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**SAVANT LAKE PROJECT
1991 PROSPECTING REPORT**

BY

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Thunder Bay Mining District

Townships: Poisson, Savant, McGillis

90° 25' longitude, 50° 25' latitude

Field Program: May 22 - June 10, 1991 and July 2 - July 19, 1991

Report : December, 1991

SAVANT LAKE PROJECT

1991 PROSPECTING REPORT

1.0 INTRODUCTION

Full documentation of the 1991 Savant Lake Program as required under the Ontario Prospectors Assistance Program is in the attached appendices and map pockets. The following are background and overview notes on that information. Background reports by the Ontario Geological Survey are listed in the bibliography.

The 1991 exploration program was initiated to investigate widespread gold anomalies in soils in the west-central Savant Lake area. These anomalies were initially investigated on a small scale during the 1990 OPAP-assisted reconnaissance program (Gorzynski and Ewen, 1991). The gold anomalies are largely products of glacial smearing. The 1991 OPAP-assisted exploration program was designed :

1. to better outline the gold anomalies in soil and thereby track them to their up-ice bedrock sources, and
2. to continue the reconnaissance soil sampling mainly toward the north and east in search of further anomalies.

2. LOCATION AND ACCESS

The Savant Lake area is located 150 miles north-northwest of Thunder Bay and 25 miles northeast of the town of Savant Lake. The area investigated is centred on Poisson Township although the prospecting work ranged beyond adjacent townships utilizing the excellent boat access provided by Savant Lake. The area is in the Sioux Lookout Mining District.

3. GEOLOGY

The Savant Lake area is underlain by by the Savant Lake Greenstone Belt and adjacent granitoid bodies. Bedrock exposure varies from poor to very good. Most of the lake is underlain by a thick sequence of basalts with only minor felsic volcanics and local agglomerates. On the west shore of the lake in Poisson Township lies a large unit of magnetite iron formations and greywackes. The area is complexly deformed and interpretation of the

structural geology has been controversial. Several Ontario Geological Survey mapping parties have all interpreted the structure of the area differently (Moore, 1929; Bond, 1977; Trowell, 1986; Sanborne-Barrie, 1990). The known gold showings of the area are all variably sulphidic quartz veins which are often closely associated with shear zones. Thus the structural interpretation is important to gold exploration in the area. Our work has, in part, attempted to circumvent the problem of structural interpretation by casting a large reconnaissance net soil geochemical survey.

4. GEOCHEMISTRY

4.1 SOILS

4.1.2 METHODS USED

Soil samples were collected on the previously cut One Pine Grid (Plates 2W & 2E, recorded by line and station number), on reconnaissance topographic lines in critical target areas (Plates 1A to 1F, LS-series samples) and individually as representative samples from small islands and in the course of prospecting (Plates 1 to 3, ES1- and GS1-series samples). Approximately 0.5 kilograms of B-horizon soil usually from thin veneers of basal till on bedrock, was collected with a mattock from each site. Samples were sent to Accurassay Laboratories in Thunder Bay and Kirkland Lake. There they were dried and sieved to retrieve the fine fraction (-80 mesh) for analysis. All the soil fine fraction samples were analysed for gold by fire assay with an atomic absorption finish. Splits of the fine fractions of all samples were sent to Acme Analytical Laboratories for 30 element induced cation plasma (ICP) analysis after digestion in aqua regia (see Appendix 2 for details). Results are recorded in Appendix 2 and on the Plates. Five soil sample rejects were also run for Bottle Leach Extractable Gold (BLEG) cyanidation in an attempt to overcome gold nugget effect problems (see Section 2.1.2). A number of samples have yet to be assayed and are appropriately labelled in Appendix 1.

4.1.2 THE NUGGET EFFECT PROBLEM

As a result of further sampling in 1991 and some laboratory testing by Accurassay, it was found that gold in soils of the Savant Lake area occurs as free particles subjecting assays to extreme nugget effect problems. Details of the problem and laboratory testing are found in the correspondence of Appendix 3. Many of the 1990 gold anomalies "disappeared on resampling in 1991 due to this problem. As a result, outlining areas of gold anomalies in soils is a more difficult task than previously thought. There are two avenues which will be used to try to address the problem:

1. **Bottle Leach Extractable Gold (BLEG) analyses:** This analytical technique was developed for gold nugget effect problems. The entire sample is placed in a bottle with a 1% cyanide solution and periodically shaken over a 24 hour period. The solution is then extracted, analysed for gold and the original gold content of the entire sample is calculated and reported. The much larger sample size results in a more representative relative gold value. An initial BLEG test was done on five sample rejects from the 1991 program. Although the test was not conclusive due to the small number of samples, the results did show a significant range of gold values. All of the remaining 1991 soil sample rejects have been retained and it is planned to have a larger suite of samples tested by BLEG which, if successful, will be extended to the entire sample suite and further sampling in the field to better define the soil gold anomalies.
2. Many of the known gold showings in the Savant Lake area have associated anomalous As and Cu values. These pathfinder elements occur in anomalous concentrations proximal to the showings and with further ICP analyses, may be used to locate new gold showings.

4.2 ROCKS

Rock samples were collected as deemed appropriate in the course of field work. Samples ranged in size from <1 to 5 kilograms and comprised grab or chip samples as indicated in Appendix 1. Rock samples were sent to Accurassay Laboratories in Thunder Bay and Kirkland Lake where they were crushed, pulverized and run for gold by fire assay with an atomic absorption finish. Splits of many of the pulps were sent to Acme Analytical Laboratories for 30 element ICP analyses. Results are reported in Appendix 2 and plotted on the Plates.

5.0 DISCUSSION

The following are summaries of the more interesting areas investigated.

5.1 Horseshoe Trench

Location: One Pine Grid - 64+40W, 24+00N

This trench was dug on a 2-4 cm wide quartz vein oriented at approximately 010/75E. The vein occurs in highly folded greywacke and magnetite iron formation with minor sulphidation near the vein. A felsic dike, 0.2-1.0 m wide, with moderate to intense sericite and iron carbonate alteration lies 15 feet west of the vein. The vein hosts abundant visible gold and negligible sulphides.

Samples from the trench and soils from the vicinity have not yet been assayed. Prospecting of outcrops in the area, however, suggests the vein is of limited extent. No other veins nor other areas of alteration were noted.

5.2 L28W,25S Trench

Location: Plate 3. One Pine Grid as per coordinates.

This is a 1 m wide zone with 25% deformed quartz veins and 10% locally sulphidized magnetite iron formation. The zone is oriented at 060/70S. Initial grab samples from the zone returned 0.453 and 0.295 opt Au. Subsequently taken chip samples are plotted on Plate 3 but have yet to be assayed. Several old large trenches were found for 300 m along strike of the zone to the southwest but the zone was not present where bedrock could be observed. The Shoal Gold Occurrence, a small but locally high grade quartz vein lies in the lake 50 m northeast and on strike with this trench. The zone was staked as part of 16 unit claim Pa. 1145082 and will be further exposed in 1992.

5.3 Girard and Big Sandy Island Placer Pits

Location: Plate 1D - east shore of Girard Island and north end of Big Sandy Island.

Numerous turn of the century placer test pits occur in these areas. Gold is reported to be mainly in rock fragments and difficult to pan. We were not able to pan any gold. The initial samples of sands from Girard Island were processed as both soils (sieved) and rocks (pulverized). These samples failed to return any significant gold values (GS1-R-11 to R-13 and GS1-S14 to S16). Subsequent samples taken at the north end of Big Sandy Island and again on Girard Island have not yet been analysed but they will be processed by BLEG.

5.4 Barnum Lake Trenches

Location: Plate 1E

Ten old trenches occur on the east side of Barnum Lake where a 4-14 ft wide altered and deformed shear zone lies on a basalt - dacite porphyry contact. The shear is marked by chlorite schist with abundant lenses of massive iron carbonate hosting disseminated arsenopyrite and pyrrhotite with lesser pyrite and chalcopyrite. Despite the favourable appearance of the zone, most gold assays were poor (Gorzynski and Ewen, 1991). Four single claims were staked over the zone in 1990. In 1991 areas along strike of the zone were prospected with limited success. A rough orientation survey with a Ronka Em-16

demonstrated the zone to have a subtle electromagnetic signature which also could not be followed beyond the old trenches. Several of the linear gullies in the area had moderate to strong electromagnetic responses the meaning of which are uncertain. Samples collected in 1991 in areas along strike have not yet been assayed.

5.5 Chromium Mica Shear

Location: Plate 1C - northeast quadrant - sample sites ES1-R-21,22,23, etc.

This is a very impressive looking 5m+ wide zone of Cr-mica+sericite+quartz schist with sparse rusty patches. The zone outcrops on the shore of the lake and has been stripped and washed. It trends 105/80S along a conglomerate - talc+chlorite schist contact. The alteration zone appears to pinch out about 100m west of the lake. Sampling did not return any significant values in the Cr-mica alteration zone nor from sparse massive iron carbonate float boulders found to the west.

6.0 CONCLUSIONS

1. Soils of the central Savant Lake area host glacially transported particulate gold from largely unknown bedrock sources. Defining these gold anomalies in order to track down their bedrock sources has proven difficult due to extreme nugget effect problems. BLEG (Au) and further pathfinder element analyses of soils are planned in an attempt to overcome these problems.
2. There are numerous gold anomalies throughout the Savant Lake area. Initial results suggest that the central area in Poisson and McGillis Townships has more of these anomalies than elsewhere (Plates 1D&E).
3. Several small high grade gold showings and occurrences are known in the area prospected, the most significant of which are:
 1. One Pine Lake Showing - Plate 1D - Reference: Bond (1977).
 2. McRae-Simmons Occurrence - Plate 1D - Reference: Bond (1977).
 3. L28W,25S Trench - Plate 3 - Reference: This report.
 4. Horseshoe Trench - Plate 2W - Reference: This report.
 5. Barnum Lake Trenches - Plate 1E - Reference: Gorzynski &Ewen (1991).
4. The area is complexly deformed and cut by numerous variably oriented shears several of which have associated high grade gold mineralization. Widespread gold anomalies in soils suggest that most of the gold showings and potentially economic gold deposits have yet to be found.

7.0 RECOMMENDATIONS

- 1. Assays should be completed for samples collected during the 1991 program but not yet assayed.**
- 2. All soil rejects from the 1991 program should be retained and a select number should initially be further tested for BLEG (Au) in an attempt to overcome nugget effects.**
- 3. ICP analyses should be run on a further selection of soil fine fractions now in storage to test for gold pathfinder elements such as As and Cu which are usually proximal to gold showings in the area.**
- 4. Further follow up work should be done on gold anomalies outlined during the 1991 program but not yet investigated.**
- 5. The high grade gold showing at 28+00W, 25+00S on the One Pine Grid should be further exposed and sampled along strike.**

4.0 BIBLIOGRAPHY

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APPENDIX 1
PROSPECTING LOGS AND SAMPLE DESCRIPTIONS

PROSPECTING DAILY LOG

George Gorzynski

PROJECT AREA: Savant Lake

<u>DATE</u> <u>(1991)</u>	<u>WORK PERFORMED AND SAMPLES COLLECTED</u>
May 25	Prospected islands in Savant Lake in vicinity of Girard Island. GS1-S1 to GS1-S2, GS1-R-1 to GS1-R2, Soil lines LS1 to LS3.
May 26	Reconnaissance soil sampling lines on west shore of Savant Lake northwest of Big Sandy Island. GS1-S3 , Soil lines LS4 to LS6.
May 27	Prospected east bay of Savant Lake just north of Shore Lake. GS1-R3, Soil line LS7.
May 28	Prospecting and sampling islands in northern Savant Lake. GS1-R4 to GS1-R7.
May 29	Prospected and ran soil line LS8 on large island in west central Savant Lake.
June 1	Prospected in vicinity of Treasure Island on North Arm of Savant Lake. GS1-S4 to GS1-S7, GS1-R8 to GS1-R10, Soil line LS11.
June 2	Prospected and ran soil lines LS12 and LS13 far up North Arm of Savant Lake.
June 3	Prospected on Northeast Arm of Savant Lake. GS1-S8 to GS1-S11, Soil line LS14.
June 4	Prospected northwest shore of Savant Lake. GS1-S12 to GS1-S16, GS1-R11 to GS1-R14.
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July 5	Soil sampling on One Pine grid. Ran baseline 20E to 33E and lines 30E and 16E.
July 6	Ran One Pine grid soil lines 36W and 32W.
July 7	Soil sampling and prospecting on One Pine grid. GS1-S100, GS1-R100, baseline 65W to 68W, grid lines 60W and 62W.
July 9	Barnum Lake property prospecting. GS1-S101.

Prospecting Daily Log - George Gorzynski - continued

<u>DATE</u> <u>(1991)</u>	<u>WORK PERFORMED AND SAMPLES COLLECTED</u>
July 10	Prospecting west central Savant Lake. GS1-S102 to GS1-S105, GS1-R101 to GS1-R104.
July 11	Prospecting east central Savant Lake. GS1-S106, GS1-R105 to GS1-R106.
July 12	Follow up of soil anomalies in north central Savant Lake. GS1-S107, GS1-R107 to GS1-R109.
July 13	Prospecting on One Pine grid vicinity of L24W. GS1-R109 to GS1-R112.
July 15	Prospecting near One Pine grid in vicinity of 62W, 16N. GS1-S108 to GS1-S113, GS1-R113, Soil line 62W, 23N to 26N.
July 16	Prospecting Savant Narrows and south of Stellar Bay areas. GS1-S114 to GS1-S121, GS1-R115 to GS1-R117, Soil line 30W, 25S to 26S.

PROSPECTING DAILY LOG H.Eric Ewen

PROJECT AREA : SAVANT LAKE

DATE WORK PERFORMED AND SAMPLES COLLECTED

- May 25 Prospected islands in Savant Lake in the vicinity of Girard Island. Collected samples ES1- S1 to S12, ES1-R1, and ran soil lines LS1 to LS3. All plotted on Poisson Twp. Map.
- May 26 Ran soil line LS4 across peninsula NW of Girard Island. Took soil samples ES1-S13&14, and ran soil lines LS5 & LS6. All plotted on Poisson Twp. Map.
- May 27 Ran soil line LS7 on East end of East bay of Savant Lake. Took soils ES1- 15 to S41 and rocks ES1-R2 to R7. All plotted on Savant Twp. Map.
- May 28 Prospected islands in northern Savant Lake. Took soil samples ES1-S42 to S74 and rock ES1-R8 to ES1-R10. All plotted on Benner, Poisson, Savant, and McGillis Twp. Maps.
- May 29 Ran soil line LS8 and took rock sample on island in NE Poisson Twp.
- May 30 Staked block of 16 claims (PA 1145082) in SW Poisson Twp.
- May 31 Prospected and ran soil lines LS9 and LS10 south of portage between Savant Lake and Whimbrel Lake in NW Poisson Twp.
- June 1 Prospected North Arm Savant Lake and ran soil line LS11. Took rock samples ES1-R12 to ES1-R16. All plotted on Savant Twp. Map.
- June 2 Prospected and ran soil lines LS12 & LS13 in the North Arm region of Savant Lake. Plotted on Savant Lake Twp & on Endogoki Lake Claim Maps.
- June 3 Prospected NE Arm of Savant Lake. Took rock samples ES1-R17 to ES1-R22 and soils ES1-S75 to ES1-S78 and ran soil line LS14. All are plotted on Savant Twp. Map.
- June 4 Prospected the NW shore of Savant Lake and took soils ES1-S79 to ES1-S95. Plotted on Savant Twp. Map.
- July 5 Ran soil lines on One Pine Lake Grid , Base Line 0+00, Line 28+00W and prospected old trenches. Poisson Twp. One Pine Lk. Grid Map.
- July 6 Continued L28+00W and prospected. Took rock samples ES1-R24 &25. Plotted on Poisson Twp. One Pine Lake Grid Map.
- July 7 Ran soil lines 4+00 W and 24+00W and prospected. Piosson Twp. One Pine Lake Grid Map.

- July 8** Mucked out trench at L28+00W, 25+00S , Poisson Twp. One Pine Lake Grid Map.
- July 9** Prospected Barnum Lake area McGillis Twp. Map. Took two rock samples ES1-R26 &27 and one soil ES1-S96.
- July 10** Prospected peninsula in SE corner of Piosson Twp. and took samples ES1-R28 and ES1- S97 to ES1 - S99
- July 11** Prospected near Savant Narrows (ES1-R29). Prospected in Stellar Bay area (ES1-R30 & 31 ES1-S100) Plotted on Jutten Twp Map.
- July 12** Follow-up of anomalous sample ES1-S59. Took samples ES1-R32 & ES1-S101 to S103 . Plotted on McGillis Twp. Map.
- July 13** Prospected on One Pine Lake Grid line 24+00W, 3+50S. Took samples ES1-R33 & ES1-S104. At L24+00W, 3+00S took samples ES1-R34 &S105 Plotted on the One Pine Lake Grid Map.
- July 15** Prospected on One Pine Lake Grid L62+30W, 26+80N and took samples ES1-S106 to S108 and ES1-R35.
- July 16** Sampled trench at L28+00W, 25+00S took ES1-R36 to R38. Prospected in the south bay of Stellar Bay taking samples ES1-R39 & S 109. Samples plotted on One Pine Lake Grid Map. and on the Jutten Twp. Map.

DESCRIPTION OF ROCK SAMPLES

<u>No.</u> _ES1-	<u>LOCATION</u> TWP.	<u>TYPE</u>	<u>ROCK TYPE</u>	<u>MINERALIZATION</u>	<u>ASSAYS</u> IN PPB Au
R1	Poisson	chip (6")	quartz vein	To minor py.	< 5
R2	Savant	chip (3')	qtz. sec. schist	5% po	5
R3	Savant	grab	qtz. sec. schist	5- 10% po	8
R4	Savant	chip (1')	qtz. chl. schist	minor po cpy	< 5
R5	Savant	chip (2')	rusty volc. lens	5% po	36
R6	Savant	chip (10')	carb. alter. volc.	minor py	40
R7	Savant	chip (3')	qtz. v. chl.	5% py	69
R8	Benner	chip (1")	qtz. v. in grwke	5% py	7
R9	McGillis	chip (6")	sheared volc.	10% py	5
R10	McGillis	chip (6')	shear in volc.	20% py	35
R11	Poisson	chip (12")	qtz. carb. v.	5% py	163
R12	Savant	chip(18")	qtz. / sheared arg.	5% py	17
R13	Savant	5 boulders	qtz. mtrx. bx.	20% py	58
R14	Savant	grab	silic. shear in pep. congl.—		8
R15	Savant	grab	rusty as above	rust	5
R16	Savant	grab	as above	rust	5
R17	Savant	grab	gabbro	5% py, po	9
R18	Savant	grab	sheared gabbro	2% po	< 5
R19	Savant	grab	sheared congl.	fuscite	40
R20	Savant	chip(15x10'lens)	cr. mica qtz	tr. asp.	110
R21	Savant	chip (5')	same as above	1% sulf.	14
R22	Savant	chip (10')	same as above	1% sulf.	30
R23	Savant	boulders	chl. sch. qtz. carb.	rust	7
R24	28W 25S	grab	qtz.vein shear	2" mass. py.	n/a
R25	28W 25S	grab	qtz. v. shear	7' 20% py, po	n/a
R26	McGillis	chip (3')	carb. dacite contact	10% asp.	n/a
R27	McGillis	chip (3')	bull qtz.		n/a
R28	Poisson	chip (3')	chlorite schist	5% stibnite	n/a
R29	Jutten	chip (6')	chlorite schist	10-20% sulf.	n/a
R30	Jutten	grab (3')	shear qtz. carb.	mass. asp. py.	n/a
R31	Jutten	grab (3')	shear. qtz. carb.	10% asp. py.	n/a
R32	McGillis	grab	shear. congl.	tr. py. asp?	n/a
R33	24W350S	chip (4")	qtz. v. in carb.	tr. sulf.	n/a
R34	24W300S	chip (6")	qtz. IF chi. sch.	minor py.	n/a
R35	6230W2680N	chip (3')	qtz.lens in chl. sch.	tr. sulf.	n/a
R36	28W 25S	chip (6')	qtz. & IF in shear	2" mass. sulf.	n/a
R37	28W 25S	chip (6')	same as above	5% sulf.	n/a
R38	28W 25S	grab	IF chl. schist	75% py	n/a
R39	Jutten	chip (18")	shear in chl. sch.	min. py.,po.,ZnS	n/a
R40	Jutten	chip (12")	same as above	rust	n/a

n/a = samples not yet assayed

<u>No.</u>	<u>LOCATION</u>	<u>TYPE</u>	<u>ROCK TYPE</u>	<u>MINERALIZATION</u>	<u>ASSAYS</u>
<u>_GS1-</u>	<u>TWP.</u>				<u>IN PPB Au</u>
R1	Poisson	grab	sch. fel. tuff	carb.	< 5
R2	Poisson	grab	numerous qtz. v.	5-10%py.	9
R3	Savant	grab	rusty volc.	5% py, po	5
R4	Savant	chip (12")	qtz. chl. v	5% py, po	372
R5	Savant	chip (12")	silic. rhy. dike	2% py	100
R6	McGillis	grab	24' shear volc.	15% rust	31
R7	McGillis	chip (3")	grwke, qtz.v	mass. py	9
R8	Savant	grab	shear volc.	mass. py	71
R9	Savant	grab	grey chert	10%py. 1%cp	22
R10	Savant	grab	felsic agg	rusty	6
R11	Poisson	grab	sand		7
R12	Poisson	grab	sand		6
R13	Poisson	grab	sand		11
R14	Poisson	grab	sand		12
R100	62W900N	grab	schist	Fe carb..	32
R101	Poisson	grab	schist	minor py.	n/a
R102	Poisson	grab	sheared dacite	10% FeCO3	n/a
R103	Poisson	grab	sand		n/a
R104	Poisson	grab	sand		n/a
R105	Poisson	chip (12')	carb schist	tr. py.	n/a
R106	Jutten	grab	carb schist	2% py. tr. asp	n/a
R107	McGillis	boulders	shear schist	4% py	n/a
R108	Poisson	chip (12")	shear volc.	3% asp	n/a
R109	2385W450S	grab	chl schist	5% fe carb	n/a
R110	2460W360N	boulders	chl. schist	tr. py 20% fe carb	n/a
R111	3595W360S	boulders	carb.schist	minor py	n/a
R112	36W300S	pebbles	schist	rusty	n/a
R113	6470W2510N	grab	qtz. carb. v.	rusty	n/a
R114	Jutten	grab	muck from trench	min. py, po, cp	n/a
R115	Jutten	grab	same as above	same as above	n/a
R116	Jutten	grab	from muck pile	as above	n/a
R117	Jutten	grab	wh & blk carb.	10% asb.	n/a

n/a = samples not yet assayed

DESCRIPTION OF SOIL SAMPLES

<u>SAMPLE No.</u>	<u>LOCATION</u>	<u>HORIZON</u>	<u>DESCRIPTION</u>	<u>ASSAY RESULTS</u>
ES1-	TWP.			IN PPB Au
S1	Poisson	B	med. rust br. close to o/c	< 5
S2	Poisson	B	lgt. rust br. close to o/c	< 5
S3	Poisson	B	med. rust br. close to o/c	< 5
S4	Poisson	B?	lgt. br. pebbly clay	< 5
S5	Poisson	B	dk. br. close to o/c	< 5
S6	Poisson	B	lgt. rust br.	< 5
S7	Poisson	B	lgt. rust br.	< 5
S8	Poisson	B	med. rust br.	< 5
S9	Poisson	B	rust br. rubbly granitic boulders	< 5
S10	Poisson	B	lgt. rust br. - "heavy" till	< 5
S11	Poisson	B	med. rust br. rubble	5
S12	Poisson	B	med. rust br. in till area	< 5
S13	Poisson	B	rust br. over quartz vein	< 5
S14	Poisson	B	rust br. soil volcanic o/c	< 5
S15	Savant	B	lgt. rust br. soil inter. volc. o/c	< 5
S16	Savant	B	lgt. rust br.	26
S17	Savant	B	orange rust brown	< 5
S18	Savant	B	orange rust brown	< 5
S19	Savant	B	medium brown	< 5
S20	Savant	B	org. rust br. boulder till	< 5
S21	Savant	B	org. rust br. sandy boulder till	40
S22	Savant	B	grey br. till	71
S23	Savant	B	org rust br boulder till	19
S24	Savant	B	org. rust br. boulder till	< 5
S25	Savant	B	lgt. rust br. pebbly near o/c	< 5
S26	Savant	B	bright org. rust sandy till	< 5
S27	Savant	B	orange rust brown humocky	< 5
S28	Savant	B	org. rust br. humocky	< 5
S29	Savant	B	med. rust br. gravely till	23
S30	Savant	B	org. rust br. sandy boulder till	10
S31	Savant	B	org. rust br. gravely	< 5
S32	Savant	B	org rust br. gravely	< 5
S33	Savant	B	med rust br. near o/c	< 5
S34	Savant	B	org. rust br. near o/c	< 5
S35	Savant	B	med rust br. gravely near o/c	< 5
S36	Savant	B	orange rust brown gravely	< 5
S37	Savant	B	br. sandy till near o/c	< 5
S38	Savant	B	med. rust br. sandy till near o/c	< 5

<u>SAMPLE No.</u>	<u>LOCATION</u>	<u>HORIZON</u>	<u>DESCRIPTION</u>	<u>ASSAY RESULTS</u>
ES1-	TWP.			IN PPB Au
S39	Savant	B	med. br. local o/c	13
S40	Savant	B	dk. br. pebbly till	< 5
S41	Savant	B	med. br. local o/c	< 5
S42	Poisson	B	lgt. br. gravel local o/c	< 5
S43	Benner	B	med.br. local o/c	< 5
S44	Benner	B	org. rust br. no o/c	< 5
S45	Benner	B	org. rust br. IF o/c	5
S46	Savant	B	med. br. near o/c	16
S47	Savant	B	org rust br. sandy	< 5
S48	Savant	B	choc. rust br.near o/c	< 5
S49	Savant	B	org. rust sandy till	5
S50	Savant	B	org rust br. pebbly	38
S51	Savant	B	org. rust br. near o/c	< 5
S52	Savant	B	med. rust br. near o/c	12
S53	Savant	B	med rust br. coarse sand	7
S54	Savant	B?	lgt. br. silty clay	97
S55	Poisson	B	med. rust br. local o/c	< 5
S56	Benner	B	rust br. local o/c	< 5
S57	McGillis	B	org rust br.	< 5
S58	McGillis	B	red rust br. silty sand	< 5
S59	McGillis	B?	dk. br. silty sand, pebbles	83
S60	McGillis	B	med. br. local o/c	< 5
S61	McGillis	B	org. rust br local o/c	8
S62	McGillis	B	choc. rust br. pebbly	< 5
S63	McGillis	B	org. rust br. local o/c	17
S64	McGillis	B	org. rust br. local o/c	< 5
S65	McGillis	B	org. rust br. silty sand	5
S66	McGillis	B	org. rust br. local o/c	< 5
S67	McGillis	B	red rust br. gossan?	< 5
S68	McGillis	B	org. rust br. local o/c	< 5
S69	McGillis	B	rust brown local o/c	< 5
S70	McGillis	B	med. rust br. local o/c	< 5
S71	Poisson	B	org. rust br. pebbly	< 5
S72	Poisson	B	org. rust br. pinky	5
S73	Poisson	B	org. rust br. pebbly	< 5
S74	Poisson	B	med. rust over o/c	< 5
S75	Savant	B	rusty brown over o/c	11
S76	Savant	B	med. grey br. in a linear	19
S77	Savant	B	med. rust br. over o/c	9
S78	Savant	B	med. rust br. silty sand	< 5
S79	Poisson	B	med. rust br. quartz knot	10
S80	Poisson	B	lgt. rust br. local o/c	< 5
S81	Poisson	B?	ed. rust br. nto o/c	5

<u>SAMPLE No.</u>	<u>LOCATION</u>	<u>HORIZON</u>	<u>DESCRIPTION</u>	<u>ASSAY RESULTS</u>
ES1-	TWP.			IN PPB Au
S82	Poisson	B	red rust br. local o/c	7
S83	Poisson	B	lgt. rust. br.	5
S84	Poisson	B	red rust br. near o/c	5
S85	Poisson	B	red rust br.	6
S86	Poisson	B	med. rust br. local o/c	6
S87	Poisson	B	red rust br. no o/c	7
S88	Poisson	B	lgt. rust br. no o/c	8
S89	Poisson	B	red rust br. no o/c	8
S90	Poisson	B	red rust br. no o/c	< 5
S91	Poisson	B	red rust br. local o/c	< 5
S92	Poisson	B	red rust br. no o/c	< 5
S93	Poisson	B	red rust br. on o/c	5
S94	Poisson	B	red rust br. no o/c	< 5
S95	Poisson	B	lgt. rust br. sandy no o/c	8
S96	McGillis	B	rust br. sandy gravel	n/a
S97	Poisson	B	med. rust br. in linear	n/a
S98	Poisson	B	rust br. near old trench	n/a
S99	Poisson	B	rust br. near old trench	n/a
S100	Jutten	B	org. br. soil from pit	n/a
S101	McGillis	B	med.rust br. anomaly S59	n/a
S102	McGillis	B	lgt. rust br. anomaly S59	n/a
S103	McGillis	B	med. rust br. anomaly S59	n/a
S104	L24W 350S	B	carbonate rust	n/a
S105	L25W 300S	B	carbonated rusted soil	n/a
S106	6230W 2680N	B	med. rust br. ER35	n/a
S107	6230W 2680N	B	med rust br. ER35	n/a
S108	6230W 2680N	B	med. rust br. ER35	n/a
S109	Jutten	B	rusty soil from shear	n/a

n/a = samples not yet assayed

<u>SAMPLE No.</u>	<u>LOCATION</u>	<u>HORIZON</u>	<u>DESCRIPTION</u>	<u>ASSAY RESULTS</u>
GS1-	TWP.			IN PPB Au
S1	Poisson	B	lgt. rust br. clayey, bebbles	< 5
S2	Poisson	B	med. br. pebbly till	< 5
S3	Poisson	B	bright orb. rust br.	< 5
S4	Savant	B	org. rust br.	5
S5	Savant	B	med. br. gritty	< 5
S6	Savant	B	med. br. gritty	< 5
S7	Savant	B	med. br. till on o/c	181
S8	Savant	B	org. rust br. local o/c	< 5
S9	Savant	B	org. rust br. local o/c	< 5
S10	Savant	B	org. rust br. local o/c	< 5
S11	Savant	B	org. rust br. local o/c	< 5
S12	Poisson	B	org. rust br. over qtz. carb. vein	< 5
S13	Poisson	B?	sand from old placer pit	< 5
S14	Poisson	B?	org. rust br. sand from esker	48
S15	Poisson	B?	lt. br. sand from top of esker	5
S16	Poisson	B?	esker sand	< 5
S100	6425W 2100N	B	org. rust br. from old trench	< 5
S101	McGillis	B	rust br. no o/c	n/a
S102	Poisson	B	med. br. sandy till	n/a
S103	Poisson	B	org. br. sand from sand bank	n/a
S104	Poisson	B?	med. br. sand	n/a
S105	Poisson	B	org. rust br. boulder till over o/c	n/a
S106	Poisson	B	org. rust br. crack in shear	n/a
S107	McGillis	B	med. br. gritty till	n/a
S108	Poisson	B	org. rust br. boulder till above trench	n/a
S109	6350W2400N	B	med br. boulder till local o/c	n/a
S110	6325W 2400N	B	med. br. boulder till from trench	n/a
S111	6400W 2470N	B	org. rust br. boulder till	n/a
S112	5420W 1370N	B	med. br. boulder till	n/a
S113	5750W 1420N	B	org. rust br. boulder till	n/a
S114	3125W 2450N	B?	med. br. from muck pile	n/a
S115	3150W 2525N	B	org. rust br. from muck pile	n/a
S116	3320W 2500S	B?	org. rust br. from muck pile	n/a
S117	3330W 2540S	B	org. rust br. from muck pile	n/a
S118	Jutten	B?	sand and pebbles from muck pile	n/a
S119	Jutten	B	org.rust br. in gully	n/a
S120	Jutten	B	org. rust br. in carbonate pit	n/a
S121	Jutten	B	very org. rust br. almost ferrecrete	n/a

n/a = samples not yet assayed

DESCRIPTION OF SOIL LINES

<u>LINE NAME</u>	<u>LOCATION</u>	<u>LINE LENGTH</u>	<u>No of SAMPLES</u>
LS-1	Poisson, Big Sandy Is.	0 to 5+75 E	22
LS-2	Poisson, Girard Is.	0 to 2+75 E	12
LS-3	Poisson, Girard Is.	0 to 3+75 E	13
LS-4	Poisson, on peninsula	0 to 8+25 W	30
LS-5	Poisson, on peninsula	0 to 6+25 W	24
LS-6	Poisson, as above	0 to 7+25 E	29
LS-7	Savant, North of Shore Lk.	0+10S to 1+00N	8
LS-8	Poisson, on Is. N. of LS-5&6	0 to 9+67 W	41
LS-9	Poisson, W. end Whimbrel Por.	0 to 7+00 S	29
LS-10	Poisson, E. end Whimbrel Por.	0 to 3+00 S	12
LS-11	Savant, W part N twsp line	0 to 4+50 W	18
LS-12	Savant, Treasure Is.	0 to 12+44 E	49
LS-13	Endogoki Lk. E. of Fin Lk.	0 to 12+50 E	44
LS-14	Savant, S. of NE. Arm	0 to 2+00 N	9
TOTAL NUMBER OF SAMPLES			340

APPENDIX 2
ASSAYS AND ANALYTICAL RESULTS



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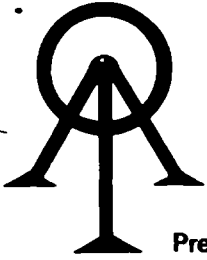
June 5

91

Work Order # : T910294
 Project : ROCKS

SAMPLE NUMBERS		Gold	
Accurassay	Customer	ppb	
544496	GS1-R-1	<5	
544497	GS1-R-2	9	
544498	GS1-R-3	5	
544499	GS1-R-4	372	} 4-TWO JOHN ISLAND VEINS & DILUTED GIVE
544500	GS1-R-5	100	
544501	GS1-R-6	31	
544502	GS1-R-7	9	
544503	ES1-R-1	<5	
544504	ES1-R-2	5	
544505	ES1-R-3	8	
544505	ES1-R-3	6	Check
544506	ES1-R-4	<5	
544507	ES1-R-5	36	
544508	ES1-R-6	40	
544509	ES1-R-7	69	
544510	ES1-R-8	6	
544511	ES1-R-9	5	
544512	ES1-R-10	35	
544513	ES1-R-11	163	} 07-CARB VEIN WITH 54.19 ESP. ISLAND
544513	ES1-R-11	151	

Per: Blaine Vint



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June 7

91

Work Order # : T910295
 Project : SOILS

SAMPLE NUMBERS	Customer	Gold ppb
Accurassay		
544514	GS1-S-1	<5
544515	GS1-S-2	<5
544516	GS1-S-3	<5
544517	ES1-S-1	<5
544518	ES1-S-2	<5
544519	ES1-S-3	<5
544520	ES1-S-4	<5
544521	ES1-S-5	<5
544522	ES1-S-6	<5
544523	ES1-S-7	<5
544523	ES1-S-7	<5 Check
544524	ES1-S-8	<5
544525	ES1-S-9	<5
544526	ES1-S-10	<5
544527	ES1-S-11	6
544528	ES1-S-12	<5
544529	ES1-S-13	<5
544530	ES1-S-14	<5
544531	ES1-S-15	<5
544532	ES1-S-16	26
544532	ES1-S-16	9 Check
544533	ES1-S-17	<5
544534	ES1-S-18	<5
544535	ES1-S-19	<5
544536	ES1-S-20	<5
544537	ES1-S-21	40
544538	ES1-S-22	71
544539	ES1-S-23	19
544540	ES1-S-24	<5
544541	ES1-S-25	<5
544541	ES1-S-25	<5 Check

