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**MINING LANDS SECTION**

A REPORT ON THE  
FAIRSERVICE PINE LAKE PROPERTY  
STRAW LAKE, ONTARIO  
N.T.S. 52F/3NW

R.T. Lucas,  
Thunder Bay, Ont.

September, 1980.



INTRODUCTION	1
LOCATION, ACCESS AND PROPERTY DESCRIPTION	2
PREVIOUS WORK	2 - 3
CURRENT PROGRAM	3
REGIONAL GEOLOGY	3 - 4
GRID GEOLOGY	
(A) Diorite-Quartz Diorite	5
(B) Granodiorite to Trondhjemite	5
(C) Mixed Contact Phase	6
(D) Metavolcanic Rocks	6
(E) Dyke Rocks	7
STRUCTURE	7
GRID GEOPHYSICS	7 - 8
MINERALIZATION	
(1) The Showing	8 - 14
(2) Other Mineralization on the Grid	15
CONCLUSIONS	15 - 16
RECOMMENDATIONS	16
REFERENCE LIST	

MAPS:

- 1 - Claim Map
- 2 - Location Map
- 3 - Generalized Geology Map

TABLE OF CONTENTS

CONTINUED

APPENDIX I

Rose Diagrams

(a) Joints

(b) Shears

APPENDIX II

Assays and Location Sketches

ENCLOSURES:

- |   |         |             |
|---|---------|-------------|
| (1) Straw Lake Geology                          | 1"=200' | FS-3035     |
| (2) Straw Lake VLF-Seattle                      | 1"=200' | FS-2932C(1) |
| (3) Straw Lake VLF-Annapolis                    | 1"=200' | FS-2932C(2) |
| (4) Straw Lake Filtered VLF (In Phase; Seattle) | 1"-200' | FS 3034C    |
| (5) Straw Lake Magnetometer Survey              | 1"=200' | FS 2932     |
| (6) 3 drawings of filtered VLF                  |         |             |
| (a) Out of Phase Seattle                        |         |             |
| (b) In Phase Annapolis                          |         |             |
| (c) Out of Phase Annapolis                      |         |             |

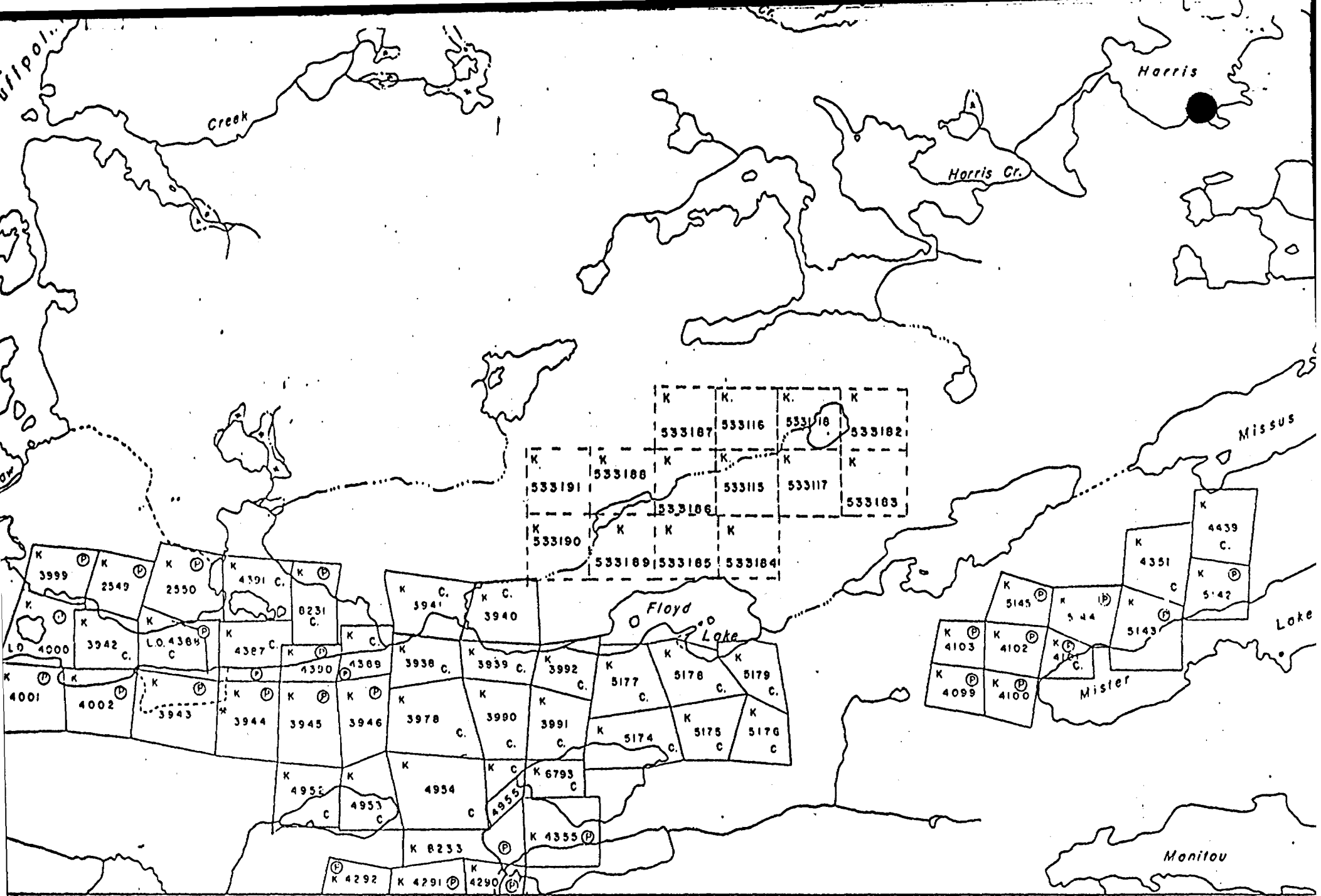
## INTRODUCTION

The purpose of this project was to investigate the Pine Lake (Fairservice) gold occurrence and the surrounding area for possible economic accumulations of gold and/or silver mineralization. Geological, geochemical and geophysical methods of exploration were used.

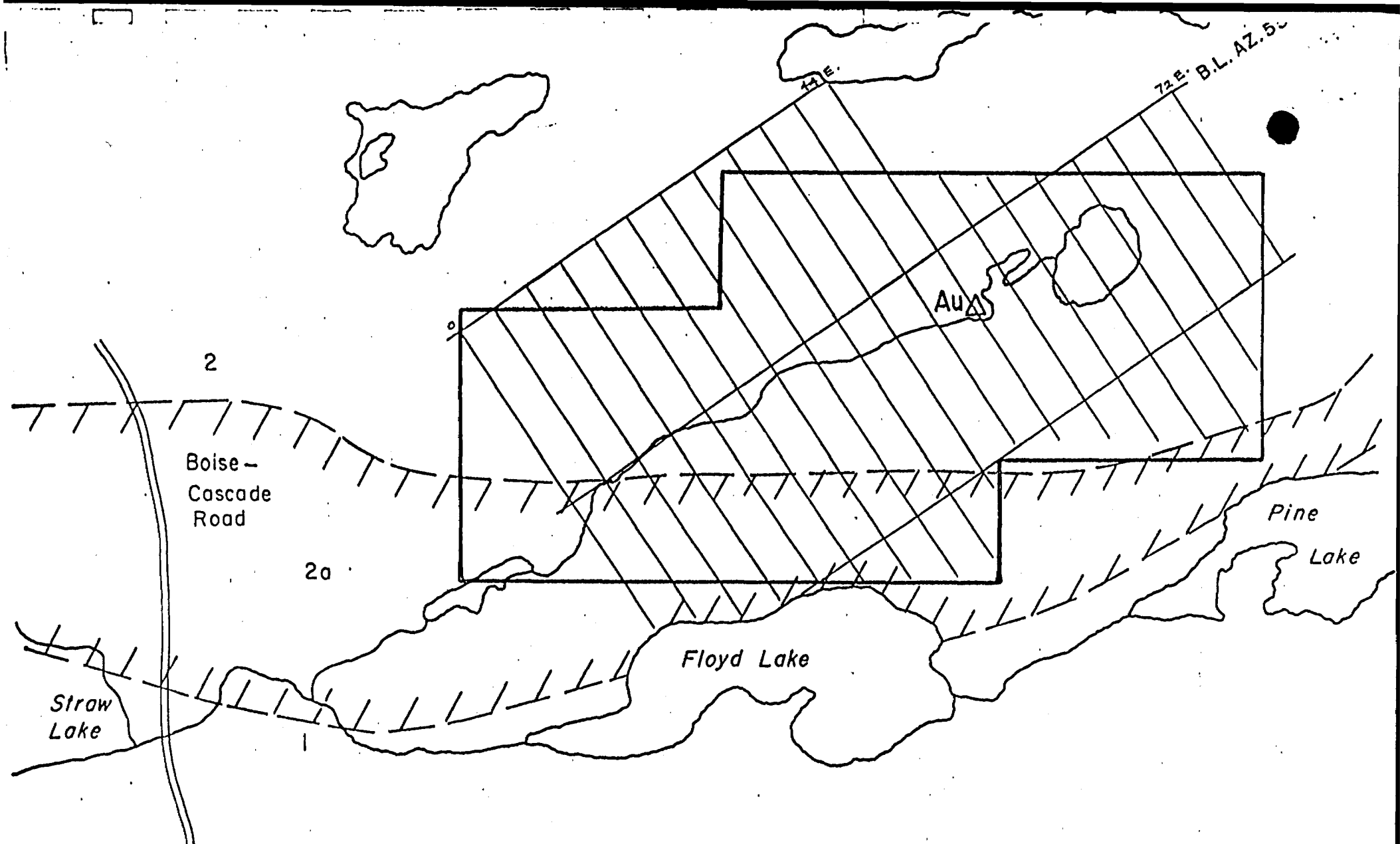
The showing and vicinity, optioned by Selco from R.J. Fairservice, is within the Lawrence Lake Batholith in the Kenora Mining Division. Since the showing is within a batholithic body a weak analogy to the Belmoral 'type' deposit can be made.

Results to date have not indicated economic quantities of gold or silver.

The Pine Lake property falls within the Straw Lake Project Area, exploration in which is subject to a letter of agreement between Dome Exploration and Selco Mining, with Selco managing the project.



