the Benny Greenstone Belt which has not been mapped in detail. No Geological Data Information Folio (GDIF) exists for either Gilbert or Hotte Townships. Only one area of economic mineralization (chalcopyrite and sphalerite) was noted from government reports (Card and Innis 1981). This occurs in the southeast corner of Gilbert Township, east of the Project #2 area. An airborne geophysical survey published by the Ontario Geological Survey in 1991 showed a weak to moderate EM response 800 meters south of the Gilbert Twp. showing. A linear magnetic anomaly extends northwest from the reported showing for a kilometer. Weak EM responses were also noted in the unmapped areas in Hotte and Gilbert townships and strong linear magnetic anomalies were noted there. It should be mentioned that EM and magnetic responses over known deposits farther east were low to moderate, with stronger responses of both types occurring with graphite/pyrrhotite.

1993 EXPLORATION PROGRAM

A Phase 1 program totalling \$9,940.00 was proposed to explore the western section of the Benny Greenstone Belt for economic mineralization. It involved a two person crew in the field for 21 days, with an additional 4 days to write the report and draft the various maps. Project #1 would require 10 to 14 days in the field from a camp based at Bluewater Lake. EM targets and reported trenches would be relocated. A reconnaissance grid (cut baseline and crosslines) would be established and the grid would be

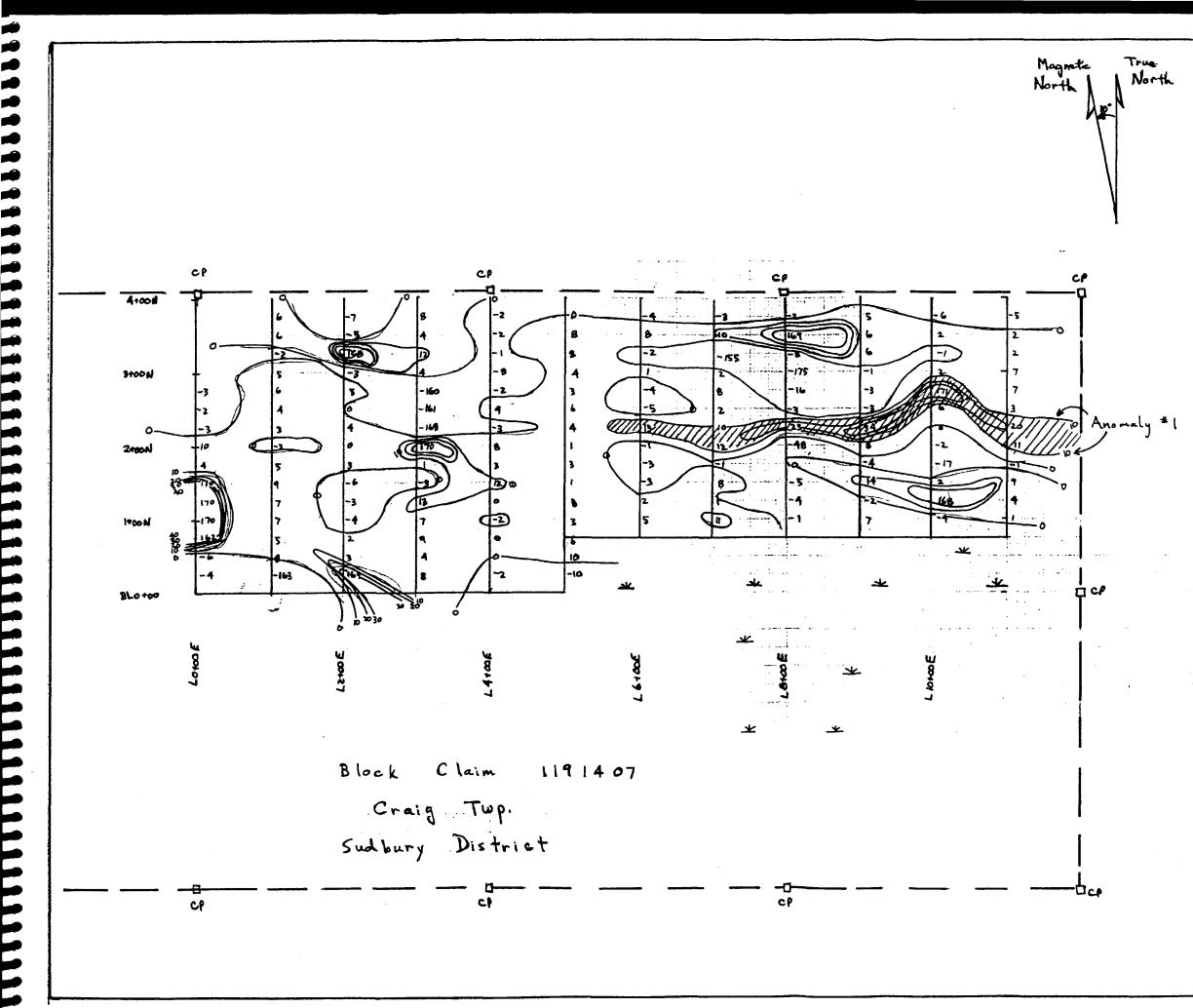
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resurveyed using Shootback Horizontal Loop EM and magnetometer. The grid would be mapped in detail, and any areas of interest would be sampled. The reported old trenches would be retrenched, mapped and resampled for fresh material. Program #2 was a reconnaissance mapping and prospecting program. Airphotos would be used to spot outcrop for mapping. Agnes River runs north along the Hotte/Gilbert townships border, essentially cutting across the greenstone belt. Road access to the river was used to take stream sediment samples to test for elevated metals concentrations whose source would be in the surrounding volcanic rocks. An estimated 100 rock and stream sediment samples would be dried, pulverized and assayed for 24 elements by ICP, plus gold by Fire Assay and graphite furnace Atomic Absorption finish. Further work would be dependent on the results of this program.