26 • R-2 - EAST END OF LOT 15

40 • NORTH SIDE OF LOT 15

Per: Blaine [Signature]



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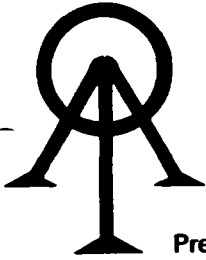
June 7

91

Work Order # : T910295
Project : SOILS

SAMPLE NUMBERS Accurassay	Customer	Gold ppb
544542	ES1-S-26	<5
544543	ES1-S-27	<5
544544	ES1-S-28	<5
544545	ES1-S-29	23 ISLANDS IN EAST BAY
544546	ES1-S-30	10
544547	ES1-S-31	<5
544548	ES1-S-32	<5
544549	ES1-S-33	<5
544550	ES1-S-34	<5
544550	ES1-S-34	<5 Check
544551	ES1-S-35	<5
544552	ES1-S-36	<5
544553	ES1-S-37	<5
544554	ES1-S-38	<5
544555	ES1-S-39	13 ISLANDS WEST OF EAST BAY
544556	ES1-S-40	<5
544557	ES1-S-41	<5
544558	ES1-S-42	<5
544559	ES1-S-43	<5
544559	ES1-S-43	<5 Check
544560	ES1-S-44	<5
544561	ES1-S-45	5
544562	ES1-S-46	16 ISLANDS NORTH WEST BAY
544563	ES1-S-47	<5
544564	ES1-S-48	<5
544565	ES1-S-49	5
544566	ES1-S-50	38 ISLANDS EAST BAY
544567	ES1-S-51	<5
544568	ES1-S-52	<5
544568	ES1-S-52	12 Check
544569	ES1-S-53	7

Per: Blaine Venter



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June 7

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Work Order # : T910295
 Project : SOILS

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
544570	ES1-S-54	97 • - 4-TWP JUNCTION ISLAND.
544571	ES1-S-55	<5
544572	ES1-S-56	<5
544573	ES1-S-57	<5
544574	ES1-S-58	<5
544575	ES1-S-59	83 • - NG ISLAND MAIN LAKE
544576	ES1-S-60	<5
544577	ES1-S-61	8
544577	ES1-S-61	5 Check
544578	ES1-S-62	<5
544579	ES1-S-63	17 - GR-6 SITE - EAST SHORE OF MAIN LAKE
544580	ES1-S-64	<5
544581	ES1-S-65	5
544582	ES1-S-66	<5
544583	ES1-S-67	<5
544584	ES1-S-68	<5
544585	ES1-S-69	<5
544586	ES1-S-70	<5
544586	ES1-S-70	<5 Check
544587	ES1-S-71	<5
544588	ES1-S-72	5
544589	ES1-S-73	<5
544590	ES1-S-74	<5
544590	ES1-S-74	<5 Check

Per: Blaine V. [Signature]



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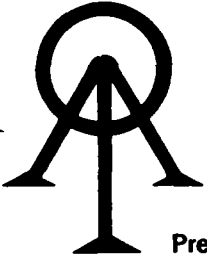
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June 6

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Work Order # : T910296
Project : SOILS

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	
544591	LS1-0+00	<5	
544592	LS1-0+25E	<5	
544593	LS1-0+50E	<5	
544594	LS1-0+75E	<5	
544595	LS1-1+00E	8	
544596	LS1-1+25E	7	
544597	LS1-1+50E	23	
544598	LS1-1+75E	<5	
544599	LS1-2+60E	<5	
544600	LS1-2+80E	<5	
544600	LS1-2+80E	<5	Check
544601	LS1-3+00E	5	
544602	LS1-3+25E	8	
544603	LS1-3+50E	5	
544604	LS1-3+75E	5	
544605	LS1-4+00E	<5	
544606	LS1-4+50E	<5	
544607	LS1-4+75E	<5	
544608	LS1-4+85E *	5	
544609	LS1-5+00E	<5	
544609	LS1-5+00E	<5	Check
544610	LS1-5+25E	<5	
544611	LS1-5+50E	<5	
544612	LS1-5+75E	<5	
544613	LS2-0+00	<5	
544614	LS2-0+25E	5	
544615	LS2-0+50E	15	
544616	LS2-0+75E	<5	
544617	LS2-1+00E	<5	
544618	LS2-1+25E	6	
544618	LS2-1+25E	<5	Check



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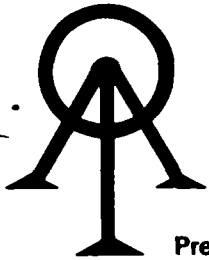
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June 6

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Work Order # : T910296
Project : SOILS

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
544619	LS2-1+50E	5
544620	LS2-1+75E	5
544621	LS2-2+00E	5
544622	LS2-2+25E	5
544623	LS2-2+50E	6
544624	LS2-2+75E	<5
544625	LS3-0+00	<5
544626	LS3-0+25E	<5
544627	LS3-0+50E	<5
544627	LS3-0+50E	6 Check
544628	LS3-0+75E	<5
544629	LS3-1+00E	5
544630	LS3-1+40E	<5
544631	LS3-1+75E	<5
544632	LS3-2+30E	6
544633	LS3-2+50E	<5
544634	LS3-3+00E	6
544635	LS3-3+25E	7
544636	LS3-3+50E	<5
544636	LS3-3+50E	<5 Check
544637	LS3-3+75E	<5
544637	LS3-3+75E	<5 Check



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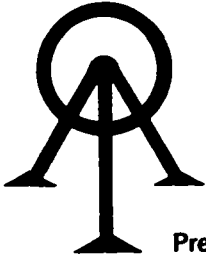
June 10

91

Work Order # : T910296A
Project : SOILS

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
544638	LS4-0+00	5
544639	LS4-0+25W	9
544640	LS4-0+50W	8
544641	LS4-0+75W	<5
544642	LS4-1+00W	20
544643	LS4-1+25W	<5
544644	LS4-1+50W	<5
544645	LS4-1+75W	6
544646	LS4-2+00W	5
544647	LS4-2+25W	7
544647	LS4-2+25W	<5 Check
544648	LS4-2+50W	5
544649	LS4-2+75W	5
544650	LS4-3+00W	7
544651	LS4-3+25W	<5
544652	LS4-3+60W	<5
544653	LS4-3+85W	<5
544654	LS4-4+00W	6
544655	LS4-4+25W	<5
544656	LS4-4+50W	<5
544656	LS4-4+50W	<5 Check
544657	LS4-4+75W	5
544658	LS4-5+00W	<5
544659	LS4-5+75W	<5
544660	LS4-6+00W	<5
544661	LS4-6+25W	<5
544662	LS4-6+50W	6
544663	LS4-6+75W	<5
544664	LS4-7+00W	6
544665	LS4-7+50W	5
544665	LS4-7+50W	<5 Check

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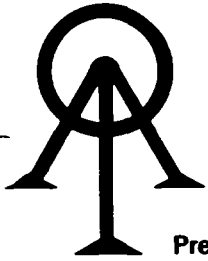
George Gorzynski
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3836 West 16th Avenue
VANCOUVER, BRITISH COLUMBIA
V6R 3C7

June 10

91

Work Order # : T910296A
Project : SOILS

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
544666	LS4-7+75W	<5
544667	LS4-8+25W	<5
544668	LS5-0+00	<5
544669	LS5-0+35W	5
544670	LS5-0+50W	<5
544671	LS5-0+75W	<5
544672	LS5-1+00W	<5
544673	LS5-1+25W	<5
544674	LS5-1+60W	13
544674	LS5-1+60W	30 • Check
544675	LS5-1+75W	6
544676	LS5-2+00W	<5
544677	LS5-2+25W	<5
544678	LS5-2+50W	<5
544679	LS5-2+75W	<5
544680	LS5-3+00W	<5
544681	LS5-3+25W	<5
544682	LS5-3+50W	6
544683	LS5-3+75W	9
544683	LS5-3+75W	8 Check
544684	LS5-4+00W	8
544685	LS5-4+25W	<5
544686	LS5-4+50W	5
544687	LS5-4+75W	10
544688	LS5-5+40W	20
544689	LS5-5+75W	31 •
544690	LS5-6+00W	14
544691	LS5-6+25W	15
544691	LS5-6+25W	16 Check



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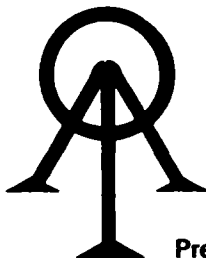
June 10

91

Work Order # : T910296B
Project : SOILS

SAMPLE NUMBERS		Gold	
Accurassay	Customer	ppb	
544692	LS6-0+00	8	
544693	LS6-0+25E	15	
544694	LS6-0+50E	31.	
544695	LS6-0+75E	<5	
544696	LS6-1+35E	18	
544697	LS6-1+50E	<5	
544698	LS6-1+75E	<5	
544699	LS6-2+00E	<5	
544700	LS6-2+25E	<5	
544701	LS6-2+50E	6	
544701	LS6-2+50E	<5	Check
544702	LS6-2+75E	<5	
544703	LS6-3+00E	<5	
544704	LS6-3+25E	79.	
544705	LS6-3+50E	<5	
544706	LS6-3+75E	13	
544707	LS6-4+00E	<5	
544708	LS6-4+25E	<5	
544709	LS6-4+50E	<5	
544710	LS6-4+75E	<5	
544710	LS6-4+75E	<5	Check
544711	LS6-5+00E	<5	
544712	LS6-5+25E	5	
544713	LS6-5+50E	<5	
544714	LS6-5+75E	<5	
544715	LS6-6+00E	8	
544716	LS6-6+25E	<5	
544717	LS6-6+50E	<5	
544718	LS6-6+75E	<5	
544719	LS6-7+00E	<5	
544719	LS6-7+00E	<5	Check

Per: Blaine Duff



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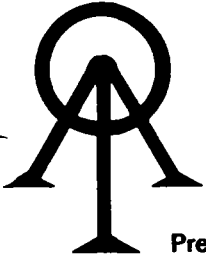
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V6R 3C7

June 10

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Work Order # : T910296B
Project : SOILS

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
544720	LS6-7+25E	<5
544721	LS7-0+10S	<5
544722	LS7-0+00	6
544723	LS7-0+10N	<5
544724	LS7-0+10N-A	<5
544725	LS7-0+25N	<5
544726	LS7-0+50N	<5
544727	LS7-0+75N	<5
544728	LS7-1+00N	<5
544728	LS7-1+00N	<5 Check



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Work Order # : T910296C
Project : SOILS

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	
544729	LS8-0+00	<5	
544730	LS8-0+25W	<5	
544731	LS8-0+39W	<5	
544732	LS8-0+50W	<5	
544733	LS8-0+65W	<5	
544734	LS8-1+00W	<5	
544735	LS8-1+25W	<5	
544736	LS8-1+50W	<5	
544737	LS8-1+75W	<5	
544738	LS8-2+00W	<5	
544738	LS8-2+00W	<5	Check
544739	LS8-2+25W	5	
544740	LS8-2+50W	<5	
544741	LS8-2+75W	<5	
544742	LS8-3+00W	<5	
544743	LS8-3+25W	11	
544744	LS8-3+50W	<5	
544745	LS8-3+75W	5	
544746	LS8-4+00W	16	
544747	LS8-4+25W	<5	
544747	LS8-4+25W	17	Check
544748	LS8-4+50W	<5	
544749	LS8-4+75W	<5	
544750	LS8-5+00W	<5	
544751	LS8-5+25W	<5	
544752	LS8-5+50W	13	
544753	LS8-5+75W	6	
544754	LS8-6+00W	<5	
544755	LS8-6+25W	<5	
544756	LS8-6+50W	<5	
544756	LS8-6+50W	<5	Check

Per: *George Gorzynski*



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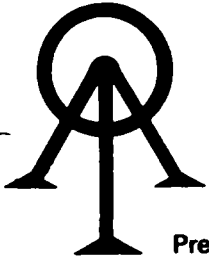
George Gorzynski
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V6R 3C7

June 10

91

Work Order # : T910296C
Project : SOILS

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
544757	LS8-6+75W	<5
544758	LS8-7+00W	<5
544759	LS8-7+25W	10
544760	LS8-7+50W	9
544761	LS8-7+75W	<5
544762	LS8-8+00W	<5
544763	LS8-8+25W	7
544764	LS8-8+50W	<5
544765	LS8-8+75W	<5
544765	LS8-8+75W	<5 Check
544766	LS8-9+00W	<5
544767	LS8-9+25W	<5
544768	LS8-9+50W	11
544769	LS8-9+67W	<5
544769	LS8-9+67W	<5 Check



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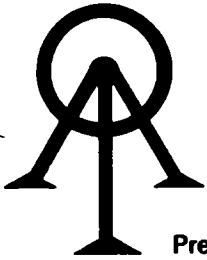
June 18

91

Work Order # : T910317
Project : ROCK

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
545147	GS1-R-8	71
545148	GS1-R-9	22
545149	GS1-R-10	6
545150	GS1-R-11	7
545151	GS1-R-12	6
545152	GS1-R-13	11
545153	GS1-R-14	12
545154	ES1-R-12	17
545155	ES1-R-13	58
545156	ES1-R-14	8
545156	ES1-R-14	8 Check
545157	ES1-R-15	<5
545158	ES1-R-16	5
545159	ES1-R-17	9
545160	ES1-R-18	<5
545161	ES1-R-19	40
545162	ES1-R-20	110
545163	ES1-R-21	14
545164	ES1-R-22	30
545165	ES1-R-23	7
545165	ES1-R-23	<5 Check

Per: 



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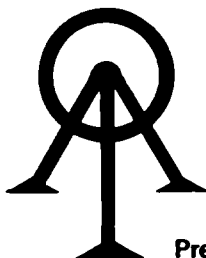
June 18

91

Work Order # : T910317A
 Project : SOIL

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
545166	GS1-S-4	5
545167	GS1-S-5	<5
545168	GS1-S-6	<5
545169	GS1-S-7	181
545170	GS1-S-8	<5
545171	GS1-S-9	<5
545172	GS1-S-10	<5
545173	GS1-S-11	<5
545174	GS1-S-12	<5
545175	GS1-S-13	<5
545175	GS1-S-13	<5 Check
545176	GS1-S-14	48
545177	GS1-S-15	5
545178	GS1-S-16	<5
545179	ES1-S-75	11
545180	ES1-S-76	19
545181	ES1-S-77	9
545182	ES1-S-78	<5
545183	ES1-S-79	10
545184	ES1-S-80	<5
545184	ES1-S-80	<5 Check
545185	ES1-S-81	7
545186	ES1-S-82	<5
545187	ES1-S-83	5
545188	ES1-S-84	6
545189	ES1-S-85	6
545190	ES1-S-86	6
545191	ES1-S-87	7
545192	ES1-S-88	8
5. 93	ES1-S-89	7
545193	ES1-S-89	8 Check

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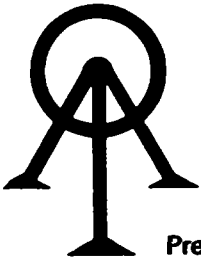
June 18

91

Work Order # : T910317A
Project : SOIL

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
545194	ES1-S-90	<5
545195	ES1-S-91	<5
545196	ES1-S-92	<5
545197	ES1-S-93	5
545198	ES1-S-94	<5
545199	ES1-S-95	5
545199	ES1-S-95	8 Check

Per: 



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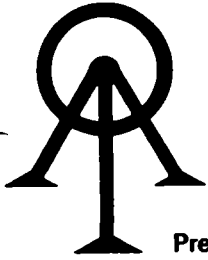
June 20

91

Work Order # : T910317B
Project : SOIL

SAMPLE NUMBERS Accurassay	CUSTOMER	Gold ppb	
545200	LS 9-0+00	12	
545201	LS 9-0+25 S	<5	
545202	LS 9-0+50 S	<5	
545203	LS 9-0+70 S	7	
545204	LS 9-1+00 S	5	
545205	LS 9-1+25 S	5	
545206	LS 9-1+50 S	11	
545207	LS 9-1+75 S	5	
545208	LS 9-2+10 S	6	
545209	LS 9-2+25 S	5	
545209	LS 9-2+25 S	<5	Check
545210	LS 9-2+50 S	<5	
545211	LS 9-2+75 S	9	
545212	LS 9-3+00 S	<5	
545213	LS 9-3+25 S	6	
545214	LS 9-3+50 S	<5	
545215	LS 9-3+75 S	<5	
545216	LS 9-4+00 S	<5	
545217	LS 9-4+25 S	<5	
545218	LS 9-4+50 S	<5	
545218	LS 9-4+50 S	<5	Check
545219	LS 9-4+75 S	5	
545220	LS 9-5+00 S	<5	
545221	LS 9-5+25 S	9	
545222	LS 9-5+50 S	<5	
545223	LS 9-5+75 S	5	
545224	LS 9-6+00 S	<5	
545225	LS 9-6+25 S	<5	
545226	LS 9-6+50 S	<5	
545227	LS 9-6+75 S	5	
545227	LS 9-6+75 S	<5	Check

Per: Blaine Voth



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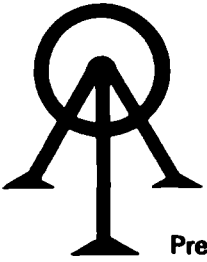
June 20

91

Work Order # : T910317B
Project : SOIL

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
545228	LS 9-7+00 S	<5
545229	LS10-0+00	<5
545230	LS10-0+25 S	<5
545231	LS10-0+50 S	<5
545232	LS10-0+75 S	<5
545233	LS10-1+00 S	<5
545234	LS10-1+25 S	<5
545235	LS10-1+50 S	5
545236	LS10-1+75 S	<5
545236	LS10-1+75 S	5 Check
545237	LS10-2+00 S	<5
545238	LS10-2+25 S	<5
545239	LS10-2+50 S	26
545240	LS10-2+75 S	<5
545241	LS10-3+00 S	7
545242	LS11-0+00	5
545243	LS11-0+25 W	<5
545244	LS11-0+50 W	8
545245	LS11-0+75 W	5
545245	LS11-0+75 W	<5 Check
545246	LS11-1+00 W	8
545247	LS11-1+25 W	13
545248	LS11-1+50 W	9
545249	LS11-1+75 W	8
545250	LS11-2+00 W	9
545251	LS11-2+25 W	<5
545252	LS11-2+50 W	5
545253	LS11-2+75 W	<5
545254	LS11-3+00 W	17
545254	LS11-3+00 W	11 Check
545255	LS11-3+15 W	5

Per: Blaine Vint



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June 20

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Work Order # : T910317B
Project : SOIL

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
545256	LS11-3+75 W	6
545257	LS11-4+00 W	18
545258	LS11-4+25 W	7
545259	LS11-4+50 W	9
545259	LS11-4+50 W	7 Check



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June 21

91

Work Order # : T910317C
Project : SOILS

SAMPLE NUMBERS		Gold	
Accurassay	Customer	ppb	
545260	LS12-0+00	<5	
545261	LS12-0+25 E	<5	
545262	LS12-0+50 E	<5	
545263	LS12-1+25 E	33	
545264	LS12-1+50 E	6	
545265	LS12-1+75 E	5	
545266	LS12-2+00 E	5	
545267	LS12-2+25 E	6	
545268	LS12-2+50 E	7	
545269	LS12-2+75 E	<5	
545269	LS12-2+75 E	8	Check
545270	LS12-3+00 E	16	
545271	LS12-3+25 E	<5	
545272	LS12-3+50 E	<5	
545273	LS12-3+75 E	<5	
545274	LS12-4+00 E	<5	
545275	LS12-4+25 E	<5	
545276	LS12-4+50 E	9	
545277	LS12-4+75 E	10	
545278	LS12-5+00 E	<5	
545278	LS12-5+00 E	<5	Check
545279	LS12-5+25 E	<5	
545280	LS12-5+50 E	<5	
545281	LS12-5+75 E	<5	
545282	LS12-6+00 E	<5	
545283	LS12-6+25 E	6	
545284	LS12-6+50 E	<5	
545285	LS12-6+75 E	17	
545286	LS12-7+00 E	<5	
545287	LS12-7+25 E	<5	
545287	LS12-7+25 E	<5	Check

Per: 



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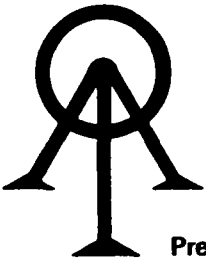
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VANCOUVER, BRITISH COLUMBIA
V6R 3C7

June 21

91

Work Order # : T910317C
Project : SOILS

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
545288	LS12-7+50 E	<5
545289	LS12-7+75 E	<5
545290	LS12-8+00 E	6
545291	LS12-8+25 E	<5
545292	LS12-8+50 E	<5
545293	LS12-8+75 E	<5
545294	LS12-9+00 E	<5
545295	LS12-9+25 E	<5
545296	LS12-9+50 E	<5
545296	LS12-9+50 E	5 Check
545297	LS12-9+75 E	<5
545298	LS12-10+00 E	8
545299	LS12-10+25 E	<5
545300	LS12-10+50 E	6
545301	LS12-10+75 E	6
545302	LS12-11+00 E	395
545303	LS12-11+25 E	8
545304	LS12-11+50 E	<5
545305	LS12-11+75 E	<5
545305	LS12-11+75 E	<5 Check
545306	LS12-12+00 E	9
545307	LS12-12+25 E	<5
545308	LS12-12+44 E	92
545308	LS12-12+44 E	162 Check



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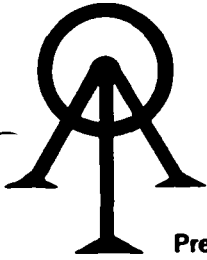
George Gorzynski
G.G. Engineering Ltd.
3836 West 16th Avenue
VANCOUVER, BRITISH COLUMBIA
V6R 3C7

June 21

91

Work Order # : T910317D
Project : SOIL

SAMPLE NUMBERS		Gold	
Accurassay	Customer	ppb	
545309	LS13-0+00	<5	
545310	LS13-0+25 E	<5	
545311	LS13-1+00 E	<5	
545312	LS13-1+25 E	217	
545313	LS13-1+50 E	6	
545314	LS13-1+75 E	<5	
545315	LS13-2+00 E	<5	
545316	LS13-2+25 E	<5	
545317	LS13-2+50 E	<5	
545318	LS13-2+75 E	<5	
545318	LS13-2+75 E	<5	Check
545319	LS13-3+00 E	6	
545320	LS13-3+25 E	22	
545321	LS13-3+50 E	12	
545322	LS13-3+75 E	9	
545323	LS13-4+00 E	<5	
545324	LS13-4+25 E	<5	
545325	LS13-4+50 E	<5	
545326	LS13-4+75 E	<5	
545327	LS13-5+00 E	<5	
545327	LS13-5+00 E	<5	Check
545328	LS13-5+15 E	<5	
545329	LS13-5+50 E	<5	
545330	LS13-5+75 E	<5	
545331	LS13-6+00 E	<5	
545332	LS13-6+25 E	<5	
545333	LS13-6+50 E	<5	
545334	LS13-6+75 E	9	
545335	LS13-7+00 E	<5	
545336	LS13-7+25 E	<5	
545336	LS13-7+25 E	<5	Check



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June 21

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Work Order # : T910317D
Project : SOIL

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb
545337	LS13-7+50 E	<5
545338	LS13-8+00 E	<5
545339	LS13-8+25 E	<5
545340	LS13-8+50 E	<5
545341	LS13-8+75 E	<5
545342	LS13-9+00 E	<5
545343	LS13-9+50 E	<5
545344	LS13-10+25 E	<5
545345	LS13-10+50 E	<5
545345	LS13-10+50 E	<5 Check
545346	LS13-10+75 E	<5
545347	LS13-11+25 E	<5
545348	LS13-11+50 E	<5
545349	LS13-11+75 E	<5
545350	LS13-12+00 E	<5
545351	LS13-12+25 E	<5
545352	LS13-12+50 E	<5
545353	LS14-0+00	<5
545354	LS14-0+25 N	<5
545354	LS14-0+25 N	<5 Check
545355	LS14-0+50 N	<5
545356	LS14-0+75 N	<5
545357	LS14-1+00 N	<5
545358	LS14-1+25 N	<5
545359	LS14-1+50 N	37
545360	LS14-1+75 N	<5
545361	LS14-2+00 N	<5
545361	LS14-2+00 N	<5 Check

Per: Blaine V. [Signature]



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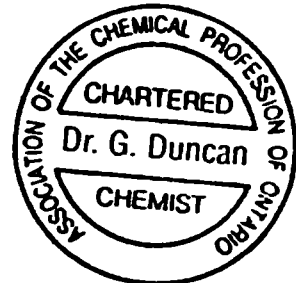
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George Gorzynski
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Vancouver, B.C.
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July 19

Work Order # : 910871
Project :

SAMPLE NUMBERS		Gold	Gold
Accurassay	Customer	ppb	Oz/T
246135	ESI-R-24	10139	0.295
246136	ESI-R-25	15564	0.453
246137	GSI-R-100	32	0.001
246137	GSI-R-100	26	0.001 Check



Per: _____

G. Duncan



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Page: 1

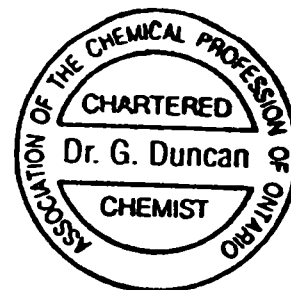
George Gorzynski
 G.G. Engineering Ltd.
 3836 West 16th Avenue
 Vancouver, B.C.
 V6R 3C7

July 19

91

Work Order # : 910880
 Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
246096	L36+00W, 18+00S	<5	<0.001	
246097	L36+00W, 19+00S	<5	<0.001	
246098	L36+00W, 19+50S	<5	<0.001	
246099	L36+00W, 20+00S	<5	<0.001	
246100	L36+00W, 21+00S	<5	<0.001	
246101	L58+00W, 3+00S	<5	<0.001	
246102	L58+00W, 4+00S	20	0.001	
246103	L58+00W, 5+00S	<5	<0.001	
246104	L58+00W, 6+00S	<5	<0.001	
246105	L58+00W, 7+00S	<5	<0.001	
246105	L58+00W, 7+00S	<5	<0.001	Check
246106	L58+00W, 8+00S	<5	<0.001	
246107	L60+00W, 3+50S	<5	<0.001	
246108	L60+00W, 4+00S	<5	<0.001	
246109	L60+00W, 5+00S	<5	<0.001	
246110	L62+00W, 21+75N	<5	<0.001	
246111	L62+00W, 21+00N	5	<0.001	
246112	L62+00W, 20+00N	5	<0.001	
246113	L62+00W, 19+00N	5	<0.001	
246114	L62+00W, 17+00N	<5	<0.001	
246114	L62+00W, 17+00N	<5	<0.001	Check
246115	L62+00W, 16+00N	<5	<0.001	
246116	L62+00W, 15+00N	<5	<0.001	
246117	L62+00W, 14+00N	<5	<0.001	
246118	L62+00W, 13+00N	<5	<0.001	
246119	L62+00W, 12+00N	<5	<0.001	
246120	L62+00W, 11+00N	5	<0.001	
246121	L62+00W, 10+00N	5	<0.001	
246122	L62+00W, 9+00N	5	<0.001	
246123	L62+00W, 8+00N	<5	<0.001	
246123	L62+00W, 8+00N	6	<0.001	Check



Per: Dr. G. Duncan



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Page: 2

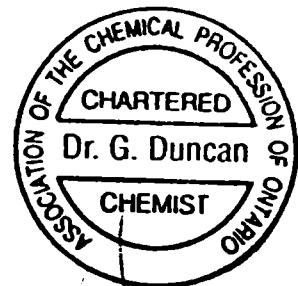
George Gorzynski
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V6R 3C7

July 19

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Work Order # : 910880
Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
246124	L62+00W,7+00N	<5	<0.001	
246125	L62+00W,6+00N	<5	<0.001	
246126	L62+00W,5+00N	<5	<0.001	
246127	L62+00W,4+00N	<5	<0.001	
246128	L62+00W,2+75N	<5	<0.001	
246129	L62+00W,2+00N	<5	<0.001	
246130	L62+00W,1+00N	<5	<0.001	
246131	L62+00W,1+00S	<5	<0.001	
246132	L62+00W,2+00S	6	<0.001	
246132	L62+00W,2+00S	<5	<0.001	Check
246133	GSI-S-100	<5	<0.001	
246133	GSI-S-100	<5	<0.001	Check



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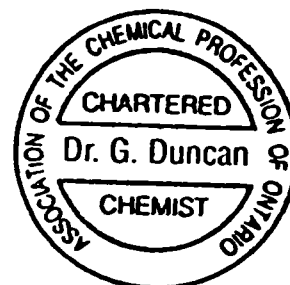
Work Order # : 910872
Project :

SAMPLE NUMBERS Accurassay	CUSTOMER	Gold ppb	Gold Oz/T
245854	BL,33+00 E	12	<0.001
245855	BL,32+00 E	<5	<0.001
245856	BL,31+00 E	<5	<0.001
245857	BL,30+00 E	<5	<0.001
245858	BL,29+00 E	<5	<0.001
245859	BL,28+00 E	<5	<0.001
245860	BL,27+00 E	<5	<0.001
245861	BL,26+00 E	<5	<0.001
245862	BL,25+00 E	<5	<0.001
245863	BL,24+00 E	8	<0.001
245863	BL,24+00 E	<5	<0.001
245864	BL,23+00 E	11	<0.001
245865	BL,22+00 E	<5	<0.001
245866	BL,21+00 E	<5	<0.001
245867	LO+00,7+00 V	6	<0.001
245868	LO+00,8+00 V	<5	<0.001
245869	LO+00,8+75 V	35	0.001
245870	LO+00,10+10 V	98	0.003
245871	LO+00,11+00 V	<5	<0.001
245872	LO+00;12+00 V	<5	<0.001
245872	LO+00,12+00 V	<5	<0.001
245873	LO+00,13+00 V	<5	<0.001
245874	LO+00,14+00 V	77	0.002
245875	LO+00,15+00 V	<5	<0.001
245876	LO+00,16+00 V	6	<0.001
245877	LO+00,17+00 V	<5	<0.001
245878	LO+00,18+00 V	10	<0.001
245879	LO+00,22+00 V	<5	<0.001
5880	LO+00,23+50 V	<5	<0.001
245881	LO+00,24+00 V	<5	<0.001
245881	LO+00,24+00 V	<5	<0.001

Check

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Per: _____

G. Duncan



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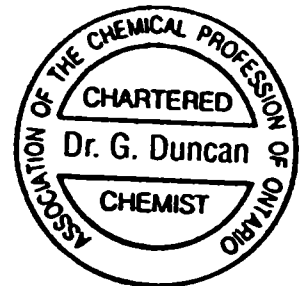
George Gorzynski
 G.G. Engineering Ltd.
 3836 West 16th Avenue
 Vancouver, B.C.
 V6R 3C7

July 18

91

Work Order # : 910872
 Project :

SAMPLE NUMBERS		Gold	Gold
Accurassay	Customer	ppb	Oz/T
245882	LO+00,25+00 W	8	<0.001
245883	LO+00,26+00 W	<5	<0.001
245883	LO+00,26+00 W	<5	<0.001 Check



Per: *G. Duncan*



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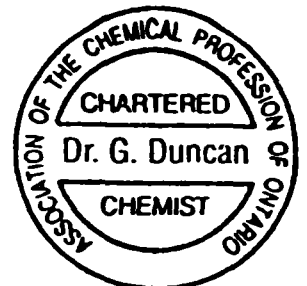
Work Order # : 910873
 Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T
245884	L0+00,27+00 V	23	0.001
245885	L0+00,28+00 V	<5	<0.001
245886	L0+00,29+00 V	<5	<0.001
245887	L0+00,30+00 V	<5	<0.001
245888	L0+00,31+00 V	18	0.001
245889	L0+00,32+00 V	<5	<0.001
245890	L0+00,33+00 V	<5	<0.001
245891	L0+00,34+00 V	<5	<0.001
245892	L0+00,35+00 V	<5	<0.001
245893	L0+00,36+00 V	<5	<0.001
245893	L0+00,36+00 V	<5	<0.001
245894	L0+00,37+00 V	<5	<0.001
245895	L0+00,38+00 V	10	<0.001
245896	L0+00,39+00 V	5	<0.001
245897	L0+00,40+00 V	20	0.001
245898	L0+00,41+00 V	6	<0.001
245899	L0+00,44+00 V	14	<0.001
245900	L0+00,45+00 V	<5	<0.001
245901	L0+00,46+00 V	10	<0.001
245902	L0+00,48+00 V	5	<0.001
245902	L0+00,48+00 V	6	<0.001
245903	L0+00,48+90 V	<5	<0.001
245904	L0+00,61+00 V	<5	<0.001
245905	L0+00,62+00 V	<5	<0.001
245906	L0+00,63+00 V	19	0.001
245907	L0+00,64+00 V	<5	<0.001
245908	L0+00,65+00 V	<5	<0.001
3909	L0+00,66+00 V	<5	<0.001
245910	L0+00,67+00 V	<5	<0.001
245911	L0+00,68+00 V	<5	<0.001
245911	L0+00,68+00 V	<5	<0.001

Check

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Per: _____

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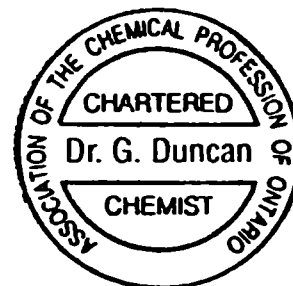
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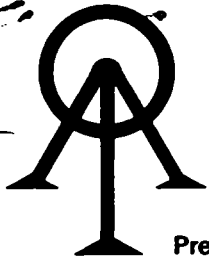
91

Work Order # : 910873
Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
245912	L30E,5+80 N	<5	<0.001	
245913	L30E,4+80 N	<5	<0.001	
245913	L30E,4+80 N	<5	<0.001	Check



G. Duncan



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Page: 1

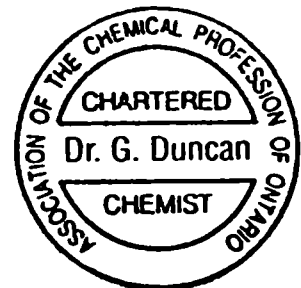
George Gorzynski
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Vancouver, B.C.
V6R 3C7

July 18

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Work Order # : 910874
Project :

SAMPLE NUMBERS Accurassay	CUSTOMER	Gold ppb	Gold Oz/T	
245914	L30E,4+00 N	<5	<0.001	
245915	L30E,3+00 N	7	<0.001	
245916	L30E,2+00 N	151	0.004	
245917	L30E,1+00 N	<5	<0.001	
245918	L30E,1+00 S	<5	<0.001	
245919	L30E,2+00 S	<5	<0.001	
245920	L30E,3+00 S	<5	<0.001	
245921	L30E,4+00 S	40	0.001	
245922	L30E,5+00 S	<5	<0.001	
245923	L30E,6+00 S	<5	<0.001	
245923	L30E,6+00 S	<5	<0.001	Check
245924	L30E,7+00 S	<5	<0.001	
245925	L30E,8+00 S	6	<0.001	
245926	L20E,1+50 N	<5	<0.001	
245927	L20E,0+65 S	9	<0.001	
245928	L18E,1+25 N	9	<0.001	
245929	L18E,0+75 S	9	<0.001	
245930	L16E,6+00 N	<5	<0.001	
245931	L16E,5+00 N	5	<0.001	
245932	L16E,4+00 N	6	<0.001	
245932	L16E,4+00 N	<5	<0.001	Check
245933	L16E,3+00 N	<5	<0.001	
245934	L16E,2+00 N	6	<0.001	
245935	L16E,1+00 N	8	<0.001	
245936	L16E,0+30 S	<5	<0.001	
245937	L16E,1+00 S	<5	<0.001	
245938	L16E,4+00 S	5	<0.001	
245939	L16E,5+00 S	5	<0.001	
245940	L16E,6+75 S	5	<0.001	
245941	L4+00W,3+50 S	<5	<0.001	
245941	L4+00W,3+50 S	<5	<0.001	Check