LAKE M-2430



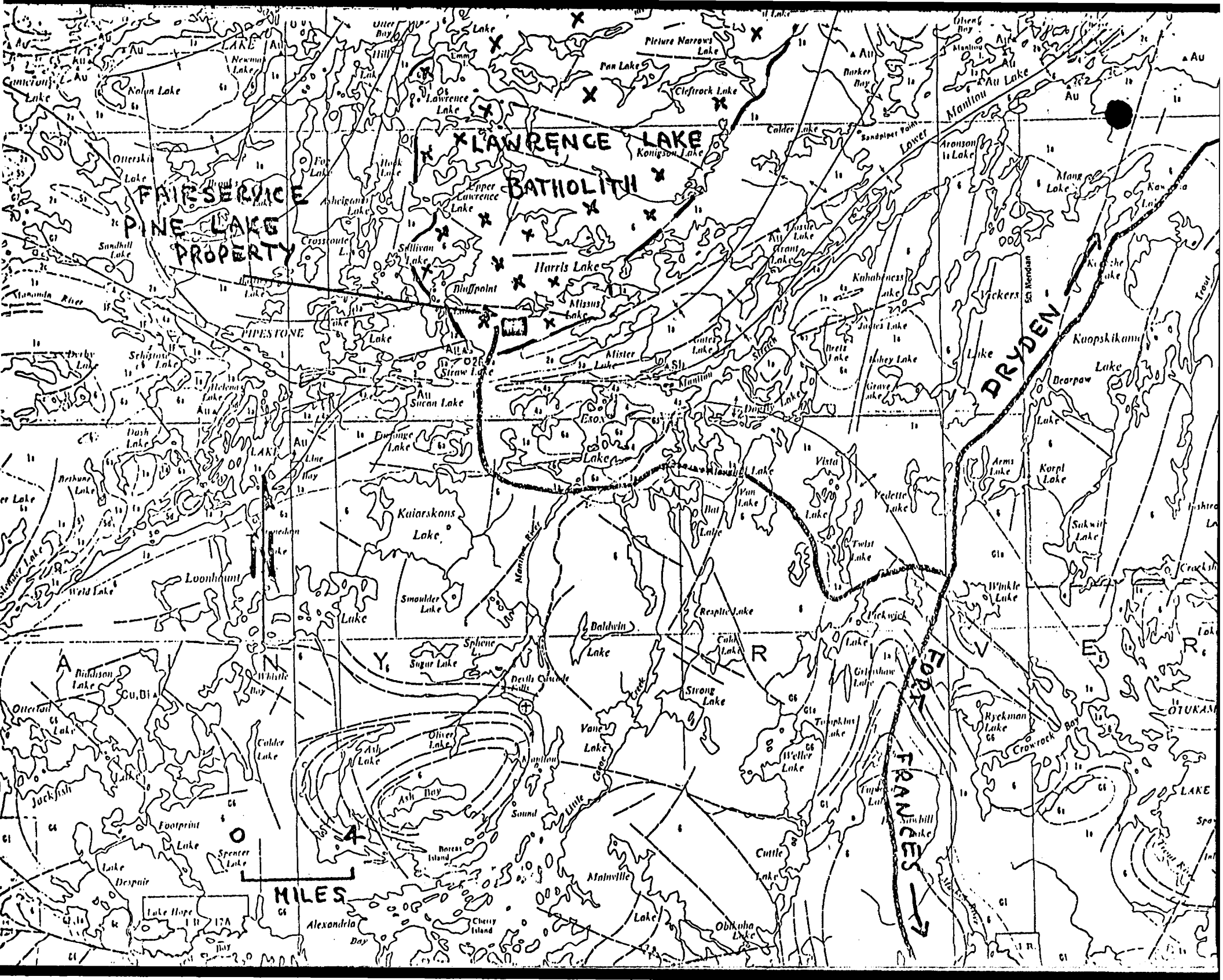
LEGEND

- 2 Granodiorite
- 20 Border Phase of Granodiorite
- 1 Intermediate and some Felsic Volcanics

FAIRSERVICE GOLD  
PROPERTY

STRAW LAKE PROJECT

1" = 1/4 mile      APRIL '80



LOCATION, ACCESS AND PROPERTY DESCRIPTION

The 14 claim property is located in the Straw Lake area, approximately 60 km north of Fort Frances.

Access is via a Boise-Cascade logging road from the newly constructed Dryden-Fort Frances Highway. The grid is about  $\frac{1}{2}$  mile east of where the logging road passes Straw Lake.

PREVIOUS WORK

There is no record at the assessment work branch of the O.G.S. of previous exploration on the Fairservice Property. R.J. Fairservice has numerous assay results including those taken by Amax in 1979 (Anderson, 1980). The outcrop hosting the mineralization has been partially stripped and three short drill holes (1' to 2') for sampling have intersected veins 49, 54 and 55. A small grid and an expired claim post (Hall) were found nearby.

During the past two summers, O.G.S. Geologist Scott has examined the showing as part of a regional programme to determine the effectiveness of using a leaching process for recovering gold from ore.



Mining exploration for base metals in the general Straw Lake area has been conducted by Freeport Can. Expl. (1970-71), Inco (1971) and Conwest (1952). All other exploration has been for gold or gold-silver deposits. Refer to a compilation of assessment work for the Straw Lake Area (Berezowskyj, March, 1980).

#### CURRENT PROGRAM

A grid was cut and a magnetic survey completed during the winter of 1980.

Summer activities consisted of geological mapping, and a two station VLF (EM-16) survey over the gridded area. Detailed channel sampling was conducted over a large portion of the mineralized outcrop.

Fall activities will consist of the completion of channel sampling, and additional sampling across the grid area. Two Winkie drill holes are scheduled to test the showing itself.

#### REGIONAL GEOLOGY

The property straddles a portion of the SE contact between the Lawrence Lake Batholith and the Straw Lake volcanics.

Both rock suites form a part of the Wabigoon Volcanic-Plutonic Belt of the Superior Structural Province.

The Lawrence Lake Batholith is represented by three main phases, an early subordinate amphibole diorite to gabbro phase, a diorite to quartz diorite phase, and a later granodiorite to trondhjemite phase (Edwards, 1980), which hosts the Pine Lake showing.

Volcanic rocks to the immediate south comprise a mixed suite of felsic to mafic flows and pyroclastics, including numerous feldspar porphyry sheets (Anderson, 1980). Approximately 2.5 km south of the property, the Manitou-Pipestone Fault separates the aforementioned volcanics from an accumulation of complexly folded, largely mafic flows, intrusives and sediments. Some felsic volcanics have been noted in this group south of Straw Lake.

#### GRID GEOLOGY

Five mappable rock units were determined, assisted by the ground magnetic survey. Mappable rock units from north to south are:-

- (A) diorite-quartz diorite intrusive phase (Dior.-Q.D.),
- (B) non-magnetic (T<sub>1</sub>) and magnetic (T<sub>2</sub>) granodiorite to trondhjemite intrusive phase,

- (C) mixed contact phase,
- (D) mixed suite of felsic to mafic metavolcanic rocks,
- (E) feldspar porphyry, and quartz-feldspar porphyry dykes.

(A) Diorite-Quartz Diorite

Hornblende diorite and quartz diorite form the northern phase of the batholith and underlie portions of the northern grid area. A mafic actinolite diorite is rarely seen and may be inclusions from a western amphibole diorite to gabbro phase. A thin section of quartz diorite has the composition hornblende 20%, plagioclase (? %), biotite 6%, quartz 10% and accessory apatite, opaques and zircon (Edwards, 1980).

(B) Granodiorite to Trondhjemite

(i) Non-Magnetic

This unit,  $T_1$  underlies the north central portions of the grid area and is in contact to the north with the diorite-quartz diorite. The contact is sharp and marked by a breccia of the latter in a matrix of  $T_1$ . The showing is within this unit at the south contact with unit  $T_2$ , magnetic trondhjemite.

(ii) Magnetic

This unit,  $T_2$ , differs from  $T_1$  in magnetite content and in several isolated outcrops it contained up to

70% potassium feldspar (microcline?). Unit  $T_2$  is clearly defined on the magnetic map as a magnetic high striking across the central portions of the grid. A thin section of granodiorite to trondhjemite has the composition plagioclase 40% (sericitic alteration), microcline 10%, quartz 30%, biotite 7%, commonly magnetite 3%, epidote 2% with accessory zircon, apatite and tourmaline (Edwards, 1980).

(C) Mixed Contact Phase

Separating the magnetic trondhjemite from the volcanic rocks is a contact phase consisting of at least three or four rock types. Rock types identified within this phase include:

- (i) diorite
- (ii) quartz-rich leucocratic, trondhjemite ( $T_4$ )
- (iii) non-magnetic trondhjemite ( $T_1$ )
- (iv) breccia consisting of volcanic fragments  
in matrix of non-magnetic trondhjemite ( $T_3$ ).

(D) Metavolcanic Rocks

This unit is noted on the south-east extremes of the grid and consists largely of massive mafic volcanics, amphibolitic in places. These rocks appear black or dark green on weathered surfaces and generally strike in an east-west direction.

(E) Dyke Rocks

Quartz feldspar porphyry and feldspar porphyry dykes intrude all of the other rock units. The dykes are pale grey-green, usually with an aphanitic matrix hosting minute quartz eyes and 1-3mm grey feldspar phenocrysts. Widths range from about 1 foot to +20 feet. Most dykes are orientated along an E-W trend; one dyke strikes N-S.

STRUCTURE

Air photographs suggest a major lineament striking about  $025^{\circ}$ , in the immediate vicinity of the showing. This may account for deformation observed in unit C, south of the showing.

Structural measurements from the grid area are plotted on Rose Diagrams (Appendix I) and show a preferred joint and shear orientation of  $070-080^{\circ}$ , dipping predominantly south.

GRID GEOPHYSICS

Instruments used were a McPhar M-700 magnetometer, and VLF (EM-16) using transmitting stations Seattle and Annapolis.

Magnetic data proved useful for outlining the areas underlain by the magnetite-bearing trondhjemite, and indicated a dipole anomaly in the immediate vicinity of the showing (see Straw Lake Area - Mag Survey).

Filtered VLF-EM data reveals that several anomalies lie within low swampy areas, suggesting an overburden source. Other anomalies fall within outcrop areas implying a bedrock source. Conductive material was not encountered during the geological survey. A very broad conductive trend crudely follows the magnetic high and trend of swamp in the central portions of the grid (see Straw Lake Area - VLF (EM-16) survey).

#### MINERALIZATION

##### (1) The Showing

The showing outcrop is located about 200 feet east of line 44.00E at 9S on the grid.



PLATE 1: THE SHOWING OUTCROP

Stripping the outcrop of regolith revealed 10 quartz veins, within tension fractures, striking  $100^{\circ}$  and dipping shallowly south. (For vein locations see outcrop drawing - Appendix II). Veins vary in size from 0.25 to 7.62 cm and, all but veins 13 and 18 contain disseminated, (up to 5%) pyrite mineralization. A photograph of each vein is shown below.