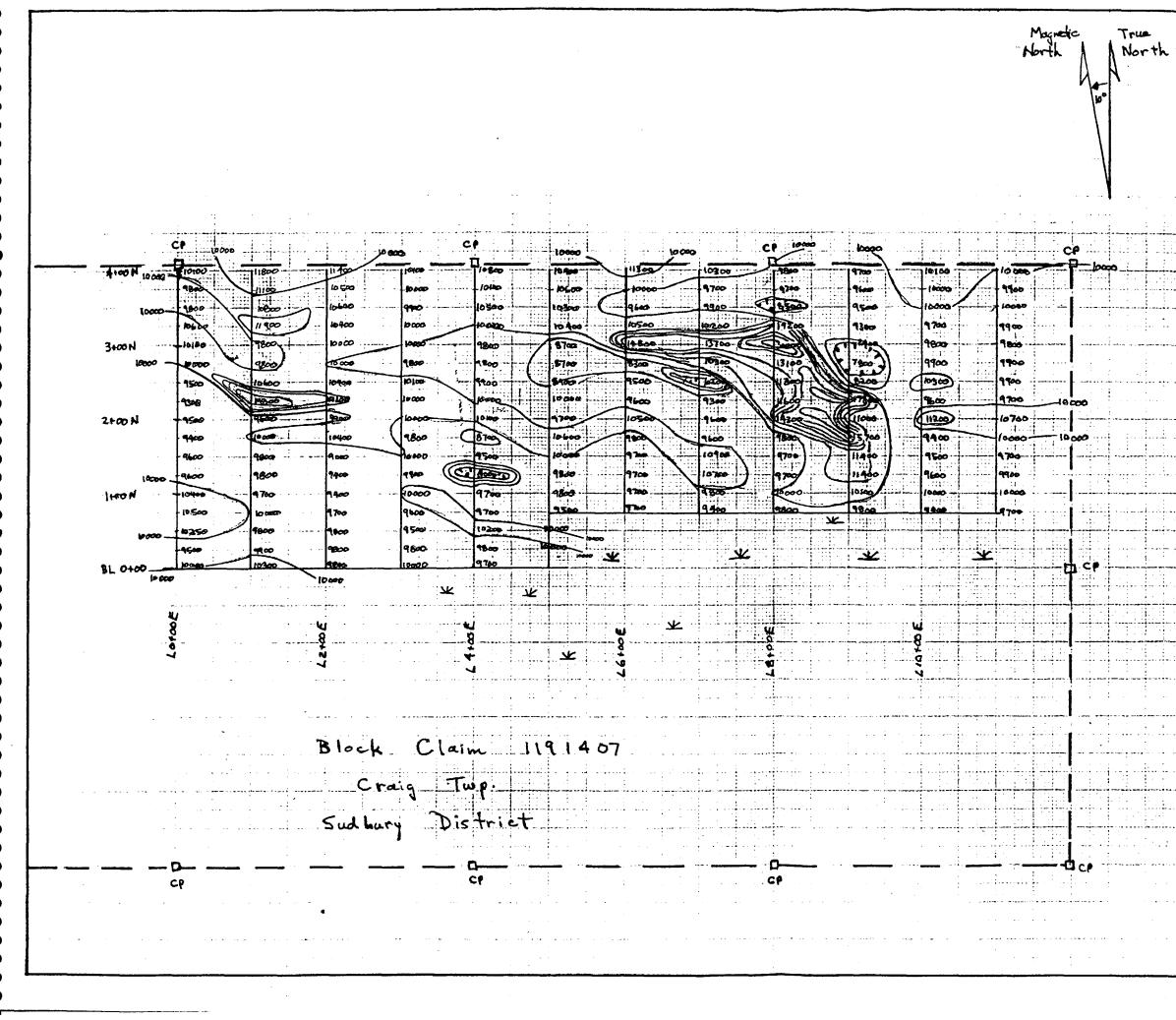
WORK DONE AND RESULTS

Fieldwork for Project #1 occurred from June 28, 1993 to July 12, 1993. A grid totalling 4.0 kilometers was cut to cover the most promising EM/magnetic anomalies and associated diamond drill holes noted from previous work (Figure 2). Over this grid a Shootback Horizontal Loop EM survey and magnetometer survey were performed to provide greater definition to those anomalies noted from the 1991 airborne survey (Figure 3a,b). The EM survey shows seven anomalies of interest. The four occurring in the west half of the grid can be related to near surface responses from muskeg and/or conductive clays. They have no continuity. In the east half of the grid only one of three anomalies is more than a single site response. This Anomaly #1 extends from L. 6+00E 2+25N to L. 11+00E 2+25N, a distance of 500 meters. The magnetometer survey shows that the only major anomaly