Per: Dr. G. Duncan



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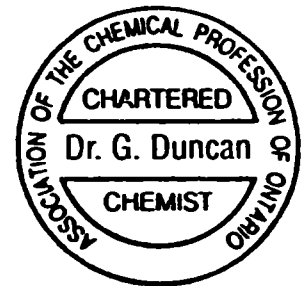
George Gorzynski
G.G. Engineering Ltd.
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Vancouver, B.C.
V6R 3C7

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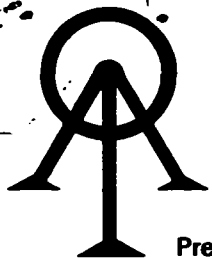
91

Work Order # : 910874
Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T
245942	L4+00W,5+00 S	<5	<0.001
245943	L4+00W,6+00 S	<5	<0.001
245943	L4+00W,6+00 S	<5	<0.001 Check



Per: *G. Duncan*



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A DIVISION OF BARRINGER LABORATORIES LIMITED, REXDALE, ONTARIO

BOX 426

KIRKLAND LAKE, ONTARIO, CANADA P2N 3J1

TEL.: (705) 567-3361

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

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Certificate of Analysis

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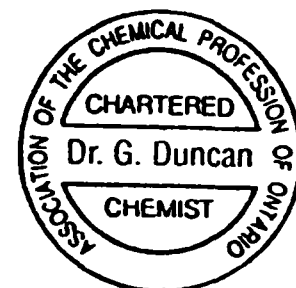
George Gorzynski
G.G. Engineering Ltd.
3836 West 16th Avenue
Vancouver, B.C.
V6R 3C7

July 18

91

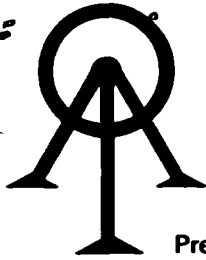
Work Order # : 910875
Project :

SAMPLE NUMBERS Accurassay	CUSTOMER	Gold ppb	Gold Oz/T	
245944	L4+00W,7+00S	6	<0.001	
245945	L4+00W,8+00S	<5	<0.001	
245946	L4+00W,9+00S	<5	<0.001	
245947	L4+00W,10+00S	5	<0.001	
245948	L4+00W,11+00S	5	<0.001	
245949	L4+00W,12+00S	7	<0.001	
245950	L4+00W,13+00S	5	<0.001	
245951	L4+00W,14+00S	6	<0.001	
245952	L4+00W,15+00S	<5	<0.001	
245953	L4+00W,16+00S	<5	<0.001	
245953	L4+00W,16+00S	<5	<0.001	Check
245954	L4+00W,17+00S	<5	<0.001	
245955	L4+00W,18+00S	<5	<0.001	
245956	L4+00W,19+00S	<5	<0.001	
245957	L4+00W,20+00S	<5	<0.001	
245958	L24+00W,10+00N	<5	<0.001	
245959	L24+00W,9+00N	<5	<0.001	
245960	L24+00W,8+00N	<5	<0.001	
245961	L24+00W,7+00N	<5	<0.001	
245962	L24+00W,6+00N	<5	<0.001	
245962	L24+00W,6+00N	<5	<0.001	Check
245963	L24+00W,5+00N	<5	<0.001	
245964	L24+00W,4+00N	<5	<0.001	
245965	L24+00W,3+50N	<5	<0.001	
245966	L24+00W,3+00N	<5	<0.001	
245967	L24+00W,2+00N	<5	<0.001	
245968	L24+00W,1+00N	<5	<0.001	
245969	L24+00W,1+00S	<5	<0.001	
245970	L24+00W,2+00S	18	0.001	
245971	L24+00W,3+00S	7	<0.001	
5971	L24+00W,3+00S	<5	<0.001	Check



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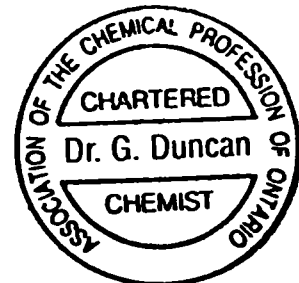
George Gorzynski
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Vancouver, B.C.
V6R 3C7

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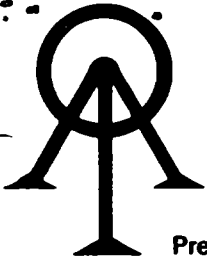
91

Work Order # : 910875
Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T
245972	L24+00W,4+00S	7	<0.001
245973	L24+00W,5+00S	<5	<0.001
245973	L24+00W,5+00S	<5	<0.001 Check



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George Gorzynski
G.G. Engineering Ltd.
3836 West 16th Avenue
Vancouver, B.C.
V6R 3C7

July 18

91

Work Order # : 910876
Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
245975	L24+00W,6+00S	<5	<0.001	
245976	L24+00W,7+00S	<5	<0.001	
245977	L24+00W,8+00S	<5	<0.001	
245978	L24+00W,9+00S	<5	<0.001	
245979	L24+00W,10+00S	<5	<0.001	
245980	L24+00W,11+00S	<5	<0.001	
245981	L24+00W,12+00S	8	<0.001	
245982	L24+00W,13+00S	5	<0.001	
245983	L24+00W,14+00S	<5	<0.001	
245984	L24+00W,15+00S	6	<0.001	
245984	L24+00W,15+00S	8	<0.001	Check
245985	L24+00W,16+00S	6	<0.001	
245986	L24+00W,16+50S	5	<0.001	
245987	L24+00W,17+00S	<5	<0.001	
245988	L24+00W,18+00S	<5	<0.001	
245989	L28+00W,32+00N	<5	<0.001	
245990	L28+00W,31+00N	13	<0.001	
245991	L28+00W,30+00N	12	<0.001	
245992	L28+00W,29+00N	<5	<0.001	
245993	L28+00W,28+00N	<5	<0.001	
245993	L28+00W,28+00N	<5	<0.001	Check
245994	L28+00W,27+00N	10	<0.001	
245995	L28+00W,26+00N	<5	<0.001	
245996	L28+00W,25+00N	<5	<0.001	
245997	L28+00W,24+00N	11	<0.001	
245998	L28+00W,23+00N	<5	<0.001	
245999	L28+00W,22+00N	<5	<0.001	
246000	L28+00W,21+00N	<5	<0.001	
246001	L28+00W,18+00N	<5	<0.001	
246002	L28+00W,17+00N	<5	<0.001	
3002	L28+00W,17+00N	6	<0.001	Check



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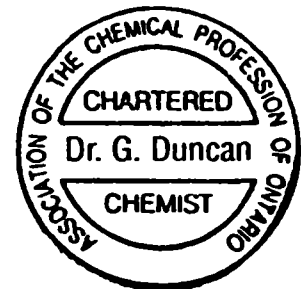
George Gorzynski
 G.G. Engineering Ltd.
 3836 West 16th Avenue
 Vancouver, B.C.
 V6R 3C7

July 18

91

Work Order # : 910876
 Project :

SAMPLE NUMBERS		Gold	Gold
Accurassay	Customer	ppb	Oz/T
246003	L28+00W, 16+00N	<5	<0.001
246004	L28+00W, 15+00N	<5	<0.001
246004	L28+00W, 15+00N	<5	<0.001 Check



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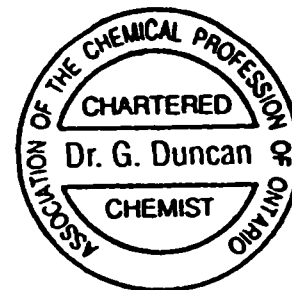
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V6R 3C7

July 18

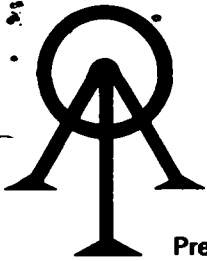
91

Work Order # : 910877
Project :

SAMPLE NUMBERS		Gold	Gold
Accurassay	Customer	ppb	Oz/T
246033	L28+00W,16+00S	23	0.001
246034	L28+00W,18+00S	<5	<0.001
246034	L28+00W,18+00S	<5	<0.001 Check



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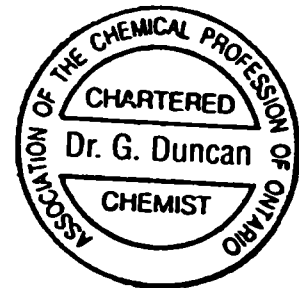
George Gorzynski
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Vancouver, B.C.
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July 18

91

Work Order # : 910878
Project :

SAMPLE NUMBERS		Gold	Gold
Accurassay	Customer	ppb	Oz/T
246063	L32+00W,6+00S	<5	<0.001
246064	L32+00W,6+75S	<5	<0.001



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George Gorzynski
G.G. Engineering Ltd.
3836 West 16th Avenue
Vancouver, B.C.
V6R 3C7

July 18

91

Work Order # : 910879
Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
246066	L32+00W,12+00S	<5	<0.001	
246067	L32+00W,13+00S	<5	<0.001	
246068	L36+00W,12+00N	<5	<0.001	
246069	L36+00W,11+00N	<5	<0.001	
246070	L36+00W,10+00N	<5	<0.001	
246071	L36+00W,9+00N	<5	<0.001	
246072	L36+00W,8+00N	<5	<0.001	
246073	L36+00W,7+00N	<5	<0.001	
246074	L36+00W,6+00N	<5	<0.001	
246075	L36+00W,5+00N	<5	<0.001	
246075	L36+00W,5+00N	<5	<0.001	Check
246076	L36+00W,4+00N	<5	<0.001	
246077	L36+00W,3+00N	<5	<0.001	
246078	L36+00W,2+00N	<5	<0.001	
246079	L36+00W,1+00N	<5	<0.001	
246080	L36+00W,0+50S	<5	<0.001	
246081	L36+00W,1+00S	<5	<0.001	
246082	L36+00W,2+00S	<5	<0.001	
246083	L36+00W,3+00S	<5	<0.001	
246084	L36+00W,3+50S	6	<0.001	
246084	L36+00W,3+50S	9	<0.001	Check
246085	L36+00W,4+00S	<5	<0.001	
246086	L36+00W,4+80S	99	0.003	
246087	L36+00W,9+00S	8	<0.001	
246088	L36+00W,10+00S	5	<0.001	
246089	L36+00W,11+00S	6	<0.001	
246090	L36+00W,12+00S	5	<0.001	
246091	L36+00W,13+00S	<5	<0.001	
246092	L36+00W,14+00S	<5	<0.001	
: 093	L36+00W,15+00S	5	<0.001	
246093	L36+00W,15+00S	6	<0.001	Check



Per: _____

G. Duncan

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: MAY 14 1991

DATE REPORT MAILED: *May 15/91*

GEOCHEMICAL ANALYSIS CERTIFICATE

G.G. Engineering Ltd. FILE # 91-1162R
3836 W. 16th Ave, Vancouver BC V6R 3C7

SAMPLE#	AU* ppb
GA1-R-3	14
GA1-S-6	490
GA1-S-7	690

- SAMPLE TYPE: CUTTING AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



GEOCHEMICAL ANALYSIS CERTIFICATE



G G Engineering Ltd. FILE # 90-6015R

SAMPLE#	AU* ppb
GA4/36W/1+50S	1
GA4/36W/2+00S	1
GA4/36W/2+50S	- N.S.
GA4/36W/3+00S	1
GA5/36W/1+00N	1
GA5/36W/1+50N	3
GA6/BL/37+00W	8
GA6/BL/38+00W	2
GA7/38W/1+00S	2
STD AU-S	51

- SAMPLE TYPE: SOIL PULP AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUN 21 1991

DATE REPORT MAILED: *June 27/91*

SIGNED BY.....*C. Leong*.....D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



GEOCHEMICAL ANALYSIS CERTIFICATE

G.G. Engineering Ltd. File # 91-1890 Page 1
 3836 V. 16th Ave, Vancouver BC V6R 3C7

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	Le ppm	Cr ppm	Mg %	Ba ppm	Tl %	B ppm	Al %	Na %	K %	U ppm
LS1 - 0+00	1	71	13	59	.1	57	30	201	4.17	20	5	ND	6	13	.3	2	2	40	.20	.025	11	48	.38	91	.09	7	3.61	.01	.05	1
LS1 - 0+25E	1	15	9	39	.1	13	8	90	2.46	16	5	ND	3	7	.2	2	2	29	.09	.018	9	29	.20	39	.08	2	1.64	.01	.03	1
LS1 - 0+50E	1	58	4	50	.1	24	11	616	2.82	11	5	ND	2	21	.2	2	2	33	.91	.026	13	26	.34	48	.07	5	1.77	.01	.03	1
LS1 - 0+75E	1	17	6	34	.2	24	11	145	3.00	10	5	ND	4	15	.2	2	2	52	.27	.024	12	32	.30	59	.09	2	1.74	.01	.02	1
LS1 - 1+00E	1	19	7	28	.1	19	11	104	2.29	67	5	ND	4	12	.2	3	2	29	.16	.025	13	30	.27	48	.08	4	1.85	.01	.03	1
LS1 - 1+25E	1	22	2	31	.1	19	9	105	1.82	25	5	ND	3	7	.2	2	2	24	.14	.025	10	25	.24	50	.07	3	1.34	.01	.03	1
LS1 - 1+50E	1	39	7	51	.2	7	6	267	2.99	239	5	ND	1	6	.2	2	2	92	.22	.024	7	14	.59	43	.15	2	1.15	.01	.03	1
LS1 - 1+75E	1	87	5	115	.1	38	39	742	9.52	30	5	ND	1	11	.4	2	2	275	.60	.013	4	44	2.44	73	.57	2	4.05	.01	.14	1
LS1 - 2+00E	1	32	3	21	.1	25	8	72	2.54	9	5	ND	3	6	.2	2	2	32	.11	.012	8	36	.22	60	.10	2	2.68	.01	.02	1
LS1 - 2+80E	1	15	2	21	.1	12	5	77	2.30	11	7	ND	5	6	.2	2	5	42	.09	.018	10	24	.21	30	.13	4	1.02	.01	.03	1
LS1 - 3+00E	1	11	6	27	.1	12	8	99	3.11	9	5	ND	4	8	.2	2	2	40	.10	.026	9	27	.25	41	.12	2	1.58	.01	.03	1
LS1 - 3+25E	1	47	5	40	.2	9	7	194	4.19	9	5	ND	3	7	.2	2	2	58	.11	.035	8	27	.33	32	.10	2	1.64	.01	.02	1
LS1 - 3+50E	1	5	3	31	.1	8	3	76	2.39	4	5	ND	1	7	.2	2	2	40	.08	.016	6	24	.17	37	.12	2	1.19	.01	.02	1
LS1 - 3+75E	1	2	2	13	.1	11	4	52	1.65	2	5	ND	3	7	.2	2	2	32	.13	.021	8	22	.13	16	.07	4	1.32	.01	.02	1
LS1 - 4+00E	1	12	4	52	.1	18	8	173	2.47	5	5	ND	4	10	.2	2	2	38	.15	.094	10	33	.31	45	.10	5	2.18	.01	.03	1
LS1 - 4+50E	1	13	2	110	.1	26	10	374	2.62	6	5	ND	6	8	.2	2	2	36	.13	.142	12	35	.39	88	.10	2	2.11	.01	.06	1
LS1 - 4+75E	1	4	2	67	.1	11	8	781	1.69	2	5	ND	2	9	.2	2	2	25	.11	.058	8	23	.50	105	.06	7	1.44	.01	.04	1
LS1 - 4+85E	1	33	6	77	.1	29	15	303	3.76	4	5	ND	6	8	.2	2	2	56	.18	.118	13	55	.59	65	.16	4	2.90	.01	.06	1
LS1 - 5+00E	1	8	2	45	.1	15	7	102	1.59	4	5	ND	4	7	.3	2	2	22	.11	.063	8	23	.22	41	.07	5	1.39	.01	.03	2
LS1 - 5+25E	1	26	15	91	.1	26	14	577	3.31	9	7	ND	3	11	.2	2	2	50	.14	.085	9	43	.48	102	.14	3	1.97	.01	.07	1
LS1 - 5+50E	1	11	7	26	.3	11	6	116	1.43	2	5	ND	7	9	.2	2	2	23	.16	.074	12	21	.23	25	.08	4	.84	.01	.04	2
LS1 - 5+75E	1	1	2	19	.1	9	5	60	1.36	2	5	ND	3	6	.2	2	2	19	.10	.018	6	19	.16	20	.08	5	.95	.01	.03	1
LS2 - 0+00	1	10	2	29	.2	16	6	141	1.67	2	5	ND	4	10	.2	2	2	32	.10	.008	9	19	.38	28	.13	2	.96	.01	.06	1
LS2 - 0+25E	1	9	2	41	.1	23	7	125	1.81	5	6	ND	3	14	.2	2	3	26	.15	.024	10	34	.46	38	.11	3	1.32	.01	.05	1
LS2 - 0+50E	1	10	5	34	.1	20	7	87	3.37	10	5	ND	4	7	.2	2	2	41	.06	.028	9	43	.33	41	.16	3	1.84	.01	.04	1
LS2 - 0+75E	1	6	9	28	.1	18	5	73	1.88	2	5	ND	4	9	.2	2	2	28	.09	.023	13	34	.29	38	.12	2	2.05	.01	.06	1
LS2 - 1+00E	1	12	17	27	.1	13	7	88	3.84	9	5	ND	4	9	.3	2	2	37	.08	.028	8	31	.22	42	.13	2	1.60	.01	.05	1
LS2 - 1+25E	1	5	9	33	.1	10	4	75	2.04	4	5	ND	3	17	.2	2	2	26	.12	.021	9	17	.19	32	.09	2	1.10	.01	.03	1
LS2 - 1+50E	2	9	17	43	.1	12	6	100	4.51	7	5	ND	7	8	.2	2	2	56	.07	.055	12	33	.22	40	.13	2	2.36	.01	.03	1
LS2 - 1+75E	1	8	14	46	.1	10	6	112	2.78	7	5	ND	4	8	.2	2	2	35	.08	.026	9	24	.29	38	.13	2	1.68	.01	.04	1
LS2 - 2+00E	1	11	15	50	.1	22	10	164	3.98	5	5	ND	4	15	.3	3	2	53	.12	.045	9	45	.40	49	.20	2	1.92	.01	.05	3
LS2 - 2+25E	1	8	2	44	.2	15	6	121	3.83	2	5	ND	6	23	.2	2	2	22	.18	.025	23	15	.13	55	.01	2	.91	.01	.03	1
LS2 - 2+50E	1	11	20	58	.3	15	13	288	11.03	2	5	ND	2	23	.5	2	2	35	.13	.069	13	23	.15	64	.03	4	1.19	.01	.05	1
LS2 - 2+75E	2	18	14	38	.1	21	11	186	5.68	4	5	ND	5	13	.2	2	2	28	.09	.020	18	24	.28	37	.04	2	1.21	.01	.06	1
LS3 - 0+00	2	4	11	35	.1	12	5	87	1.99	6	5	ND	3	10	.2	2	2	45	.07	.010	9	19	.27	18	.17	4	.92	.01	.05	1
LS3 - 0+25E	2	8	16	35	.1	10	5	67	3.31	4	5	ND	4	10	.4	2	2	36	.05	.022	8	20	.18	37	.07	5	1.38	.01	.03	2
STANDARD C	20	58	42	132	7.4	72	32	1055	3.97	38	18	7	39	53	18.4	15	18	57	.48	.091	40	59	.88	175	.09	34	1.85	.07	.15	11

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: PULP



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ce %	P %	Le ppm	Cr ppm	Mg %	Ba ppm	Tl %	B ppm	Al %	Na %	K %	M ppm	
LS3 - 0+50E	2	9	9	22	.1	7	4	89	2.53	7	5	ND	4	14	.2	2	2	2	45	.12	.012	15	22	.21	27	.09	2	1.41	.01	.03	1
LS3 - 0+75E	1	5	2	10	.1	8	3	59	1.88	6	5	ND	3	9	.2	2	2	2	26	.09	.007	8	19	.16	27	.08	2	1.13	.01	.02	1
LS3 - 1+00E	1	6	2	8	.1	6	4	74	5.07	2	5	ND	1	7	.2	2	2	2	33	.05	.008	16	22	.08	26	.02	2	.85	.01	.03	1
LS3 - 1+40E	1	18	14	38	.1	20	9	208	5.16	6	5	ND	2	10	.4	2	2	2	64	.09	.026	10	45	.57	36	.27	3	2.75	.01	.06	1
LS3 - 1+75E	1	8	4	19	.1	12	5	95	1.86	3	5	ND	3	9	.2	2	2	2	28	.11	.013	11	20	.20	41	.10	5	1.38	.01	.03	1
LS3 - 2+30E	1	7	10	11	.1	9	3	59	2.62	3	5	ND	3	9	.2	2	2	2	38	.08	.010	11	22	.16	38	.08	2	1.79	.01	.02	1
LS3 - 2+50E	1	7	2	11	.2	12	4	68	1.88	5	5	ND	3	7	.2	2	2	2	25	.09	.006	8	21	.18	28	.08	3	1.28	.01	.02	1
LS3 - 3+00E	1	31	4	32	.2	19	7	252	1.83	4	6	ND	2	37	.2	2	2	2	39	.009	.009	30	28	.35	50	.08	2	2.12	.01	.03	1
LS3 - 3+25E	1	11	2	17	.2	15	7	96	1.70	5	5	ND	3	9	.2	2	2	2	23	.14	.015	12	24	.24	37	.09	5	1.40	.01	.03	1
LS3 - 3+50E	1	5	13	37	.2	12	6	183	2.42	3	5	ND	5	10	.2	2	2	2	38	.14	.059	13	25	.20	46	.10	5	1.95	.01	.04	1
LS3 - 3+75E	1	8	3	31	.2	16	6	191	2.92	8	5	ND	2	13	.2	2	2	2	33	.16	.079	8	35	.31	43	.09	5	1.53	.01	.04	1
LS4 - 8+25W	1	4	8	19	.1	10	3	97	1.36	4	5	ND	2	11	.2	2	2	2	26	.10	.005	8	20	.32	22	.16	3	1.01	.01	.04	1
LS4 - 7+75W	2	11	8	39	.1	12	7	397	7.11	6	5	ND	1	29	.2	3	2	2	44	.26	.029	8	32	.44	68	.08	2	2.13	.01	.04	1
LS4 - 7+50W	2	20	19	26	.1	13	6	109	4.62	10	6	ND	2	16	.2	2	2	2	51	.13	.031	22	31	.27	75	.10	2	3.16	.01	.04	1
LS4 - 7+00W	1	7	11	18	.1	12	4	98	1.59	4	5	ND	2	9	.2	2	2	2	34	.11	.009	9	23	.32	19	.14	2	1.08	.01	.03	1
LS4 - 6+75W	1	17	10	14	.1	14	6	100	4.34	10	5	ND	5	8	.2	2	2	2	44	.07	.039	12	33	.25	37	.14	4	3.22	.01	.03	1
LS4 - 6+50W	1	8	17	16	.1	10	3	112	2.33	4	5	ND	1	34	.4	2	2	2	28	.09	.011	8	20	.26	39	.07	2	1.52	.01	.04	1
LS4 - 6+25W	1	11	10	39	.1	19	6	203	2.65	6	5	ND	3	9	.2	2	2	2	52	.08	.009	9	45	.68	48	.24	2	1.80	.01	.12	1
LS4 - 6+00W	1	12	3	7	.1	17	5	85	3.02	8	5	ND	6	7	.2	2	2	2	38	.08	.038	13	48	.23	29	.14	6	2.21	.01	.03	1
LS4 - 5+75W	1	8	12	10	.1	5	2	51	1.83	3	5	ND	2	7	.2	2	2	2	24	.06	.019	8	15	.09	32	.06	2	1.47	.01	.02	1
LS4 - 5+00W	1	17	4	13	.2	15	5	100	2.22	9	5	ND	4	9	.2	2	2	2	26	.13	.034	17	27	.25	28	.11	4	2.31	.01	.03	1
LS4 - 4+75W	1	8	7	39	.2	18	9	175	2.03	2	5	ND	3	17	.2	2	2	2	33	.22	.024	11	30	.59	42	.16	6	1.54	.01	.05	1
LS4 - 4+50W	1	13	5	43	.3	15	6	192	3.15	9	5	ND	3	13	.3	2	2	2	49	.14	.073	8	37	.49	34	.20	8	1.26	.01	.09	1
LS4 - 4+25W	1	5	6	12	.1	2	1	26	.59	2	5	ND	1	17	.2	2	2	2	13	.06	.007	8	7	.05	32	.05	2	.93	.01	.03	1
LS4 - 4+00W	1	10	12	18	.1	10	4	72	2.15	7	5	ND	2	9	.2	2	2	2	34	.07	.015	10	21	.19	33	.10	4	1.89	.01	.03	1
LS4 - 3+85W	1	5	9	13	.2	6	2	53	1.44	3	5	ND	1	8	.2	2	2	2	24	.07	.014	9	14	.11	31	.09	2	1.17	.01	.03	1
LS4 - 3+60W	1	9	21	31	.2	12	5	125	3.78	7	6	ND	4	7	.5	2	2	2	79	.05	.038	9	35	.34	33	.27	6	1.54	.01	.04	1
LS4 - 3+25W	2	19	18	27	.1	17	8	121	3.94	10	5	ND	3	8	.2	2	2	2	43	.06	.045	14	42	.33	43	.15	2	4.04	.01	.04	2
LS4 - 3+00W	2	18	13	23	.1	7	3	92	2.99	3	5	ND	3	8	.2	2	2	2	44	.06	.029	14	28	.25	41	.09	3	2.01	.01	.08	1
LS4 - 2+75W	1	6	11	15	.1	3	1	25	.53	2	5	ND	1	13	.2	2	2	2	20	.03	.015	5	16	.08	31	.03	2	1.28	.01	.03	1
LS4 - 2+50W	1	22	7	31	.1	23	9	136	2.87	7	5	ND	3	17	.2	2	2	2	33	.17	.014	18	33	.47	54	.13	3	2.60	.01	.04	1
LS4 - 2+25W	1	10	14	19	.1	13	4	104	5.24	3	5	ND	2	25	.2	2	2	2	46	.17	.014	10	33	.28	46	.11	3	2.18	.01	.04	1
LS4 - 2+00W	1	8	4	23	.1	15	5	116	1.84	3	5	ND	4	18	.2	2	2	2	34	.16	.006	14	24	.35	38	.14	4	1.64	.01	.03	1
LS4 - 1+75W	2	8	10	23	.1	10	3	110	2.74	5	5	ND	2	16	.2	2	2	2	65	.14	.014	10	22	.26	42	.22	2	.96	.01	.04	1
LS4 - 1+50W	1	14	6	20	.1	19	9	153	4.86	3	15	ND	1	5	.2	2	2	2	35	.03	.018	30	30	.32	48	.01	3	1.87	.01	.05	1
LS4 - 1+25W	1	11	8	9	.2	7	3	51	2.36	3	7	ND	1	10	.2	2	2	2	31	.05	.009	16	16	.12	48	.05	3	.92	.01	.02	1
STANDARD C	18	59	41	131	7.2	68	33	1036	3.90	39	20	8	37	52	18.5	15	19	54	.48	.087	39	57	.89	174	.09	32	1.86	.06	.15	13	



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	Le ppm	Cr ppm	Mg %	Ba ppm	Tl %	B ppm	Al %	Ne %	K %	V ppm
LS4 - 1+00W	1	8	2	11	.1	10	4	72	1.46	3	5	ND	4	15	.2	2	2	25	.16	.015	12	19	.21	26	.10	2	1.00	.01	.03	1
LS4 - 0+75W	1	16	6	23	.1	16	7	127	3.00	3	5	ND	3	19	.2	2	2	42	.17	.016	9	30	.36	39	.15	3	1.84	.01	.05	1
LS4 - 0+50W	1	16	2	43	.1	30	8	155	3.32	2	5	ND	2	24	.2	2	2	16	.25	.055	22	31	.83	61	.02	2	1.72	.01	.03	1
LS4 - 0+25W	1	8	2	11	.1	11	4	59	2.51	3	5	ND	1	11	.2	2	2	22	.08	.009	19	23	.09	53	.01	2	.94	.01	.03	1
LS4 - 0+00	2	10	11	26	.1	14	7	261	3.12	3	5	ND	2	32	.2	2	2	47	.35	.010	15	28	.45	58	.09	2	1.72	.01	.03	1
LS5 - 6+25W	2	23	10	26	.3	19	9	164	3.37	18	5	ND	2	22	.2	2	2	38	.20	.016	13	29	.38	57	.13	3	1.73	.01	.08	1
LS5 - 6+00W	1	13	10	32	.2	15	8	166	3.57	7	5	ND	3	11	.2	2	2	45	.12	.044	11	31	.32	42	.15	2	2.10	.01	.07	1
LS5 - 5+75W	1	13	5	31	.1	7	3	143	3.49	72	5	ND	1	6	.2	2	2	40	.05	.017	24	21	.17	51	.02	2	1.68	.01	.04	1
LS5 - 5+40W	2	20	37	39	.1	13	7	123	3.01	83	5	ND	2	13	.2	2	2	40	.11	.008	13	27	.35	34	.12	2	1.70	.01	.06	1
LS5 - 4+75W	2	16	18	36	.1	14	8	145	3.78	2	5	ND	1	5	.2	2	2	53	.03	.029	18	43	.41	39	.01	2	2.48	.01	.04	1
LS5 - 4+50W	1	28	15	17	.1	8	4	68	3.27	6	5	ND	4	8	.2	2	2	41	.06	.017	15	26	.15	35	.04	2	2.43	.01	.02	1
LS5 - 4+25W	1	27	25	23	.1	14	5	81	2.63	3	5	ND	3	12	.2	2	2	46	.06	.011	21	47	.30	49	.05	2	2.62	.01	.03	1
LS5 - 4+00W	2	22	23	16	.1	21	9	135	6.69	4	5	ND	3	12	.2	3	2	75	.09	.024	15	69	.40	70	.10	2	2.30	.01	.04	1
LS5 - 3+75W	1	12	7	49	.1	13	6	99	2.17	2	5	ND	1	5	.2	2	2	34	.02	.014	10	24	.36	30	.01	2	1.66	.01	.05	1
LS5 - 3+50W	2	23	23	32	.1	9	4	109	3.67	5	5	ND	2	7	.2	2	2	53	.05	.028	14	26	.19	57	.03	2	2.36	.01	.03	1
LS5 - 3+25W	1	13	18	23	.1	10	4	75	2.46	9	5	ND	2	11	.2	2	2	40	.09	.021	11	28	.20	38	.09	2	1.87	.01	.03	1
LS5 - 3+00W	1	12	14	73	.1	89	17	292	4.63	2	5	ND	2	10	.2	2	2	87	.03	.032	6	152	2.17	32	.10	3	3.09	.01	.03	1
LS5 - 2+75W	1	18	7	45	.1	24	10	207	2.36	3	5	ND	2	42	.2	2	2	36	.39	.016	13	43	.66	66	.17	2	1.89	.01	.05	1
LS5 - 2+50W	1	5	14	17	.2	2	1	36	.31	3	5	ND	2	16	.2	2	2	13	.15	.012	9	8	.06	18	.14	2	.45	.01	.03	1
LS5 - 2+25W	1	49	9	81	.3	22	24	1078	5.63	3	5	ND	1	102	.2	3	2	89	1.08	.157	31	25	1.66	125	.40	3	3.21	.01	.14	1
LS5 - 2+00W	1	12	7	80	.3	18	8	192	2.38	2	5	ND	2	17	.2	2	2	37	.19	.046	13	48	.52	46	.15	2	1.79	.01	.06	1
LS5 - 1+75W	2	24	22	38	.1	68	14	146	6.96	3	5	ND	2	7	.2	2	6	95	.04	.039	12	236	1.80	52	.15	3	3.06	.01	.04	1
LS5 - 1+60W	1	9	12	13	.1	5	2	34	.87	3	5	ND	1	8	.2	2	2	21	.07	.015	10	16	.08	48	.03	2	1.37	.01	.02	1
LS5 - 1+25W	2	24	22	53	.1	18	8	221	6.20	5	5	ND	4	13	.2	2	2	73	.15	.375	14	48	.54	60	.15	3	3.26	.01	.07	1
LS5 - 1+00W	1	18	11	31	.1	7	4	310	6.23	4	5	ND	1	6	.2	2	2	30	.04	.131	14	21	.10	55	.06	3	1.49	.01	.04	1
LS5 - 0+75W	1	24	13	42	.2	17	6	114	1.82	5	5	ND	2	17	.2	2	2	33	.21	.040	15	28	.39	81	.11	2	1.97	.01	.06	1
LS5 - 0+50W	2	14	9	23	.1	14	5	96	4.25	8	5	ND	1	14	.2	2	2	56	.11	.029	18	36	.37	54	.03	2	2.45	.01	.02	1
LS5 - 0+35W	1	32	14	26	.1	27	9	144	6.11	6	5	ND	4	11	.2	2	2	58	.13	.080	15	72	.58	51	.13	2	3.82	.01	.05	1
LS5 - 0+00	1	6	9	28	.1	7	3	62	1.47	4	7	ND	1	8	.2	2	2	20	.12	.024	24	13	.17	52	.01	2	1.62	.01	.03	1
LS6 - 0+00	2	27	18	41	.1	22	8	235	6.31	5	5	ND	2	30	.2	2	3	68	.09	.029	10	51	.50	43	.16	2	2.52	.01	.12	1
LS6 - 0+25E	2	14	12	17	.1	24	9	233	11.86	2	5	ND	3	4	.2	3	2	132	.02	.028	5	63	.55	37	.22	2	2.35	.01	.12	1
LS6 - 0+50E	1	27	10	45	.2	30	11	407	9.63	6	5	ND	2	8	.2	5	2	68	.03	.029	5	57	.90	60	.16	3	3.09	.01	.14	1
LS6 - 0+75E	1	25	15	37	.1	23	7	201	3.60	8	5	ND	1	5	.2	2	2	40	.04	.016	5	31	.57	33	.02	2	1.77	.01	.06	1
LS6 - 1+35E	1	81	22	78	.3	23	24	692	6.80	16	23	ND	2	204	.2	3	2	42	.89	.129	57	25	1.21	94	.35	3	4.13	.01	.14	1
LS6 - 1+50E	2	21	30	53	.1	14	7	431	4.95	7	5	ND	1	9	.2	3	2	48	.06	.046	9	29	.34	50	.05	2	2.19	.01	.09	1
LS6 - 1+75E	1	15	92	29	.1	15	8	139	3.71	9	5	ND	2	8	.2	2	2	55	.04	.029	14	20	.70	35	.26	6	1.77	.01	.07	1
STANDARD C	19	60	37	130	7.1	68	34	1063	3.97	38	19	6	39	52	18.7	15	20	56	.49	.089	39	57	.85	179	.09	33	1.86	.07	.15	11