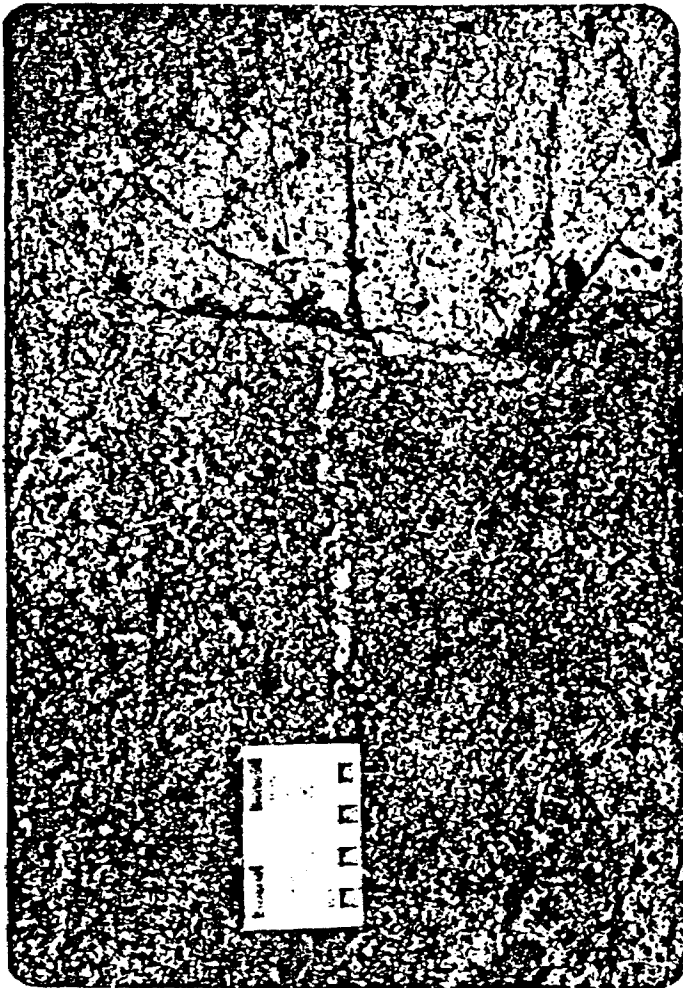


PLATE 2: VEIN 13

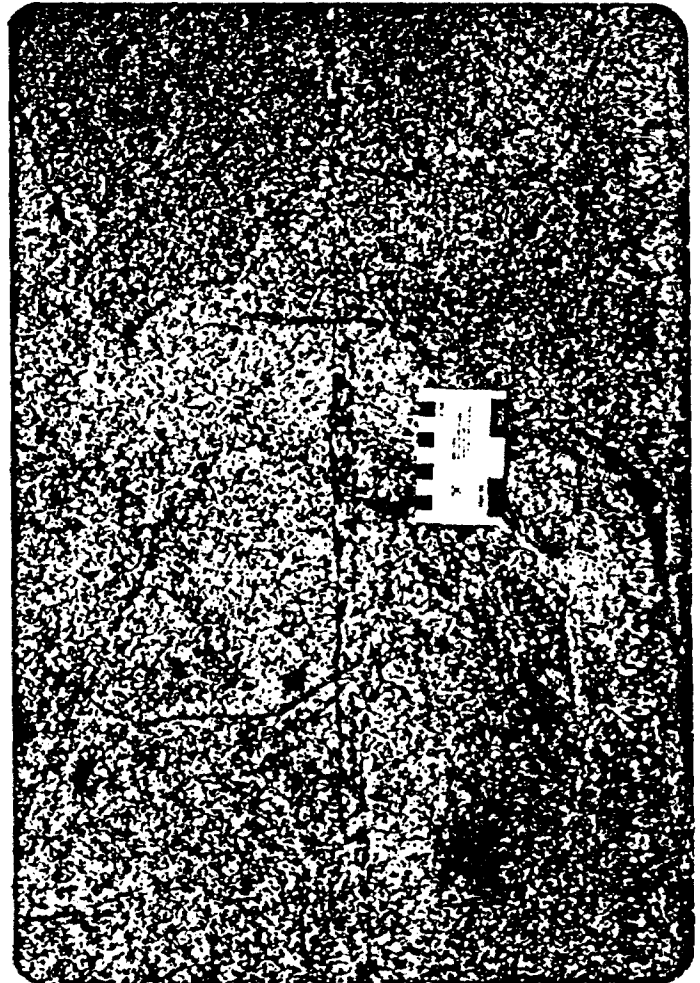


PLATE 3: VEIN 18

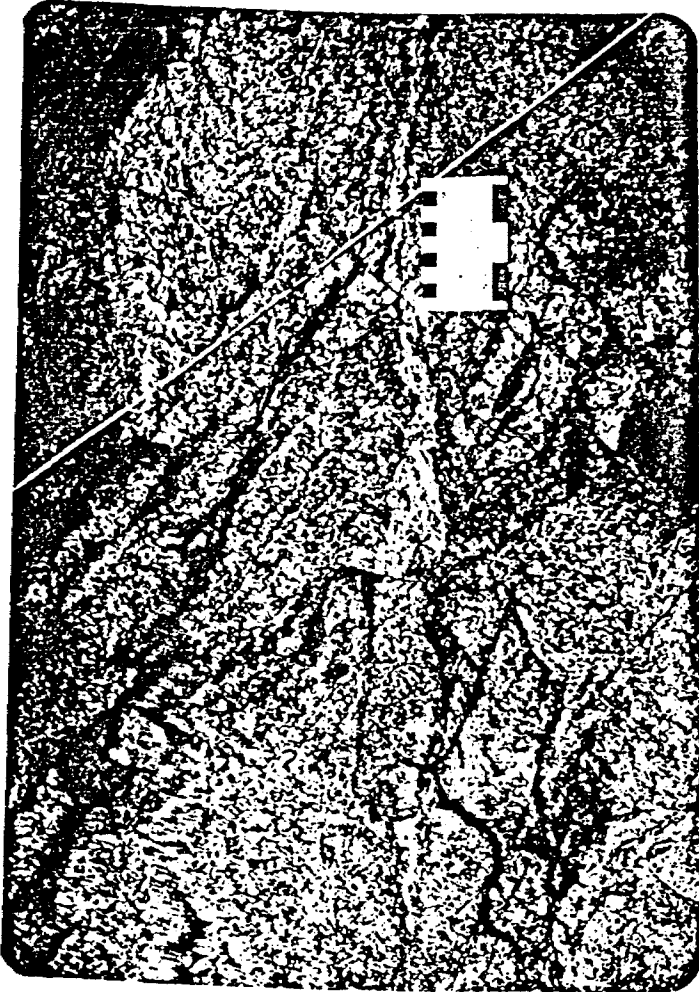


PLATE 4: VEIN 24



PLATE 5: VEIN 25





PLATE 6: VEIN 40

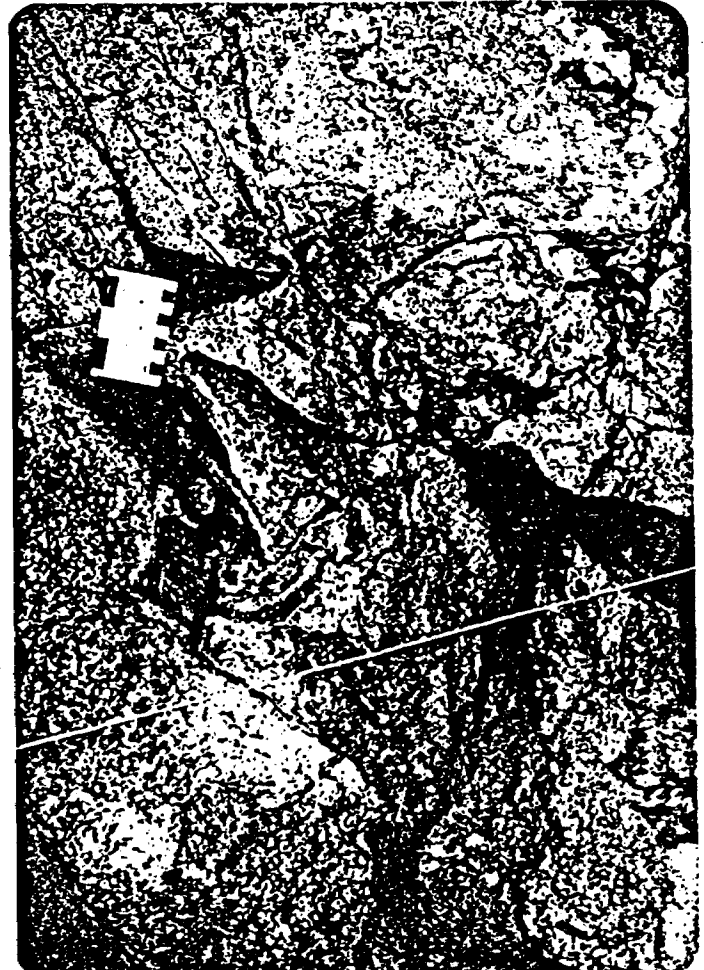


PLATE 7: VEIN 45



PLATE 8: VEIN 49



PLATE 9: VEIN 54

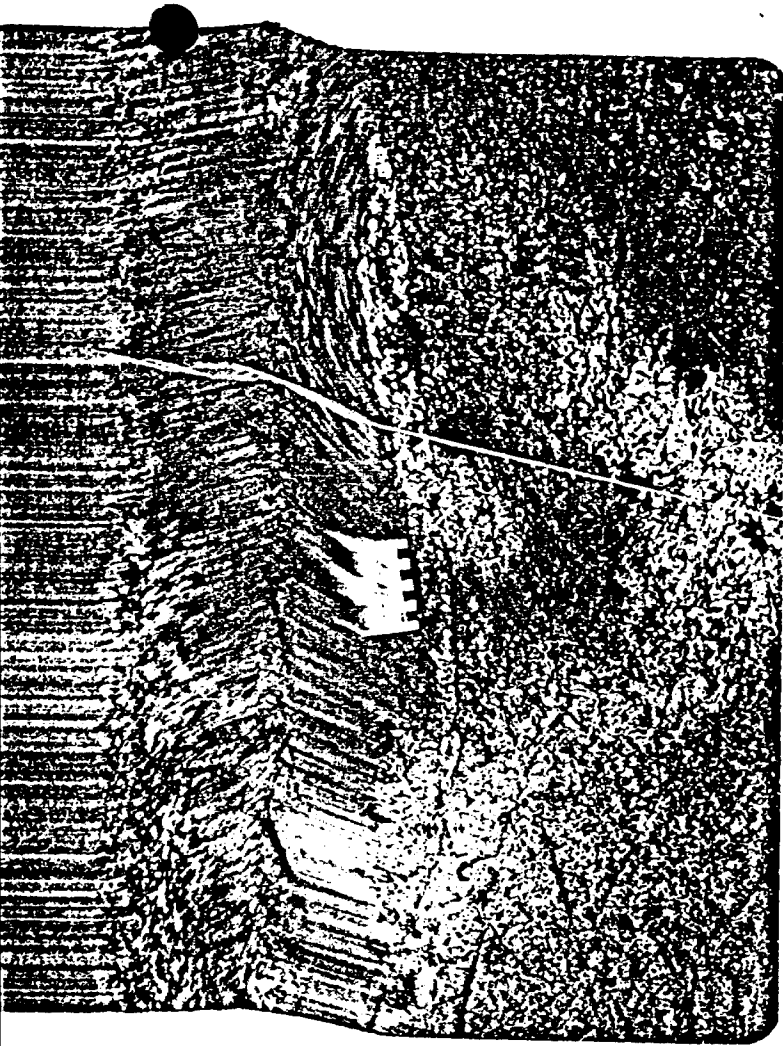


PLATE 10: VEIN 55



PLATE 11: VEIN 59

The complete length of the outcrop has been sampled by two foot channel samples taken along the string line shown in Plates 12 and 13. All channel samples are normal or near normal to strike. Sample locations and values are shown on the geology grid map and on the showing sketch (Appendix II). The weighted average for all samples along the length of outcrop is about 0.02 oz/Ton (0.69 g/T).