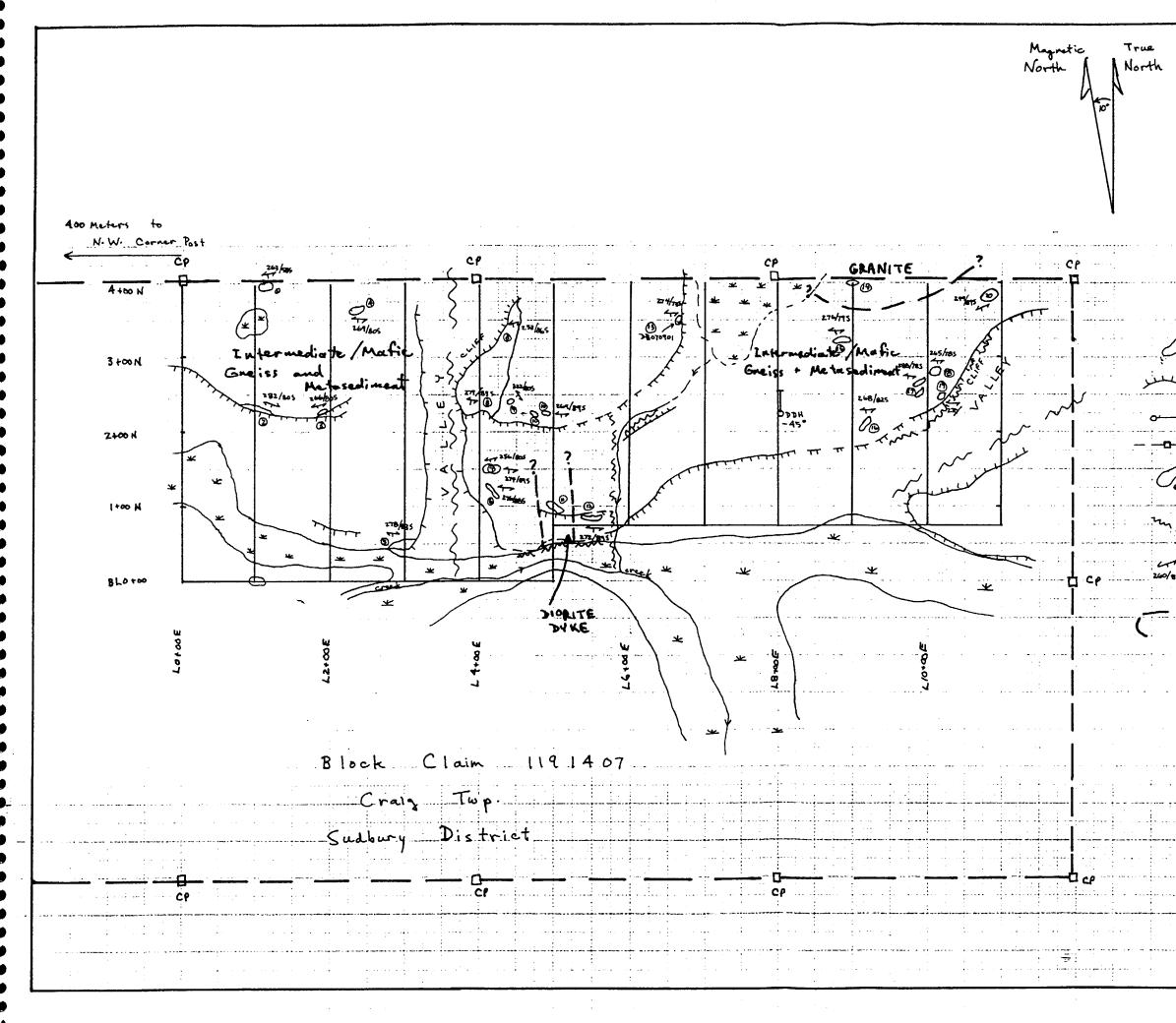
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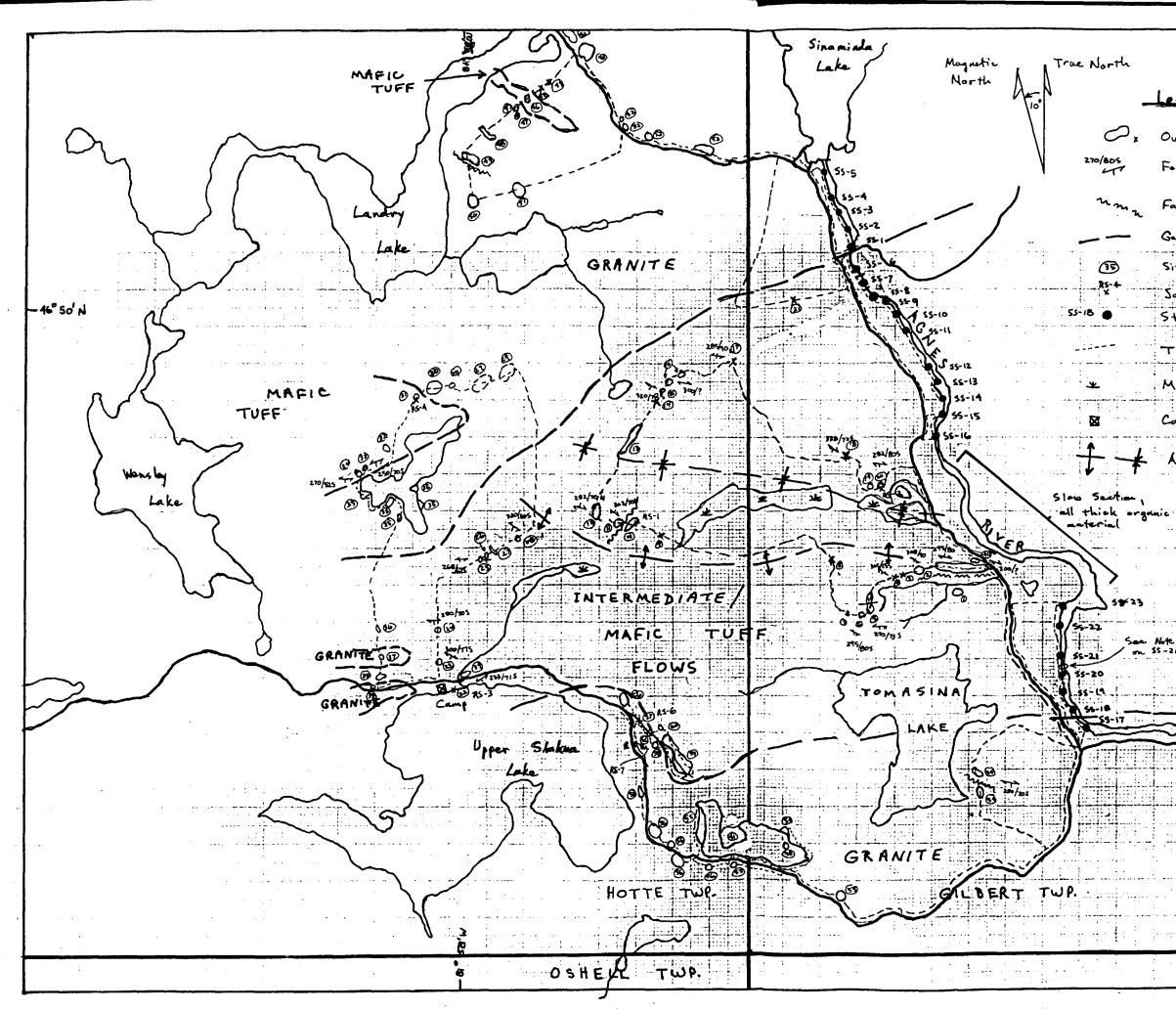
Instrument: Crone Shootback EM Frequency: Low 390 Hz Coil Spacing: 50 m +5 - Sum of Operator #1 + #2 Reading (Appendix A) Operators Facing West - Claim Post, Boundary Cedar Swamp × Banny Greenstone Project Project # 1 Shootback EM Survey - Horizondel Loop : 1:5000 Date: Oct 10/0 Figure 4/1/13 Drewn by: DB 3a NTS: 4/1/13 Drewn by : DB DUNCAN BAIN CONSULTING LTD.



Instrument: Proton Precession Magnetonia Calibration: 30,000 & Maximum Baccoline: 10,000 & Contour Interval: 100 8 Magnetic "High" Magnetic Claim Boundary, Post Cedar Swamp St. Benny Greenstone Project Project # 1 Magnetioneter Survey Scale: 1: 5000 Date: Oct 10/3 NTS: 41 I/3 Drown by: DS DUNCAN BAIN CONSULTING LTD.