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ce %	P ppm	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
LS6 - 2+00E	4	16	18	41	1.2	16	5	174	4.86	19	5	ND	2	4	.2	2	2	58	.03	.022	13	35	.39	39	.02	6	2.26	.01	.04	1
LS6 - 2+25E	3	23	28	63	.1	15	12	146	5.25	2	5	ND	1	11	.2	2	2	61	.06	.040	54	25	.59	96	.09	3	2.95	.01	.06	1
LS6 - 2+50E	4	28	18	44	.1	23	9	170	5.77	20	5	ND	1	9	.2	2	2	87	.06	.040	49	62	.54	63	.04	2	2.47	.01	.07	1
LS6 - 2+75E	3	35	37	69	.3	71	12	167	8.05	42	5	ND	3	6	.2	2	2	98	.04	.026	23	283	1.25	60	.09	10	4.13	.01	.04	1
LS6 - 3+00E	7	13	15	29	.1	17	5	100	4.96	28	5	ND	2	12	.2	2	2	82	.11	.022	19	57	.33	52	.08	6	2.02	.01	.05	1
LS6 - 3+25E	2	5	31	49	.1	8	4	147	4.34	389	5	ND	1	3	.2	2	2	33	.03	.015	16	15	.18	58	.07	3	1.39	.01	.13	1
LS6 - 3+50E	3	44	20	76	.3	170	28	503	7.84	24	5	ND	1	9	.2	2	2	128	.08	.017	29	508	2.24	41	.27	3	3.12	.01	.07	1
LS6 - 3+75E	2	38	23	54	.2	31	11	197	4.19	5	5	ND	3	31	.2	2	2	56	.31	.036	30	61	.58	44	.17	3	3.69	.01	.05	1
LS6 - 4+00E	4	51	26	61	.3	46	17	340	8.30	8	5	ND	2	12	.2	2	2	73	.08	.033	19	77	.84	57	.02	11	2.94	.01	.05	1
LS6 - 4+25E	3	17	15	77	.1	165	27	160	8.12	2	5	ND	3	6	.2	2	2	117	.03	.028	37	479	2.18	42	.07	3	3.69	.01	.04	1
LS6 - 4+50E	4	15	13	26	.2	9	5	140	4.08	3	5	ND	1	4	.2	2	3	79	.02	.024	26	27	.14	44	.04	7	1.63	.01	.05	1
LS6 - 4+75E	4	14	14	35	.2	18	8	310	14.29	2	5	ND	2	6	.2	2	2	62	.03	.018	23	56	.33	40	.10	6	1.50	.01	.09	1
LS6 - 5+00E	3	20	22	60	.1	32	12	172	5.61	5	5	ND	1	4	.2	2	2	73	.02	.019	22	62	.51	74	.02	3	2.75	.01	.05	1
LS6 - 5+25E	3	92	16	60	.2	63	21	387	9.68	6	5	ND	2	7	.2	2	2	77	.05	.030	10	91	.95	90	.04	5	3.22	.01	.07	1
LS6 - 5+50E	6	35	39	63	.3	23	12	247	4.68	9	5	ND	1	22	.2	2	2	65	.17	.045	19	41	.45	82	.05	4	2.81	.01	.06	1
LS6 - 5+75E	3	21	17	33	.1	12	5	121	4.76	4	5	ND	2	7	.2	2	2	57	.04	.021	17	34	.25	57	.02	3	2.33	.01	.05	1
LS6 - 6+00E	3	14	20	29	.1	12	4	77	3.45	5	5	ND	1	10	.2	2	2	53	.04	.027	15	31	.24	49	.01	2	2.07	.01	.08	1
LS6 - 6+25E	4	38	26	36	.2	23	7	161	6.56	3	5	ND	2	8	.2	2	2	63	.04	.026	14	60	.43	54	.04	4	2.79	.01	.04	1
LS6 - 6+50E	3	13	21	39	.1	8	3	115	4.78	5	5	ND	3	6	.2	2	2	51	.05	.024	8	26	.16	46	.03	9	1.92	.01	.04	1
LS6 - 6+75E	3	11	19	23	.2	18	4	91	3.18	2	5	ND	3	9	.2	2	2	69	.07	.022	9	48	.41	38	.14	6	1.86	.01	.07	1
LS6 - 7+00E	2	12	20	45	.2	44	7	222	3.41	6	5	ND	2	26	.2	2	2	56	.06	.021	8	104	1.12	47	.11	4	2.44	.01	.03	1
LS6 - 7+25E	3	17	19	35	.1	19	5	167	3.68	6	5	ND	1	11	.2	2	3	51	.05	.021	9	44	.46	48	.08	5	2.10	.01	.04	1
LS7 - 1+00N	1	10	8	16	.1	39	8	81	2.11	11	5	ND	2	6	.2	2	2	27	.10	.018	11	57	.31	27	.10	2	1.71	.01	.03	1
LS7 - 0+75N	1	8	4	16	.1	20	5	82	1.15	3	5	ND	2	10	.2	2	3	20	.23	.025	9	31	.28	33	.09	5	1.00	.01	.05	1
LS7 - 0+50N	1	15	4	15	.2	32	7	91	1.78	7	5	ND	4	7	.2	2	4	29	.13	.024	11	47	.32	21	.10	7	1.23	.01	.04	1
LS7 - 0+25N	1	7	7	12	.1	13	3	55	1.47	2	5	ND	3	5	.2	2	2	28	.07	.009	9	36	.20	18	.09	2	1.37	.01	.03	1
LS7 - 0+10N	1	11	8	17	.1	27	8	102	1.94	8	5	ND	4	6	.2	2	2	27	.11	.023	10	53	.30	24	.10	7	1.78	.01	.04	1
LS7 - 0+10N-A	1	26	4	20	.1	37	11	174	1.80	4	5	ND	4	8	.2	2	2	31	.14	.019	12	58	.57	31	.11	10	1.40	.01	.05	1
LS7 - 0+00	1	9	5	14	.1	18	5	74	1.24	4	5	ND	2	6	.3	2	2	22	.12	.012	9	34	.26	22	.08	5	1.04	.01	.03	1
LS7 - 0+10S	1	14	4	24	.1	25	8	135	1.34	4	5	ND	3	9	.3	2	3	22	.21	.025	13	43	.40	28	.09	2	.99	.01	.05	1
LS8 - 9+67N	2	9	15	32	.1	6	2	63	1.12	3	5	ND	4	5	.3	2	2	17	.02	.008	21	8	.11	33	.02	3	1.22	.01	.06	1
LS8 - 9+50N	3	18	19	74	.1	24	8	330	6.83	9	5	ND	3	8	.2	2	6	36	.05	.042	9	32	.54	82	.09	3	2.27	.01	.21	1
LS8 - 9+25N	2	29	21	62	.2	25	10	219	3.82	9	5	ND	4	12	.2	2	2	38	.11	.046	15	45	.52	53	.14	4	4.01	.01	.07	1
LS8 - 9+00N	3	17	27	45	.1	22	6	147	3.61	8	5	ND	3	17	.3	2	2	43	.07	.026	14	40	.52	44	.09	3	2.01	.01	.06	1
LS8 - 8+75N	5	26	25	37	.1	15	6	176	8.54	8	5	ND	2	6	.2	2	3	50	.03	.042	11	32	.32	36	.04	3	2.54	.01	.05	1
LS8 - 8+50N	2	30	15	44	.1	37	11	188	3.40	25	5	ND	4	31	.2	2	2	29	.30	.032	35	31	.60	73	.16	2	1.75	.01	.22	1
STANDARD C	20	59	36	132	7.4	70	34	1064	3.97	37	16	7	38	53	18.6	15	21	57	.48	.092	40	57	.88	178	.09	35	1.88	.07	.15	13



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SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Hg %	Ba ppm	Ti %	B ppm	Al %	Me %	K %	W ppm
LS8 - 8+25W	4	20	12	76	.1	13	5	275	4.89	34	5	ND	8	17	.2	2	2	24	.13	.034	12	16	.39	109	.17	3	1.65	.01	.79	1
LS8 - 8+00W	1	13	6	24	.1	12	4	102	1.16	2	5	ND	3	12	.2	2	2	18	.21	.029	10	17	.28	40	.10	2	.90	.02	.06	1
LS8 - 7+75W	1	19	13	78	.1	21	9	232	3.95	5	5	ND	4	15	.2	2	2	51	.18	.052	11	36	.56	66	.21	3	2.14	.01	.15	1
LS8 - 7+50W	2	48	14	74	.2	30	12	220	3.79	13	5	ND	6	16	.2	2	2	43	.17	.036	16	37	.58	75	.18	3	2.69	.01	.12	1
LS8 - 7+25W	2	27	12	88	.1	14	6	181	4.17	3	5	ND	5	10	.2	2	2	32	.11	.060	14	29	.35	47	.09	3	2.52	.01	.07	1
LS8 - 7+00W	2	22	17	58	.1	19	7	198	10.65	2	5	ND	4	3	.2	2	2	51	.01	.055	12	41	.47	39	.06	2	2.65	.01	.15	1
LS8 - 6+75W	1	30	7	64	.3	39	12	218	3.33	7	5	ND	6	18	.2	2	2	37	.20	.026	16	48	.69	82	.18	4	2.36	.02	.08	1
LS8 - 6+50W	1	9	9	27	.1	11	3	96	1.11	2	5	ND	3	14	.2	2	2	22	.18	.016	9	19	.27	25	.14	2	.72	.02	.05	1
LS8 - 6+25W	1	23	13	82	.2	26	9	261	4.29	6	5	ND	5	17	.2	2	2	42	.18	.033	15	37	.93	56	.24	3	2.52	.02	.12	1
LS8 - 6+00W	1	23	14	66	.1	22	8	188	4.51	6	5	ND	5	13	.7	2	2	73	.11	.042	10	42	.63	54	.50	2	2.10	.02	.10	1
LS8 - 5+75W	2	28	15	91	.1	22	9	173	5.69	3	5	ND	7	24	.2	2	2	43	.20	.034	27	62	.50	114	.11	2	3.37	.01	.16	1
LS8 - 5+50W	2	32	17	51	.1	15	6	129	5.56	92	5	ND	6	6	.2	2	2	30	.05	.034	17	29	.34	46	.08	3	2.98	.01	.10	1
LS8 - 5+25W	2	15	8	33	.1	14	8	103	4.18	10	5	ND	5	5	.2	2	2	43	.03	.032	23	30	.23	31	.03	2	1.32	.01	.05	1
LS8 - 5+00W	3	24	16	38	.1	12	6	120	4.96	7	5	ND	3	7	.2	2	2	53	.04	.026	10	31	.29	48	.02	2	2.15	.01	.05	1
LS8 - 4+75W	2	26	9	66	.1	21	8	196	4.96	5	5	ND	6	12	.2	2	2	45	.13	.043	14	40	.61	47	.16	3	2.41	.01	.07	1
LS8 - 4+50W	2	22	7	27	.1	16	6	154	7.94	5	5	ND	6	4	.2	2	2	46	.03	.024	27	38	.20	39	.03	2	1.14	.01	.06	1
LS8 - 4+25W	1	24	14	64	.2	19	8	195	2.40	2	5	ND	3	23	.2	2	2	31	.23	.021	12	30	.55	54	.16	2	1.58	.02	.08	1
LS8 - 4+00W	1	27	6	29	.4	24	8	174	9.72	4	5	ND	5	16	.6	2	2	23	.13	.026	10	33	.41	52	.11	3	1.55	.02	.06	1
LS8 - 3+75W	2	16	22	29	.1	8	3	69	5.77	4	5	ND	6	7	.3	2	2	35	.04	.027	21	17	.17	46	.06	2	1.81	.01	.10	1
LS8 - 3+50W	1	18	7	39	.1	16	5	367	6.84	57	5	ND	6	8	.2	2	2	33	.04	.020	24	22	.28	72	.09	2	1.94	.01	.42	1
LS8 - 3+25W	2	52	9	44	.1	23	10	626	15.16	25	5	ND	7	14	.2	2	2	19	.08	.069	24	20	.21	53	.11	2	1.40	.01	.37	1
LS8 - 3+00W	1	24	15	67	.1	10	8	206	4.79	57	5	ND	5	16	.5	2	2	44	.11	.031	34	9	.38	88	.05	2	2.04	.01	.16	1
LS8 - 2+75W	1	16	10	72	.2	17	8	197	4.28	15	5	ND	6	13	.2	2	2	49	.13	.035	11	34	.49	45	.21	2	1.94	.01	.08	1
LS8 - 2+50W	1	17	9	41	.1	10	4	145	1.94	30	5	ND	3	5	.2	2	2	11	.02	.033	30	6	.05	23	.01	2	.64	.01	.06	1
LS8 - 2+25W	1	14	15	68	.2	25	9	281	6.98	61	5	ND	6	43	1.7	2	2	29	.36	.030	15	31	.59	107	.19	2	2.82	.01	.39	1
LS8 - 2+00W	1	22	9	59	.3	29	13	292	2.73	8	5	ND	7	23	.7	2	2	32	.52	.034	35	40	.55	124	.14	3	2.46	.02	.14	1
LS8 - 1+75W	1	11	10	33	.1	17	6	96	2.56	3	5	ND	5	13	.2	2	3	25	.20	.042	9	30	.23	70	.11	2	2.67	.01	.06	1
LS8 - 1+50W	1	12	7	25	.1	14	4	80	1.45	2	5	ND	4	11	.5	2	2	21	.18	.031	11	25	.28	48	.12	3	1.42	.02	.08	1
LS8 - 1+25W	1	7	6	36	.1	11	5	166	2.09	4	5	ND	3	10	.4	2	2	27	.15	.059	6	21	.26	28	.11	2	.85	.01	.06	1
LS8 - 1+00W	1	13	13	43	.1	13	6	92	13.13	6	5	ND	3	4	.2	2	2	40	.02	.072	21	32	.22	40	.05	2	1.31	.01	.06	1
LS8 - 0+65W	1	16	21	48	.1	11	4	94	3.02	4	5	ND	4	12	.5	2	2	41	.08	.068	17	23	.34	54	.08	2	1.54	.02	.05	1
LS8 - 0+50W	1	30	14	59	.2	27	9	188	2.91	10	5	ND	4	24	.5	2	2	37	.21	.063	16	38	.52	56	.14	2	2.52	.01	.07	1
LS8 - 0+39W	3	20	11	46	.1	15	6	125	5.61	14	5	ND	4	14	.5	2	2	73	.10	.069	19	25	.47	42	.15	2	1.79	.01	.07	1
LS8 - 0+25W	1	21	7	49	.2	18	7	196	14.08	7	5	ND	5	13	.4	2	2	41	.06	.082	21	31	.44	42	.08	2	1.57	.01	.04	1
LS8 - 0+00	2	16	13	34	.1	12	4	115	12.15	7	5	ND	4	7	1.4	2	2	36	.03	.068	13	28	.22	54	.07	2	1.74	.01	.04	1
STANDARD C	19	62	42	133	7.6	72	32	1084	3.92	39	19	7	39	53	19.0	15	20	54	.52	.091	39	59	.90	176	.09	33	1.93	.07	.14	11



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SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P ppm	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	V ppm
ESI-S-1	3	24	18	30	.1	10	6	84	5.22	11	5	ND	7	9	.4	2	2	50	.08	.579	19	40	.22	46	.11	2	3.47	.01	.03	1
ESI-S-2	1	19	9	27	.1	12	4	67	1.64	8	5	ND	2	26	.3	2	2	23	.25	.163	16	26	.23	46	.06	8	1.93	.01	.03	1
ESI-S-3	1	52	2	35	.1	24	10	234	2.35	9	5	ND	4	9	.2	2	2	34	.25	.067	13	40	.53	16	.10	2	2.03	.01	.03	1
ESI-S-4	1	23	11	44	.1	14	10	728	2.13	6	5	ND	4	9	.2	3	2	35	.17	.057	10	31	.36	59	.09	2	1.36	.01	.04	1
ESI-S-5	1	59	7	56	.1	21	11	591	4.19	8	5	ND	4	10	.2	3	2	59	.20	.165	10	43	.48	61	.05	5	1.99	.01	.04	1
ESI-S-6	1	17	2	34	.1	42	16	287	4.25	2	5	ND	4	7	.3	2	2	84	.22	.066	8	74	1.26	29	.23	2	2.28	.01	.03	1
ESI-S-7	1	77	2	103	.1	112	43	1102	8.91	4	5	ND	2	6	.2	2	5	182	.36	.046	2	197	3.24	17	.39	5	4.74	.01	.01	1
ESI-S-8	1	56	20	54	.1	24	10	1442	2.27	13	5	ND	1	13	.5	2	2	38	.62	.084	5	97	.58	111	.05	4	1.19	.01	.04	1
ESI-S-9	1	24	10	37	.3	24	10	176	3.43	11	5	ND	5	9	.2	4	2	39	.12	.197	10	46	.33	47	.06	6	1.52	.01	.03	1
ESI-S-10	1	14	12	33	.1	12	6	683	1.62	9	5	ND	3	11	.3	2	2	29	.16	.022	9	27	.28	105	.06	2	.90	.01	.03	1
ESI-S-11	1	13	4	48	.1	19	8	167	2.60	12	5	ND	4	9	.2	2	2	55	.11	.013	7	43	.52	38	.20	2	1.28	.01	.03	2
ESI-S-12	1	35	12	53	.1	30	16	345	5.00	6	5	ND	4	8	.2	2	2	78	.14	.026	9	49	.52	35	.13	3	1.96	.01	.03	1
ESI-S-13	1	12	18	38	.1	8	4	86	2.55	10	5	ND	3	19	.2	2	2	28	.09	.110	7	16	.24	33	.06	2	1.63	.01	.05	1
ESI-S-14	3	18	11	42	.1	10	7	148	7.32	10	5	ND	7	75	.4	2	2	22	.18	.112	9	14	.51	91	.07	2	2.84	.01	.09	1
ESI-S-15	1	23	5	20	.1	22	7	94	1.37	7	5	ND	7	9	.2	2	2	21	.14	.007	14	42	.36	37	.11	2	1.39	.01	.03	1
ESI-S-16	1	20	7	25	.1	86	20	86	2.47	9	5	ND	6	7	.2	2	2	38	.16	.013	21	39	.27	33	.12	2	3.16	.01	.03	1
ESI-S-17	1	44	8	35	.1	43	23	181	4.06	44	5	ND	6	10	.2	2	2	47	.16	.045	9	52	.37	27	.10	3	4.88	.01	.03	1
ESI-S-18	1	16	11	40	.1	23	8	123	3.19	12	5	ND	4	8	.2	2	2	54	.10	.012	8	44	.35	35	.17	2	1.72	.01	.03	1
ESI-S-19	1	8	5	20	.2	12	4	84	1.16	5	5	ND	5	8	.3	2	2	30	.10	.004	9	22	.30	26	.14	2	.80	.01	.02	1
ESI-S-20	1	5	7	15	.1	11	5	53	2.41	12	5	ND	6	6	.2	2	2	48	.08	.012	11	32	.16	28	.14	2	1.25	.01	.02	1
ESI-S-21	1	5	4	18	.1	14	6	70	1.93	3	5	ND	5	12	.2	2	2	30	.19	.017	9	28	.22	22	.12	2	1.60	.01	.03	1
ESI-S-22	1	11	7	30	.1	18	6	92	1.17	7	5	ND	5	9	.3	2	2	19	.25	.014	11	28	.28	28	.08	4	.80	.01	.02	1
ESI-S-23	2	23	8	38	.2	33	10	140	3.51	30	5	ND	6	5	.2	3	2	40	.07	.019	14	77	.35	44	.09	6	1.89	.01	.03	2
ESI-S-24	1	14	2	17	.1	20	6	107	1.54	17	5	ND	4	7	.2	2	2	22	.14	.024	9	34	.23	22	.07	2	.93	.01	.02	1
ESI-S-25	1	18	6	24	.1	14	5	81	1.46	7	5	ND	5	7	.2	2	3	26	.13	.018	11	21	.19	30	.08	2	1.11	.01	.02	1
ESI-S-26	1	4	2	13	.1	6	3	44	2.15	8	5	ND	4	6	.2	2	2	30	.08	.021	7	26	.12	22	.10	2	1.61	.01	.01	1
ESI-S-27	1	18	2	20	.1	16	6	78	2.53	12	5	ND	6	5	.2	2	2	42	.07	.050	11	36	.23	22	.11	2	2.17	.01	.02	1
ESI-S-28	1	6	7	24	.3	10	5	80	2.08	10	5	ND	6	7	.2	2	2	55	.15	.012	13	30	.27	16	.15	2	.89	.01	.02	1
ESI-S-29	1	9	2	29	.1	15	5	122	1.30	23	5	ND	5	8	.2	2	2	25	.24	.032	12	29	.41	11	.11	2	.93	.01	.02	1
ESI-S-30	1	20	4	27	.1	18	7	106	3.25	12	5	ND	6	7	.2	2	2	47	.12	.143	9	46	.40	34	.11	2	1.80	.01	.01	1
ESI-S-31	1	12	5	21	.1	16	8	89	2.43	7	5	ND	4	8	.2	2	2	43	.11	.018	8	46	.32	36	.13	2	1.36	.01	.03	2
ESI-S-32	1	9	4	18	.1	17	5	108	1.66	27	5	ND	4	8	.2	2	2	33	.17	.018	10	37	.36	25	.10	5	.78	.01	.02	1
ESI-S-33	1	21	5	46	.1	20	12	279	1.92	7	5	ND	4	9	.6	2	3	32	.22	.045	10	35	.46	48	.10	5	1.48	.01	.03	2
ESI-S-34	1	12	7	25	.1	14	5	82	2.28	17	5	ND	4	6	.2	2	2	76	.07	.014	8	35	.27	15	.16	2	.95	.01	.02	1
ESI-S-35	1	17	3	23	.1	12	5	80	1.32	6	5	ND	4	7	.2	2	2	29	.11	.011	10	20	.24	26	.08	2	.86	.01	.02	2
ESI-S-36	1	11	4	29	.1	14	7	105	2.17	10	5	ND	7	9	.2	2	2	51	.19	.015	14	30	.32	29	.13	2	1.02	.01	.03	2
STANDARD C	19	61	36	130	7.3	70	32	1041	3.90	39	18	7	39	53	18.8	15	23	56	.47	.091	40	59	.87	176	.09	34	1.87	.07	.15	11



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SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ml ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	Le ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	V %
ESI-S-37	1	13	2	13	.1	20	8	66	1.17	7	5	ND	4	5	.2	2	2	15	.11	.015	8	25	.20	4	.07	5	.90	.01	.01	1
ESI-S-38	1	14	4	25	.3	22	7	112	1.39	10	5	ND	4	12	.3	2	2	21	.65	.032	11	23	.32	59	.06	8	1.03	.02	.02	1
ESI-S-39	1	5	6	25	.1	12	5	109	1.79	20	5	ND	4	7	.2	2	2	40	.10	.032	11	24	.22	21	.10	6	.77	.01	.02	1
ESI-S-40	1	19	5	19	.1	9	4	60	2.37	15	5	ND	3	8	.2	2	2	29	.10	.095	10	31	.17	28	.08	3	1.20	.01	.02	1
ESI-S-41	1	10	2	19	.1	12	7	88	2.04	12	5	ND	3	9	.2	2	4	31	.16	.042	9	27	.26	26	.08	3	1.12	.01	.02	1
ESI-S-42	1	3	4	38	.1	9	4	111	1.23	2	5	ND	3	18	.2	2	2	19	.31	.049	9	16	.45	30	.12	4	.96	.01	.03	1
ESI-S-43	1	4	10	38	.1	12	7	119	2.83	5	5	ND	4	14	.2	2	2	37	.49	.082	12	39	.35	20	.11	4	2.38	.02	.02	1
ESI-S-44	1	5	3	34	.1	12	6	99	2.13	4	5	ND	4	10	.2	2	2	32	.19	.019	11	29	.33	22	.13	4	1.54	.01	.05	1
ESI-S-45	1	11	33	178	.3	37	12	290	3.75	18	5	ND	6	14	.2	2	3	46	.23	.492	25	110	.53	40	.10	4	2.00	.01	.06	1
ESI-S-46	1	15	18	34	.2	10	6	88	4.04	14	5	ND	4	7	.4	2	2	67	.10	.037	10	45	.26	28	.16	2	2.20	.01	.02	1
ESI-S-47	1	63	5	74	.1	50	20	298	3.23	9	5	ND	5	12	.2	2	2	49	.30	.051	12	59	1.01	54	.20	6	2.32	.01	.21	1
ESI-S-48	1	13	7	37	.1	16	6	98	2.58	9	5	ND	3	7	.2	2	2	63	.14	.021	8	31	.32	35	.16	4	1.04	.01	.03	1
ESI-S-49	1	38	6	24	.1	24	12	108	3.53	39	5	ND	5	12	.4	4	2	49	.24	.065	13	35	.21	28	.09	4	2.23	.01	.02	1
ESI-S-50	1	28	8	41	.1	15	14	139	4.32	33	5	ND	5	12	.2	2	2	61	.18	.045	10	39	.37	28	.14	2	2.37	.01	.02	1
ESI-S-51	1	22	5	29	.1	23	11	109	3.92	17	5	ND	3	9	.2	2	2	57	.14	.030	8	44	.34	41	.16	2	1.79	.01	.02	1
ESI-S-52	1	22	7	49	.1	25	10	239	3.06	34	5	ND	1	8	.4	2	2	71	.17	.023	10	40	.61	38	.08	2	1.75	.01	.02	1
ESI-S-53	1	18	2	54	.1	26	14	187	3.70	9	5	ND	6	8	.3	2	2	55	.16	.037	11	62	.69	43	.20	5	2.61	.01	.12	2
ESI-S-54	1	8	10	20	.4	8	3	114	1.55	21	5	ND	3	25	.8	2	4	22	.35	.170	12	24	.13	43	.10	6	.82	.01	.03	2
ESI-S-55	1	4	6	20	.2	8	2	56	1.13	5	5	ND	2	13	.2	2	2	19	.17	.018	9	19	.17	25	.12	5	.82	.01	.03	1
ESI-S-56	1	14	11	48	.1	27	7	141	3.80	12	5	ND	2	64	.3	2	2	65	1.07	.643	8	62	.48	85	.21	6	1.78	.01	.06	2
ESI-S-57	1	14	9	33	.2	17	9	119	2.95	5	5	ND	5	10	.4	3	2	43	.19	.088	10	39	.38	21	.11	2	1.99	.01	.04	2
ESI-S-58	1	15	9	29	.1	10	5	79	3.90	125	5	ND	3	10	.2	2	2	80	.14	.051	9	37	.19	48	.12	4	1.40	.01	.02	1
ESI-S-59	1	244	11	60	.1	34	13	299	2.96	22	5	ND	1	16	.6	2	2	36	1.43	.152	38	49	.38	27	.05	4	2.97	.01	.03	1
ESI-S-60	1	25	5	36	.1	20	9	194	2.82	16	5	ND	5	7	.2	2	2	67	.13	.019	11	46	.55	30	.16	2	1.60	.01	.03	1
ESI-S-61	1	15	2	16	.1	16	5	79	1.81	10	5	ND	4	5	.2	2	2	21	.10	.018	9	36	.25	16	.08	3	1.75	.01	.01	1
ESI-S-62	1	11	11	20	.1	8	3	49	2.78	10	7	ND	4	7	.2	2	2	100	.06	.016	10	30	.14	33	.27	6	1.00	.01	.02	1
ESI-S-63	1	11	3	25	.1	17	7	111	2.71	3	5	ND	8	8	.3	2	2	49	.10	.010	15	37	.31	25	.15	3	1.05	.01	.03	1
ESI-S-64	1	33	9	42	.4	35	15	206	6.41	22	5	ND	1	4	.5	2	2	98	.10	.021	4	84	.71	23	.11	2	1.67	.01	.02	1
ESI-S-65	1	7	3	14	.1	12	5	55	2.02	7	5	ND	4	6	.2	2	2	34	.12	.031	8	26	.16	16	.09	5	1.08	.01	.02	1
ESI-S-66	1	10	3	25	.1	15	8	101	4.12	7	5	ND	11	5	.2	2	2	65	.08	.029	18	46	.25	14	.15	3	1.09	.01	.02	1
ESI-S-67	1	133	6	158	.2	54	34	177	16.31	31	5	ND	3	3	.2	2	2	46	.10	.051	4	44	.20	30	.03	2	2.05	.01	.01	1
ESI-S-68	1	28	7	43	.1	8	7	266	2.78	9	5	ND	2	6	.2	2	2	48	.08	.012	8	19	.12	30	.11	2	.93	.01	.02	1
ESI-S-69	1	19	2	31	.1	21	8	136	2.48	20	5	ND	3	9	.2	2	2	43	.18	.016	6	33	.33	47	.13	4	1.15	.01	.02	1
ESI-S-70	1	76	11	31	.2	16	8	207	2.10	12	5	ND	2	8	.2	2	2	38	.21	.022	10	34	.30	42	.09	4	1.25	.01	.03	1
ESI-S-71	1	9	6	34	.1	13	5	106	1.80	7	5	ND	4	23	.2	2	2	24	.89	.058	14	29	.59	46	.11	4	1.10	.01	.07	1
ESI-S-72	2	10	12	46	.1	8	4	186	3.75	129	5	ND	3	10	.2	2	5	26	.12	.066	26	9	.10	61	.01	2	1.56	.01	.05	1
STANDARD C	18	56	44	131	7.5	70	33	1043	3.97	36	23	7	39	52	18.8	18	19	55	.48	.090	38	58	.88	177	.09	31	1.88	.06	.15	11



AA ANALYTICAL



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SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ce	P	Le	Cr	Mg	Ba	Ti	B	Al	Na	K	V
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm
ES1-S-73	2	12	13	41	.3	18	7	160	3.76	7	5	ND	5	16	.2	2	3	64	.18	.033	12	45	.54	53	.23	5	2.02	.01	.06	1
ES1-S-74	2	10	12	39	.1	19	5	122	3.23	85	5	ND	2	12	.2	2	2	30	.10	.028	10	22	.30	42	.01	4	1.40	.01	.04	1
GS1-S-1	1	4	7	9	.1	2	1	23	.26	3	5	ND	1	6	.2	2	2	6	.07	.007	8	5	.03	15	.03	6	.32	.01	.02	1
GS1-S-2	1	9	7	22	.1	14	4	85	1.83	3	5	ND	5	7	.2	2	3	27	.11	.025	14	35	.32	23	.15	3	1.27	.01	.03	1
GS1-S-3	3	8	18	26	.1	10	3	96	3.43	3	5	ND	2	30	.2	2	2	40	.10	.032	8	27	.28	30	.09	3	1.63	.01	.04	1
STANDARD C	18	57	38	133	7.0	70	32	1050	3.99	38	15	6	39	52	18.7	14	18	55	.49	.091	38	58	.88	178	.09	33	1.89	.07	.15	11



AA ANALYTICAL

AA ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ce %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	V ppm
EG1-R-1	2	300	5	42	.5	43	82	268	5.03	9	5	ND	1	3	.2	2	2	36	.17	.006	2	628	.65	5	.04	2	.86	.02	.04	2
EG1-R-2	1	372	20	238	.4	65	43	284	29.89	251	5	ND	3	2	.2	2	2	48	.01	.015	2	115	.69	11	.01	2	1.67	.01	.02	1
EG1-R-3	1	169	21	109	.3	45	85	1160	32.03	206	5	ND	3	17	.2	3	9	18	.21	.025	3	76	.46	16	.01	2	.19	.01	.06	1
EG1-R-4	1	45	2	60	.2	32	22	465	3.71	6	5	ND	2	49	.2	4	2	53	.93	.042	8	167	1.14	138	.15	4	2.56	.18	.75	1
ER1-R-1	2	419	29	184	.7	37	27	190	12.00	7	5	ND	4	6	1.0	2	3	17	.28	.018	17	216	.15	28	.05	2	.53	.01	.17	2
ER1-R-2	3	87	31	111	.4	22	16	254	9.48	25	5	ND	7	5	.5	2	2	16	.39	.012	10	164	.24	14	.08	2	.74	.01	.14	1
ER1-R-3	3	76	18	309	.3	15	15	458	7.63	2	5	ND	3	9	.3	2	2	54	.73	.017	6	244	.55	22	.13	2	1.25	.02	.32	1
ES1-R-1	1	25	3	32	.1	48	21	1007	2.10	10	5	ND	1	9	.2	4	2	38	1.32	.019	2	636	.84	38	.11	124	1.04	.01	.02	1
ES1-R-2	1	29	14	50	.2	67	33	753	4.96	4	5	ND	5	47	.3	2	2	19	2.62	.047	16	246	1.02	35	.17	2	1.35	.02	.17	1
ES1-R-3	1	48	17	53	.2	99	44	642	8.01	3	6	ND	4	44	.2	2	2	14	2.12	.044	14	121	1.02	35	.15	4	1.36	.01	.20	1
ES1-R-4	1	22	3	53	.1	45	27	703	4.49	2	5	ND	1	13	.2	2	2	90	1.51	.008	2	473	1.47	5	.15	2	2.24	.01	.01	1
ES1-R-5	1	240	10	140	.2	62	329	585	13.05	16	5	ND	1	9	.5	2	2	59	.36	.021	2	164	1.93	7	.35	2	2.32	.04	.01	1
ES1-R-6	1	141	18	53	.1	22	22	1718	20.81	66	5	ND	1	8	.2	2	3	42	2.11	.025	2	185	1.02	1	.01	2	1.86	.01	.01	1
ES1-R-7	1	190	9	121	.1	51	69	302	12.88	93	5	ND	1	3	.3	2	2	53	.12	.031	2	86	1.16	17	.01	2	2.86	.01	.02	1
ES1-R-8	1	98	17	37	.1	32	19	316	4.33	50	5	ND	3	6	.2	3	2	9	.05	.011	7	417	.08	22	.01	2	.23	.01	.09	1
ES1-R-9	1	194	2	44	.1	47	37	922	16.74	2	5	ND	1	2	.2	2	2	49	.19	.024	2	218	.92	11	.01	14	1.08	.01	.07	1
ES1-R-10	1	60	7	18	1.2	43	35	49	7.53	142	5	ND	1	2	.2	11	2	9	.04	.005	2	141	.07	9	.01	2	.21	.01	.07	1
ES1-R-11	1	65	17	50	.1	22	15	457	9.26	6	5	ND	5	89	.3	2	2	19	.68	.049	14	318	.68	48	.03	2	.69	.02	.17	1
GG1-R-1	1	46	2	68	.1	101	43	1552	7.62	2	5	ND	2	117	.2	2	2	85	2.00	.037	18	161	2.90	47	.07	2	3.31	.02	.23	1
GG1-R-2	1	70	2	61	.1	54	38	1019	5.80	2	5	ND	1	30	.6	2	2	82	2.22	.013	4	383	2.49	28	.19	7	3.51	.11	.23	1
GG1-R-3	1	88	2	46	.1	52	31	646	3.90	2	5	ND	1	28	.2	2	2	59	1.62	.011	4	491	1.39	27	.18	2	2.37	.18	.18	1
GG1-R-4	1	91	29	148	.3	35	34	4243	11.19	246	5	ND	1	100	.6	2	2	12	4.69	.034	3	107	1.02	24	.01	2	.22	.02	.09	1
GSI-R-1	1	21	8	26	.1	16	8	542	2.12	8	5	ND	2	34	.2	2	2	4	2.15	.041	22	186	.18	27	.01	6	.19	.02	.05	1
GSI-R-2	1	607	2	52	.3	58	37	774	12.15	232	5	ND	1	2	.2	2	2	10	.07	.006	2	463	.08	2	.01	3	.19	.01	.01	1
GSI-R-3	1	100	2	135	.1	37	42	870	6.48	13	5	ND	1	3	.3	2	2	189	.44	.020	2	165	2.71	8	.51	2	3.22	.03	.01	1
GSI-R-4	1	123	10	50	.1	27	19	537	10.01	1568	5	ND	3	21	.5	2	2	21	.33	.029	10	186	.36	69	.10	2	1.48	.01	.46	1
GSI-R-5	2	18	22	75	.1	22	13	58	1.07	1263	10	ND	8	5	.2	3	3	9	.03	.003	11	727	.01	38	.01	3	.16	.05	.11	1
GSI-R-6	1	181	6	60	.1	80	29	514	13.61	51	5	ND	1	5	.4	2	2	106	.86	.017	2	268	1.63	11	.25	2	2.06	.01	.03	1
GSI-R-7	2	139	28	55	.3	29	47	400	26.26	15	5	ND	3	3	.2	2	4	49	.08	.026	8	134	.89	10	.10	2	1.11	.02	.02	1
STANDARD C	20	60	42	134	7.2	71	32	1068	3.97	39	24	6	39	53	18.6	15	19	58	.48	.092	41	59	.91	173	.09	37	1.89	.07	.15	11