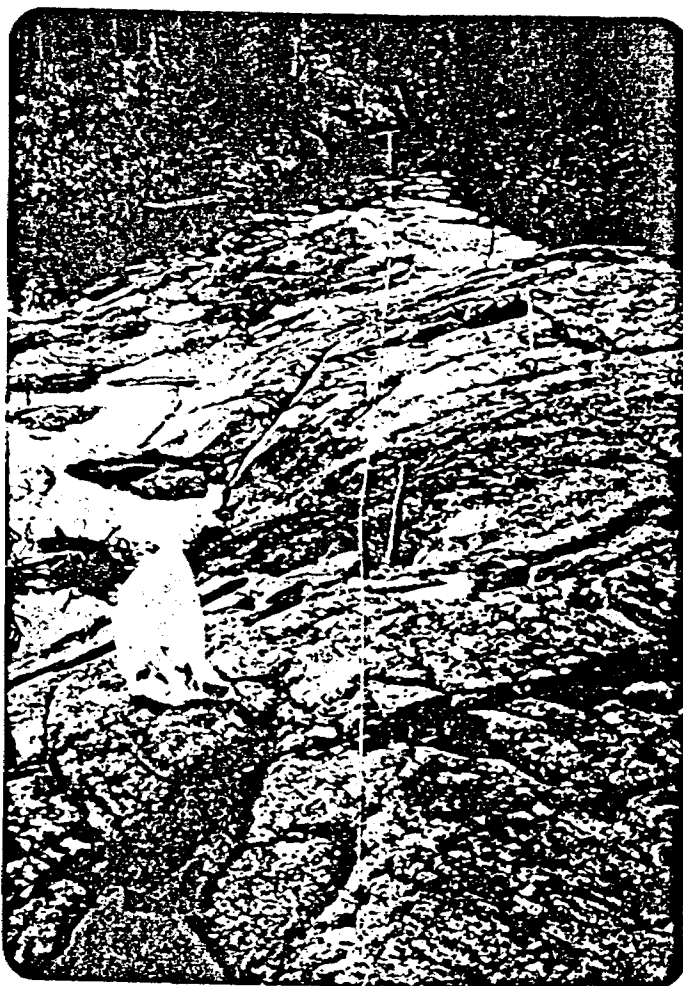


PLATE 12: CHANNEL LOCATION

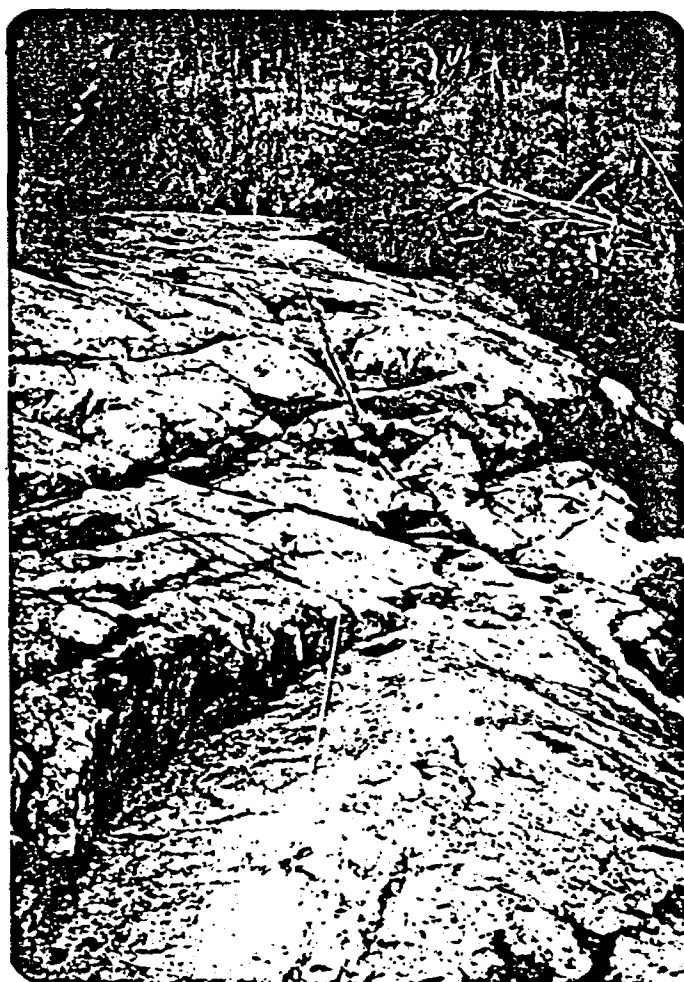


PLATE 13: CHANNEL LOCATION

(2) Other Mineralization on The Grid

Many quartz veins and/or shear zones are encountered in the grid area, randomly located and variable in size and mineralization. Quartz veins varied from a few mm to at least 7 meters in width with varying mineralization of Fe carbonate and up to 5% pyrite to barren. The larger, white quartz vein systems tend to be barren. Commonly, shear zones contained quartz with similar variations in size and mineralization.

Several of the quartz and/or shear zones, both with and without visible sulphides were assayed for Au-Ag. Highest value is 0.04 oz/T Au. A list of assays is included in Appendix II.

CONCLUSIONS

Results to date have not indicated economic quantities of gold or silver, however the future sampling and diamond drill results must be received before a definite conclusion on the showing may be drawn.

All of the data gathered indicates gold, pyrite and minor chalcopyrite mineralization within the general area, thus the potential for gold and/or base metals is considered good.

#### RECOMMENDATIONS

It is recommended that further sampling on the grid be conducted, particularly along the air photograph lineament near the showing.

Assays for silver have been exceeding low therefore it is recommended future assaying exclude this metal. The sampling mentioned above could be completed during the drill program.

In addition to the Winkie hole already planned, a second hole is recommended to test for a possible N-S structure immediately east of the outcrop, passing under the creek, pond and beaver dam.

It is further recommended that time be spent, on a reconnaissance basis, to determine the extent of felsic units within the volcanic assemblage, as a preliminary step toward a possible base metal and/or gold exploration program.

Respectfully submitted,

  
Robert T. Lucas.

REFERENCE LIST

ANDERSON, W.J., 1980: Review and Outline of Proposed work for the Fairservice Gold Project.

BEREZOWKYJ, M., 1980: Fairservice Option Area - Straw Lake Assessment Compilation.

EDWARDS, G.R., 1980: Straw Lake Area, District of Rainy River and Kenora, O.G.S. O.F.R. - 5292.

EDWARDS, G.R., and SUTCLIFFE, R.H., 1977: Straw Lake Area, District of Rainy River and Kenora, O.G.S. Preliminary Map 1243.

THOMPSON, J.E., 1935: Geology of Rowan-Straw Lake Area, O.D.M., Volume 44, pt. 4.

THOMPSON, J.E., 1934: Geology of Straw-Manitou Lakes Area, O.D.N., Volume 44, pt. 4.

MAGNETIC - REGIONAL

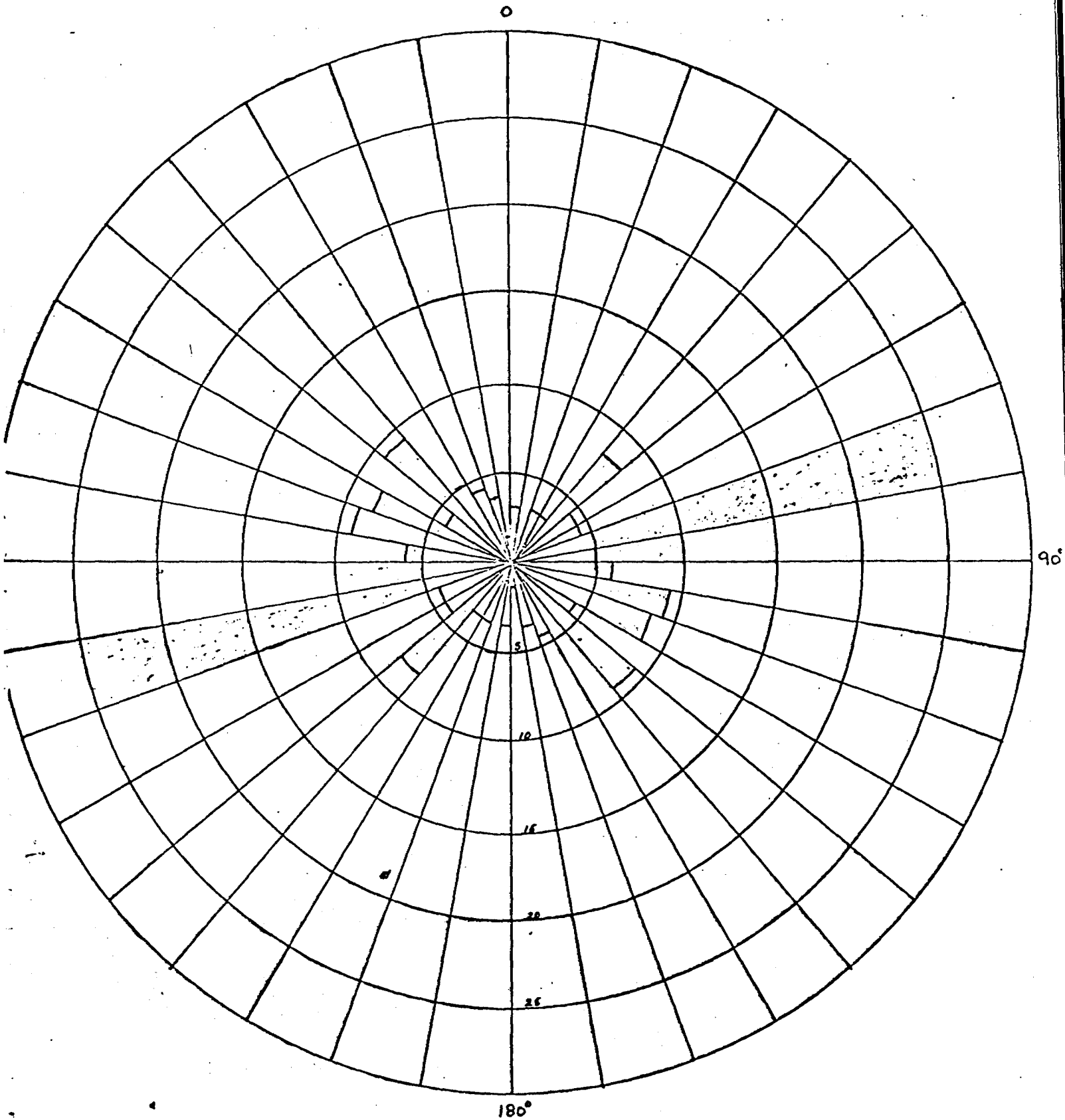
G.S.C., G.P. 1160 - Harris Lake.