.egend Muskeg Topographic Break; steep, gentle لمنب Dnillhole Claim Boundary, Post Outcrop, with description # (see Appendix Fault - inferred Foliation, strike + dip Geological Contact, assumed Benny Greenstone Project Project # 1 Mapping + Prospecting 1:5000 Figu 3 c Date: Oct 10/3 NTS: 41 1/13 Drown by: DB DUNCAN BAIN CONSULTING LTD.



minor outcrop Outcrop 1 Foliation ; strike + dip Fault, assumed Geological Contract Site Description Sample Site - rock 46°50'N-Stream Sediment Sample Site Traverse Line Muskey Campsite Anticline, syncline Benny Greenstone Project Project #2 Mapping, Prospecting -and Stream Sediment Sampling Soale: 1:20000 Dramby DB Figure NTS 411/13 DUNCAN BAIN CONSULTING LTD.

occurs from L. 6+00E 3+00N to L. 10+00E 2+00N. It overlaps the EM Anomaly #1 at L. 9+00E 2+00N, suggesting the presence of pyrrhotite mineralization in the underlying bedrock. An attempt was made to locate the original 1959 trenches during mapping and prospecting. This attempt was unsuccessful due to much lower outcrop exposure and much thicker vegetation cover than was anticipated. Therefore no blasting or sampling of old trenches was done. The grid was prospected and mapped, but there was little bedrock exposure or mineralization noted (Figure 3c). The grid is underlain by intermixed intermediate and mafic gneiss suggesting a combination of volcanic tuffs and volcanically derived sediments which have been regionally metamorphosed to upper amphibolite facies. An outcrop of diorite dyke was noted, as was a single outcrop of granite. Sharp topographic breaks represent vertical faults. One of the old drillholes was relocated at L. 8+00E 2+45N by the discovery of a casing rod, and it appears to be collared north of EM Anomaly #1 noted from this years' survey. Only one rock sample was taken on the property (DB071001, see sample descriptions) as there was little worth assaying. Two samples were taken of a 1.5 meter wide rusty weathering quartz vein noted at the north end of Kennedy Lake (DB070901, 02; Exploration camp was located at the south end, at the Kennedy Lake Dam).

Project #2 was planned to continue from July 12 to July 18, 1993. Unseasonal working conditions led to a postponement of this part of the project until September 1. It continued until September 8, 1993, at which point all field work was completed. Two days were spent collecting stream sediment samples at approximately 100 m intervals along the Agnes River. No samples were taken where the streambed was thick organic material. A total of 23

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stream sediment samples were taken (Figure 4). Assay results are found in Appendix C. The survey shows that there were no significant elevated metal concentrations present in those stream sediment samples. Five days were spent mapping and prospecting the Project #2 area. Traverses, sample sites and outcrop are located on Figure 4. Outcrop exposure was 20%, mainly consisting of mafic gneisses derived from basalt and andesite tuffs. Occasional pillow basalts were noted, and rare showings of possible lapilli tuff and volcanically derived metasediments were found. There appears to be a syncline/anticline sequence present (possibly overturned pillows) asssociated with regional metamorphism. Much of the greenstone belt has been invaded by white and pink quartz-feldspar-(biotite)-(hornblende) granites. There was little indication of metasediments or chert. Several pyrite stringers in rusty weathering mafic gneiss (avg. 1/2%) were the only indication of sulphide mineralization and were sampled. No significant assays were noted from these samples. Sample descriptions are found in Appendix D.

RECOMMENDATIONS

It is recommended that Anomaly #1 in the Project #1 area should be further tested by soil sampling to determine if there is any significant sulphide mineralization underlying the anomaly. Further work would depend on the results of this investigation. No further work should be done on the Project #2 area. No mineralization was noted in outcrop or in the stream sediments. The area is moderately overgrown, making the discovery of new rock exposures with mineralization unlikely.

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APPENDIX A

GEOPHYSICAL DATA

GEGPHYSICAL DATA

Shootback EM Survey

Magnetometer

		- man a man party again to the state of the state of the state of the			
Line	Station	Operator 1	Operator 2	Sum	Gammas
0+00E	4+00N				10100
	3+75N				9800
	3+50N				9800
	3+25N				10600
	3+00N	72			10100
	2+75N	65			10000
	2+50N	72	-75	-2	9500
	2+25N	80	-67		9500
	2+00N	80	-75	10	9300
	1+75N	9 0	7 ()	4	9500
	1+50N	88	-76	170	9400
	1+25N	90	80	170	9600
	1+00N	88	82	170	9600
	0+75N	-70	80	162	10400
	0+50N	74	74	- 6	10500
	0+25N		64	4	10250
	0+00N		70		9500
1+00E	4+00N		-64		11800
	3+75N		-78	6	11100
	3+50N	70	78	ć	10800
	3+25N	84	80	-2	11900
	3+00N	-80	-82	5	9800
	2+75N	-75	-49	6	9800
	2+50N	38	-41	4	10600
	2+25N	5.5	-80	T.	19800
	2+00N	44	-62	-2	9600
	1+75N	78	-40	5	10000
	1+50N	67	-49	9	9800
	1+25N	4.9	-60	7	9800
	$1 \pm 00N$	56	-64	. 7	9700
	0+75N	67	-70	5	1.0000
	0+50N	69	-75	8	9800
	0+25N	78		-163	9900
	0+00N	-88		and the first free	10300
2+00E	4+00N	-75			11400
	3+75N	-85		-7	10500
	3+50N	82	68	-5	10600
	3+25N	85	80	168	10400
	3+00N	79	86	-3	10000
	2+75N	65	-88	ŝ	10000
	2+50N	45	-74	ō	10400
	2+25N	48	-65	4	11100
	2+00N	58	-4 i	, O	9900
	1+75N	44	-48		10400
	1+50N	46	-55		9000
	an e garactifi	-7 Ц,1	·		a na nativé

	1+25N	34	-30		9400
	1+00N	na sa Mana	49	4	9500
	0+75N	35	-58		9700
	O+SON	85	-70	3	98 00
	0+25N			169	9800
	0+00N		84		9800
3+00E	4+00N		-72		10100
	3+75N		-74	8	10000
	3+50N	BO	-70	4	9900
	3+25N	78	-71	12	10000
	3+00N	82	-72	4	10000
	2+75N	78	-76	-160	9800
	2+50N	-88	-84	-161	10100
	2+25N		84	-169	10000
	2+00N	-85	76	170	10000
	1+75N	86	79	1	9800
	1+50N	-75	-62		10000
	1+25N	-82	-55	13	9900
	1+00N	75	-54	2	10000
	0+75N	62	-56	9	9600
	0+50N	63	-50	4	9500
	0+25N	<u>60</u>		8	9800
	0+00N	58			10000
4+00E	4+00N	82			10800
	3+75N	54		2	10100
	3+50N	65	-84	2	10500
	3+25N	67	-56	1	<u>10000</u>
	3+00N	-58	-66	-8	9800
	2+75N	56	59		9800
	2+50N	26	56	4	9900
	2+25N	60	-52	3	10000
	2+00N	68	-29	8	10100
	1+75N	78	-52		8700
	1+50N	68	65	12	9500
	1+25N	72	ా ఉం ఉం	Q	4000
	1+00N	78	-68		9700
	0+75N	74	74	Ċ,	9700
	0+50N	78	-78	<u></u>	10200
	0+25N		-74	-2	9600
	0+00N		-80		9700
5+00E	4+00N		82		10400
	3+75N		-80	Ő	10600
	3+50N	-82	-72	8	10300
	3+25N	88	-74	8	10400
	3+00N	80	-72	4	8700
	2+75N	78	-64	3	8700
	2+50N	75	-45	ద	8900
	2+25N	70	-37	<i>⊾</i> .].	10000
	2+00N	49	-45	1	9700
	1+75N	38	-56		10600
	1+50N	48	-60	1	10000