GEOCHEMICAL ANALYSIS CERTIFICATE

G.G. Engineering Ltd. File # 91-1978 Page 1
 3836 W. 16th Ave, Vancouver BC V6R 3C7

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ce %	P %	La ppm	Cr ppm	Hg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
LS9 0+00	1	26	8	37	.1	24	10	150	2.16	6	7	ND	4	19	.2	2	4	28	.38	.044	12	33	.53	64	.14	5	1.44	.02	.10	2
LS9 0+25S	1	25	5	73	.1	96	29	534	6.02	6	5	ND	1	10	.3	2	2	100	.25	.006	5	127	2.58	58	.25	2	3.53	.01	.03	1
LS9 0+50S	1	161	10	87	.1	117	37	664	6.87	5	5	ND	2	23	.4	2	2	111	.54	.009	8	153	2.89	162	.28	2	4.05	.01	.23	1
LS9 0+70S	1	20	6	86	.1	84	26	565	6.19	5	5	ND	2	21	.5	2	2	95	.22	.011	4	121	2.12	42	.36	3	3.18	.01	.04	1
LS9 1+00S	1	18	13	94	.1	70	26	483	5.56	5	5	ND	2	60	1.1	2	2	108	.83	.097	28	170	3.35	147	.30	2	3.88	.01	.21	1
LS9 1+25S	1	22	17	70	.1	59	22	318	5.57	5	5	ND	2	18	.2	2	2	120	.16	.022	9	118	1.90	76	.40	4	2.82	.01	.17	1
LS9 1+50S	1	15	16	77	.1	9	12	387	3.90	2	5	ND	2	12	.2	2	2	78	.13	.024	11	16	.50	92	.12	4	1.93	.01	.04	1
LS9 1+75S	1	8	7	18	.1	3	1	73	.99	2	5	ND	1	5	.2	2	2	20	.05	.014	7	9	.09	29	.02	2	1.07	.01	.02	1
LS9 2+10S	1	7	11	38	.1	2	1	133	.62	2	5	ND	1	5	.4	2	2	11	.05	.018	7	6	.07	34	.01	4	1.08	.01	.05	1
LS9 2+25S	1	12	18	84	.1	113	21	333	4.07	6	5	ND	7	27	.4	2	2	76	.31	.018	25	353	3.28	42	.26	2	3.32	.01	.04	1
LS9 2+50S	3	10	16	56	.2	15	11	399	9.34	3	5	ND	4	7	.6	2	2	38	.05	.017	6	30	.69	53	.09	2	2.30	.01	.18	1
LS9 2+75S	1	21	22	81	.1	47	16	231	4.22	9	9	ND	6	50	.2	2	2	80	.48	.029	13	142	1.88	89	.30	2	2.21	.01	.05	1
LS9 3+00S	1	11	14	51	.1	9	7	200	2.57	4	5	ND	2	42	.6	3	2	64	.30	.013	6	21	.35	70	.35	5	1.06	.01	.07	1
LS9 3+25S	4	5	11	33	.1	3	5	141	2.27	5	5	ND	2	30	.4	3	2	55	.21	.014	7	9	.29	26	.34	2	1.09	.01	.04	1
LS9 3+50S	1	7	8	41	.1	7	7	213	2.47	2	6	ND	1	25	.2	2	2	78	.23	.010	6	12	.47	36	.44	5	1.20	.01	.03	1
LS9 3+75S	1	12	14	52	.1	45	12	275	6.61	5	5	ND	3	60	.5	2	2	72	.22	.018	5	88	1.05	57	.32	2	2.17	.01	.11	2
LS9 4+00S	1	10	14	34	.1	11	7	101	2.03	22	5	ND	2	11	.3	2	2	41	.13	.010	10	27	.30	41	.14	3	1.38	.01	.04	1
LS9 4+25S	1	15	10	59	.1	42	15	438	4.58	11	6	ND	3	22	.4	2	2	78	.20	.024	7	60	1.11	66	.29	2	1.94	.01	.06	2
LS9 4+50S	1	11	6	33	.1	10	5	101	2.77	5	5	ND	4	9	.2	2	2	37	.09	.017	9	22	.25	33	.16	5	1.22	.01	.04	1
LS9 4+75S	1	12	12	50	.1	17	8	147	3.78	7	6	ND	3	11	.2	2	2	60	.11	.026	8	35	.43	48	.23	3	1.61	.01	.06	1
LS9 5+00S	1	13	8	44	.1	18	8	159	2.21	8	6	ND	3	9	.2	2	2	38	.10	.012	8	28	.43	42	.18	4	1.44	.01	.07	1
LS9 5+25S	1	10	14	44	.1	11	5	167	2.73	2	8	ND	2	10	.2	2	2	40	.09	.020	11	26	.35	55	.14	3	1.49	.01	.07	2
LS9 5+50S	1	14	11	40	.2	14	8	136	3.99	6	5	ND	3	8	.2	2	2	57	.09	.023	8	31	.39	43	.21	4	1.62	.01	.08	2
LS9 5+75S	1	12	14	37	.1	16	10	108	10.38	2	5	ND	3	5	.2	2	2	46	.02	.037	17	41	.35	34	.08	3	1.52	.01	.06	1
LS9 6+00S	1	9	14	31	.1	10	6	85	5.18	5	5	ND	1	9	.4	2	2	37	.08	.026	8	30	.22	42	.08	4	1.57	.01	.04	1
LS9 6+25S	1	23	6	55	.1	21	8	180	2.47	3	5	ND	3	11	.3	2	2	36	.18	.021	9	33	.61	36	.17	4	1.36	.01	.11	1
LS9 6+50S	1	17	7	41	.1	19	9	160	2.48	4	5	ND	3	11	.2	2	2	41	.13	.009	9	27	.57	40	.20	4	1.64	.01	.05	1
LS9 6+75S	1	53	17	55	.1	47	17	313	4.91	5	5	ND	4	10	.5	2	2	91	.23	.023	12	79	.75	63	.17	3	3.87	.01	.05	1
LS9 7+00S	1	17	17	63	.1	53	17	158	7.31	5	5	ND	5	4	.2	2	2	123	.02	.020	30	112	1.22	31	.16	2	2.20	.01	.04	1
LS10 0+00	1	67	11	81	.1	37	19	727	10.47	9	5	ND	2	41	1.0	2	2	89	.26	.042	9	104	2.62	90	.29	2	4.98	.01	.48	1
LS10 0+25S	1	21	20	74	.1	45	13	334	4.84	7	5	ND	2	10	.2	2	2	52	.07	.010	8	71	1.11	77	.10	2	2.60	.01	.09	1
LS10 0+50S	1	20	13	62	.1	23	10	324	4.24	133	5	ND	2	17	.4	2	2	48	.19	.059	9	39	.59	100	.16	7	1.72	.01	.12	1
LS10 0+75S	1	29	16	96	.4	26	15	454	3.42	9	5	ND	2	23	.6	2	2	35	.19	.058	17	42	.61	62	.11	4	1.96	.01	.10	1
LS10 1+00S	1	20	15	76	.1	10	5	201	2.92	27	5	ND	1	5	.3	2	2	32	.03	.020	8	19	.20	58	.03	2	1.61	.01	.07	1
LS10 1+25S	3	29	13	64	.1	21	10	256	5.73	6	5	ND	3	6	.8	2	2	48	.03	.025	5	35	.68	37	.06	2	2.05	.01	.08	1
LS10 1+50S	3	206	115	58	.2	67	32	535	7.53	16	5	ND	11	27	.6	2	2	59	.31	.035	38	63	.71	84	.12	2	4.58	.01	.09	1
STANDARD C	19	61	40	137	7.0	70	32	1051	4.00	37	22	7	38	52	18.9	17	19	57	.49	.091	38	58	.91	179	.09	31	1.91	.06	.16	13

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL AU DETECTION LIMIT BY ICP IS 3 PPM.
 . SAMPLE TYPE: PULP

ANALYST: J. S. ...
 CHECKED BY: ...
 APPROVED BY: ...



AA ANALYTICAL



AA ANALYTICAL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Be	Ti	B	Al	Na	K	W
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm
LS10 1+75S	4	22	26	66	.1	16	11	192	4.17	29	5	ND	2	15	.6	2	8	58	.15	.030	10	29	.27	55	.07	5	1.72	.01	.04	1
LS10 2+00S	1	29	13	105	.1	37	21	683	7.38	6	5	ND	3	34	.9	2	2	81	.24	.048	11	70	1.61	102	.33	8	3.59	.01	.17	1
LS10 2+25S	1	25	17	82	.2	59	21	424	5.33	11	5	ND	3	72	.9	5	2	98	.43	.092	15	142	2.85	182	.32	9	3.90	.01	.49	2
LS10 2+50S	3	42	26	142	.3	40	22	387	6.23	14	5	ND	3	36	.2	2	2	56	.24	.046	13	50	.67	76	.12	6	3.11	.01	.14	1
LS10 2+75S	2	15	15	43	.1	20	7	180	2.93	4	5	ND	1	10	.2	2	2	43	.14	.017	8	28	.46	39	.11	2	1.57	.01	.05	1
LS10 3+00S	2	40	19	60	.1	13	7	129	3.57	13	5	ND	3	12	.3	2	2	53	.10	.024	18	34	.27	65	.05	6	2.30	.01	.03	1
LS11 4+50W	1	6	6	34	.1	15	8	83	3.42	6	5	ND	3	7	.2	2	2	44	.08	.038	7	36	.26	43	.14	6	2.64	.01	.05	1
LS11 4+25W	1	3	16	48	.1	11	5	107	3.19	9	5	ND	5	9	.8	3	2	54	.10	.085	12	34	.21	52	.13	5	2.35	.01	.04	2
LS11 4+00W	1	5	7	91	.8	6	4	182	1.94	5	5	ND	5	9	.4	4	2	31	.09	.099	10	22	.16	73	.10	3	1.67	.01	.05	1
LS11 3+75W	1	7	13	106	.2	14	6	141	3.58	7	5	ND	4	9	.2	2	2	50	.10	.056	9	30	.34	50	.18	5	1.58	.01	.07	1
LS11 3+15W	1	6	5	31	.1	12	4	55	1.93	8	5	ND	3	8	.5	2	3	24	.11	.022	8	21	.14	28	.11	2	1.57	.01	.03	1
LS11 3+00W	1	40	8	59	1.0	4	4	39	3.96	9	5	ND	2	5	.2	2	3	35	.04	.019	7	14	.07	20	.11	4	.75	.01	.02	1
LS11 2+75W	1	4	7	24	.1	8	3	64	1.01	4	5	ND	2	7	.2	2	2	29	.07	.007	8	15	.17	20	.14	2	.75	.01	.02	1
LS11 2+50W	1	27	5	56	.2	30	14	115	2.21	5	5	ND	4	9	.4	4	2	33	.16	.018	11	29	.33	68	.13	7	2.24	.01	.03	1
LS11 2+25W	1	21	9	27	.1	9	5	61	1.88	4	5	ND	2	6	.2	2	2	25	.11	.020	8	22	.15	33	.07	3	1.84	.01	.02	1
LS11 2+00W	1	69	10	66	.1	41	14	269	2.76	2	5	ND	6	11	.3	2	2	39	.18	.015	14	40	.60	88	.15	6	2.79	.01	.04	1
LS11 1+75W	1	19	6	26	.1	11	5	66	2.48	5	5	ND	3	7	.2	2	2	39	.10	.027	10	22	.19	31	.11	2	1.83	.01	.02	1
LS11 1+50W	1	19	6	51	.1	9	5	82	2.20	5	5	ND	3	7	.3	2	2	31	.11	.028	10	23	.19	37	.10	3	1.77	.01	.03	1
LS11 1+25W	2	69	10	22	.1	14	5	53	3.81	8	7	ND	2	4	.2	2	3	73	.08	.027	7	44	.09	30	.05	4	3.11	.01	.02	1
LS11 1+00W	1	15	11	40	.1	9	5	69	2.88	7	5	ND	3	7	.2	2	2	61	.07	.022	8	19	.19	32	.23	4	1.31	.01	.02	1
LS11 0+75W	1	10	3	19	.1	12	5	50	1.56	6	5	ND	3	7	.2	2	2	28	.08	.013	8	17	.13	36	.10	2	1.72	.01	.02	1
LS11 0+50W	1	55	12	40	.1	30	12	126	3.44	9	5	ND	4	12	.4	2	2	59	.15	.041	14	34	.38	64	.20	5	2.45	.01	.05	1
LS11 0+25W	1	19	5	24	.1	11	5	70	2.21	4	5	ND	4	8	.2	2	4	41	.10	.026	10	27	.20	39	.13	4	2.05	.01	.03	1
LS11 0+00	1	23	5	32	.1	16	7	85	2.89	4	5	ND	4	7	.2	2	2	49	.10	.012	7	30	.25	58	.17	5	1.89	.01	.04	1
LS12 0+00	1	11	4	7	.1	1	1	31	.59	5	5	ND	2	5	.2	2	2	27	.06	.005	7	11	.07	17	.12	2	.45	.01	.01	1
LS12 0+25E	1	12	7	22	.1	9	5	78	2.73	12	5	ND	3	6	.2	2	2	52	.09	.035	9	27	.18	29	.17	2	1.05	.01	.03	1
LS12 0+50E	1	14	2	26	.1	9	5	85	1.77	8	5	ND	3	8	.2	2	2	31	.14	.027	10	23	.19	30	.10	3	1.29	.01	.03	1
LS12 1+25E	1	4	5	12	.1	6	3	37	.95	3	5	ND	4	6	.2	2	2	23	.13	.009	10	14	.11	17	.10	2	.62	.01	.02	1
LS12 1+50E	1	6	6	24	.3	17	7	103	1.83	6	5	ND	4	7	.2	3	2	27	.12	.027	8	23	.20	64	.10	6	1.57	.01	.04	1
LS12 1+75E	1	18	3	20	.1	7	3	49	1.96	7	5	ND	3	4	.2	2	2	34	.06	.039	8	24	.11	27	.08	4	1.83	.01	.02	1
LS12 2+00E	1	32	9	38	.1	17	9	160	2.67	13	5	ND	4	7	.2	2	2	40	.21	.054	13	29	.34	20	.11	4	1.23	.01	.03	1
LS12 2+25E	1	9	4	27	.1	15	6	102	2.69	5	5	ND	5	6	.2	2	2	35	.12	.041	9	39	.34	25	.13	2	2.96	.01	.05	1
LS12 2+50E	1	6	2	20	.1	12	6	95	1.41	5	5	ND	2	8	.2	2	2	22	.19	.023	8	21	.24	20	.09	2	1.04	.01	.02	1
LS12 2+75E	1	21	2	38	.2	17	9	189	2.23	5	5	ND	3	7	.2	2	2	30	.12	.023	7	25	.30	38	.11	3	1.31	.01	.04	1
LS12 3+00E	1	3	4	14	.1	8	4	71	1.04	2	5	ND	2	7	.2	2	2	17	.20	.046	9	17	.18	19	.08	3	.52	.01	.03	1
LS12 3+25E	1	7	4	16	.1	3	2	35	.82	5	11	ND	3	5	.2	2	3	15	.07	.009	9	10	.08	15	.06	3	.76	.01	.02	1
STANDARD C	18	59	36	131	7.3	70	32	1025	3.91	38	19	7	39	52	17.9	14	21	57	.48	.087	38	57	.87	176	.09	39	1.84	.06	.15	12



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ce %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
LS12 3+50E	1	6	12	31	.1	18	8	93	2.70	6	5	ND	5	9	.2	2	2	41	.12	.066	10	35	.21	62	.11	2	2.40	.01	.04	1
LS12 3+75E	1	5	6	14	.2	9	4	63	1.31	6	5	ND	5	7	.2	2	2	23	.16	.048	10	18	.18	14	.09	4	.72	.01	.03	1
LS12 4+00E	1	4	5	22	.1	10	5	90	1.49	8	5	ND	3	6	.3	2	2	22	.15	.108	7	23	.19	26	.08	3	.97	.01	.04	1
LS12 4+25E	1	36	7	37	.1	15	6	64	2.77	10	5	ND	3	6	.3	2	2	34	.07	.030	7	25	.14	34	.08	2	2.19	.01	.02	1
LS12 4+50E	1	10	7	14	.1	5	3	42	1.28	2	5	ND	3	6	.2	2	2	24	.06	.013	9	16	.11	22	.07	2	.95	.01	.02	1
LS12 4+75E	1	5	3	32	.1	16	5	107	1.77	12	5	ND	2	10	.2	2	2	24	.14	.049	9	26	.18	58	.07	2	1.82	.01	.04	1
LS12 5+00E	1	4	8	32	.1	14	6	149	1.92	6	5	ND	5	9	.2	2	2	28	.14	.109	8	27	.22	62	.08	2	1.64	.01	.04	1
LS12 5+25E	1	53	2	89	.1	15	20	451	2.68	4	5	ND	2	6	.2	2	2	35	.12	.040	8	22	.30	45	.08	2	1.74	.01	.03	1
LS12 5+50E	1	13	8	44	.1	20	9	161	2.56	6	5	ND	5	8	.2	2	2	41	.13	.041	11	39	.39	36	.14	2	1.33	.01	.04	1
LS12 5+75E	1	38	3	38	.1	22	8	95	1.92	6	5	ND	4	6	.2	2	2	26	.12	.030	8	30	.24	34	.09	3	1.83	.01	.04	1
LS12 6+00E	1	10	5	33	.2	25	7	98	2.62	8	5	ND	5	7	.2	2	2	45	.11	.029	11	33	.27	39	.14	2	1.39	.01	.04	1
LS12 6+25E	1	5	4	48	.1	22	7	109	2.57	9	5	ND	2	7	.2	3	2	39	.09	.024	7	46	.28	54	.11	2	1.75	.01	.04	1
LS12 6+50E	1	2	8	20	.1	9	4	84	2.32	8	5	ND	6	7	.2	2	2	47	.12	.036	10	25	.20	13	.12	2	.75	.01	.02	1
LS12 6+75E	1	16	14	45	.2	21	9	118	3.08	9	5	ND	5	7	.4	2	2	47	.10	.038	11	46	.30	64	.14	2	2.47	.01	.05	1
LS12 7+00E	1	15	4	38	.2	26	7	79	3.38	10	5	ND	4	7	.2	2	2	50	.10	.042	9	46	.25	48	.11	2	1.99	.01	.04	1
LS12 7+25E	1	16	2	22	.1	14	5	62	1.19	3	5	ND	1	6	.2	2	2	20	.09	.013	8	31	.18	26	.06	2	1.36	.01	.02	1
LS12 7+50E	1	4	2	14	.1	13	5	64	1.42	2	5	ND	4	6	.2	2	2	20	.11	.028	11	23	.17	19	.08	2	1.61	.01	.02	1
LS12 7+75E	1	13	8	44	.2	33	12	150	2.91	5	5	ND	3	7	.2	2	2	45	.15	.034	8	40	.65	36	.16	2	1.94	.01	.03	1
LS12 8+00E	1	2	2	12	.1	8	2	50	1.10	3	5	ND	1	7	.2	2	2	27	.13	.018	5	19	.15	16	.08	2	.83	.01	.02	1
LS12 8+25E	1	2	3	14	.1	12	5	78	1.29	2	5	ND	4	7	.2	2	2	21	.18	.032	13	20	.21	14	.08	2	.82	.01	.02	1
LS12 8+50E	1	7	10	19	.2	5	3	41	.93	26	5	ND	3	7	.2	2	2	19	.08	.013	12	14	.11	31	.06	2	.83	.01	.02	1
LS12 8+75E	1	4	6	12	.1	10	4	70	1.17	57	5	ND	2	7	.2	2	2	22	.14	.026	7	17	.17	11	.08	2	.86	.01	.02	1
LS12 9+00E	1	8	8	39	.1	16	7	70	2.08	8	5	ND	2	7	.2	2	2	28	.09	.021	8	26	.16	41	.09	2	2.12	.01	.03	1
LS12 9+25E	1	43	2	38	.1	24	8	96	2.35	9	5	ND	4	5	.2	2	2	28	.09	.025	9	35	.28	22	.09	2	2.20	.01	.03	1
LS12 9+50E	1	10	17	40	.2	13	6	65	3.31	5	5	ND	3	6	.2	3	2	47	.07	.025	10	31	.14	34	.11	2	2.71	.01	.02	2
LS12 9+75E	1	12	6	24	.2	7	3	53	.93	3	5	ND	4	6	.2	2	2	25	.08	.006	10	17	.15	20	.10	2	.94	.01	.02	1
LS12 10+00E	1	12	9	16	.1	2	1	34	.67	2	7	ND	1	6	.2	2	2	26	.08	.006	9	10	.06	16	.08	2	.52	.01	.01	1
LS12 10+25E	1	11	6	19	.1	8	4	35	1.27	2	5	ND	3	6	.2	2	2	29	.07	.006	8	18	.10	20	.08	2	1.21	.01	.02	1
LS12 10+50E	1	29	6	25	.1	13	6	87	1.49	5	5	ND	1	6	.2	2	3	52	.13	.015	5	25	.17	21	.20	2	.93	.01	.02	1
LS12 10+75E	1	20	8	17	.1	8	2	48	.85	2	5	ND	1	5	.2	2	2	35	.18	.010	4	17	.08	17	.13	2	.51	.01	.02	1
LS12 11+00E	1	314	6	44	.1	224	46	401	4.33	1065	7	ND	3	11	.3	2	2	54	1.21	.051	32	92	.59	51	.07	2	6.00	.01	.04	40
LS12 11+25E	1	25	4	16	.1	14	5	61	1.87	37	5	ND	2	6	.2	2	2	34	.10	.013	9	32	.20	20	.10	2	1.74	.01	.03	1
LS12 11+50E	1	16	4	19	.2	23	7	82	1.49	5	5	ND	3	7	.2	2	2	21	.12	.008	8	28	.26	43	.10	4	1.50	.01	.02	1
LS12 11+75E	1	11	3	10	.1	6	2	39	.91	2	5	ND	2	5	.2	2	2	22	.07	.007	8	15	.13	12	.08	2	.95	.01	.01	1
LS12 12+00E	1	14	5	29	.1	38	10	140	2.48	2	5	ND	3	8	.2	2	2	34	.14	.051	7	47	.25	42	.10	3	2.20	.01	.04	1
LS12 12+25E	1	6	5	28	.3	27	8	76	2.48	10	5	ND	4	9	.3	3	2	37	.15	.032	10	35	.25	50	.12	2	2.04	.01	.05	1
LS12 12+44E	1	13	6	43	.3	36	10	269	3.99	418	5	ND	2	5	.3	2	2	100	.12	.015	6	107	.86	34	.16	3	1.66	.01	.02	52
STANDARD C	19	57	37	130	7.2	71	34	1040	4.02	38	24	7	37	53	18.5	14	21	56	.49	.091	37	58	.88	174	.09	33	1.89	.06	.15	11



AORE ANALYTICAL

G.G. Engineering Ltd. FILE # 91-1978



AORE ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	M ppm
LS13 0+00	1	19	2	38	.1	21	11	127	3.26	9	5	ND	7	8	.3	2	5	56	.11	.013	11	40	.43	27	.19	4	1.80	.01	.08	1
LS13 0+25E	1	11	7	33	.1	17	6	124	1.89	9	8	ND	4	10	.2	2	2	36	.15	.035	9	27	.27	51	.12	6	.99	.01	.05	1
LS13 1+00E	1	45	12	46	.1	22	11	109	3.86	11	5	ND	4	8	.3	2	3	62	.12	.016	9	42	.34	37	.19	3	1.86	.01	.04	1
LS13 1+25E	1	17	11	18	.1	6	1	57	.84	4	5	ND	1	5	.2	2	5	30	.10	.007	9	15	.06	35	.10	2	.87	.01	.02	1
LS13 1+50E	1	56	7	91	.1	28	8	334	2.46	8	5	ND	1	6	.4	2	2	51	.17	.010	7	20	.12	83	.07	4	1.51	.01	.02	1
LS13 1+75E	1	17	5	20	.2	12	3	56	1.50	6	5	ND	2	5	.2	2	2	40	.08	.006	6	14	.10	22	.10	7	.71	.01	.02	1
LS13 2+00E	1	32	6	116	.1	35	11	140	1.43	9	7	ND	1	10	.2	2	2	27	.31	.021	10	25	.27	45	.08	4	1.10	.02	.04	1
LS13 2+25E	1	17	4	15	.1	15	5	66	1.36	7	5	ND	4	7	.2	2	2	19	.20	.037	9	16	.15	11	.07	5	.76	.01	.02	1
LS13 2+50E	1	2	2	18	.2	11	5	50	1.68	9	5	ND	3	7	.2	2	2	32	.10	.018	7	19	.13	26	.10	2	1.15	.01	.02	1
LS13 2+75E	1	22	6	41	.1	14	6	129	3.70	6	5	ND	4	6	.2	2	2	71	.10	.077	7	26	.19	24	.13	4	1.01	.01	.03	1
LS13 3+00E	1	16	5	42	.1	10	5	86	2.44	10	14	ND	5	5	.2	2	2	41	.09	.108	8	27	.13	30	.09	3	2.19	.01	.03	1
LS13 3+25E	1	54	5	48	.3	33	15	201	2.94	6	5	ND	3	7	.2	2	2	53	.17	.057	7	42	.52	32	.13	4	2.91	.02	.04	2
LS13 3+50E	1	14	5	32	.2	13	6	81	1.76	10	5	ND	4	9	.2	2	2	45	.18	.013	9	25	.23	36	.13	5	.94	.01	.03	1
LS13 3+75E	1	44	2	34	.1	31	11	82	2.16	6	5	ND	2	11	.2	2	2	33	.29	.036	7	28	.22	23	.10	5	2.35	.01	.03	1
LS13 4+00E	1	25	2	46	.1	15	7	82	2.51	8	5	ND	3	7	.2	2	2	51	.12	.042	7	25	.17	42	.12	6	1.62	.01	.03	1
LS13 4+25E	1	111	2	131	.1	98	40	169	3.67	8	5	ND	3	6	.5	6	2	126	.13	.069	6	82	.37	55	.12	5	3.27	.02	.04	1
LS13 4+50E	1	13	2	24	.3	15	7	68	1.58	8	5	ND	3	6	.2	2	2	27	.11	.035	8	23	.13	28	.08	5	1.37	.01	.02	1
LS13 4+75E	1	23	5	19	.1	11	4	43	1.15	9	5	ND	3	6	.2	2	2	21	.10	.017	8	17	.12	25	.07	2	1.33	.01	.02	1
LS13 5+00E	1	26	8	16	.1	23	6	68	1.42	5	5	ND	4	7	.2	2	2	22	.11	.013	8	30	.20	29	.08	2	1.62	.01	.02	1
LS13 5+15E	1	23	3	25	.1	22	7	70	2.27	7	5	ND	4	6	.2	2	2	42	.10	.024	6	39	.19	34	.10	4	2.22	.01	.02	1
LS13 5+50E	1	54	2	16	.1	39	10	57	2.05	9	5	ND	2	4	.2	3	2	33	.10	.011	6	36	.23	10	.09	5	2.38	.01	.01	1
LS13 5+75E	1	44	6	32	.3	23	8	88	2.23	7	5	ND	2	6	.2	2	2	53	.11	.010	6	24	.25	26	.14	4	1.12	.01	.03	1
LS13 6+00E	1	13	4	16	.1	12	4	47	1.48	7	5	ND	3	6	.2	2	2	38	.09	.005	7	18	.14	15	.13	2	.91	.01	.01	1
LS13 6+25E	1	23	8	22	.1	16	6	65	1.98	8	5	ND	4	6	.2	3	2	27	.11	.033	7	32	.17	23	.09	3	2.42	.01	.02	1
LS13 6+50E	1	34	3	44	.2	23	8	100	1.84	5	5	ND	4	7	.3	2	2	28	.12	.025	9	30	.23	30	.09	2	1.94	.01	.02	1
LS13 6+75E	1	22	2	24	.2	18	7	66	1.58	5	5	ND	3	7	.2	4	2	28	.11	.016	8	26	.21	30	.09	3	2.03	.01	.02	1
LS13 7+00E	1	21	3	24	.1	16	6	82	1.16	2	5	ND	2	7	.2	2	2	23	.12	.006	8	23	.25	25	.10	2	1.09	.01	.02	1
LS13 7+25E	1	8	3	20	.3	12	5	55	1.56	5	5	ND	3	6	.2	2	2	32	.10	.011	7	19	.17	25	.10	3	1.14	.01	.02	1
LS13 7+50E	1	18	2	19	.2	13	4	50	1.51	2	5	ND	2	6	.3	2	2	27	.11	.019	7	23	.17	28	.09	2	2.05	.01	.01	1
LS13 8+00E	1	8	5	14	.1	7	1	27	.78	4	5	ND	2	6	.2	2	2	17	.09	.011	7	15	.08	14	.09	2	.66	.01	.02	1
LS13 8+25E	1	5	2	28	.1	3	1	35	1.12	2	5	ND	2	5	.2	2	2	24	.07	.010	6	12	.05	24	.07	4	.76	.01	.02	1
LS13 8+50E	1	10	5	65	.1	14	5	75	2.65	8	5	ND	3	9	.2	2	2	50	.11	.059	7	29	.13	62	.11	5	2.46	.01	.03	1
LS13 8+75E	1	10	5	43	.1	13	5	95	2.24	6	5	ND	3	7	.3	2	2	34	.12	.055	8	27	.17	45	.11	6	2.02	.01	.03	1
LS13 9+00E	1	13	6	22	.1	12	5	54	3.14	4	5	ND	3	5	.4	2	3	48	.08	.029	6	33	.15	24	.14	5	2.75	.01	.03	1
LS13 9+50E	1	16	8	16	.1	11	5	51	2.16	2	5	ND	3	5	.2	2	3	36	.08	.012	7	27	.14	30	.12	3	2.23	.01	.02	1
LS13 10+25E	1	20	3	17	.1	14	4	58	1.88	4	5	ND	4	5	.2	2	2	29	.10	.015	7	23	.17	24	.09	2	1.70	.01	.02	1
STANDARD C	18	55	37	135	7.1	70	34	1051	4.01	40	20	7	39	52	18.4	15	19	55	.48	.092	38	58	.87	182	.09	34	1.91	.06	.15	11



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SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
LS13 10+50E	1 24	6 6	22 2	19 7	5 7	85 2.21	5	6 ND	5 5	6	2 2	34 .13	.025	7 7	29 .20	27 .12	2 2	26 .15	.022	9 9	30 .28	31 .10	3 3	2.16	.01	.04	1			
LS13 10+75E	1 19	5 5	19 .1	11 5	5 ND	61 2.80	6	5 ND	4 8	2 2	19 .22	.029	7 7	26 .17	19 .15	2 2	19 .15	.09	.016	7 7	26 .17	19 .15	4 4	1.82	.01	.02	1			
LS13 11+25E	1 1	4 4	9 .1	5 2	5 ND	31 .71	2	5 ND	3 5	2 2	16 .06	.008	8 8	13 .09	13 .06	2 2	40 .16	.014	9 9	29 .75	29 .19	3 3	1.76	.01	.09	1				
LS13 11+50E	1 7	4 4	18 .3	20 8	8 ND	73 1.89	4	14 ND	5 7	4 4	2 2	29 .10	.013	8 8	29 .22	36 .11	2 2	30 .16	.010	8 8	151 .76	25 .12	2 2	1.29	.01	.05	1			
LS13 11+75E	1 4	7 7	22 .1	8 4	5 ND	72 1.74	5	5 ND	4 6	5 5	2 2	40 .08	.019	7 7	19 .17	21 .14	2 2	39 .15	.012	8 8	357 1.18	28 .10	2 2	1.29	.01	.03	1			
LS13 12+00E	1 14	6 6	23 .1	19 6	6 ND	89 1.80	5	5 ND	4 7	4 4	2 2	26 .15	.022	9 9	30 .28	31 .10	2 2	26 .15	.022	9 9	30 .28	31 .10	3 3	2.22	.01	.04	1			
LS13 12+25E	1 14	3 3	23 .2	16 7	7 ND	85 1.15	2	5 ND	4 8	2 2	19 .22	.029	7 7	26 .17	19 .15	2 2	40 .16	.014	9 9	29 .75	29 .19	3 3	1.76	.01	.09	1				
LS13 12+50E	1 12	6 6	46 .1	27 9	9 ND	188 1.99	2	5 ND	6 8	4 4	2 2	30 .16	.010	8 8	151 .76	25 .12	2 2	30 .16	.010	8 8	151 .76	25 .12	2 2	1.29	.01	.05	1			
LS14 2+00N	1 11	9 9	23 .2	78 12	12 ND	122 1.79	8	5 ND	4 6	3 3	2 2	39 .15	.012	8 8	357 1.18	28 .10	2 2	39 .15	.012	8 8	357 1.18	28 .10	2 2	1.29	.01	.03	1			
LS14 1+75N	1 6	7 7	26 .1	92 11	11 ND	132 1.76	4	5 ND	3 7	2 2	39 .15	.012	8 8	357 1.18	28 .10	2 2	39 .15	.012	8 8	357 1.18	28 .10	2 2	1.29	.01	.03	1				
LS14 1+50N	1 24	5 5	35 .2	122 15	15 ND	375 2.33	10	5 ND	5 9	3 3	2 2	33 .30	.026	15 15	370 1.27	40 .09	2 2	33 .30	.026	15 15	370 1.27	40 .09	3 3	1.46	.01	.05	1			
LS14 1+25N	1 54	7 7	63 .5	152 21	21 ND	946 3.54	16	5 ND	5 16	1 1	4 4	2 2	42 .65	.055	37 37	260 1.55	87 .15	2 2	42 .65	.055	37 37	260 1.55	87 .15	3 3	2.42	.01	.13	1		
LS14 1+00N	1 41	18 18	119 .2	261 32	32 ND	478 4.51	26	5 ND	5 11	4 4	2 2	46 .28	.024	14 14	412 2.16	39 .17	2 2	46 .28	.024	14 14	412 2.16	39 .17	2 2	2.94	.01	.09	1			
LS14 0+75N	1 8	14 14	38 .2	92 10	10 ND	162 2.57	20	5 ND	4 5	4 4	2 2	47 .07	.013	9 9	260 .93	22 .17	2 2	47 .07	.013	9 9	260 .93	22 .17	2 2	1.21	.01	.05	1			
LS14 0+50N	1 8	17 17	61 .1	51 9	9 ND	225 2.71	16	5 ND	6 4	7 7	2 2	44 .06	.008	15 15	102 1.07	83 .17	2 2	44 .06	.008	15 15	102 1.07	83 .17	2 2	2.03	.01	.26	1			
LS14 0+25N	1 3	10 10	38 .1	47 10	10 ND	106 2.10	2	5 ND	4 2	7 7	2 2	59 .02	.010	12 12	79 1.76	27 .18	2 2	59 .02	.010	12 12	79 1.76	27 .18	2 2	1.85	.01	.07	1			
LS14 0+00	1 29	8 8	36 .1	139 15	15 ND	162 2.74	16	5 ND	4 6	6 6	2 2	35 .12	.023	11 11	295 1.20	20 .14	2 2	35 .12	.023	11 11	295 1.20	20 .14	3 3	1.80	.01	.02	1			