APPENDIX I

ROSE DIAGRAMS

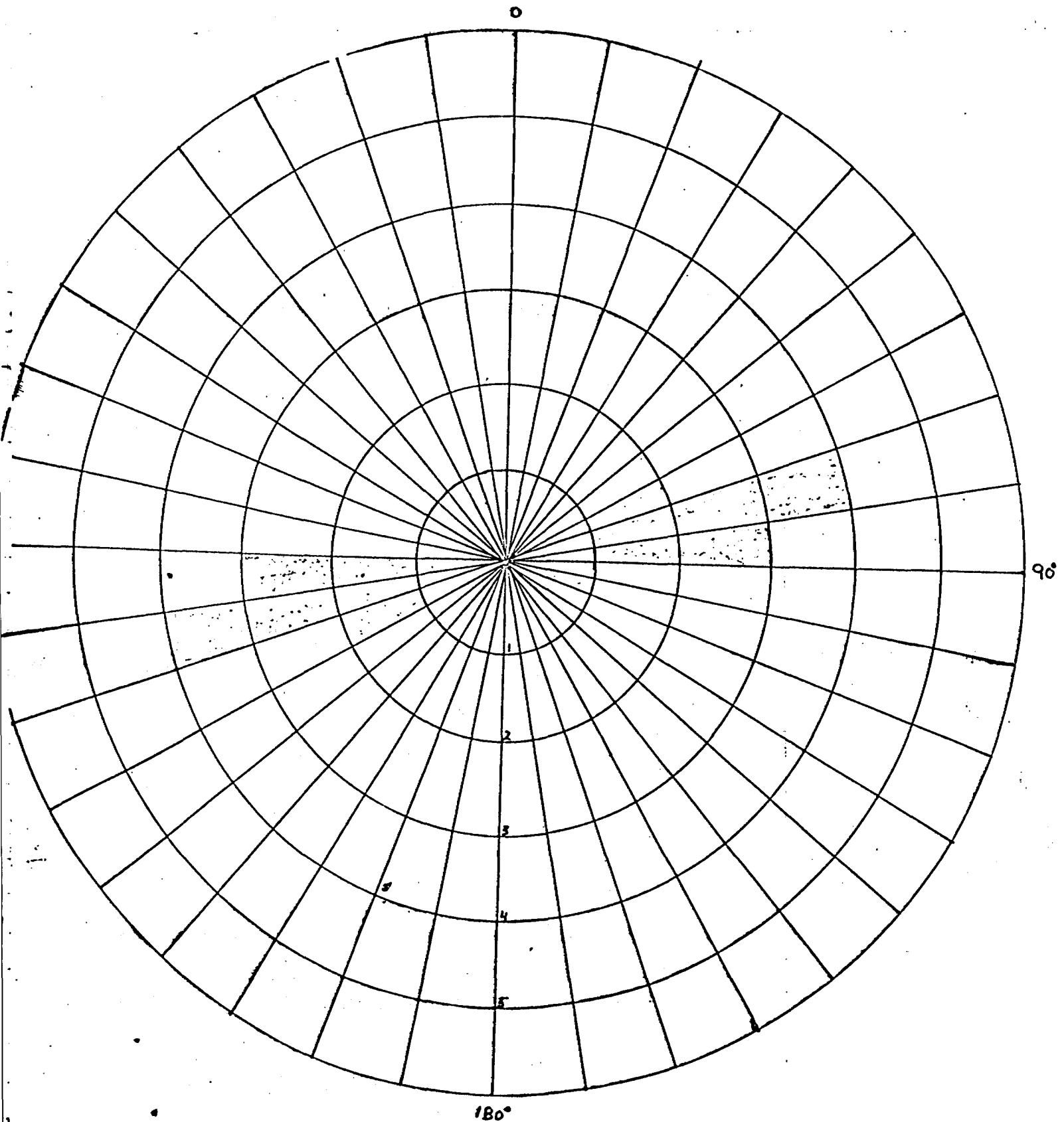


JOINTS  
PREFERRED ORIENTATION  
123 JOINTS



ROSE DIAGRAM  
FAIRSERVICE PROPERTY

SHEAR ZONES  
PREFERRED ORIENTATION  
12 SHEARS



ROSE DIAGRAM  
FAIRSERVICE PROPERTY

APPENDIX II

ASSAYS AND LOCATION

(Some Locations on Geology Map  
and Reconnaissance Sketch)

FAIRSERVICE OPTION 06130  
STRAW LAKE ONTARIO

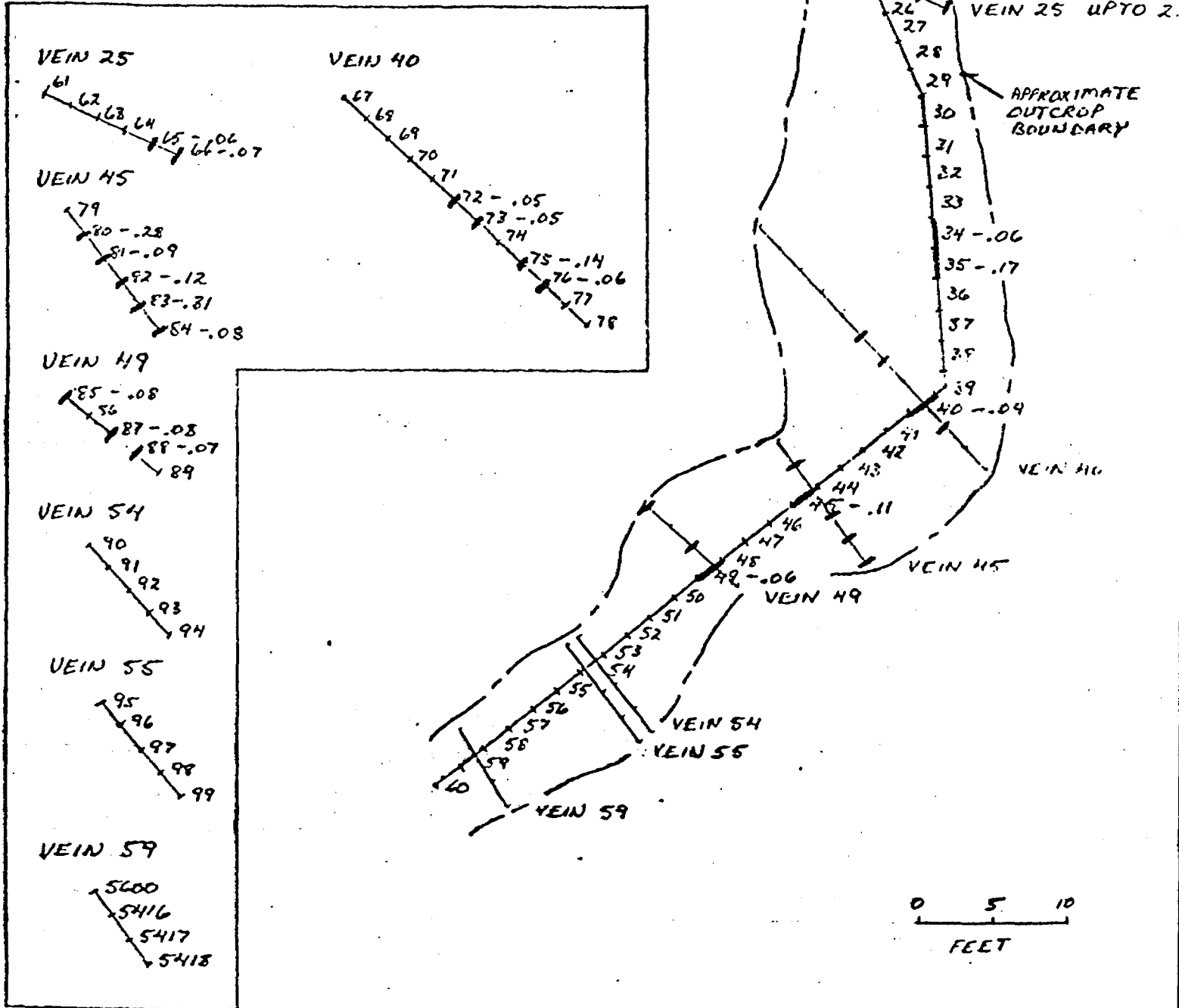
SAMPLE PLAN AUG. 1980

NOTES: ALL SAMPLE NUMBERS ARE AS ON  
SAMPLE TAGS EXCEPT FOR PREFIX  
55 - I.E. SAMPLE 49 IS ACTUALLY 5549

ALL SAMPLES ON MAIN CHANNEL ARE  
2 FEET IN LENGTH

ALL SAMPLES ON VEINS ARE ONE FOOT  
CROSS CHANNELS TAKEN EVERY 2 FEET  
ALONG EXPOSED STRIKE OF THE VEINS.