	1+25N 1+00N 0+75N 0+50N 0+25N 0+00N	57 68 43 31 62 -88	-40 -25 -52 78	8 3 6 10 -10	9800 9800 9500
6+00E	4+00N 3+75N 3+50N 3+25N 2+75N 2+50N 2+25N 2+25N 2+00N 1+75N 1+75N 1+75N 1+75N 1+75N 1+75N 1+75N 0+75N 0+25N 0+25N 0+25N	85 82 56 49 48 64 85 57 52 59 64	-89 -74 -58 -48 -52 -69 -72 -58 -55 -62 -57 -59	-4 8 -2 1 -4 -5 13 -1 -5 25	$ \begin{array}{r} 11300\\ 10000\\ 9600\\ 10500\\ 14800\\ 8300\\ 9500\\ 9500\\ 9600\\ 10500\\ 9700\\ 9700\\ 9700\\ 9700\\ 9700\\ 9700\\ 9700 \end{array} $
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8+00E	4+00N 3+75N 3+50N 3+25N 3+00N 2+75N 2+50N 2+25N 2+25N 2+00N 1+75N 1+50N	84 88 80 86 90 70 85 42 54 50 46	-86 81 72 -89 74 67 -62 -90 -54	-2 169 -8 -175 -16 -3 23 -48 0 -5	9800 9700 8500 19200 30000 13100 11800 11800 14300 9800 9700

	1+25N 1+00N 0+75N 0+50N 0+25N 0+25N 0+00N	Mire et e é di	-55 -50 -52	4 1	9700 10000 9900
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11+00E	4+00N 3+75N 3+50N 3+25N 3+00N 2+75N 2+75N 2+50N 2+25N 2+25N 2+00N 1+75N 1+50N	28 42 56 58 54 84 84 -76	-33 -40 -54 -51 -49 -55 -64 -75 75 63 70	-5 2 7 7 3 20 11 -1 9	10000 9800 9900 9800 9700 9700 10700 10000 9700 9700

1+25N 1+00N	-54 -66	ó1	4	10000 9700
0+75N	-60			
0+50N				
0+25N				
Ō+OON				

OUTCROP DESCRIPTIONS

AFFENDIX B

PROJECT #1

- 1 -med. gr. hbld-biot gneiss with qtz lenses to 5 mm thick (boudinage), well fol., layering 2 mm
- 2 -f. gr. hbld gneiss, faintly layered, qtz lenses rare
- 3 -same as 2, slightly more siliceous
- 4 -knob of med. gr. hbld-biot gneiss, weak foliation
- 5 -weathers med.grey, fresh med grey qtz-feld-(hbld)(ser) gneiss, f.gr., weak fol.
- 6 -med brown weathering blue-grey silicified qtz-feld-hbld gneiss, slaty cleavage but granular, v.f.gr. tuff or volc. slt.
- 7 -lt. brown-grey weathering med. grey granular qtz-feld-(hbld) gneiss, minor 1 mm diam feld. frags (lapilli); occas. musc. rich, some sections with layering of felsic and mafic minerals
- 8 -rusty weathering (no sulphides) well layered qtz-feld-biot gneiss (metasediment), mafic and felsic layering to 5 cm wide, rusty from weathering of biotite; mafic layers may contain lithic feld. frags stretched along fol.; large o/c very resistant to weathering, cliff; in north half 10% of o/c is qtz-feld pegmatite
- 9 -med gr. hbld gneiss

- 10 -finely layered hbld gneiss
- 11 -grey brown weathering blue-grey fresh massive intermed/mafic med gr diabase/diorite dyke
- 12 -weakly bedded f.gr. intermed. tuff
- 13 -interbedded coarse + f.gr. well bedded mafic tuff; sample DB071001, finely dissem. 1/2% py in qtz stringers in hornblendite
- 14 -pink coarse gr. granite
- 15 -f.gr. blue grey massive granular mafic tuff (gneiss)
- 16 -mafic tuff banded with qtz eyes to 2 mm diam; 1/2% dissem. py grains
- 17 -f.gr. intermed. tuff
- 18 -well layered lt. brown weathering med. grey/blue f.gr. massive mafic tuff
- 19 -massive blue-grey to f.gr. med. grey granular intermed. tuff

20 -f.gr. granular blue grey, weathers med grey hbld-qtz-feld gneiss (mafic tuff)

21 -1.5 m wide qtz vein, vertical, 10% feldspar, rusty along sutures; north end Kennedy Lake (see Figure 2), sample DB070901, 02

PROJECT #2

- 1 -o\c ridge of mafic/intermed gneiss, weathers pale/med grey, med gr. granular, cut by approx 10%pink granitic dykes along foliation 295/80N; area newly logged and cleared
- 2 -pillow basalts, Az 308/vert, length avg. 1.5 m, width avg 30 cm, weathers med./lt. green with dk green rims avg 4 cm wide; tops unknown, probable N overturned; minor andesite flow to SW 10 m distance
- 3 -med. gr. v. granular tuff/lapilli tuff; weathered surface "lumpy", no obvious lapilli
- 4 -andesite flow brxx, Az 305/55S, andesite pillowed weathers med/lt green
- 5 -pillowed flows, Az 270/735, top of knob, andesitic basalt or basalt with hbld altered to chlor; mottling fine, 1 mm diam green + blue-grey med gr.;approx. contact between pillows to N and med. gr. basalt tuff to S; cut along fol. by granitic dyke with Az 263/80N
- 6 -basalt tuff, fol 295/80S
- 7 -basalt tuff, dk green fresh, med gr. granular
- 8 -large subcrop mafic tuff, fresh dk green granular; v. close to in place
- 9-same as 8