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SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Mg %	K %	W ppm
EG1-S-1	1	596	1616	6569	250.1	59	84	3816	13.71	26249	5	ND	1	45	57.8	222	2	38	1.34	.026	12	19	.75	38	.03	2	1.33	.01	.06	1
EG1-S-2	7	1294	17	153	.3	203	216	14259	9.10	78	5	ND	1	12	1.7	2	2	53	1.13	.017	22	14	1.00	91	.05	4	2.22	.04	.08	1
EG1-S-3	4	247	22	51	.2	28	27	614	6.45	74	5	ND	3	10	.3	2	2	47	.18	.039	11	27	.71	36	.10	3	1.59	.02	.10	2
ER1-S-1	4	162	46	75	.9	10	13	145	17.46	20	8	ND	3	7	.7	2	17	32	.10	.036	24	27	.19	56	.11	2	.65	.01	.18	1
ER1-S-3	1	72	10	61	.1	1	4	242	5.76	2	5	ND	10	1	.4	2	2	12	.03	.006	5	9	.51	8	.05	2	.96	.01	.15	1
ER1-S-4	5	10	9	12	.1	7	3	58	2.73	3	5	ND	3	5	.2	2	2	36	.08	.006	8	12	.10	4	.10	4	.83	.01	.02	1
ER1-S-5	4	169	12	33	.5	8	12	100	22.32	85	11	ND	7	2	1.4	4	7	51	.06	.037	7	22	.13	19	.13	2	.73	.01	.04	2
ER1-S-6	2	18	5	32	.1	7	5	178	3.02	5	5	ND	2	8	.3	2	2	51	.07	.019	8	23	.57	97	.15	3	1.71	.01	.26	1
ER1-S-7	1	8	5	35	.1	7	1	295	2.97	2	5	ND	1	16	.2	2	2	56	.12	.021	5	23	.83	113	.16	2	1.32	.05	.66	1
ES1-S-75	1	65	4	88	.2	19	23	777	4.52	8	5	ND	2	8	.3	2	2	66	.19	.043	6	25	.52	56	.13	4	1.54	.01	.05	1
ES1-S-76	1	8	8	17	.1	7	2	54	.74	2	5	ND	2	5	.2	2	2	18	.07	.008	8	15	.16	16	.08	2	.48	.01	.02	1
ES1-S-77	1	15	5	23	.1	26	9	95	1.77	9	5	ND	3	8	.2	2	2	21	.17	.029	12	36	.29	40	.09	2	1.95	.02	.05	1
ES1-S-78	1	5	22	16	.1	15	2	33	.54	27	6	ND	4	7	.2	2	2	17	.09	.006	10	13	.10	15	.13	2	.45	.01	.03	1
ES1-S-79	1	98	48	21	.1	38	21	765	3.36	45	5	ND	1	24	.2	2	2	15	.79	.236	32	34	.15	21	.01	3	2.17	.01	.03	1
ES1-S-80	1	8	3	23	.1	11	4	81	1.40	3	5	ND	2	9	.3	2	2	20	.21	.044	12	23	.23	32	.09	3	1.26	.01	.05	1
ES1-S-81	1	6	9	32	.1	8	3	100	1.29	2	5	ND	3	15	.2	2	2	21	.17	.041	9	14	.17	53	.09	2	.82	.01	.04	1
ES1-S-82	1	10	13	130	.1	17	8	174	3.13	16	5	ND	3	13	.2	2	2	40	.15	.114	11	26	.44	46	.15	4	1.63	.01	.06	1
ES1-S-83	1	7	10	54	.1	12	6	200	2.04	6	5	ND	4	16	.3	2	2	30	.25	.061	9	28	.49	61	.18	2	1.12	.01	.17	1
ES1-S-84	1	7	12	65	.1	17	12	803	3.37	2	5	ND	4	18	.2	2	2	55	.18	.055	7	30	.85	123	.19	2	1.63	.01	.09	1
ES1-S-85	1	8	10	27	.1	12	5	129	1.75	6	5	ND	5	13	.2	2	2	24	.17	.075	12	23	.30	44	.12	2	.91	.01	.05	1
ES1-S-86	1	21	17	41	.1	13	6	127	2.55	11	6	ND	1	14	.2	2	2	31	.10	.045	15	29	.35	27	.09	2	1.89	.01	.04	1
ES1-S-87	1	7	9	49	.1	16	6	143	2.57	7	5	ND	3	11	.2	2	2	42	.12	.025	9	33	.42	46	.18	2	1.34	.01	.07	1
ES1-S-88	1	15	10	48	.2	23	9	257	3.21	6	5	ND	4	27	.2	2	2	42	.22	.091	12	34	.83	64	.28	2	1.74	.01	.10	2
ES1-S-89	2	19	14	60	.1	13	8	162	5.17	17	5	ND	4	4	.2	2	2	32	.02	.019	5	22	.35	44	.13	2	1.30	.01	.23	1
ES1-S-90	1	7	11	48	.1	15	7	142	3.80	8	5	ND	4	9	.2	2	2	64	.10	.039	10	34	.41	36	.25	2	1.70	.01	.06	1
ES1-S-91	1	7	9	64	.2	10	5	136	2.29	3	5	ND	4	16	.2	2	2	30	.17	.095	11	22	.28	95	.12	4	1.22	.01	.09	1
ES1-S-92	1	6	6	45	.1	12	5	109	2.72	66	5	ND	4	13	.2	2	2	32	.14	.051	9	25	.35	49	.12	2	1.34	.01	.05	1
ES1-S-93	3	13	20	56	.3	94	13	201	3.95	7	6	ND	4	22	.2	4	2	52	.08	.028	17	156	1.59	39	.13	2	2.65	.01	.04	2
ES1-S-94	1	7	8	32	.2	13	5	105	2.12	7	5	ND	3	12	.2	2	2	36	.11	.011	7	25	.35	43	.16	2	1.04	.01	.08	1
ES1-S-95	1	4	6	19	.1	11	3	63	.92	4	5	ND	5	12	.2	2	2	12	.21	.035	12	15	.21	33	.08	3	.69	.01	.05	1
GG1-S-1	1	30	8	44	.1	28	12	249	2.82	14	5	ND	2	13	.2	2	2	35	.21	.018	8	23	.36	66	.07	4	2.08	.01	.04	1
GG1-S-2	1	92	13	105	.2	335	74	4307	13.58	29	5	ND	5	41	1.3	3	4	109	.47	.049	35	114	2.72	164	.21	5	3.60	.04	.81	3
GG1-S-3	1	115	12	72	.1	119	29	1399	4.00	3	5	ND	4	20	.2	2	2	61	.43	.036	33	158	2.01	108	.20	2	2.65	.09	.32	1
GG1-S-4	1	252	63	74	.4	54	47	1981	4.94	16	5	ND	4	21	.4	3	2	57	.64	.033	13	28	1.13	53	.11	6	2.59	.04	.13	2
GG1-S-5	3	71	17	188	.3	91	50	1650	18.53	25	5	ND	4	67	.2	2	2	69	.49	.052	16	49	.28	85	.01	4	1.67	.01	.04	1
GG1-S-6	1	30	7	51	.1	45	17	484	3.65	10	5	ND	3	19	.4	2	2	36	.24	.027	10	40	.49	98	.07	3	1.84	.01	.04	1
STANDARD C	18	57	36	133	7.1	69	32	1043	3.98	39	21	7	39	52	18.3	15	20	54	.48	.089	39	58	.88	179	.09	34	1.89	.06	.15	12



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SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	Le	Cr	Hg	Ba	Tl	B	Al	Na	K	W
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	%
ES1-R-12	2	394	2	393	.1	50	43	637	6.68	5	5	ND	1	4	1.1	3	2	27	.35	.014	2	312	1.33	6	.12	2	1.82	.01	.05	1
ES1-R-13	1	1440	13	1782	1.0	128	184	783	24.14	957	5	ND	2	1	4.1	2	7	13	.07	.032	4	80	.82	7	.08	2	1.07	.01	.05	1
ES1-R-14	2	27	27	27	.2	16	8	97	2.07	12	10	ND	13	2	.2	2	2	8	.02	.010	11	333	.05	23	.02	3	.17	.01	.09	1
ES1-R-15	1	13	24	31	.2	14	7	50	1.19	3	7	ND	9	1	.2	2	2	4	.01	.002	8	237	.01	17	.02	3	.05	.02	.07	1
ES1-R-16	2	17	13	27	.1	14	6	251	2.74	24	5	ND	11	4	.2	2	2	9	.07	.040	25	213	.10	27	.03	3	.34	.02	.16	1
ES1-R-17	1	445	2	44	.1	37	35	638	5.32	2	5	ND	1	7	.6	2	2	61	.53	.042	2	139	1.40	18	.29	2	2.16	.01	.04	1
ES1-R-18	1	70	2	48	.1	42	15	710	4.77	2	5	ND	1	9	.3	4	2	59	.47	.021	2	247	1.73	11	.25	2	2.09	.04	.01	1
ES1-R-19	3	23	80	48	.2	37	7	36	.46	221	8	ND	16	3	.2	48	2	5	.03	.015	32	218	.02	46	.01	3	.12	.01	.08	1
ES1-R-20	1	18	4	33	.4	238	14	155	3.42	87	15	ND	2	5	.2	2	3	21	.01	.014	3	493	.67	25	.01	2	1.04	.01	.09	1
ES1-R-21	2	11	3	72	.1	368	31	254	2.15	25	6	ND	2	2	.3	2	2	36	.04	.010	6	1063	1.53	7	.01	2	1.82	.01	.05	1
ES1-R-22	1	27	4	34	.1	160	12	164	1.91	43	5	ND	1	2	.2	2	2	19	.04	.016	6	536	.59	7	.01	2	.79	.01	.01	1
ES1-R-23	1	21	4	5	.1	102	16	745	.95	40	5	ND	10	9	.2	2	3	8	.90	.004	25	326	.56	31	.01	2	1.14	.01	.01	1
GS1-R-8	1	269	56	1229	.8	48	43	1129	8.52	8	5	ND	2	14	4.0	3	2	18	2.69	.031	3	104	1.02	9	.09	2	1.03	.01	.06	1
GS1-R-9	1	911	16	2459	.9	137	161	671	22.99	29	5	ND	1	1	6.0	4	4	10	.38	.029	4	134	.55	7	.07	4	.62	.01	.04	1
GS1-R-10	1	6	13	10	.1	7	4	49	.96	4	5	ND	9	1	.2	2	2	3	.01	.008	13	172	.01	20	.01	2	.06	.01	.04	1
GS1-R-11	1	29	2	32	.2	32	13	266	1.78	7	6	ND	3	13	.2	2	2	28	.53	.021	8	321	.52	14	.08	3	.85	.02	.07	1
GS1-R-12	1	24	3	25	.1	33	13	238	1.87	4	5	ND	5	12	.2	2	2	29	.28	.024	12	297	.49	21	.10	3	.96	.03	.07	1
GS1-R-13	1	17	4	17	.1	25	10	166	1.30	3	5	ND	5	10	.2	2	2	21	.24	.020	12	289	.34	27	.08	3	.68	.02	.07	1
GS1-R-14	1	24	2	22	.1	31	12	222	1.63	6	5	ND	3	12	.2	2	2	27	.39	.021	8	277	.50	16	.09	3	.92	.03	.06	1
STANDARD C	18	62	39	131	7.2	70	33	1051	3.93	37	24	7	39	53	18.5	15	20	55	.48	.090	39	58	.89	174	.09	32	1.89	.07	.15	11

APPENDIX 3
NUGGET EFFECT CORRESPONDENCE

George Gorzynski
G.G. Engineering Ltd.
3836 West 16th Avenue
Vancouver, British Columbia
V6R 3C7

Blaine Veitch
Accurassay Laboratories Ltd.
1070 Lithium Drive
Unit 2, Comp. 22
Thunder Bay, Ontario
P7B 6G3

Dear Blaine:

Attached are the results of some gold assays, check assays and re-sampling done on our Savant Lake Project soil grid. The original samples were taken in 1990 and appeared to produce very encouraging results. Significant cost and effort were put into a follow-up sampling program which failed to substantiate the original assays. This is obviously of concern to us both and I would appreciate your input on this matter.

Yours truly.

G.G. Engineering Ltd.


George Gorzynski

SAVANT LAKE PROJECT
COMPILATION OF REPEAT GOLD ASSAYS IN SOIL SAMPLES

<u>Sample Site</u>	<u>Accurassay (1)</u> Original (1990)	<u>Acme Analytical (2)</u> Check Assay (1991)	<u>Accurassay (3)</u> Re-Sample (1991)
BL, 37+00W	107	8	<5
38+00W	50	2	10 -
30W, 12+00S	16		
12+50S	18		
13+00S	17		
14+00S	209 (check 135)		
14+50S	182		
15+00S	288		
32W, 12+00S	20 (check 20)		<5
12+50S	25		
13+00S	22		<5
13+50S	15		
14+00S	65		
14+85S	43		
36W, 0+50S	614		<5
1+00S	6		<5
1+50S	7	<2	
2+00S	60	<2	<5
2+50S	5		
3+00S	203	<2	<5
36W, 1+00N	9 (check 9)	<2	<5
1+50N	81	3	
38W, 1+00S	105	2	
2+00S	91 (check 104)		

NOTES

(1) ACCURASSAY - original submittal

Date: October 19, 1990

Work Order No. - T900873B

Analytical Technique : Fire Assay/AA Finish

Sampled taken by : George Gorzynski

Other : It was reported by Accurassay that results were late in being mailed out because the unusual number of high gold values in the soils required extra checks to be run on the samples. Having carried out the appropriate checks, Accurassay gave assurances that the assays were good.

Neither pulps nor rejects from these samples are any longer available.

- (2) ACME ANALYTICAL - check assays
Date: June 21, 1991
File No.: 90-6015R
Analytical Technique: Acid Leach/AA Finish
Samples: Remnants of original 1990 Accurassay pulps which were originally sent to Acme for 30 element ICP analysis in October, 1990.
Other: Acme reports that there was very little pulp available for assay but feels that the assays obtained are good.
- (3) ACCURASSAY - re-samples from original October 1990 sites
Date: July 18, 1991
Work Order Numbers: 910873, 910878, 910879
Analytical Technique: Fire Assay/AA Finish
Samples taken by: George Gorzynski
Other: Samples were all taken within one meter of the original sites. The same material was collected using identical methodology etc. Samples were noted by Accurassay to be exceptionally wet, a product of abundant rainfall during the sampling period.
Pulps (and rejects?) from these samples are still available from Accurassay.

George Gorzynski Comments

1. On initial inspection it would appear that the original Accurassay results were in error. This seems to be due to contamination or instrument error after the samples were sieved given that the pulp splits sent to Acme were apparently devoid of gold.
2. The original 1990 Accurassay results were initially accepted as accurate because: (a) although some of the areas sampled appeared to have random anomaly patterns others demonstrated anomaly patterns which were continuous and appeared to make good geological sense, (b) other samples in the same batch, both rocks and soils, taken near known gold showings had similar anomalous values with no indication of cross sample contamination; and (c) Accurassay had made note of the unusual propensity of high values in these sample and had made a special effort to ensure their validity.
3. It is tempting to dismiss the 1990 assays as incorrect. This would lead to a termination of the project. A small element of doubt however exists:
 - (a) Why would erroneous assays outline some geologically sensible areas? (matrix effects from consistent bands of different soil types?);
 - (b) Acme check assays were done on marginal samples;
 - (c) Acme check assays were done via an acid leach rather than a fire assay. Could there have been a problem with the acid leach?
 - (d) In concert with the potential Acme problems could there be a problem with the 1991 Accurassay results? Were these done properly by fire assay? Was there a sieving problem due to the wet samples? Were the samples sieved to -80 mesh prior to assay?

The exploration target is an attractive one and it would be ashamed to walk away from it while some small doubts still persist in the accuracy of the null assays.

705-567-3561

August 23rd, 1991

Mr. George Gorzynski,
GG Engineering Ltd.,
3836 West 16th Ave.,
Vancouver, B.C.,
V6R 3C7

Dear Mr. Gorzynski,

Blaine Veitch has asked me to investigate and respond to your recent letter concerning the non-reproducibility of your gold assays on the soil samples you sent to us. Now that I've spoken to both Blaine in Thunder bay and our assay lab. manager here in Kirkland Lake (Brian Fraser), I can clear up the confusion by referring you to the following:

1. Our standard procedure for soils is to use new fire assay pots or pots which have been used with samples running at or below detection levels (5ppb).

2. Our standard procedure involves repeating every tenth sample and our computer is programmed to "flag" any check values which vary by more than 30% and to print an "Irregular results warning" on our worksheets (see enclosed). This is followed up by an examination of our quality control standard which is run with every batch of samples and also a re-assay of these samples to see how reproducible the gold values are (hence the reason for your comment under 2(c)). The rationale behind this approach is based upon the observation that poor reproducibility in gold assays is caused by three things:

- (a) Poor assaying
- (b) Poor sampling
- (c) A combination of (a) & (b)

We can attempt to eliminate (a) by doing everything according to standard procedures (which we do) but a decision still has to be made about what the repeat assay values are really telling us. If the sub-sample taken for assay (in this case 20g) is too small to be representative of the whole sample, then repeat assays will simply bounce all over the place along a Poisson Distribution curve (see cyanide leach flyer enclosed) but no single assay will give the true value. Poisson Distribution is typically seen in samples where the number of gold particles present is very small relative to the total number of particles present and its effect is to produce a low bias in assays obtained from sub-samples which are not large enough to be representative. This is the basis of the so-called "nugget effect" which can be just as much of a problem in low-grade soil-samples containing only a few grains of gold in each 100g sample as it is in ore-grade material showing visible gold.

3. Our assayers do not rely on repeatability of sample assays to indicate either accuracy or precision but by running quality-control samples whose gold value is accurately known alongside

the sample assays (as mentioned in 2 above) we can pin-point problems in the assay procedure. However, this does not guarantee that any particular sample sitting in its own particular pot is not somehow contaminated and it is here that the assayer has to exercise good judgement. If he assays a series of samples and gets results all in the low ppb range except for one which is about 100 times higher than anything else on either side of it, then it is our standard procedure to check this by doing another assay on the remaining sample. If a similar result is obtained then we conclude that the first result is valid but if, as in your case, the repeat assay is much lower then a decision has to be made regarding the first assay. Is it valid or contaminated? Assuming the quality control checks out and that all other care was taken by using new pots, etc., we have no evidence of contamination and thus both the high and low results are valid and the problem is a sampling one. Normally, we would then report both values but in some instances, depending on the client, the type of sample and the judgement of the assayer, we will run a third assay and if it also comes in low, we will report only the repeatable averaged low values.

4. I have inspected the original worksheets on the samples you sent in last month (enclosed) and you can see that in several cases the check assays are not reproducible plus there are several instances of individual assays which are way out of character with those on either side. For example, L0+00,12+00W gave <5ppb with a check of 45ppb; L0+00,24+00W gave <5ppb with a check of 179ppb; L0+00,61+00W gave an original assay of 1779ppb with a repeat assay of 6ppb, but in every batch of these samples the quality control value was as expected.

5. Both our Thunder Bay lab. and our Kirkland Lake lab. have had exactly the same types of variation with your samples but our Kirkland Lake assayer (who ran the recent samples) took the more cautious approach and in the worst cases simply averaged the repeat assays which were reproducibly low. Hence the reason for the disappearance of the "anomalies". *This is probably the reason the Thunder Bay laboratory reported more anomalies.*

6. The Acme results performed by acid digest/AA are almost guaranteed to be biased low, not because of sloppy assaying but because of the severe nugget problems in the samples which would be exacerbated by the small amount of sample taken plus the fact that the acid digest technique is not very efficient (Bondar Clegg have published some warnings about this).

7. All the above points to the conclusion that the soil samples are severely affected by poor homogeneity and as I look over your results I am convinced that a 20g fire assay is far too small a sample to give statistically meaningful results. I would predict that many of the samples reported as <5ppb could well be much higher if a larger sample were assayed.

8. Your soil samples would be much more meaningfully assayed by a cyanide leach procedure performed on 500 to 1000g samples. Using the larger sample size should overcome the variations you are now experiencing. I would like to suggest you send us 4 or 5 samples which we will run free of charge to show you the much better results you would obtain. We can run a BLEG Assay (bottle leach, extractable gold) for \$10.00 per 500g sample.

I trust the above notes help explain the reasons for the variations you are experiencing. We have analysed tens of thousands of soil samples and it is rare to have as severe a problem as you are experiencing but, in my opinion, your results clearly indicate free particulate gold in your samples as the culprit. Please let me know if you would like to run some BLEG samples.

Sincerely,



Dr. George Duncan, President,
ACCURASSAY LABORATORIES



BARRINGER/ACCURASSAY LABORATORIES

OVER COMING THE NUGGET EFFECT WITH CYANIDE LEACH ASSAYS

The Nugget Effect: Gold distribution in an ore sample sent to the lab. for analysis is often very uneven and the assayer has great difficulty in producing a reliable grade for the ore. Even after grinding the sample to a fine powder, there still may not be sufficient gold grains present in the sample to obtain a representative assay sample (up to 30 grams) from the sample submitted for analysis (typically 2000 to 3000 grams). The nugget problem is usually first noticed by the geologist who can sometimes see free gold in the sample but the assay values are low, or the assayer may find the problem when he runs check assays and obtains poor agreement. There are several ways of overcoming this dilemma:

1) Multiple Repeat Assays: This will eventually solve the problem but at great cost because even after 10 to 15 assays, only 10% of the total sample has been assayed!

2) Metallics Assay: This is a procedure which screens the powdered sample to trap the larger gold nuggets which are then assayed separately along with two assays on the fines which passed through the screen. An overall assay is calculated which takes into account the nuggets found on the screen. This procedure is much less costly than multiple repeat assays but can still miss much of the free gold which passed through the screen. Again, less than 5% of the sample sent to the lab is actually assayed.

3) Cyanide Leach Assays: Here, a very large portion of the sample (500 to 1000 grams) is pulverized and treated with a cyanide solution to extract almost all the free gold. The cyanide solution is analyzed for gold content along with a portion of the residues to check % recovery values. This approach gives a more statistically reliable assay than either of the above since 30 to 50% of the sample sent to the lab. is assayed.

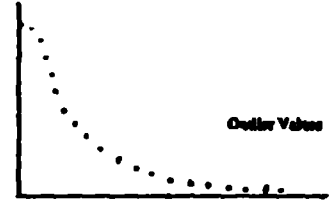
CONTROLLING SAMPLING ERRORS

Another way to think of the "Nugget Effect" is as a sampling error caused by erratic distribution of the gold grains in the sample. Unless there is a clear understanding of the origin of sampling errors, it will be impossible to minimize and control these to any great extent, and the assay values, although accurately produced will remain highly suspect. Also, it is a common practice among geologists to cut these high-grade "outlier" assays when, in fact, these values may be highly significant. Gold values in a sample are typically very low, even when dealing with ore grade and therefore usually follow a Poisson distribution rather than Gaussian or Normal distribution.

This means that high "outlier" values are highly significant and should not be rejected.



Normal Distribution



Poisson Distribution

By rejecting these "outlier" values, calculated grades can become skewed with a low bias leading to rejection of some marginal orebodies which may in fact be economic mines. Much work has been written about sampling errors but the work of Pierre Guy and Francis Pitard stands out in its application to gold sampling. They have characterized several sources of sampling error but one of these is particularly important to understanding the rationale behind cyanide leach assays:

The Fundamental Sampling Error:

This error is ALWAYS present and is generated by the differences in gold content between individual fragments in the sample taken. Its magnitude depends, among other things, on SAMPLE WEIGHT. The larger the sample weight, the lower the fundamental error. THIS IS THE FOREMOST ADVANTAGE OF CYANIDE LEACH ASSAYS AND RESULTS IN THE FOLLOWING:

ADVANTAGES OF CYANIDE LEACH ASSAYS:

1) ASSAY GRADES ARE VERY RELIABLE:

Because such a large sample is assayed, the grades obtained carry a much higher probability of representing the true grade than either single fire assays or even metallics assays.

2) ASSAY GRADES INCREASE BY 10 TO 30% ON AVERAGE:

This varies over a very wide range depending on the severity of the nugget effect and can be as high as SEVERAL HUNDRED PERCENT.

3) COSTS ARE ABOUT THE SAME AS METALLICS ASSAYS:

Dollar for dollar, cyanide leach assays provide a more reliable value than either single fire assay or metallics assays.

Sampling Errors Arising From Taking Too Small A Sub-sample For Assay Are A Major Cause Of Disagreement Between Calculated And Actual Reserves. Economic Ores Have Been Missed And Uneconomic Grades Have Been Mined Because Of Failure To Control Sampling Errors!

4) MILL RECOVERY TARGETS CAN BE ESTIMATED:

This is an extra advantage of cyanide leach assays not provided by either fire assay or metallica assays.

5) OTHER METALS CAN BE RUN e.g. Ag, Cu, Zn, etc:

Some Real-life Examples:

Single Fire Assay oz/T	Cyanide Leach oz/T
0.362	1.110
<0.001	0.004
0.021	0.030
0.036	0.049
0.077	0.114
0.322 & 0.296	0.256

The first example shows a very dramatic improvement in grade, typical of a nugget ore. Note that the second example gave a less than detection limit when done as a single fire assay but produced a significant value when run by cyanide leach. The next three examples are typical of the kind of benefit that cyanide leach assays give. The last example shows that even a check assay run on a nugget ore (from the original may still give misleading values) provides a higher probability of revealing the true grade than several single fire assays because of the large amount of sample analysed.

HOW ARE THESE ASSAYS PERFORMED?

The sample is prepared in the normal manner to produce approx. 1000 g of pulp (98% minus 150 mesh). 800 g of this is weighed out and tumbled in a hot cyanide solution for several hours until all the available gold is dissolved. The cyanide solution is then analysed for gold content along with a sample of the residues (fire-assayed)

and the results are reported for the following:

- CYANIDE LEACH ASSAY (OZ/T),**
- RESIDUE ASSAY (OZ/T),**
- OVERALL ASSAY(OZ/T)**
- % RECOVERY.**

ON WHAT KIND OF SAMPLES SHOULD THEY BE RUN?

Studies have clearly shown that pulverized laboratory samples in which most of the gold is present as particles OF THE SAME AVERAGE SIZE AS, OR LARGER THAN THE OANQUE WILL HAVE PROBLEMS BEING ACCURATELY ASSAYED USING A 300 FIRE- ASSAY SUB-SAMPLE. Consider the example of an ore sample containing a true grade of 0.05 oz/T and having all the gold grains equal in size to the average particle size of the pulp (say, 150 to 200 mesh). Then in a 30 g fire-assay sub-sample THERE ARE ONLY BETWEEN 3 & 6 GOLD GRAINS IN THIS SAMPLE AND ASSAYS WILL VARY BETWEEN 20 & 40% FOR EACH GOLD GRAIN MISSED OR GAINED IN REPEAT ASSAYS. Even a metallica assay would not overcome this problem since these assays only account for large "nuggets" in the sample.

RE-ANALYSIS OF STORED REJECTS & PULPS BY CYANIDE LEACH HAS PROVED VERY USEFUL IN



IF YOU DON'T KNOW THE GOLD GRAIN SIZE, HOW DO YOU RECOGNIZE THE PROBLEM?

This is why "outlier" assay values are so important! These are often rejected by geologists as spurious but in fact they could be pointing to a serious sampling error. Remember, the Poisson Distribution indicates that most assays will be grouped around the "low-end" value but the true grade will be above this when the "outliers" are taken into consideration. Cyanide leach assays on large samples will include all the gold grains causing the "outlier" problems.

NEED MORE INFORMATION?

Call Toll Free 1-800-461-4996 (Ontario/Quebec) or 1-800-263-9040 (Rest of Canada)

BARRINGER/ACCURASSAY LABORATORIES

- Mississauga
- Kirkland Lake
- Thunder Bay.
- Red Lake
- Timmins
- Calgary
- Smithers, B.C.

GP
17/8/91

George Gorzynski
G.G. Engineering Ltd.
3036 West 16th Avenue
Vancouver, B.C.
V6R 3C7

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July 16

91

Work Order # : 910872
Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T
245854	BL, 33+00 R	12	<0.001
245855	BL, 32+00 R	<5	<0.001
245856	BL, 31+00 R	<5	<0.001
245857	BL, 30+00 R	<5	<0.001
245858	BL, 29+00 R	<5	<0.001
245859	BL, 28+00 R	<5	<0.001
245860	BL, 27+00 R	<5	<0.001
245861	BL, 26+00 R	<5	<0.001
245862	BL, 25+00 R	<5	<0.001
245863	BL, 24+00 R	8	<0.001
245863	BL, 24+00 R	<5	<0.001
245864	BL, 23+00 R	11	<0.001
245865	BL, 22+00 R	<5	<0.001
245866	BL, 21+00 R	<5	<0.001
245867	LO+00, 7+00 V	6	<0.001
245868	LO+00, 8+00 V	<5	<0.001
245869	LO+00, 8+75 V	35	0.001
245870	LO+00, 10+10 V	225	0.007
245871	LO+00, 11+00 V	<5	<0.001
245872	LO+00, 12+00 V	<5	<0.001
245872	LO+00, 12+00 V	45	0.001
245873	LO+00, 13+00 V	<5	<0.001
245874	LO+00, 14+00 V	77	0.002
245875	LO+00, 15+00 V	<5	<0.001
245876	LO+00, 16+00 V	6	<0.001
245877	LO+00, 17+00 V	<5	<0.001
245878	LO+00, 18+00 V	10	<0.001
245879	LO+00, 22+00 V	<5	<0.001
245880	LO+00, 23+50 V	<5	<0.001
245881	LO+00, 24+00 V	126	0.004
245881	LO+00, 24+00 V	<5	<0.001
245882	LO+00, 25+00 V	179	0.005
245883	LO+00, 26+00 V	<5	<0.001
245883	LO+00, 26+00 V	<5	<0.001

Check

R 98 (1.97, 20.20)

R 45 (0.05, 20.20)
Bad Check

R 25 (0.07, 20.2)

Bad Check
R 8 (0.16, 20.2)

Check

(Handwritten signature) 17/8/91

George Gorzynski
 G.G. Engineering Ltd.
 3836 West 16th Avenue
 Vancouver, B.C.
 V6R 3C7

Page: 1
 July 17 91

Work Order # : 910873
 Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
245884	L0+00,27+00 W	23	0.001	
245885	L0+00,28+00 W	<5	<0.001	
245886	L0+00,29+00 W	<5	<0.001	
245887	L0+00,30+00 W	<5	<0.001	
245888	L0+00,31+00 W	18	0.001	
245889	L0+00,32+00 W	<5	<0.001	
245890	L0+00,33+00 W	61	0.002	<i>-R. <5 (0.02, 20.2)</i>
245891	L0+00,34+00 W	<5	<0.001	
245892	L0+00,35+00 W	<5	<0.001	
245893	L0+00,36+00 W	<5	<0.001	<i>-R <5 (0.01, 20.2)</i>
245893	L0+00,36+00 W	59	0.002	<i>Bad Check</i>
245894	L0+00,37+00 W	104	0.003	<i>-R. <5 (0.03, 20.2)</i>
245895	L0+00,38+00 W	10	<0.001	
245896	L0+00,39+00 W	5	<0.001	
245897	L0+00,40+00 W	20	0.001	
245898	L0+00,41+00 W	6	<0.001	
245899	L0+00,44+00 W	14	<0.001	
245900	L0+00,45+00 W	<5	<0.001	
245901	L0+00,46+00 W	10	<0.001	
245902	L0+00,48+00 W	5	<0.001	
245902	L0+00,48+00 W	6	<0.001	Check
245903	L0+00,48+90 W	<5	<0.001	
245904	L0+00,61+00 W	1779	0.052	<i>-R 6 (0.06, 10.2)</i>
245905	L0+00,62+00 W	<5	<0.001	
245906	L0+00,63+00 W	19	0.001	
245907	L0+00,64+00 W	<5	<0.001	
245908	L0+00,65+00 W	<5	<0.001	
245909	L0+00,66+00 W	<5	<0.001	
245910	L0+00,67+00 W	<5	<0.001	
245911	L0+00,68+00 W	<5	<0.001	
245911	L0+00,68+00 W	<5	<0.001	Check
245912	L30E, 5+80 N	<5	<0.001	

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July 17

91

Work Order # : 910874
 Project :

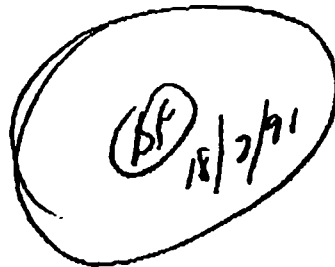
Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T
245914	L30E,4+00 N	<5	<0.001
245915	L30E,3+00 N	7	<0.001
245916	L30E,2+00 N	151	0.004
245917	L30E,1+00 N	<5	<0.001
245918	L30E,1+00 S	<5	<0.001
245919	L30E,2+00 S	<5	<0.001
245920	L30E,3+00 S	<5	<0.001
245921	L30E,4+00 S	40	0.001
245922	L30E,5+00 S	<5	<0.001
245923	L30E,6+00 S	<5	<0.001
245923	L30E,6+00 S	19	0.001
245924	L30E,7+00 S	<5	<0.001
245925	L30E,8+00 S	6	<0.001
245926	L20E,1+50 N	<5	<0.001
245927	L20E,0+65 S	9	<0.001
245928	L18E,1+25 N	9	<0.001
245929	L18E,0+75 S	9	<0.001
245930	L16E,6+00 N	<5	<0.001
245931	L16E,5+00 N	5	<0.001
245932	L16E,4+00 N	6	<0.001
245932	L16E,4+00 N	<5	<0.001
245933	L16E,3+00 N	<5	<0.001
245934	L16E,2+00 N	6	<0.001
245935	L16E,1+00 N	8	<0.001
245936	L16E,0+30 S	<5	<0.001
245937	L16E,1+00 S	<5	<0.001
245938	L16E,4+00 S	5	<0.001
245939	L16E,5+00 S	5	<0.001
245940	L16E,6+75 S	5	<0.001
5941	L4+00W,3+50 S	<5	<0.001
245941	L4+00W,3+50 S	<5	<0.001
245942	L4+00W,5+00 S	<5	<0.001
245943	L4+00W,6+00 S	<5	<0.001
245943	L4+00W,6+00 S	<5	<0.001

Handwritten: ⁴⁵
 R (0.07, 20.2)
 Bad Check

Check

Check

Check



Page: 1

Georga Gorzynski
 G.G. Engineering Ltd.
 3836 West 15th Avenue
 Vancouver, B.C.
 V6R 3C7