— GOLD VALUES GREATER THAN OR EQUAL  
TO 0.05 ARE PLOTTED ON THE RIGHT  
OF SAMPLE NO.'S. I.E. 49 - .06

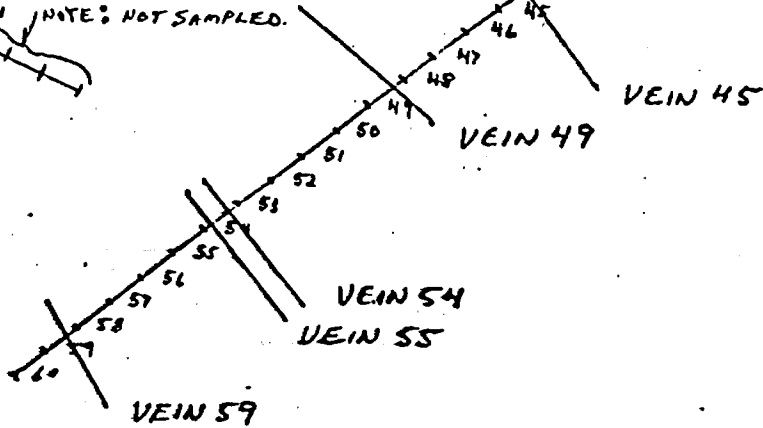
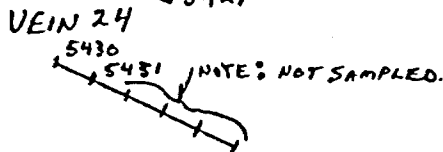
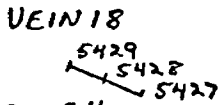
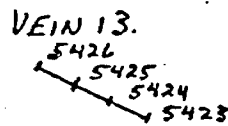
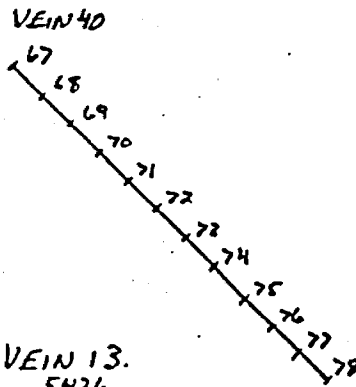
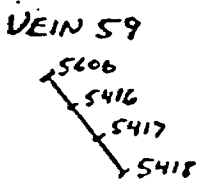
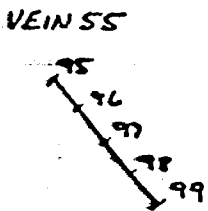
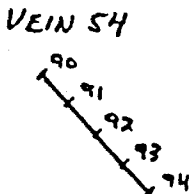
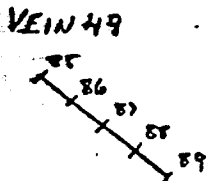
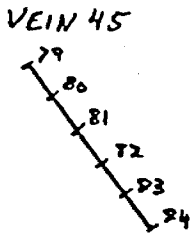
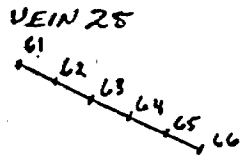


# FAIRSERVICE PROPERTY

## SAMPLE LOCATION PLAN

ALL SAMPLE NUMBERS BEGIN WITH 55  
(IE 49 = 5549) UNLESS OTHERWISE SHOWN.

ALL SAMPLE NUMBERS AS ON ASSAY TAGS.





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 49759

Date: Aug. 1, 1980

Received July 25, 1980 38 Samples of Ore

Submitted by Selco Mining Corporation, Thunder Bay, Ontario Per: M.

Berezowskyi

### CHANNEL SAMPLES

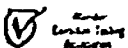
SAMPLE NO.	GOLD Oz./ton	SILVER Oz./ton
5523	NIL	Trace
5524	NIL	NIL
5525	0.19 ✓	0.02
5526	0.02	NIL
5527	0.002	NIL
5528	0.002	Trace
5529	NIL	NIL
5530	0.002	NIL
5531	0.04	Trace
5532	0.002	Trace
5533	0.002	NIL
5534	0.06	Trace
5535	0.17 ✓	0.04
5536	0.02	Trace
5537	0.002	Trace
5538	0.002	NIL
5539	0.01	NIL
5540	0.09	0.02
5541	0.005	Trace

con't....

Per G. Lebel

G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

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Date: Aug. 1, 1980

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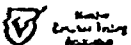
Submitted by Selco Mining Corporation, Thunder Bay, Ontario

### CHANNEL SAMPLES

SAMPLE NO.	GOLD Oz./ton	SILVER Oz./ton
5542	NIL	NIL
5543	NIL	Trace
5544	0.005	NIL
5545	0.11	0.04
5546	0.01	Trace
5547	0.01	NIL
5548	0.01	NIL
5549	0.06	0.03
5550	NIL	NIL
5551	0.002	NIL
5552	0.01	Trace
5553	0.01	Trace
5554	0.01	Trace
5555	0.01	Trace
5556	0.002	0.04
5557	NIL	NIL
5558	0.002	NIL
5559	0.02	Trace
5560	0.002	NIL

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928





# COCHENOUR FIRE ASSAYING

Phone: Bus. 756-3521  
Res. 756-3341

J.W. Beck, Assayer,  
Box 43, Cochenour, Ont.

## ASSAY CERTIFICATE

Date: Aug. 23-80

"Buying over 30 Years"

No.	To Selco Mining Corporation Ltd. Description	oz/ton Au	oz/ton Ag
01 ✓	Chips. L36E, 15+20 S	.04	Nil
02 ✓	52E 26 S	.02	"
03 ✓	60E 24+65 S	.01	"
06 ✓	40E 15 S	Trace	"
07 ✓	24E 6 S	"	"
08 ✓	44E 5+70 S	.03	"
512 ✓	48E 26+60 S	Trace	"
23 ✓	44E 13 S	.02	"
24 ✓	48E 21+20 S	Trace	"
25 ✓	24E 17+50 S	"	"
26	CHANNEL SAMPLE	.03	"
27	" "	.03	"
28	" "	Trace	"
29 ✓	L8E - 16 N	Trace	"
20 ✓	45' SE of FAIRSERVICE SHOWING	.01	"
522	CHANNEL # 22	Trace	"
561	CHANNEL - VEINS	.03	"
62	"	.01	"
63	"	.10	"
64	"	.06	"
65	"	.07	"
66	"	.03	"
67	"	.02	"
68	"	Trace	"

Assayer:

*J.W. Beck*



# COCHENOUR FIRE ASSAYING

Phone: Bus. 755-3521  
Res. 756-3341

J.W. Beck, Assayer,  
Box 43, Cochenour, Ont.

## ASSAY CERTIFICATE

Date: Aug. 13-80

"Assaying over 20 Years"



No.	To <u>White Mining Corporation Ltd.</u> Description	oz/ton Au	oz/ton Ag
569	CHANNEL SAMPLES	Trace	11
70		"	"
71		"	"
72		.05	"
73		.05	"
74		.04	"
75		.14 ✓	"
76		.06	"
77		.03	"
78		.04	"
79		.01	"
80		.28 ✓	"
81		.09	"
82		.12	"
83		.31	"
84		.08	"
85		.08	"
86		.01	"
87		.08	"
88		.07	"
89		.02	"
90		.02	"
91		.02	"
92		Trace	"

Assayer: J.W. Beck



# COCHENOUR FIRE ASSAYING

Phone: Bus. 756-3521  
Res. 756-3341

J.W. Beck, Assayer,  
Box 43, Cochenour, Ont.

"Living over 30 Years"

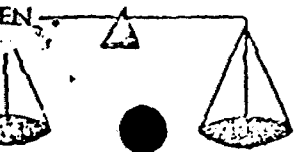
## ASSAY CERTIFICATE

Date: Aug. 13-90

no.	To Selco Mining Corporation Ltd. Description	oz/ton Au	oz/ton Ag
5603	Chips. CHANNEL SAMPLES	Trace	NIL
04		.03	"
95		Trace	"
96		.04	"
97		.03	"
98		.02	"
99		.03	"
5600		.04	"
	BY XRAY LABS		
4041	L60E GS	tr	tr.
05	L60E GS	NIL	NIL
09	~ L44E 3+35'S (W side)	.03	NIL
10	~ L44E 3+50'S (S side)	.04	tr
11	~ L44E ~ 3+70'S (E side)	NIL	tr
421	<del>XXXXXXXXXXXXXXXXXXXX</del> STRAW LK ROAD	tr	NIL
422	<del>XXXXXXXXXXXXXXXXXXXX</del> STRAW LK. ROAD	tr	NIL.

Assayer:

*J.W. Beck*



Assaying over 30 Years"

# COCHENOUR FIRE ASSAYING

J.W. Beck, Assayer,  
Box 43, Cochenour, Ont.

## ASSAY CERTIFICATE

REASON FOR REJECTING: (ARTS) CLAIM: PL. OUT OF WARRANTY PERIOD

Phone: Bus. 756-3521  
Res. 756-3341

Date: Oct. 11, -80

No.	To Selco Mining Corporation Ltd. Description	oz/ton Au	oz/ton Ag
23	Chips. VEIN 13	Trace	
24	"	"	
25	"	"	
26	"	"	
27	VEIN 18	.04	
28	"	.02	
29	"	.01	
30	VEIN 24	Trace	
31	"	"	
512	CHANNEL SAMPLES <sup>ACROSS</sup> MAIN ZONE	"	
13		"	
14		"	
15		"	
16		.01	
17		Trace	
18		.02	
19		.01	
20		Trace	
		"	

Assayer: J.W. Beck



52F03NW0031 2.5244 BLUFFPOINT LAKE

020

REPORT ON THE GEOLOGICAL SURVEY  
OF THE  
STRAW LAKE AREA  
FAIRSERVICE OPTION

**RECEIVED**

JUN 29 1981

**MINING LANDS SECTION**

W.C. Kerr  
June 30, 1981

## INTRODUCTION

This report summarizes the work performed on the Fairservice Gold area in Northwestern Ontario from May 11 to June 27, 1981. Grid mapping over the 1981 grid (06418) and sampling of alteration zones was done. Detailed mapping and sampling was done over the line 16+00E showing and the Fair-service showing number 2 (creek zone). In addition, detailed mapping and sampling was accomplished over the VLF-EM anomaly and other alteration zones on the 1980 grid (06417).

## LOCATION

The Fairservice Gold area is located northeast of Straw Lake, between Dryden and Fort Frances in northwest Ontario. Excellent access is provided by an all-weather road maintained by Boise-Cascade for on-going logging operations.

## GENERAL MAPPING AND SAMPLING PROCEDURE

Grid mapping was undertaken over the 1981 grid (06418) which was cut at 400 ft. line spacings. All outcrops which were visible from the line were mapped. The topography of the grid was generally rugged, so outcrop density was quite good. All altered outcrops and quartz veins were routinely sampled. Sampling procedure consisted of 5 foot chip samples generally normal to the foliation for altered outcrops, and grab samples from quartz veins.

GEOLOGY

The Fairservice Gold area lies within the Lawrence Lake Batholith, near its southern boundary where it is in contact with mafic to felsic metavolcanics. The following rock types were recognized in the field: (Note that the Legend incorporates some rock lithologies and symbols used by Edwards and Sutcliffe in their 1977 P - Series geological map).