- 10 -basalt tuff, med-f.gr. blue-grey fresh, occas. rusty surface from dissem + bleb py, sample RS-1
- 11 -across small sharp valley (fault) from 10, med gr. coarse weathering well fol. mafic tuff(gneiss), Az 303/70 N
- 12 -top of knob; ridge running 020, fol. 282/72N
- 13 -dk blue grey massive f.gr. basalt tuff
- 14 -same as 13
- 15 -Az 320/78S, med gr. well fol green-grey hbld gneiss, xstls to 5 mm euhedral
- 16 -same rock, fol 300/50N
- 17 -med green grey med gr. granular andesite/basalt tuff, Az 285/90

18 -Az 338/72S, mafic tuff, rare barren white qtz vein 10 cm wide along fol

19 -same as 18

- 20 -coarsely layered alternating black and lt grey weathering gneiss; fol 282/80S; segregation of mafic and felsic minerals from original intermed tuff/metased; mafic band shows coarse hbld xstls to 1 cm long; 1/2% dissem.py, sample RS-2
- 21 -moderately granitized mafic gneiss, pink-grey tinge, med-coarse gr., streaky fol.
- 22 -at campsite, N shore Upper Shakwa Lake; rusty weathering intermed./mafic gneiss, siliceous, with 1/2% dissem. py, sample RS-3
- 23 -intermed. tuff, med. gr. mod. fol. Az 300/77S
- 24 -mafic tuff, fol. Az 280/705
- 25 -hbld gneiss, fresh blue grey med gr.;subhedral hbld laths to 3 mm along fol. Az 268/62S; weathers med grey granular
- 26 -med grey granular weathering, fresh dk grey f.gr. weakly fol siliceous (sharp fracture edge) mafic gneiss; slight rusty weathering
- 27 -small ridge facing SW; fresh med grey f.gr. massive to weakly fol. mafic gneiss; weak sericitiz. along fol. plane to give sheen (schistose); weathers med grey f.gr texture, weakly rusty patches; salt and pepper banding suggests intermed tuff/metasediment; rare py grains rusted out in fresh rock
- 28 -foliation 320/80S; pinkish grey weathering fresh med grey/lt. green intermed. tuff, fine foliation
- 29 -knoll may consist of brick red coarse-med gr. hbld granite, 5-10% hbld; numerous round and angular blocks of this material downslope; no bedrock exposure; an indicator for underlying granitics in the change in vegetation to open mature spruce + pine with little undergrowth
- 30 -increase in mafic gneiss in rubble; approaching granite/mafic gneiss contact
- 31 -med-coarse gr. amphibolite; hbld altered to chlor., laths subhedral to 5 mm, random orient.(?); N side of ridge; weakly magnetic, 1/2% po, sample RS-4
- 32 -coarse gr. pale grey-pale pink weathering, fresh dk grey feld/qtz + 20% red feld laths, xstllne, gneissic; no foliation available

RS-4

33 -possible andesite flow brxx; stretched subangular med/dk green med gr. granular tuff frags to 50 cm long X 20 cm wide in white grey-pale pink xstl lapilli tuff matrix; approx 60% frags, 40% ash; flow along foliation Az

250/705

- 34 -intermed./mafic tuff; fol 270/528, occas. refold (Z) on 1/2 m scale
- 35 -It pink weathering, med grey/med pink granite, gneissic along shores of shallow lake; contacts with tuff to N is hidden
- 36 -mafic tuff; med-f.gr. weathers med grey, fresh dk blue grey, faint foliation 272/82S; grey bull qtz + granite dykelets injected along fol.; contact with granite along lakeshore; near top of hill?
- 37 -red granite, N side of ridge
- 38 -well fol. finely fol. lt + dk grey layers, fol 332/48S, occas.rusty weathering intermed. tuff (dacite?); looks like original ash under hand lens
- 39 -possible mafic flow, dk green xstllne, fol 233/715, N side of road
- 40 -on Agnes R. road, new logging road; pillow basalts, flow strike 300, lies N of known mafic tuff (flow?)
- 41 -pink granite on point across lake
- 42 -N side Landry Lake; pink granites
- 43 -pink granite + (dykelet) cutting white granite
- 44 -weather pale grey, coarse texture; fresh med. grey/lt. grey med/coarse gr. x'stllne, granular white granite
- 45 -pink nodular granite, gneissic fabric
- 46 -mafic tuff; dk green-grey med.gr. granular; weathers med. grey granular
- 47 -pink granite
- 48 -red granite
- 49 -ridge of pink granite/red granite; sharp drop to SW of 20 m; presumed fault Az 320/? along foliation of volcanics; granite probably has fol 320/508
- 50 -red granite (qtz-feld-hbld); weathers red-pink, fresh brick red mottled with 15-20% subhedral/anhedral hbld laths to 5 mm
- 51 -red granite
- 52 -pink granite
- 53 -mafic tuff

- 54 -pink/red granite gneiss; sharp drop of 10 m to S to valley floor; probable fault along gneissosity 280/705
- 55 -pink unfol. granite
- 56 -white/pale pink weathering gtz-feld-(hbld) granite
- 56a -pink granite; possible contact with andesite in place
- 57 -andesite tuff float, angular, with 5 cm coarse qtz xstllne veins, rusty, with py blebs; qtz may be chert lens rexstll; source to N, sample RS-6
- 58 -pink granite
- 59 -basalt/andesite tuff; green-grey to blue-grey granular med. gr.; no apparent fol.; in close contact (not exposed) with pink granite to S
- 60 -"basalt" becoming coarse gr., lighter in colour, possibly due to contamination from granitic material (diffuse contact, some still recognizable basalt tuff)
- 61 -rusty weathering float, angular andesite tuff/basalt (dk green fresh) with narrow pink feld. layers to 3 mm along fol.; xstls, grains + narrow 1-2 mm layers of py and py altered to limonite, usually surrounded by apple green chlor. altered andesite; sample RS-7

APPENDIX C

ASSAY CERTIFICATES



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

5175 Timberlea Blvd., Mississauga, Ontario, Canada L4W 2S3 PHONE: 416-624-2806 To: BAIN, DUNCAN CONSULTING LTD.

UNIT 17, 1318 HIGHBURY AVE. LONDON, ON N5Y 5E5 Page Number :1-A Total Pages :1 Certificate Date: 20-OCT-93 Invoice No. :19322441 P.O. Number :930919 Account :LFV