July 17

91

Work Order # : 910875
 Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
245944	L4+00W,7+00S	6	<0.001	
245945	L4+00W,8+00S	<5	<0.001	
245946	L4+00W,9+00S	<5	<0.001	
245947	L4+00W,10+00S	5	<0.001	
245948	L4+00W,11+00S	5	<0.001	
245949	L4+00W,12+00S	7	<0.001	
245950	L4+00W,13+00S	5	<0.001	
245951	L4+00W,14+00S	6	<0.001	
245952	L4+00W,15+00S	<5	<0.001	
245953	L4+00W,16+00S	<5	<0.001	
245953	L4+00W,16+00S	<5	<0.001	Check
245954	L4+00W,17+00S	<5	<0.001	
245955	L4+00W,18+00S	<5	<0.001	
245956	L4+00W,19+00S	<5	<0.001	
245957	L4+00W,20+00S	<5	<0.001	
245958	L24+00W,10+00N	<5	<0.001	
245959	L24+00W,9+00N	<5	<0.001	
245960	L24+00W,8+00N	<5	<0.001	
245961	L24+00W,7+00N	<5	<0.001	
245962	L24+00W,6+00N	<5	<0.001	
245962	L24+00W,6+00N	<5	<0.001	Check
245963	L24+00W,5+00N	<5	<0.001	
245964	L24+00W,4+00N	<5	<0.001	
245965	L24+00W,3+50N	<5	<0.001	
245966	L24+00W,3+00N	<5	<0.001	
245967	L24+00W,2+00N	<5	<0.001	
245968	L24+00W,1+00N	<5	<0.001	
245969	L24+00W,1+00S	<5	<0.001	
245970	L24+00W,2+00S	18	0.001	
245971	L24+00W,3+00S	7	<0.001	
245971	L24+00W,3+00S	<5	<0.001	Check
245972	L24+00W,4+00S	7	<0.001	
245973	L24+00W,5+00S	<5	<0.001	

(BF) 11/8/91

George Gorzynski
 G.G. Engineering Ltd.
 3836 West 16th Avenue
 Vancouver, B.C.
 V6R 3C7

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July 18

91

Work Order # : 910876
 Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
245975	L24+00V,6+00S	<5	<0.001	
245976	L24+00V,7+00S	<5	<0.001	
245977	L24+00V,8+00S	<5	<0.001	
245978	L24+00V,9+00S	<5	<0.001	
245979	L24+00V,10+00S	<5	<0.001	
245980	L24+00V,11+00S	<5	<0.001	
245981	L24+00V,12+00S	8	<0.001	
245982	L24+00V,13+00S	5	<0.001	
245983	L24+00V,14+00S	<5	<0.001	
245984	L24+00V,15+00S	6	<0.001	
245984	L24+00V,15+00S	8	<0.001	Check
245985	L24+00V,16+00S	6	<0.001	
245986	L24+00V,16+50S	5	<0.001	
245987	L24+00V,17+00S	<5	<0.001	
245988	L24+00V,18+00S	<5	<0.001	
245989	L28+00V,32+00N	<5	<0.001	
245990	L28+00V,31+00N	13	<0.001	
245991	L28+00V,30+00N	12	<0.001	
245992	L28+00V,29+00N	<5	<0.001	
245993	L28+00V,28+00N	<5	<0.001	
245993	L28+00V,28+00N	<5	<0.001	Check
245994	L28+00V,27+00N	10	<0.001	
245995	L28+00V,26+00N	<5	<0.001	
245996	L28+00V,25+00N	<5	<0.001	
245997	L28+00V,24+00N	11	<0.001	
245998	L28+00V,23+00N	<5	<0.001	
245999	L28+00V,22+00N	<5	<0.001	
6000	L28+00V,21+00N	<5	<0.001	
246001	L28+00V,18+00N	<5	<0.001	
246002	L28+00V,17+00N	<5	<0.001	
246002	L28+00V,17+00N	6	<0.001	Check
246003	L28+00V,16+00N	<5	<0.001	
246004	L28+00V,15+00N	<5	<0.001	
246004	L28+00V,15+00N	<5	<0.001	Check

(SF) 18/7/91

George Gorzynski
 G.G. Engineering Ltd.
 3836 West 16th Avenue
 Vancouver, B.C.
 V6R 3C7

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July 18

91

Work Order # : 910677
 Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
246005	L28+00W, 14+00N	5	<0.001	
246006	L28+00W, 13+00N	11	<0.001	
246007	L28+00W, 12+00N	<5	<0.001	
246008	L28+00W, 11+00N	<5	<0.001	
246009	L28+00W, 9+00N	<5	<0.001	
246010	L28+00W, 8+00N	<5	<0.001	
246011	L28+00W, 7+00N	<5	<0.001	
246012	L28+00W, 6+00N	<5	<0.001	
246013	L28+00W, 5+00N	<5	<0.001	
246014	L28+00W, 4+00N	<5	<0.001	
246014	L28+00W, 4+00N	7	<0.001	Check
246015	L28+00W, 3+00N	<5	<0.001	
246016	L28+00W, 2+00N	<5	<0.001	
246017	L28+00W, 1+00N	<5	<0.001	
246018	L28+00W, 1+00S	<5	<0.001	
246019	L28+00W, 2+00S	<5	<0.001	
246020	L28+00W, 3+00S	<5	<0.001	
246021	L28+00W, 3+75S	13	<0.001	
246022	L28+00W, 4+00S	21	0.001	
246023	L28+00W, 5+00S	<5	<0.001	
246023	L28+00W, 5+00S	<5	<0.001	Check
246024	L28+00W, 6+20S	<5	<0.001	
246025	L28+00W, 7+00S	<5	<0.001	
246026	L28+00W, 8+00S	<5	<0.001	
246027	L28+00W, 9+00S	<5	<0.001	
246028	L28+00W, 10+00S	<5	<0.001	
246029	L28+00W, 11+00S	<5	<0.001	
246030	L28+00W, 12+00S	<5	<0.001	
246031	L28+00W, 13+00S	<5	<0.001	
246032	L28+00W, 14+00S	7	<0.001	
246032	L28+00W, 14+00S	14	<0.001	Check
246033	L28+00W, 16+00S	23	0.001	
246034	L28+00W, 18+00S	<5	<0.001	
246034	L28+00W, 18+00S	<5	<0.001	Check

CP
18/7/91

Page: 1

George Gorzynski
G 6 Engineering Ltd.
3835 West 15th Avenue
Vancouver, B.C.
V6R 3C7

July 18

91

Work Order # : 910878
Project :

ACCURASSAY	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
245035	L28+00W, 19+00S	<5	<0.001	
245036	L28+00W, 20+00S	<5	<0.001	
245037	L28+00W, 21+00S	11	<0.001	
245038	L28+00W, 22+00S	<5	<0.001	
245039	L28+00W, 23+00S	<5	<0.001	
245040	L28+00W, 24+00S	<5	<0.001	
245041	L28+00W, 25+00S	<5	<0.001	
245042	L28+00W, 25+50S	8406	0.245	
245043	L28+00W, 25+75S	4079	0.119	
245044	L28+00W, 25+80S	1570	0.046	
245044	L28+00W, 25+80S	1184	0.034	Check
245045	L28+00W, 25+00S	<5	<0.001	
245046	L32+00W, 12+00N	<5	<0.001	
245047	L32+00W, 11+00N	<5	<0.001	
245048	L32+00W, 10+00N	<5	<0.001	
245049	L32+00W, 9+00N	<5	<0.001	
245050	L32+00W, 8+00N	<5	<0.001	
245051	L32+00W, 7+00N	<5	<0.001	
245052	L32+00W, 6+00N	<5	<0.001	
245053	L32+00W, 5+00N	<5	<0.001	
245053	L32+00W, 5+00N	<5	<0.001	Check
245054	L32+00W, 4+00N	6	<0.001	
245055	L32+00W, 3+00N	59	0.002	
245056	L32+00W, 2+00N	<5	<0.001	
245057	L32+00W, 1+00N	<5	<0.001	
245058	L32+00W, 1+00S	<5	<0.001	
245059	L32+00W, 2+00S	6	<0.001	
245060	L32+00W, 3+00S	<5	<0.001	
245061	L32+00W, 4+00S	<5	<0.001	
245062	L32+00W, 5+00S	<5	<0.001	
245063	L32+00W, 5+00S	<5	<0.001	Check
245064	L32+00W, 6+75S	<5	<0.001	
245064	L32+00W, 6+75S	5	<0.001	CHECK

George Gorzynski
 G.G. Engineering Ltd.
 3836 West 16th Avenue
 Vancouver, B.C.
 V6R 3C7

Page: 1

July 18

91

Work Order # : 910879
 Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/l	
246066	L32+00W, 12+00S	<5	<0.001	
246067	L32+00W, 13+00S	<5	<0.001	
246068	L36+00W, 12+00N	<5	<0.001	
246069	L36+00W, 11+00N	<5	<0.001	
246070	L36+00W, 10+00N	<5	<0.001	
246071	L36+00W, 9+00N	<5	<0.001	
246072	L36+00W, 8+00N	<5	<0.001	
246073	L36+00W, 7+00N	<5	<0.001	
246074	L36+00W, 6+00N	<5	<0.001	
246075	L36+00W, 5+00N	<5	<0.001	
246075	L36+00W, 5+00N	<5	<0.001	Check
246076	L36+00W, 4+00N	<5	<0.001	
246077	L36+00W, 3+00N	<5	<0.001	
246078	L36+00W, 2+00N	<5	<0.001	
246079	L36+00W, 1+00N	<5	<0.001	
246080	L36+00W, 0+50S	<5	<0.001	
246081	L36+00W, 1+00S	<5	<0.001	
246082	L36+00W, 2+00S	<5	<0.001	
246083	L36+00W, 3+00S	<5	<0.001	
246084	L36+00W, 3+50S	6	<0.001	
246084	L36+00W, 3+50S	9	<0.001	Check
246085	L36+00W, 4+00S	<5	<0.001	
246086	L36+00W, 4+80S	99	0.003	
246087	L36+00W, 9+00S	8	<0.001	
246088	L36+00W, 10+00S	5	<0.001	
246089	L36+00W, 11+00S	6	<0.001	
246090	L36+00W, 12+00S	5	<0.001	
246091	L36+00W, 13+00S	<5	<0.001	
246092	L36+00W, 14+00S	<5	<0.001	
246093	L36+00W, 15+00S	5	<0.001	
246093	L36+00W, 15+00S	6	<0.001	Check
246094	L36+00W, 16+00S	<5	<0.001	
246095	L36+00W, 17+00S	6	<0.001	
246095	L36+00W, 17+00S	<5	<0.001	Check

G.G. Engineering Ltd.
 3836 West 16th Avenue
 Vancouver, B.C.
 V6R 3C7

July 19

91

Work Order # : 910880
 Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	Gold Oz/T	
246096	L36+00W, 18+00S	<5	<0.001	
246097	L36+00W, 19+00S	<5	<0.001	
246098	L36+00W, 19+50S	<5	<0.001	
246099	L36+00W, 20+00S	<5	<0.001	
246100	L36+00W, 21+00S	<5	<0.001	
246101	L58+00W, 3+00S	<5	<0.001	
246102	L58+00W, 4+00S	20	0.001	
246103	L58+00W, 5+00S	<5	<0.001	
246104	L58+00W, 6+00S	<5	<0.001	
246105	L58+00W, 7+00S	<5	<0.001	
246105	L58+00W, 7+00S	<5	<0.001	Check
246106	L58+00W, 8+00S	<5	<0.001	
246107	L60+00W, 3+50S	<5	<0.001	
246108	L60+00W, 4+00S	<5	<0.001	
246109	L60+00W, 5+00S	<5	<0.001	
246110	L62+00W, 21+75N	<5	<0.001	
246111	L62+00W, 21+00N	5	<0.001	
246112	L62+00W, 20+00N	5	<0.001	
246113	L62+00W, 19+00N	5	<0.001	
246114	L62+00W, 17+00N	<5	<0.001	
246114	L62+00W, 17+00N	<5	<0.001	Check
246115	L62+00W, 16+00N	<5	<0.001	
246116	L62+00W, 15+00N	<5	<0.001	
246117	L62+00W, 14+00N	<5	<0.001	
246118	L62+00W, 13+00N	<5	<0.001	
246119	L62+00W, 12+00N	<5	<0.001	
246120	L62+00W, 11+00N	5	<0.001	
246121	L62+00W, 10+00N	5	<0.001	
246122	L62+00W, 9+00N	5	<0.001	
246123	L62+00W, 8+00N	<5	<0.001	
246123	L62+00W, 8+00N	6	<0.001	Check
246124	L62+00W, 7+00N	<5	<0.001	
246125	L62+00W, 6+00N	<5	<0.001	
246126	L62+00W, 5+00N	<5	<0.001	
246127	L62+00W, 4+00N	<5	<0.001	
246128	L62+00W, 2+75N	<5	<0.001	
246129	L62+00W, 2+00N	<5	<0.001	
246130	L62+00W, 1+00N	<5	<0.001	
246131	L62+00W, 1+00S	<5	<0.001	
246132	L62+00W, 2+00S	6	<0.001	
246132	L62+00W, 2+00S	493	0.014	Bad Check
246133	GS1-S-100	<5	<0.001	
246133	GS1-S-100	<5	<0.001	Check

R. 45 (0.07, 20.2)

September 28, 1991

George Gorzynski
G.G. Engineering Ltd.
3836 West 16th Avenue
Vancouver, British Columbia
V6R 3C7

George Duncan
Accurassay Laboratories Ltd.
P.O. Box 426
3 Industrial Drive
Kirkland Lake, Ontario
P2N 3J1

Dear George:

Thank you for your letter of August 23rd and the fascinating follow up conversation on extreme gold nugget effects in our recent soil sampling program. In your letter you indicated willingness to run five of our samples through a BLEC gold assay free of charge. I would like to take you up on your offer and will consider running all our samples by BLEC if these tests prove fruitful. I do not have any new samples available now but perhaps we could do the tests on rejects from the following samples which should be in storage at your laboratory:

Work Order #: 910872

<u>SAMPLE NUMBERS</u>		<u>PREVIOUS GOLD ASSAYS (ppb)</u>
<u>Accurassay</u>	<u>Customer</u>	
245857	BL,30+00E	<5
245894	L0+00,37+00W	107, 8, <5, 104, <5
246042	L28+00W,25+50S	8406
246082	L36+00W,2+00S	60, <5, <5, <5
246083	L36+00W,3+00S	203, <5, <5, <5

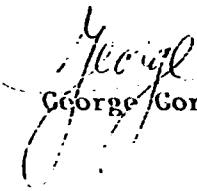
These samples cover an apparent range of values and should provide a good test even though they will be run on rejects.

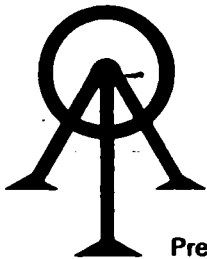
I am still waiting for the raw data/work sheets on assays done on previous sample batches. I'll be much better able to choose samples for further BLEC assays when I receive them from you.

Thank you for your time and consideration. I'll be looking forward to hearing from you.

Yours truly,

G.G. ENGINEERING LTD.


George Gorzynski, P.Eng.



ACCURASSAY LABORATORIES

A DIVISION OF BARRINGER LABORATORIES LIMITED, REXDALE, ONTARIO

BOX 426

KIRKLAND LAKE, ONTARIO, CANADA—P2N 3J1

TEL.: (705) 567-3361

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

44036

Certificate of Analysis

Page #1

October 9

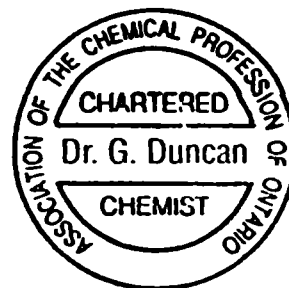
1991

Mr. George Gorzynski
G.G. Engineering Ltd.
3836 West 16th Avenue
Vancouver, British Columbia
V6R 3C7

Work Order # 911207
Project:

BLEG-CARBON EXTRACTION ANALYSIS

SAMPLE NUMBERS	Gold ppb	Wt. of Sample (g)
BL 30+00E	1.5	188
L0+00 37+00W	1.9	100
L28+00W 25+50S	4378	82
L36+00W 2+00S	9.4	125
L36+00W 3+00S	1.5	179



SUMMARY COMMENTS ON NUGGET EFFECTS AT SAVANT LAKE

- 1. Soils and tills in the Savant Lake area are subject to extreme nugget effects in the course of gold assaying.**
- 2. There is a considerable amount of particulate gold in these soils. The extent and significance of these anomalies, however, is not known at this point but should become clearer with additional work.**
- 3. Analyses for BLEG (Au) and pathfinder elements may in large part resolve questions about these anomalies.**

G-5882

Jan 2/91
Jan 17/91
Jan 23/91

QWT TMAVA2

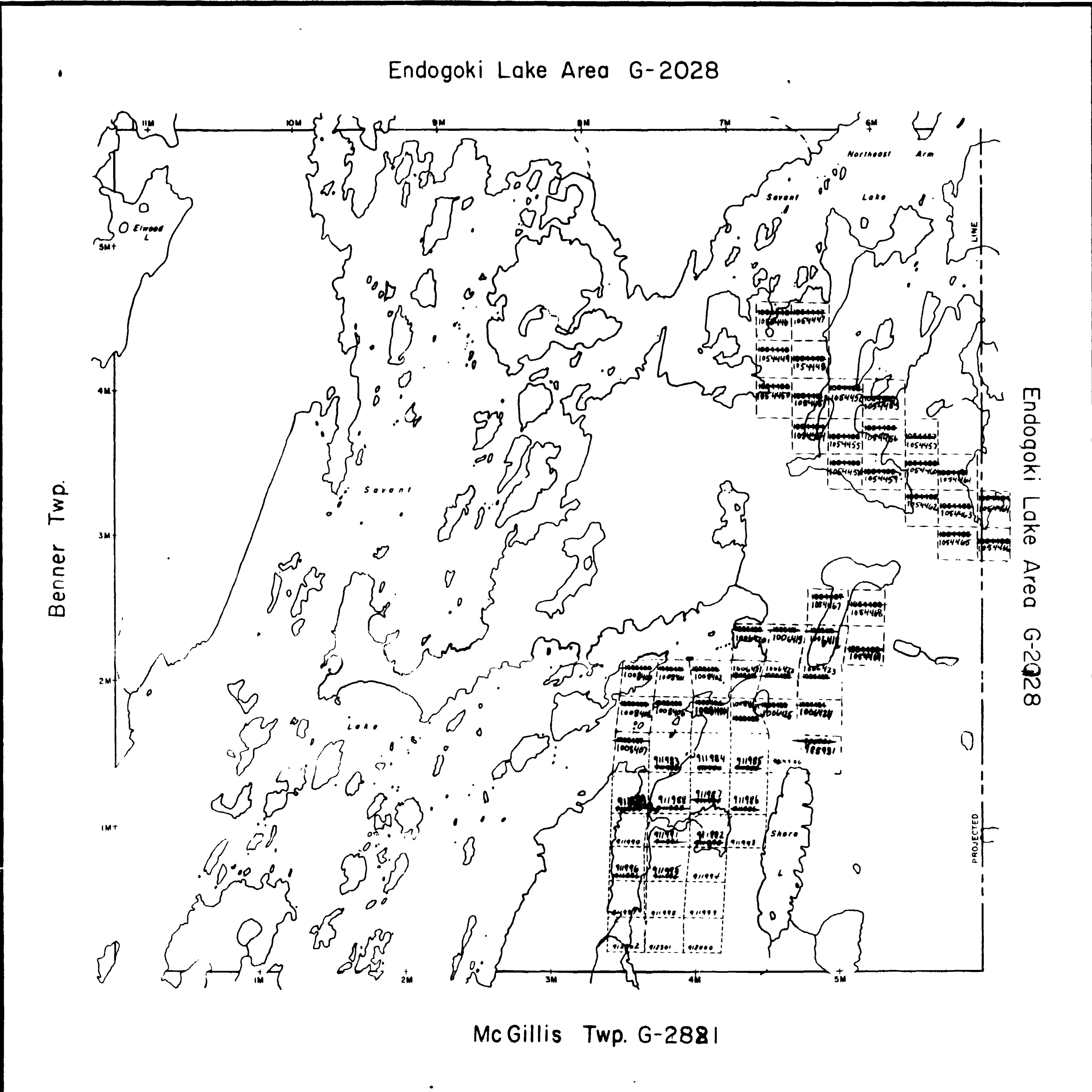
G-5882

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
Oct 31/86				
Nov 1/86				
Nov 2/86				
June 1/87				
BB/01/06				
Jan 2/91				
Sept 18/90				
Nov 20/90				



TRIM LINE

G-5882

QWT TMAVA2

G-5882

LEGEND

HIGHWAY AND ROUTE No.

OTHER ROADS

TRAILS

SURVEYED LINES

TOWNSHIPS, BASE LINES, ETC.

LOTS, MINING CLAIMS, PARCELS, ETC.

UNSURVEYED LINES

LOT LINES

PARCEL BOUNDARY

MINING CLAIMS ETC.

RAILWAY AND RIGHT OF WAY

UTILITY LINES

NON-PERENNIAL STREAM

FLOODING OR FLOODING RIGHTS

SUBDIVISION OR COMPOSITE PLAN

RESERVATIONS

ORIGINAL SHORELINE

MARSH OR MUSKEG

MINES

TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" SURFACE RIGHTS ONLY	○
" MINING RIGHTS ONLY	○
LEASE, SURFACE & MINING RIGHTS	○
" SURFACE RIGHTS ONLY	○
" MINING RIGHTS ONLY	○
LICENCE OF OCCUPATION	○
ORDER IN COUNCIL	○
RESERVATION	○
CANCELLED	○
SAND & GRAVEL	○

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 4 1913 VESTED IN ORIGINAL PATENTEES BY THE PUBLIC LANDS ACT R.S.O. 1970 CHAP. 300 SEC. 63 SUBSEC. 1

SCALE 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 100 200 400 600 800 1000 1200

TOWNSHIP

SAVANT

M.R. ADMINISTRATIVE DISTRICT

SIoux LOOKOUT

MINING DIVISION

PATRICIA

LAND TITLES / REGISTRY DIVISION

THUNDER BAY

Ministry of Land Management
Natural Resources Branch
Ontario

11th MAY 1985

Number: **G-2885**

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

TRIM LINE

MINING RECORDER
PATRICIA
MINING DIVISION
11 MAR 13 AM 1:18



May 1890
May 1890 C
No. 32000
July 17/90 R
August 3/90 R
Jan 2/91

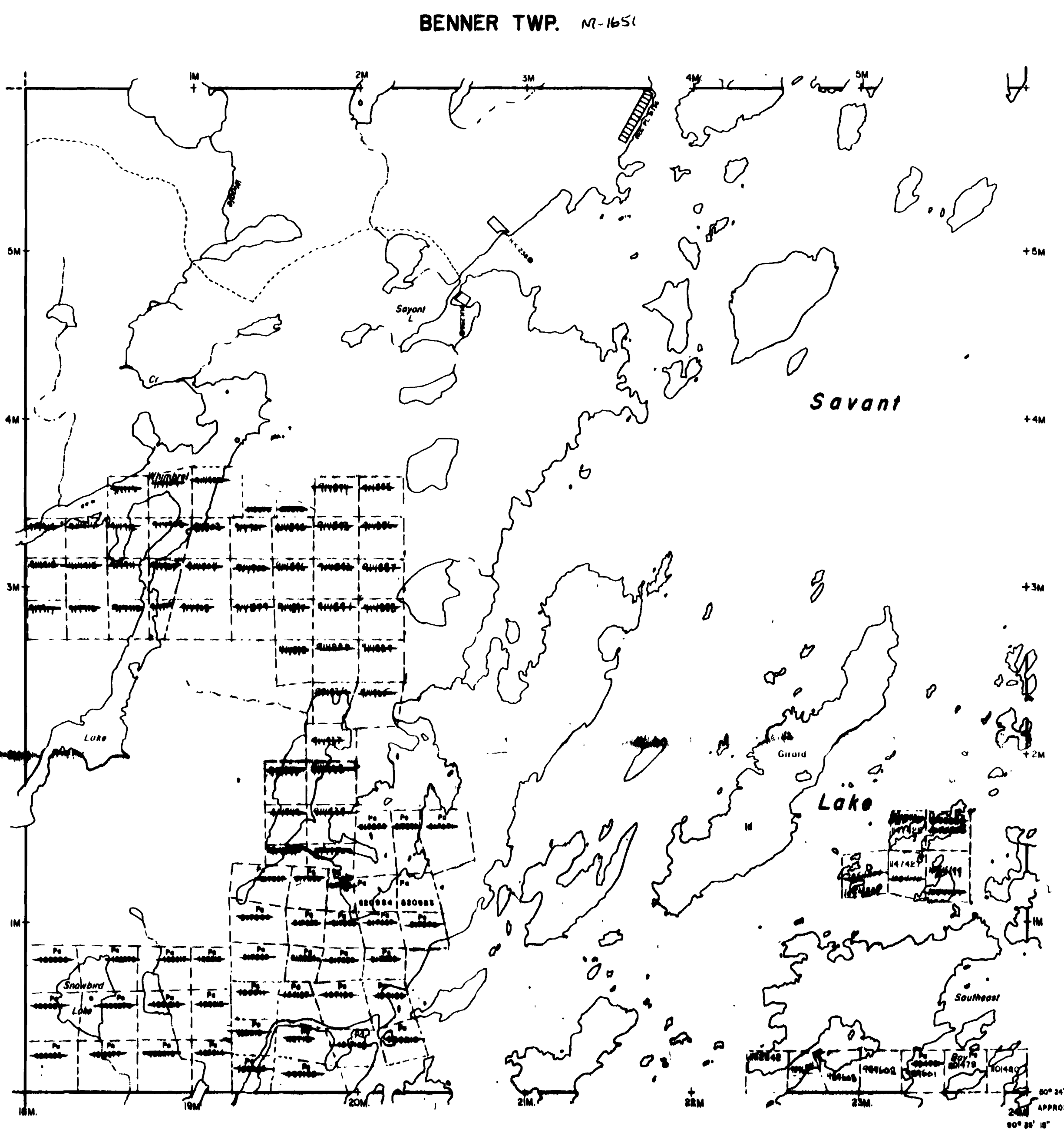
BOISSON TWP

G-5883

REFERENCES				
AREAS WITHDRAWN FROM DISPOSITION				
M.R.O. - MINING RIGHTS ONLY				
S.R.O. - SURFACE RIGHTS ONLY				
M. & S. MINING AND SURFACE RIGHTS				
Description	Order No.	Date	Disposition	File

July 14/86
August 1/86
Aug 11/86
Sept 16/86
Oct 23/86
Oct 27/86
Feb 24/87
Apr 19/87
July 1/87
Feb 5/88
Oct 4/88
July 7/89
Nov 2/87
Nov 28/89
Nov 28/89
Nov 28/89
Nov 28/89
Nov 28/89
Nov 28/89
Nov 28/89
Nov 28/89

M'CUBBIN TWP. G-2053



JUTTEN TWP. G-2874

M'GILLIS TWP. G-2881

BENNER TWP. M-1651

LEGEND	
HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIPS, BASE LINES, ETC.	
LOTS, MINING CLAIMS, PARCELS, ETC.	
UNSURVEYED LINES	
LOT LINES	
PARCEL BOUNDARY	
MINING CLAIMS, ETC.	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBDIVISION OR COMPOSITE PLAN	
RESERVATIONS	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	
TRAVERSE MONUMENT	

DISPOSITION OF CROWN LANDS	
TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" SURFACE RIGHTS ONLY	○
" MINING RIGHTS ONLY	◐
LEASE, SURFACE & MINING RIGHTS	◑
" SURFACE RIGHTS ONLY	◒
" MINING RIGHTS ONLY	◓
LICENCE OF OCCUPATION	◔
ORDER IN COUNCIL	◕
RESERVATION	◖
CANCELLED	◗
SAND & GRAVEL	◘

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 8, 1913 VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970 CHAP. 380 SEC. 63, SUBSEC. 1.

SCALE: 1 INCH = 40 CHAINS

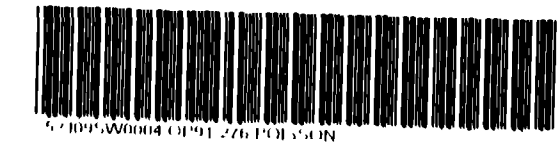
TOWNSHIP	
POISSON	
M.N.R. ADMINISTRATIVE DISTRICT	
SIOUX LOOKOUT	
MINING DIVISION	
PATRICIA	
LAND TITLES / REGISTRY DIVISION	
THUNDER BAY	
Ministry of Natural Resources	Land Management Branch
Date: MAY 1985	Number: G-2883

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

G-5883

BOISSON TWP

G-5883



MUNICIPALITY OF PATRICIA
MINING DIVISION
31 MAR 13 AM 11:17

July 17/80 R
Nov 14/80 R

G-5881

MC GILLIS TWP

G-5881

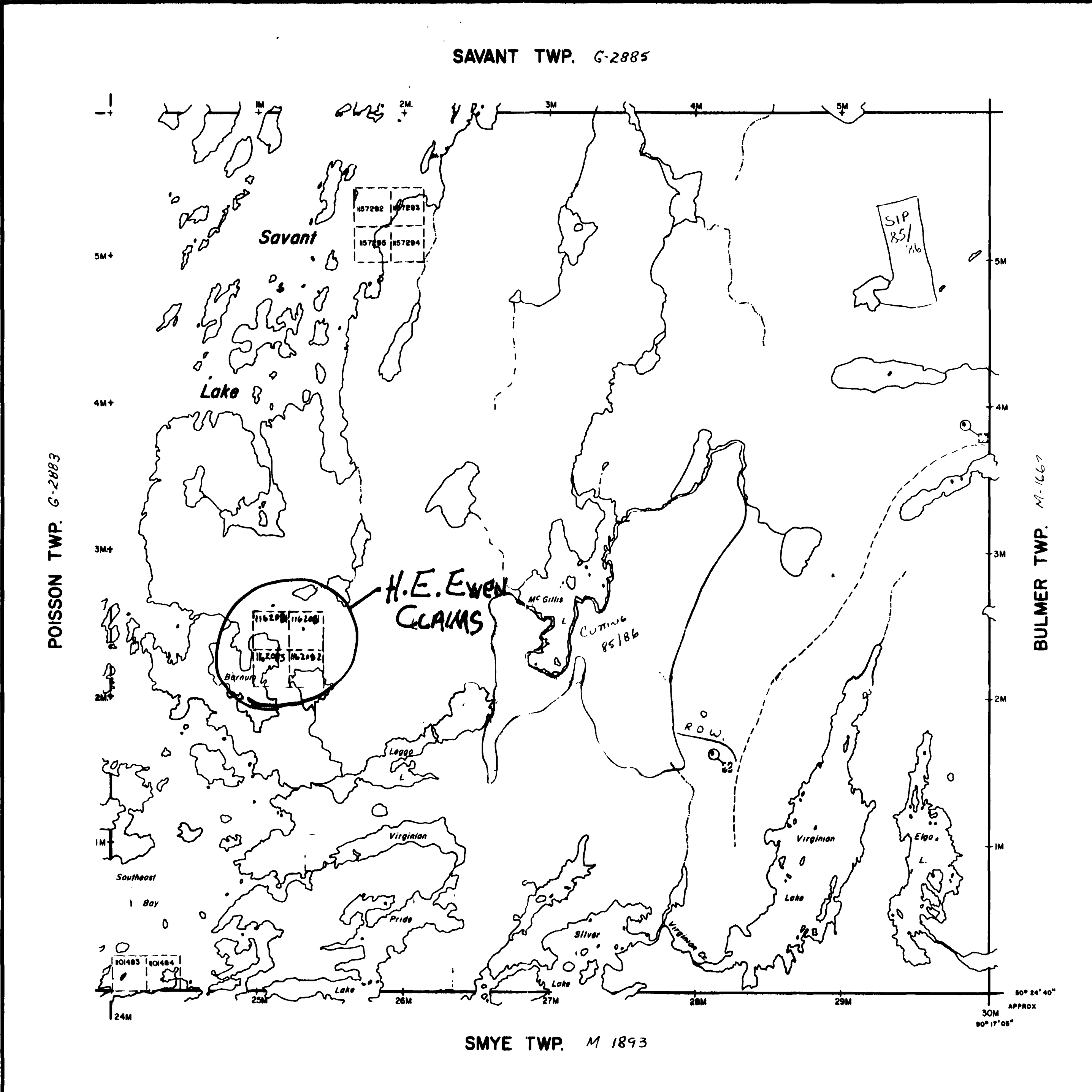
REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY
 S.R.O. - SURFACE RIGHTS ONLY
 M+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
SAND AND GRAVEL				
QUARRY PERMIT				

S.A.T. R/P/L
 APRIL 27/87
 June 8/90



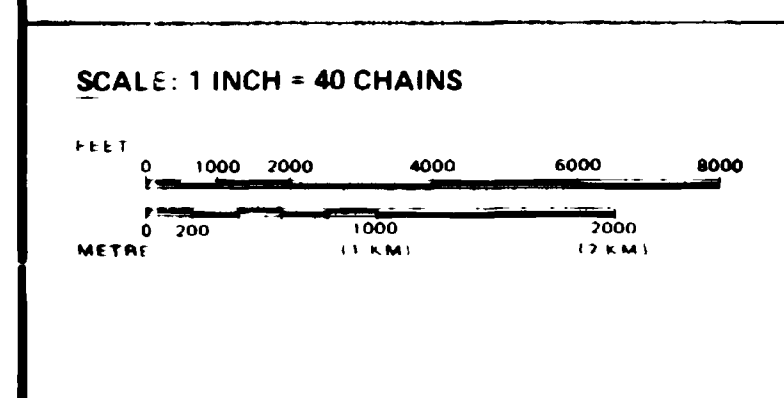
LEGEND

HIGHWAY AND ROUTE No	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIPS, BASE LINES, ETC	
LOTS, MINING CLAIMS, PARCELS, ETC	
UNSURVEYED LINES	
LOT LINES	
PARCEL BOUNDARY	
MINING CLAIMS ETC	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBD VISION OR COMPOSITE PLAN	
RESERVATIONS	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINE:	
TRAVERSE MONUMENT	

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LEASL, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 5 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT R.S.O. 1970 CHAP 380, SEC 83, SUBSEC 1