- 9 - Lawrence Lake Batholith
  - a - Mixed Contact zone
  - b - Pink feldspathic granodiorite
  - c - White granodiorite
  - d - Cherty weathering chilled granodiorite
  - e - Impure granodiorite
  - q - Feldspar porphyry, porphyry dikes
  - v - Aplitic and felsite dykes
  
- 6 - Mafic Intrusive Rocks
  - a - Biotite - hornblende diorite
  - b - Biotite - hornblende quartz diorite

Granodiorite was the major rock type observed in the area. The most prevalent variety was a pink feldspathic granodiorite. This was massive, medium grained, pink to red on weathered and fresh surface, and commonly formed ridges and high relief hills. Biotite, hornblende, and occasional magnetite were the predominant mafic minerals.

White granodiorite, possibly variety trondhjemite, was much less widespread, only occurring locally with no continuity. It was slightly coarser grained, and was characterized by the absence of pink feldspars.

Chilled, cherty - weathering granodiorite was exposed sporadically about the grid but was most predominant near the contact with the metavolcanics. Pyrite occurs locally as euhedral disseminations. The colour on fresh surface varied from pale pink to green.

Impure granodiorite was commonly fine to medium grained, and was characterized by including sometimes partially resorbed clasts of diorite, quartz diorite, and pink feldspathic granodiorite. The finer grained variety often showed cherty - weathering patterns.

All of the granodiorite varieties sometime carried magnetite, although this was not a universal feature.

Diorite and quartz diorite were the main mafic rocks observed. Both were characterized by locally abundant magnetite and hornblende, although usually biotite was the predominant mafic mineral. Most of the exposures were of fine to medium grain size, with some coarse-grained phases observed in isolated outcrops.

Intrusive dikes were almost always chilled. Mafic dikes were commonly chloritic, while ophitic and felsite dikes usually had an abundance of magnetite relative to the host rock (usually concentrated in joints).

The "mixed contact zone" of Edwards was continued for this survey. It is representative of outcrops comprised of more than one lithology. The most commonly observed case was a combination of felsic (granodiorite) + mafic (diorite-quartz diorite) intrusives. Where one rock type was more dominant, it will follow the symbol for mixed contact zone; e.g., (9a, b) reflects a mixed contact zone having pink feldspathic, granodiorite as its major component.

#### STRUCTURE

Several major lineaments transect the area. Some of the cliffs along these lineaments have zones of mylonitization near the base. An interesting feature is that nearly all of the cliffs face in a northerly direction, and most mylonite zones were dipping steeply south to vertical.

Emplacement of gold mineralization appears to be related to zones of dilation or en-echelon-type splay faults near major fault zones.

#### ECONOMIC GEOLOGY

The purpose of this work was to map and sample 2 gold occurrences found late last year - the "low grade" line



16+00 showing and the "high grade" line 0+00 showing - and to map and sample the grid which was cut this spring to the northwest.

The type of rocks which carry gold in this particular area are fairly easy to recognize. There are 2 types of observed gold-bearing rocks:

1. Pyritic-sericitic-saussuritic alteration.
2. Quartz veins.

Type 1 is almost always characterized by a foliation, oxidation, and sometimes bleaching. The foliation is due to sericitization, and the oxidation is due to pyrite and/or magnetite. There do not appear to be sharp boundaries with respect to alteration. An interesting feature is that the foliation of the rocks usually exhibited a strike of from  $080^{\circ}$ - $120^{\circ}$ , and dipped at shallow angles to the south.

Type 2 (quartz veins) usually were emplaced along joint planes, and associated alteration consisted, as before, of sericitization, saussuritization, and some pyritization. Bleaching of the host rock was sometimes evident.

Not all altered outcrops or quartz veins carry gold. Some very intensely altered outcrops, and pyritic quartz veins, were observed during grid mapping which looked very similar to the 2 main gold showings (line 0+00 and line 16+00). However, many of these zones were barren or carried only low gold values.

The Fairservice line 2+00W (Creek Zone) showing was mapped and sampled (see Figure 5-8,10). There are 3 quartz veins, all with subhorizontal attitudes that are traceable along strike length. In addition, there are numerous smaller, vertical veins and veinlets, but these may be joint and fracture fillings related to main vein emplacement. Channel samples were taken across the major veins at intervals, and 5 foot chip samples were taken of the host rock. Although the host rock (granodiorite) was moderately altered, it carried only low gold values. There are flat lying quartz veins to the north that do not carry gold. It is suggested that diamond drilling to the northwest of the prospect might determine the lateral extent of gold bearing veins in that direction.

The line 16+00E showing (Pine Centre) was mapped and sampled (Fig. 1-4). Figure 2 reveals that gold bearing sections may be horizontal or very shallow dipping to the south. Other altered outcrops in that area carried generally low values. It is recommended the diamond drilling is the next step to determine if the values carry at depth.

The VLF-EM alteration zone (line 36+00, 10+00S) was mapped and sampled. The previous assay values (.04 and .13 oz/T) were not duplicated in the detailed resampling, the highest value being 0.01oz/T. However, the presence of a VLF-EM anomaly coincident with alteration means this zone should be tested by diamond drilling.

The Lucas showing was mapped and sampled, and 8 samples gave values ranging from .005 to .05 oz/T (see figure 9). In addition during grid mapping, an outcrop of pyritic diorite to the west returned an assay of 0.11 oz/ton. It is suggested that further detailed mapping and sampling be undertaken on completion of the geophysical survey.

An altered zone at the east end of baseline 20+00N returned values to .06 oz/ton (see grid map 6). It is suggested that this zone be tested by diamond drilling.

#### RECOMMENDATIONS FOR FURTHER WORK

1. The Creek Zone should be tested by diamond drilling to determine the northwest extent of the gold bearing quartz veins, and also to determine if other parallel veins exist at depth.
2. The Pine Centre Zone should be tested by diamond drilling to determine if the alteration zone extends to, and carries gold, at depth.
3. The coincident VLF-EM anomaly and moderate alteration means that this zone too should be tested by drilling.
4. Detailed mapping and sampling of the area west of the Lucas showing should be commenced upon completion of the geophysical surveys.

5. The altered zone at 20+00N, 32+00E, should be tested by drilling.

*per*  
*Paul Hilde*

W.C. Kerr

SAMPLE NO.	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
A-1	.002	pyritic horizon	4+00E, 1+50N	1980 Grid Map
A-2	.002	pyritic horizon	4+00E, 1+50N	1980 Grid Map
A-3	.13	pyritic quartz diorite	(VLF-EM) 36+00E, 10+00S	11
A-4	.04	quartz vein	(VLF-EM) 36+00E, 10+00S	11
A-5	Nil	quartz vein	4+00E, 1+50N	1980 Grid Map
B-1	Nil	quartz vein	22+00W, 20+00N	Grid Map #06418
B-2	Nil	pyritic zone	17+25W, 20+00N	Grid Map #06418
C-1	.01	alteration zone C	Pine Center 16+00E, 12+00N	Figure #4
C-2	.01	alteration zone C	Pine Center 16+00E, 12+00N	Figure #4
C-3	.002	quartz vein B	Pine Center 16+00E, 12+00N	Figure #4
C-4	.005	quartz vein B	Pine Center 16+00E, 12+00N	Figure #4
C-5	.002	quartz vein B	Pine Center 16+00E, 12+00N	Figure #4
C-6	.005	quartz vein A	Pine Center 16+00E, 12+00N	Figure #4
C-7	Nil	quartz vein A	Pine Center 16+00E, 12+00N	Figure #4
C-8	.01	quartz vein A	Pine Center 16+00E, 12+00N	Figure #4
D-1	.002	quartz vein	16+00E, 15+00N	Figure #3
D-2	.002	quartz vein	16+00E, 15+00N	Figure #3
D-3	Nil	quartz vein	16+00E, 15+00N	Figure #3
D-4	.02	quartz vein	16+00E, 13+00N	Figure #3
D-5	Nil	quartz vein	17+00E, 9+75N	Figure #3
E-1	Trace	quartz vein	17+50E, 11+75N	Figure #3
E-2	Trace	quartz vein	20+25E, 14+75N	Figure #3

SAMPLE NO.	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
E-3	Trace	15" quartz vein	09+35E, 20+35N	Grid Map #06418
E-4	Trace	15" quartz vein	09+35E, 20+35N	Grid Map #06418
E-5	Trace	15" quartz vein	09+35E, 20+35N	Grid Map #06418
FA-1	.20	quartz vein A	Creek Zone 2+00W, 26+50N	Figure #5
FA-2	.27	quartz vein A	Creek Zone 2+00W, 26+50N	Figure #5
FA-3	.02	quartz vein A	Creek Zone 2+00W, 26+50N	Figure #5
FA-4	.01	quartz vein A	Creek Zone 2+00W, 26+50N	Figure #5
FA-5	.10	quartz vein A	Creek Zone 2+00W, 26+50N	Figure #5
FA-6	.06	quartz vein A	Creek Zone 2+00W, 26+50N	Figure #5
FA-7	Trace	quartz vein A	Creek Zone 2+00W, 26+50N	Figure #5
FB-1	.23	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5
FB-2	.04	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5
FB-3	.11	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5
FB-4	.03	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5
FB-5	.09	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5
FB-6	.07	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5
FB-7	Trace	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5
FB-8	.03	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5
FB-9	.14	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5

SAMPLE NO	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
FB-10	.01	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5
FB-11	.05	quartz vein B	Creek Zone 2+00W, 26+50N	Figure #5
FC-1	.01	quartz vein C	Creek Zone 2+00W, 26+50N	Figure #5
FC-2	.13	quartz vein C	Creek Zone 2+00W, 26+50N	Figure #5
FC-3	.40	quartz vein C	Creek Zone 2+00W, 26+50N	Figure #5
FC-4	Trace	quartz vein	in Creek 2+00W, 26+50N	Figure #5
FC-5	.05	quartz vein	Arcuate Structure Top of Hill 2+00W, 26+50N	Figure #5
FC-6	.13	quartz vein	Arcuate Structure Top of Hill 2+00W, 26+50N	Figure #5
K-1	Trace	quartz vein	0+00, 21+00N	Grid Map #06418
K-2	Trace	quartz vein	2+00E, 29+00N	Grid Map #06418
M-1	.06	altered zone	Pine Center 16+00E, 12+00N	Figure #2
M-2	.07	altered zone	Pine Center 16+00E, 12+00N	Figure #2
M-3	.06	altered zone	Pine Center 16+00E, 12+00N	Figure #2
M-4	Trace	quartz vein	24+00E, 33+00N	Grid Map #06418
M-5	Trace	altered zone	24+00E, 33+00N	Grid Map #06418
2101	.06	altered zone	16+00E, 12+00N	Figure #2
2102	.05	altered zone	16+00E, 12+00N	Figure #2
2103	.07	altered zone	16+00E, 12+00N	Figure #2
2104	.09	altered zone	16+00E, 12+00N	Figure #2
2105	.05	altered zone	16+00E, 12+00N	Figure #2