Project : BENNY Comments: ATTN: DUNCAN BAIN

CERTIFICATE OF ANALYSIS A9322441

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							CENTIFICATE OF ANALTSIS A9322441							T I	
SAMPLE	PREP CODE	au ppb FA+AA	Ад ррт ААЗ	Al % (ICP)	Bappm (ICP)	Be ppm (ICP)	Bippm (ICP)	Ca % (ICP)	Cđ ppm (ICP)	Coppm (ICP)	Cr ppm (ICP)	Cuppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)
69751	217 285	< 5	< 0.2	7.23	470	1.0	< 2	1.56	< 0.5	12	190	12	3.02	2.47	0.82
69752	217 285	not/ss	< 0.2	5.81	450	0.5	< 2	1.69	< 0.5	11	808	34	2.86	1.67	0.80
69753	217 285	< 5	< 0.2	7.77	530	0.5	< 2	2.80	< 0.5	13	168	11	2.97	1.63	1.17
69754	217 285	< 5	< 0.2	6.58	420	1.0	< 2	1.17	< 0.5	6	491	3	1.46	2.37	0.48
69755	217 285	< 5	< 0.2	7.39	560	1.0	2	1.91	< 0.5	10	235	8	2.33	2.43	0.95
69756	217 285	< 5	< 0.2	7.24	510	1.0	< 2	1.77	< 0.5	13	224	8	2.87	2.27	0.90
69757	217 285	< 5	< 0.2	6.95	410	1.0	2	1.37	< 0.5	11	186	10	2.38	2.40	0.76
69758	217 285	< 5	< 0.2	6.78	480	0.5	2	1.80	< 0.5	17	385	14	3.70	1.99	1.12
69759	217 285	< 5	< 0.2	7.05	470	1.0	< 2	1.41	< 0.5	13	119	7	2.86	2.43	0.72
69760	217 285	< 5	< 0.2	7.04	480	1.0	2	1.58	< 0.5	11	185	7	2.74	2.15	0.69
69761	217 285	< 5	< 0.2	6.65	500	1.0	2	1.40	< 0.5	13	186	10	2.81	2.16	0.69
69762	217 285	50	< 0.2	7.20	570	1.0	2	1.91	< 0.5	10	150	11	2.17	2.05	0.88
69763	217 285	< 5	< 0.2	6.96	490	1.0	2	1.46	< 0.5	11	155	6	2.27	2.31	0.75
6976 4 69765	217 285 217 285	< 5 < 5	< 0.2	7.29	500 510	1.0	< 2 < 2	1.51	< 0.5 < 0.5	15 11	175 181	9	2.61 2.31	2.54	0.79
69766	217 285	< 5	< 0.2	7.33	490	1.0	< 2	1.76	< 0.5	14	104	15	3.24	2.34	0.96
69767	217 285	< 5	< 0.2	6.74	1290	1.0	< 2	1.42	0.5	58	358	20	6.48	2.32	0.68
69768	217 285	15	< 0.2	6.98	560	1.5	< 2	1.10	< 0.5	11	180	10	3.19	2.54	0.45
69769	217 285	15	< 0.2	7.18	510	1.0	< 2	1.71	< 0.5	12	108	14	2.68	2.15	0.98
69770	217 285	< 5	< 0.2	6.27	1110	0.5	< 2	1.42	< 0.5	61	130	18	8.86	1.95	0.68
69771	217 285	< 5	< 0.2	7.40	590	1.5	2	1.43	< 0.5	15	132	10	4.04	2.30	0.51
69772 69773	217 285 217 285	< 5 < 5	< 0.2	6.65	900 480	0.5	< 2 < 2	2.28	< 0.5 < 0.5	49	100 159	19 10	9.97 1.76	1.53 2.35	1.15 0.63
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CERTIFICATION:

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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

5175 Timberlea Blvd., Mississauga, Ontario, Canada L4W 2S3 PHONE: 416-624-2806

To: BAIN, DUNCAN CONSULTING LTD.

UNIT 17, 1318 HIGHBURY AVE. LONDON, ON N5Y 5E5

Page Number :1-B Total Pages :1 Certificate Date: 20-OCT-93 Invoice No. :19322441 P.O. Number :930919 Account :LFV

Project : BENNY Comments: ATTN: DUNCAN BAIN

CERTIFICATE OF ANALYSIS

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	PRE			No ppm	Na %		P ppm	Pb ppm	Sr ppm	Ti %	V ppm	w ppm	Zn ppm			
SAMPLE	COD	E	(ICP)	(ICP)	(ICP)	(ICP)	(ICP)	лл s	(ICP)	(ICP)	(ICP)	(ICP)	(ICP)			ļ
69751	217 2		675	< 1	2.89	20	430	44	220	0.22	64	< 10	30			
69752	217 2		495	2	2.11	36	500	40	232	0.36	51	< 10	96			
69753	217 2		510	< 1	2.96	23	820	8	340	0.49	75	< 10	40	1		1
69754	217 2		230 410	< 1 1	2.72	17	220 310	12 10	213 256	0.19	28 58	< 10 < 10	12			
69755	41/ 4	6 5	410	_	4.03		510	10	450	0.24	50	× 10				
69756	217 2		770	1	2.84	21	550	12	258	0.27	63	< 10	40			1
69757	217 2		705	1	2.84	19	430	12	208	0.23	54	< 10	26			
69758	217 2		960 1125	1	2.61	32 18	540 440	14 14	241 217	0.38	85 56	< 10 < 10	54 36			
69759 69760	217 2		570		2.81	17	490	12	251	0.20	58	< 10	40	1		1
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69761	217 2		915	1	2.68	19	460	14	236	0.26	57	< 10 < 10	48			
69762	217 2	85	385	< 1 1	2.88	19 18	420 370	12 12	318 234	0.28	57 54	< 10	24 30			1
69763 69764	217 2		460 1350	1	2.89	22	400	14	222	0.23	59	< 10	44	i		
69765	217 2		575	1	2.83	18	470	16	254	0.25	49	< 10	44			
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69766		85	955	4	2.85	28	450	14	242	0.24	73	< 10	50			
69767		85	>10000	10	2.53	34	680	12	201	0.19	77	< 10	178			
69768		85	1150 545	4	2.82	14 24	450 180	14	210 261	0.14	39 66	< 10 < 10	28	1)	1
69769 69770	217 2	85	>10000	14	2.31	30	870	14	201	0.21	93	< 10	180			
03770			/10000							ļ						
69771		85	1545	6	2.95	16	610	14	252	0.16	54	< 10	82		1	1
69772		85	8820	11	2.33	28	1130	12 10	217 209	0.36	124	< 10 < 10	180 20			
69773	217 2	85	300	1	2.69	19	240	10	209	0.10	40	× 10	4 0	[
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BENNY Project : Comments: ATTN: DUNCAN BAIN