TOWNSHIP

Mc GILLIS

M.N.R ADMINISTRATIVE DISTRICT
 SIOUX LOOKOUT
 MINING DIVISION
 PATRICIA
 LAND TITLES / REGISTRY DIVISION
 THUNDER BAY

Ministry of Natural Resources
 Land Management Branch

Date: MAY 1985 Number: **G-2881**

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

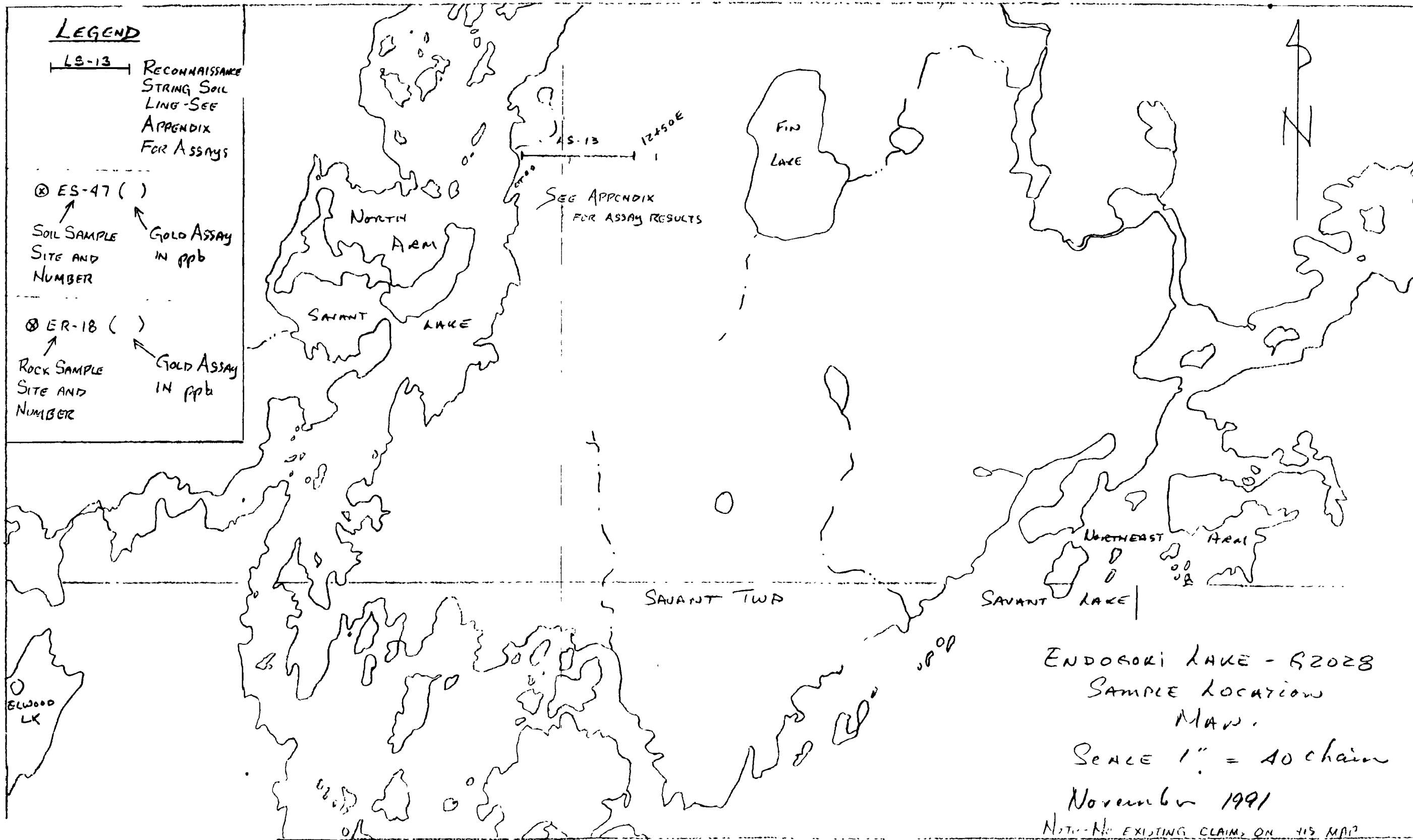
G-5881

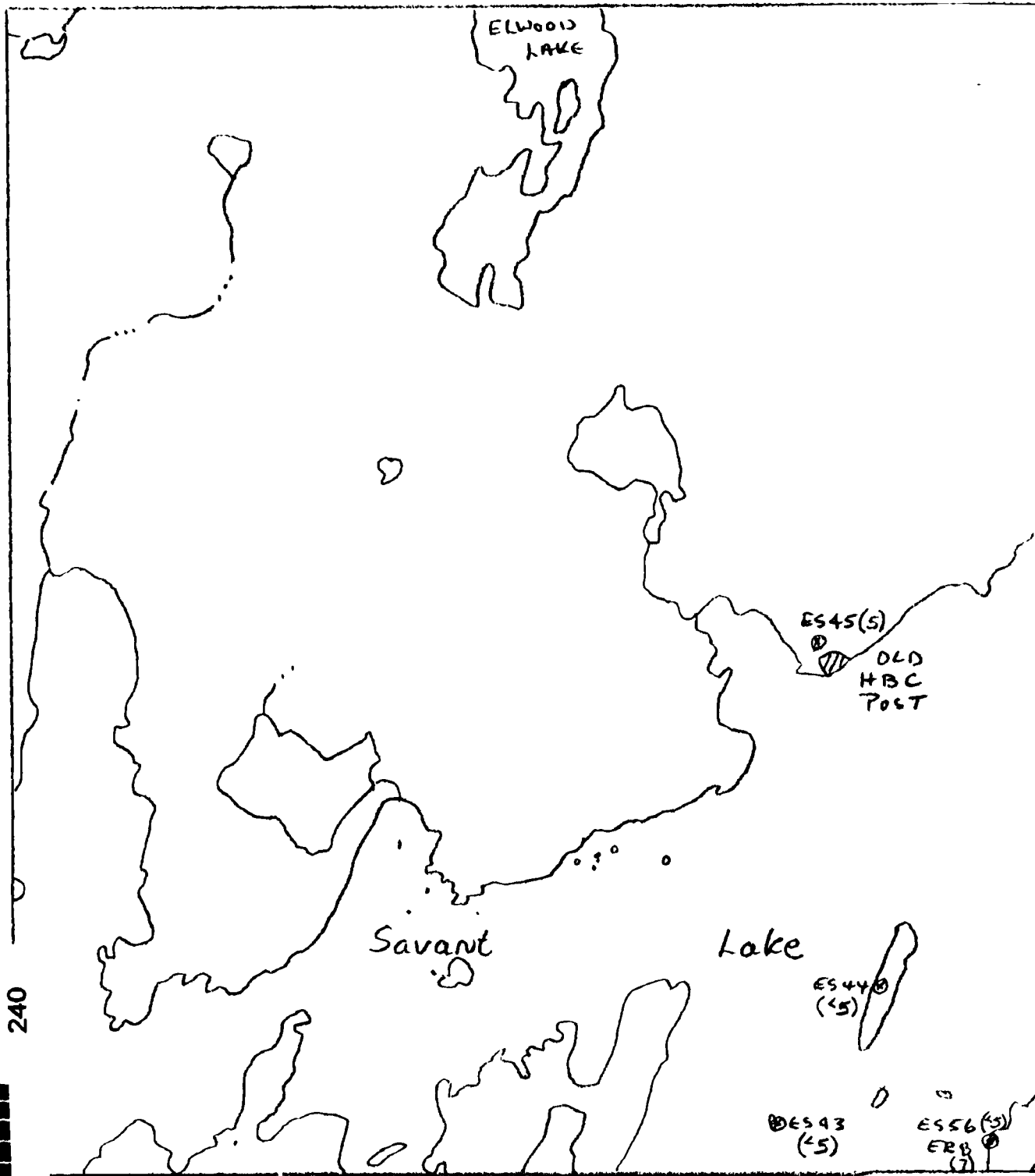
MC GILLIS TWP

G-5881



11 MAR 13 11:17
 MINING RECORDER
 PATRICIA
 CLERK DIVISION





SE CORNER.

BENNER TWP. - G-3373

SCALE 1:20,000

SAMPLE LOCATION MAP.

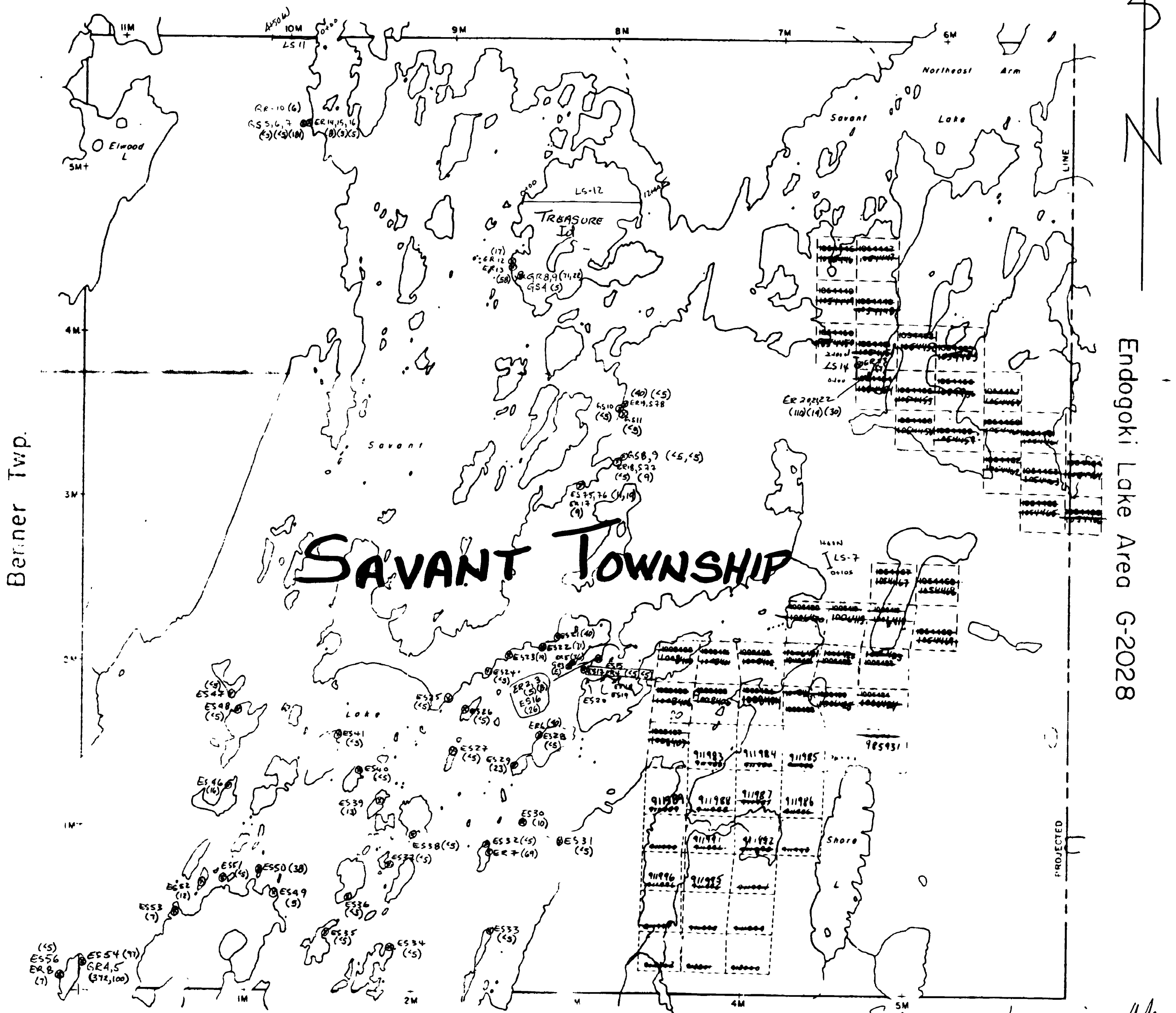
November 1991
 See PLATE 1A FOR LEGEND

PLATE 1B



52J085W0004 OP31-276 POISSON

Endogoki Lake Area G-2028



Berner Twp.

Endogoki Lake Area G-2028

McGill's Twp. G-2881

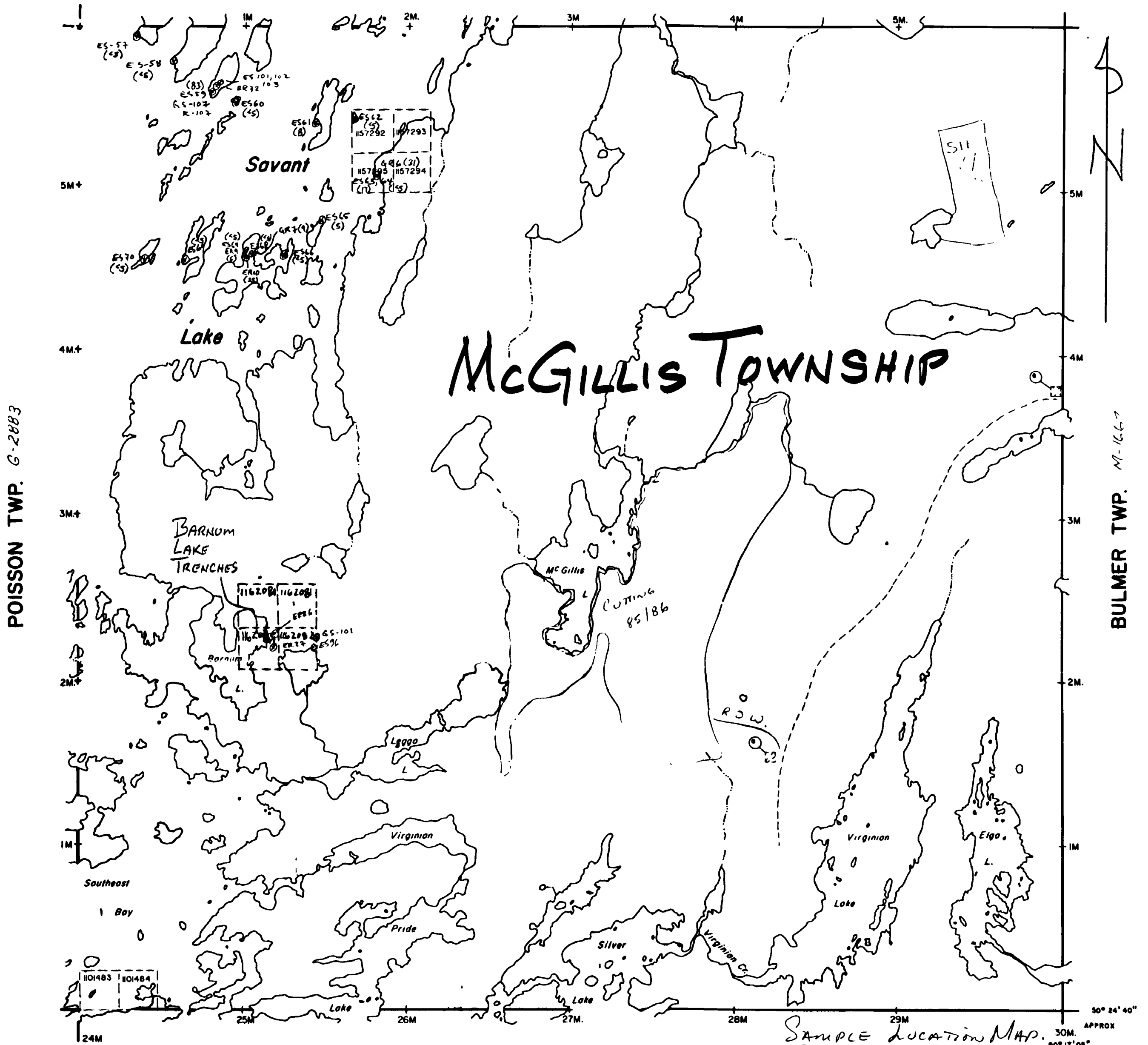
SEE PLATE 1A FOR LEGEND

SAMPLE LOCATION MAP
SCALE 1 in = 40 chains
SAVANT G-2885

November 1991

PLATE 1C

SAVANT TWP. G-2885



POISSON TWP. G-2883

BULMER TWP. M-1867

SMYE TWP. M-1893

SEE PLATE 1A FOR LEGEND

SAMPLE LOCATION MAP
SCALE 1 in = 40 chains
McGill's G-2881

November 1991

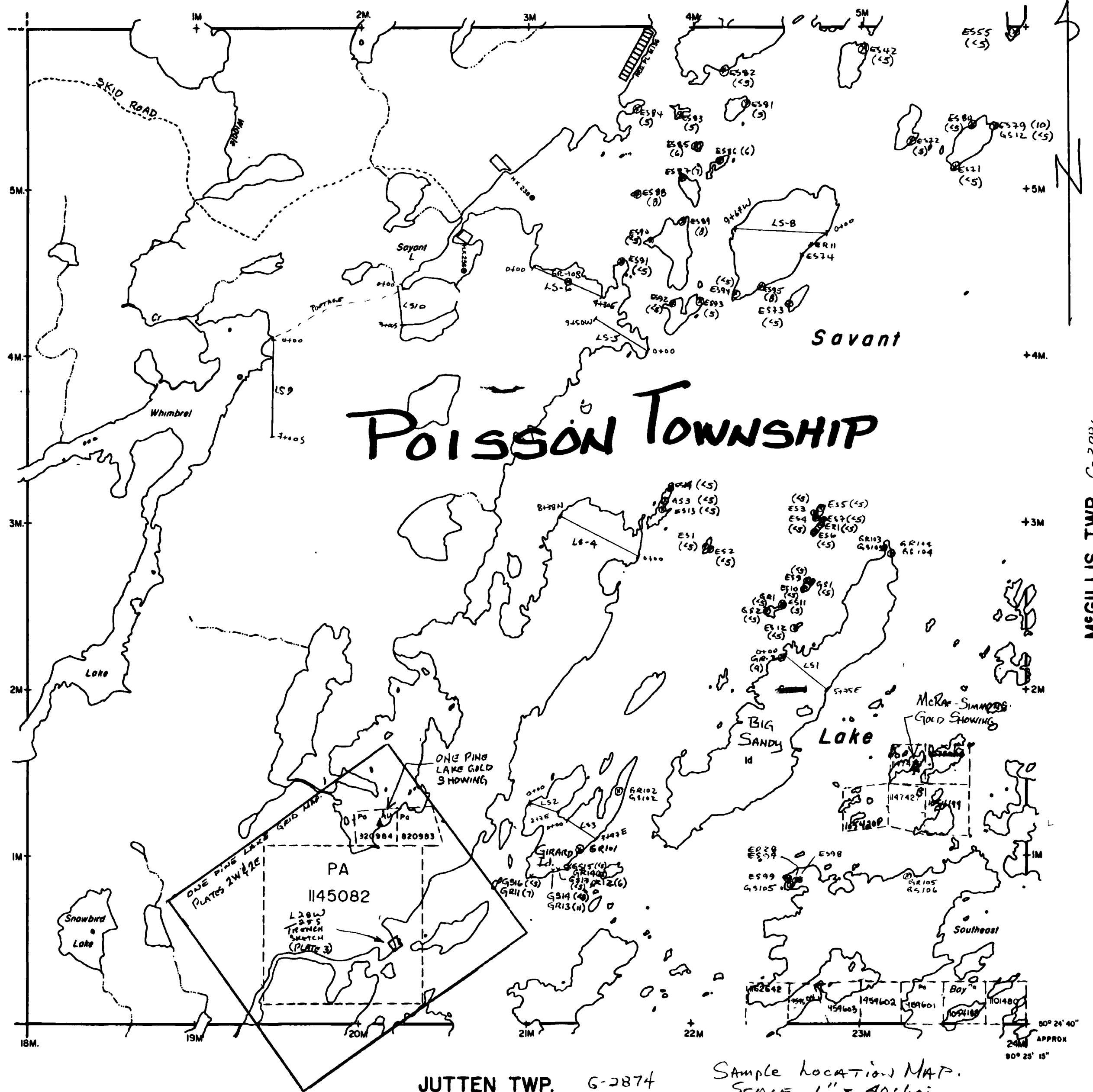
PLATE 1E



BENNER TWP. M-1651

M'CUBBIN TWP. G-2053

M'GILLIS TWP. G-2881



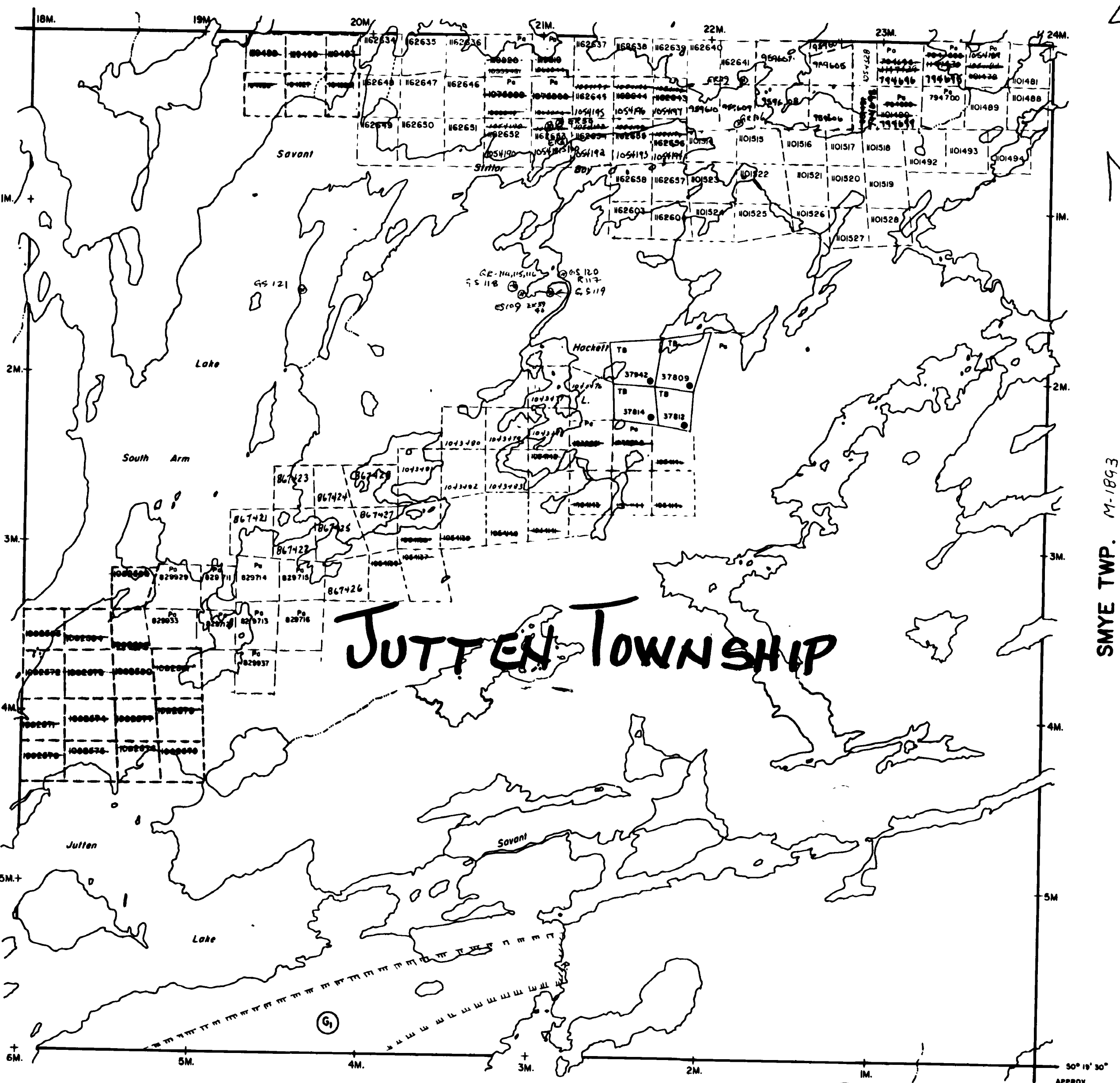
JUTTEN TWP. G-2874
SEE PLATE 1A FOR LEGEND

SAMPLE LOCATION MAP
SCALE 1" = 40 CHAINS
POISSON G2883
NOVEMBER 1991
PLATE 1D

POISSON TWP. G-2883

CONANT TWP. G-2871

SMYE TWP. M-1893

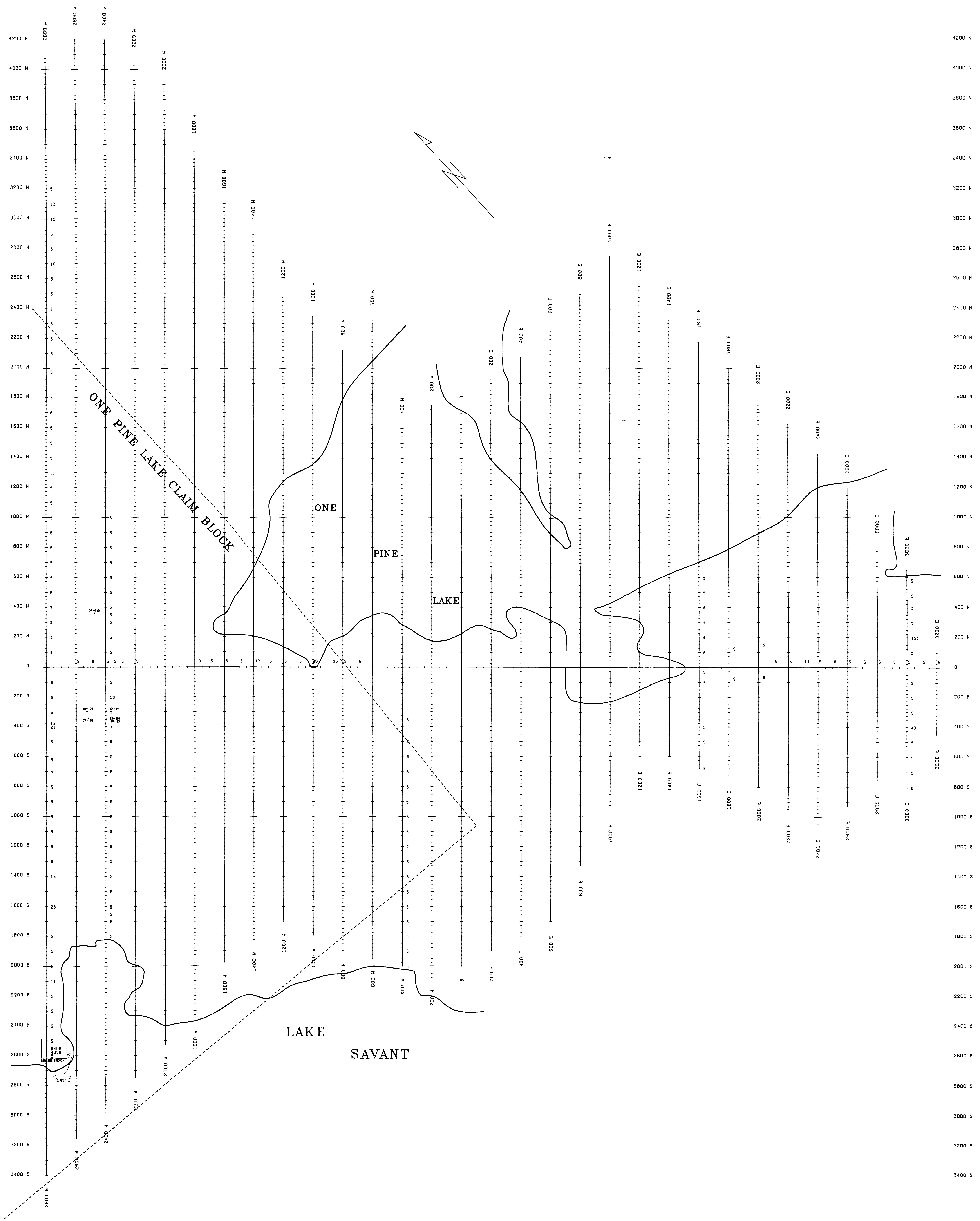


CHEVRIER TWP. M-1673
SEE PLATE 1A FOR LEGEND

SAMPLE LOCATION MAP
SCALE 1" = 40 CHAINS
JUTTEN G2874
NOVEMBER 1991
PLATE 1E

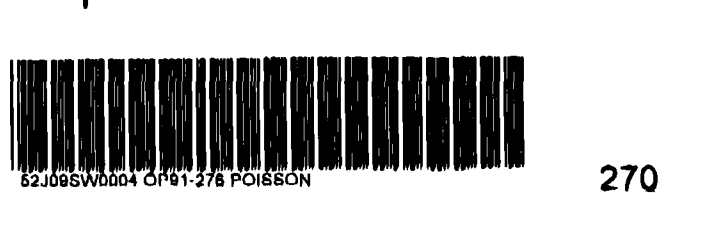


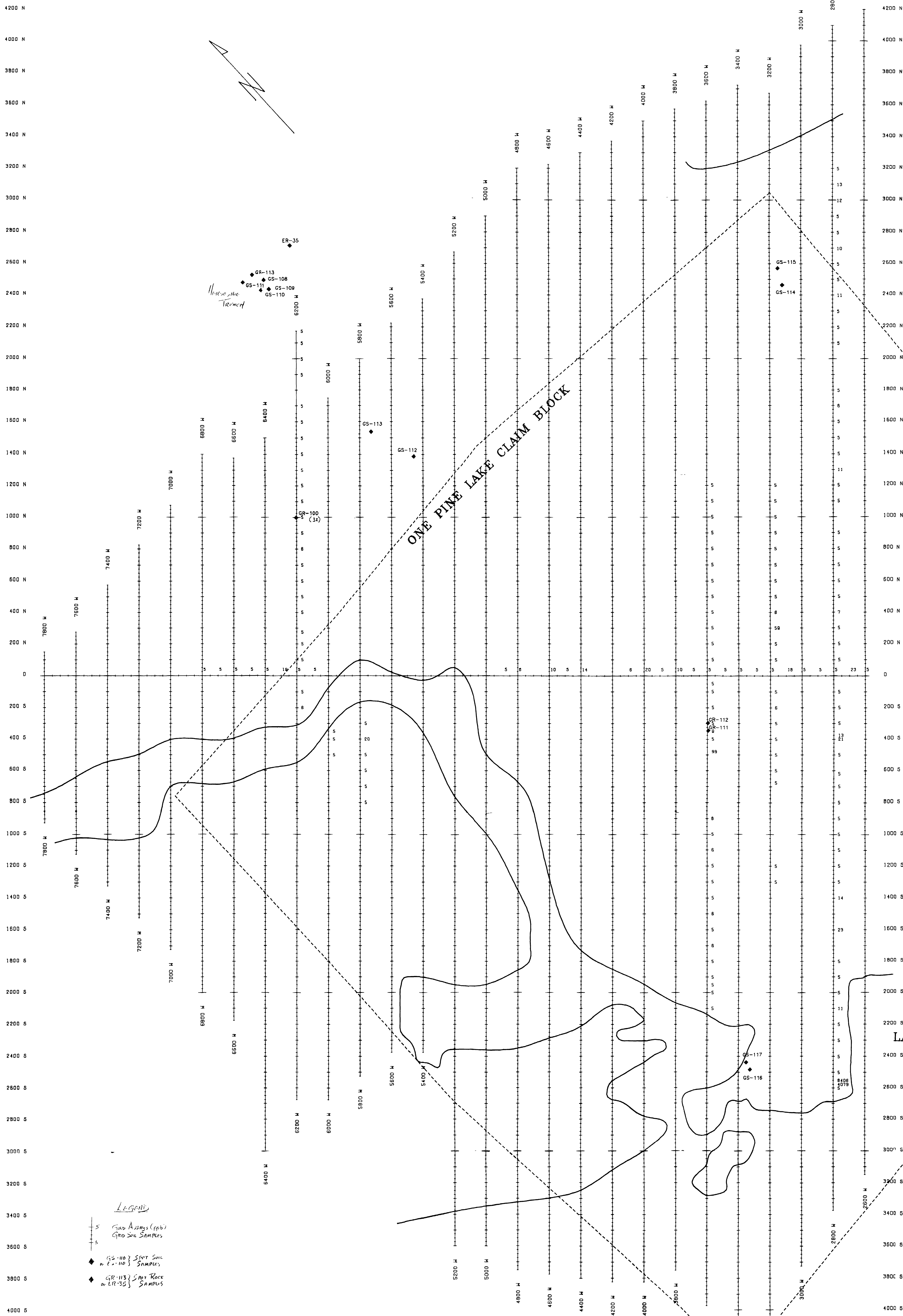
522088W0004 GP1-278 POISSON



LAKE SAVANT GOLD PROJECT
 GORZYNSKI & EWEN
 ONE PINE LAKE CLAIM BLOCK
 GOLD GEOCHEMISTRY (IN PPB)
 POISSON TOWNSHIP - ONTARIO
 PATRICIA MINING DIVISION - NTS: 52J/7.8
 SCALE 1:2400 OR 1" = 200'
 SCALE IN FEET

*See Plan 201
 For details*





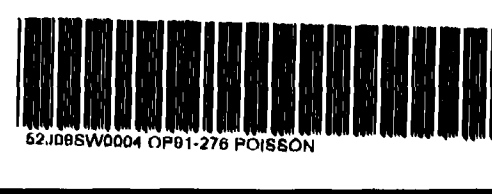
*None are
Treated*

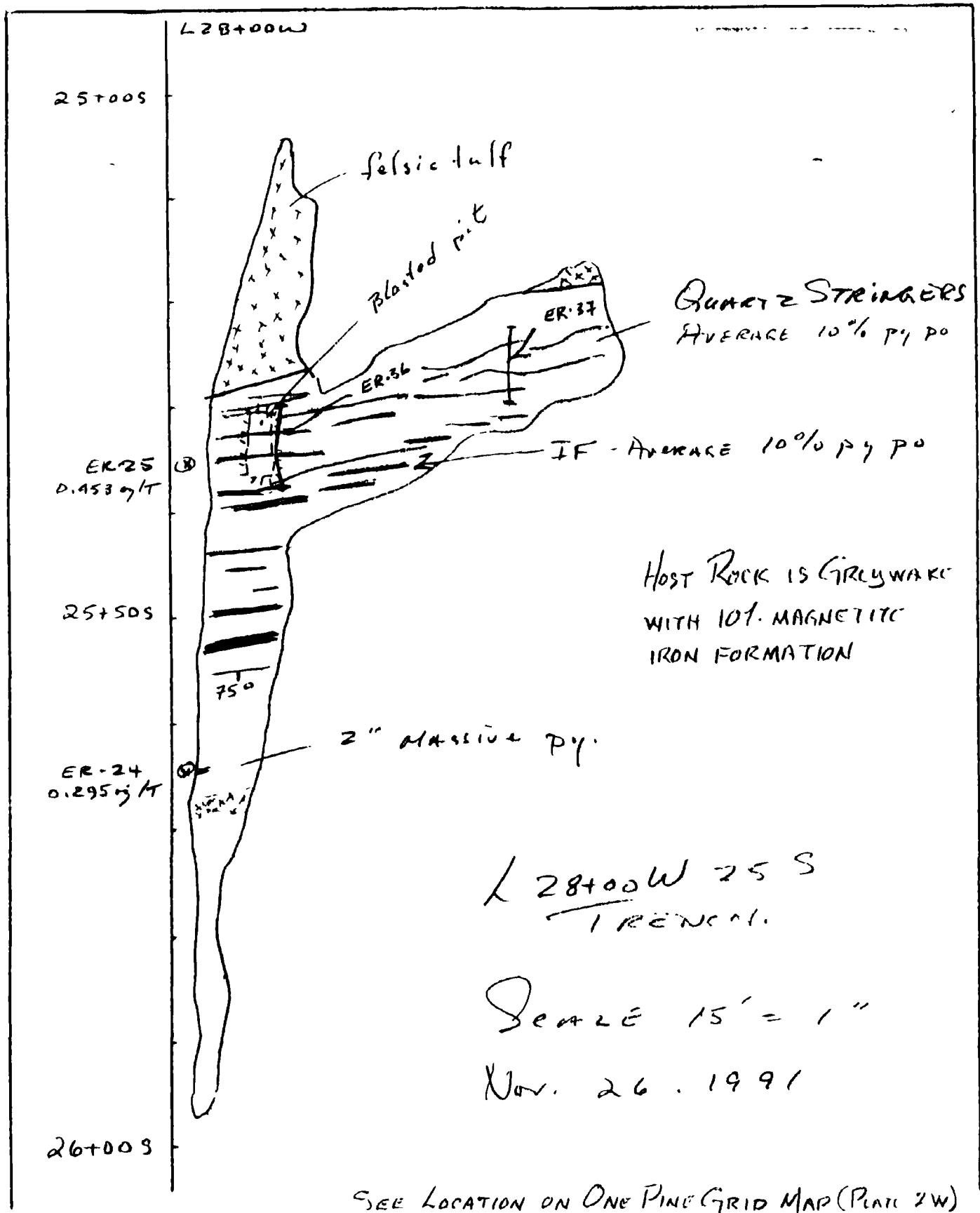
ONE PINE LAKE CLAIM BLOCK

LEGEND
 - 5 Grid Assays (ppb)
 - 5 Grid Soil Samples
 ◆ GS-110? Spot Soil or ER-35 SAMPLES
 ◆ GR-113? Spot Rock or ER-35 SAMPLES

LAKE SAVANT

LAKE SAVANT GOLD PROJECT
 GORZYNSKI & EWEN
 ONE PINE LAKE CLAIM BLOCK
 GOLD GEOCHEMISTRY (IN PPB)
 POISSON TOWNSHIP - ONTARIO
 PATRICIA MINING DIVISION - NTS: S2J/7.8
 SCALE 1:2400 OR 1" = 200'
 0 200 400 800
 SCALE IN FEET





62 1048W0004 0P01-276 POISSON