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SAMPLE		rep Ode	Min ppm (ICP)	Moppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)			
6977 4 69775 69776 69777 69777 69778	205 205 205	226 226 226 226 226 226	1645 890 70 60 1410	2 4 < 1 < 1 3	1.66 1.14 0.06 0.26 2.57	47 16 14 12 24	740 490 30 50 1090	< 2 < 2 < 2 2 2 2	136 115 5 5 384	0.93 0.16 0.01 0.01 0.86	250 57 12 16 113	< 10 < 10 < 10 < 10 < 10 10	138 118 8 6 118			
69779 69780 69781 69782 69783	205 205 205 205	226 226 226 226 226 226	1390 1350 1380 630 1250	1 < 1 2 1 2	2.15 2.35 2.33 0.20 2.50	32 58 61 31 40	1780 590 700 440 910	< 2 14 2 8 < 2	233 187 190 965 277	0.93 0.55 0.88 0.42 0.78	215 201 263 177 157	10 50 10 < 10 < 10	98 116 104 112 52			
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UNIT 17, 1318 HIGHBURY AVE. LONDON, ON N5Y 5E5 Page Number :1-A Total Pages :1 Certificate Date: 14-OCT-93 Invoice No. :19322442 P.O. Number :930919 Account :LFV

Project : BENNY Comments: ATTN: DUNCAN BAIN

CERTIFICATE OF ANALYSIS A9322442

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SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm AAS	Al % (ICP)	Bappm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cđ ppm (ICP)	Coppm (ICP)	Cr ppm (ICP)	Cuppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)
69774 69775 69776 69777 69778	205 226 205 226 205 226 205 226 205 226 205 226	65 < 5 < 5 < 5 < 5 < 5	0.2 < 0.2 < 0.2 < 0.2 < 0.2 0.4	6.58 4.06 0.39 0.86 6.14	130 90 < 10 < 10 140	< 0.5 < 0.5 < 0.5 < 0.5 1.0	< 2 4 4 6	5.97 2.27 0.11 0.03 4.90	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	36 11 3 3 4 1	129 212 424 338 74	76 124 16 7 366	9.14 9.53 0.85 1.01 9.70	0.42 0.61 0.04 0.04 0.32	2.33 2.79 0.30 0.62 2.16
69779 69780 69781 69782 69783	205 226 205 226 205 226 205 226 205 226 205 226	<pre>< 5 < 5 < 5 < 5 < 5 < 5 < 5</pre>	< 0.2 < 0.2 < 0.2 < 0.2 4.2 0.2	8.29 7.29 7.29 5.51 6.53	340 340 300 180 150	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 0.5	4 < 2 2 4 4	5.43 3.40 5.08 6.40 3.64	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	27 28 47 15 31	122 196 132 148 59	176 95 46 2010 860	9.12 7.67 8.71 8.36 8.13	0.98 1.01 0.93 0.62 0.44	2.23 2.81 3.47 0.90 1.87
			1				<u> </u>		<u> </u>	CEF	RTIFICATIO	N: 40		·	ير

SAMPLE DESCRIPTIONS

APPENDIX D

-16-

SAMPLE DESCRIPTIONS

- 69751 Stream Sediment SS-1, upstream side of bridge
- 69752 Stream Sediment SS-2, organics + sand, south end of "lake", 100 m above SS-1
- 69753 Stream Sediment SS-3, 150 m upstream from SS-2
- 69754 Stream Sediment SS-4,100 m upstream from SS-3
- 69755 Stream Sediment SS-5,100 m above SS-4,20 m below Siniminda Dam and opposite road junction
- 69756 Stream Sediment SS-6, 100 m below bridge.
- 69757 Stream Sediment SS-7,100 m downstream from SS-6, in rapids
- 69758 Stream Sediment SS-8,100 m downstream from SS-7
- 69759 Stream Sediment SS-9, 100 m downstream from SS-8; swamp to west, opposite south end of island in river
- 69760 Stream Sediment SS-10,100 m downstream of SS-9; swamp and beaver dam approx. 50 m upstream
- 59761 Stream Sediment SS-11, 95 m downstream from SS-10, just above widening with island
- 69762 Stream Sediment SS-12, approx. 225 m below SS-11; stretch of slow water with organics not sampled
- 69763 Stream Sediment SS-13,100 m downstream from SS-12
- 69764 Stream Sediment SS-14,100 m downstream from SS-13,20 m downstream from cleared area on west shore
- 69765 Stream Sediment SS-15, 100 m downstream from SS-14, at base of rapids, with pool below
- 69766 Stream Sediment SS-16, sharp abrupt rapids 100 m below SS-15, sampled at base, widens to slow grassy section with lots of organics.
- 69767 Stream Sediment SS-17, started at south junction of Agnes River road and worked north; sample taken 50 m above junction position
- 69768 Stream Sediment SS-18,125 m upstream from SS-17
- 69769 Stream Sediment SS-19, 125 m upstream from SS-18
- 69770 Stream Sediment SS-20, 80 m upstream from SS-19; bay 50 m upstream from SS-19 on west side

69771 - Stream Sediment SS-21, upstream 100 m from SS-20, py present 69772 - Stream Sediment SS-22, 165 m upstream from SS-21

- 69773 Stream Sediment SS-23, deep bay at 95 m above SS-22, with old dam/bridge; upriver broadens out, slow; sand/silt sample taken from in front of dam
- 69774 Rock sample DB070901, qtz vein N end of Kennedy Lake
- 69775 Rock Sample DB070902, qtz vein N end of Kennedy Lake
- 69776 Rock Sample DB071001, 1/2% py in qtz stringers in hornblendite
- 69777 Rock Sample RS-1, basalt tuff, med-f.gr. blue-grey fresh, occas. rusty surface from dissem + bleb py
- 69778 Rock Sample RS-2, coarsely layered alternating black and it grey weathering gneiss, 1/2% dissem.py
- 69779 Rock Sample RS-3, N shore Upper Shakwa Lake; rusty weathering intermed./mafic gneiss, siliceous, with 1/2% dissem. py
- 69780 Rock Sample RS-4, med-coarse gr. amphibolite; N side of ridge; weakly magnetic, 1/2% po
- 69781 Rock Sample RS-6, andesite tuff float, angular, with 5 cm coarse gtz xstllne veins, rusty, with py blebs; gtz may be chert lens rexstll; source to N
- 69782 Rock Sample RS-7, rusty weathering float, angular andesite tuff/basalt (dk green fresh) with narrow 1-2 mm layers of py and py altered to limonite, usually surrounded by apple green chlor. altered andesite