SAMPLE NO.	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
2106	.06	altered zone	16+00E, 12+00N	Figure #2
2107	.002	altered zone	16+00E, 12+00N	Figure #2
2108	.05	altered zone	16+00E, 12+00N	Figure #2
2109	.08	altered zone	16+00E, 12+00N	Figure #2
2110	.09	altered zone	16+00E, 12+00N	Figure #2
2111	.08	altered zone	16+00E, 12+00N	Figure #2
2112	.06	altered zone	16+00E, 12+00N	Figure #2
2113	.09	altered zone	16+00E, 12+00N	Figure #2
2114	.10	altered zone	16+00E, 12+00N	Figure #2
2115	.07	altered zone	16+00E, 12+00N	Figure #2
2116	.01	altered zone	16+00E, 12+00N	Figure #2
2117	.005	altered zone	16+00E, 12+00N	Figure #2
2118	.02	altered zone	16+00E, 12+00N	Figure #2
2119	.002	altered zone	16+00E, 12+00N	Figure #2
2120	.01	altered zone	16+00E, 12+00N	Figure #2
2121	.01	altered zone	16+00E, 12+00N	Figure #2
2122	.06	altered zone	16+00E, 12+00N	Figure #2
2123	.03	altered zone	16+00E, 12+00N	Figure #2
2124	.01	altered zone	16+00E, 12+00N	Figure #2
2125	.01	altered zone	16+00E, 12+00N	Figure #2
2126	.08	altered zone	16+00E, 12+00N	Figure #2
2127	.06	altered zone	16+00E, 12+00N	Figure #2
2128	.12	altered zone	16+00E, 12+00N	Figure #2
2129	.13	altered zone	16+00E, 12+00N	Figure #2
2130	.14	altered zone	16+00E, 12+00N	Figure #2
2131	.08	altered zone	16+00E, 12+00N	Figure #2



SAMPLE NO	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
2132	.002	altered zone	16+00E, 11+00N	Figure #3
2133	.06	altered zone	15+80E, 13+00N	Figure #3
2134	.02	altered zone	15+60E, 13+00N	Figure #3
2135	.002	altered zone	15+20E, 13+00N	Figure #3
2136	.04	altered zone	14+00E, 12+80N	Figure #3
2137	.002	altered zone	17+00E, 12+50N	Figure #3
2138	.005	altered zone	17+00E, 12+50N	Figure #3
2139	.02	altered zone	17+00E, 12+50N	Figure #3
2140	.04	altered zone	17+00E, 12+50N	Figure #3
2141	.03	altered zone	17+00E, 12+50N	Figure #3
2142	.04	altered zone	17+00E, 12+50N	Figure #3
2143	.01	altered zone	17+00E, 12+50N	Figure #3
2144	.08	altered zone	17+00E, 12+50N	Figure #3
2145	.02	altered zone	17+00E, 12+50N	Figure #3
2146	.01	altered zone	17+00E, 12+50N	Figure #3
2147	.005	altered zone	17+00E, 12+50N	Figure #3
2148	Nil	fresh representative granodiorite	24+00E, 11+50N	1980 Grid Map
2149	.002	lightly altered granodiorite	19+50E, 14+75N	Figure #3
2150	.005	unaltered granodiorite	20+00E, 11+00N	Figure #3
2151	.005	light alteration	16+00E, 14+25N	Figure #3
2152	Nil	light alteration	14+50E, 13+00N	Figure #3
2153	Nil	silicified alteration	11+75E, 15+00N	1980 Grid Map
2154	.02		2+00W, 26+50N	Figure #5
2155	.34		2+00W, 26+50N	Figure #5
2156	.02		2+00W, 26+50N	Figure #5

SAMPLE NO.	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
2157	.04		2+00W, 26+50N	Figure #5
2158	.02		2+00W, 26+50N	Figure #5
2159	.06		2+00W, 26+50N	Figure #5
2160	Nil		2+00W, 26+50N	Figure #5
2161	.005		2+00W, 26+50N	Figure #5
2162	.03		2+00W, 26+50N	Figure #5
2163	.01		2+00W, 26+50N	Figure #5
2164	.01		2+00W, 26+50N	Figure #5
2165	.002		2+00W, 26+50N	Figure #5
2166	.01		2+00W, 26+50N	Figure #5
2167	.005		2+00W, 26+50N	Figure #5
2168	.02		2+00W, 26+50N	Figure #5
2169	.005		2+00W, 26+50N	Figure #5
2170	.002		2+00W, 26+50N	Figure #5
2171	.02		2+00W, 26+50N	Figure #5
2172	.02		2+00W, 26+50N	Figure #5
2173	.02		2+00W, 26+50N	Figure #5
2174	.02		2+00W, 26+50N	Figure #5
2175	.02		2+00W, 26+50N	Figure #5
2176	.06		2+00W, 26+50N	Figure #5
2177	.02		2+00W, 26+50N	Figure #5
2178	.005		2+00W, 26+50N	Figure #5
2179	Nil		2+00W, 26+59N	Figure #5
2180	.03		2+00W, 26+50N	Figure #5
2181	Nil		2+00W, 26+50N	Figure #5
2182	Nil		2+00W, 26+50N	Figure #5
2183	.005		2+00W, 26+50N	Figure #5

SAMPLE NO.	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
2184	Nil	chip sample (5ft.)	2+00W, 26+50N	Figure #5
2185	Nil	chip sample (5ft.)	2+00W, 26+50N	Figure #5
2186	.005	chip sample (5ft.)	2+00W, 26+50N	Figure #5
2187	.005	chip sample (5ft.)	2+00W, 26+50N	Figure #10
2188	Nil	minor saussurite, pyritized, diorite	2+00W, 26+50N	Figure #10
2189	Nil	Falls outcrop lightly altered	2+00W, 26+50N	Figure #10
2190	Nil	pyritic, blue quartz	2+00W, 26+50N	Figure #10
2191	.005	(silicic-sericite, saussurite) minor (blue quartz)	2+00W, 26+50N	Figure #10
2192	Nil	massive granodiorite (white quartz)	2+00W, 26+50N	Figure #10
2193	Nil	massive granodiorite	2+00W, 26+50N	Figure #10
2194	.01	grab sample of quartz vein	2+00W, 26+50N	Figure #10
2195	Nil	massive granodiorite	2+00W, 26+50N	Figure #10
2196	.02	Lucas showing	4+00W, 35+60N	Figure #9
2197	.02	Lucas showing	4+00W, 35+60N	Figure #9
2198	.05	Lucas showing	4+00W, 35+60N	Figure #9
2199	.02	Lucas showing	4+00W, 35+60N	Figure #9
2200	.01	Lucas showing	4+00W, 35+60N	Figure #9
2201	.005	Lucas showing	4+00W, 35+60N	Figure #9
2202	.04	Lucas showing	4+00W, 35+60N	Figure #9
2203	.01	Lucas showing	4+00W, 35+60N	Figure #9
2204	.01	(5ft. chip) altered granodiorite	32+00E, 21+00N	Grid Map #06418
2205	.05	(5ft. chip) altered granodiorite	32+00E, 21+00N	Grid Map #06418
2206	Nil	(5ft. chip) altered granodiorite	32+00E, 21+00N	Grid Map #06418

SAMPLE NO.	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
2207	.002	(5ft. chip) altered granodiorite	21+00E, 31+50N	Grid Map #06418
2208	.005	(5ft. chip) altered granodiorite	21+00E, 31+50N	Grid Map #06418
2209	.002	quartz vein (8' chip)	10+00E, 24+00N	Grid Map #06418
2210	Nil	altered zone (8' chip)	2+00E, 20+00N	Grid Map #06418
2211	Nil	quartz vein	0+00 , 33+20N	Grid Map #06418
2212	Nil	alteration zone	36+00W, 28+50N	Grid Map #06418
2213	.11	altered diorite	6+00W, 39+50N	Grid Map #06418
2214	Nil	10" wide quartz vein	7+00W, 20+20N	Grid Map #06418
2215	.002	quartz vein	8+00W, 21+00N	Grid Map #06418
2216	.005	6" quartz vein in diorite	16+00W, 22+00N	Grid Map #06418
2217	Nil	8 to 24" quartz vein (bottom)	20+00W, 23+00N	Grid Map #06418
2218	Nil	8 to 24" quartz vein (top)	20+00W, 23+00N	Grid Map #06418
2219	Nil	quartz vein in shear zone	4+00W, 12+00N	Grid Map #06418
2220	Nil	quartz vein in light altered green G.D.	16+00W, 3+00N	Grid Map #06418
2221	Nil	1-2" quartz vein	20+00W, 20+00N	Grid Map #06418
2222	Nil	altered granodiorite	28+00W, 11+60N	Grid Map #06418
2223	.002	boulder; cherty chilled granodiorite	32+00W, 12+00N	Grid Map #06418
2224	.002	(10' chip) VLF-EM outcrop	36+00E, 10+00S	Figure #11
2225	.005	(10' chip) VLF-EM outcrop	36+00E, 10+00S	Figure #11
2226	.01	(10' chip) VLF-EM outcrop	36+00E, 10+00S	Figure #11
2227	.01	(10' chip) VLF-EM outcrop	36+00E, 10+00S	Figure #11

SAMPLE NO.	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
2228	.005	(10' chip) VLF-EM outcrop	36+00E, 10+00S	Figure #11
2229	.01	(10' chip) VLF-EM outcrop	36+00E, 10+00S	Figure #11
2230	.002	(10' chip) VLF-EM outcrop	36+00E, 10+00S	Figure #11
2231	Nil	(10' chip) VLF-EM outcrop	36+00E, 10+00S	Figure #11
2232	Nil	(10' chip) VLF-EM outcrop	36+00E, 10+00S	Figure #11
2233	.002	(5' chip) VLF-EM extension	34+00E, 10+00S	Figure #11
2234	.002	(5' chip) VLF-EM extension	34+00E, 10+00S	Figure #11
2235	.005	(5' chip) VLF-EM extension	34+00E, 10+00S	Figure #11
2236	.002	(5' chip) lightly altered G.D.	35+00E, 10+50S	Figure #11
2237	.002	(5' chip) lightly altered G.D.	36+10E, 11+20S	Figure #11
2238	Nil	representative sample unaltered G.D.	40+00E, 7+50S	Figure #11
2239	Nil	lightly altered granodiorite (5' chip)	40+00E, 18+00S	Figure #11
2240	.01	(grab) 3" quartz vein	40+00E, 18+00S	Figure #11
2241	.005	altered granodiorite	44+00E, 13+00S	Figure #11
2242	Nil	representative sample: diorite	44+00E, 21+00S	Figure #11
2243	Nil	representative sample altered granodiorite	44+00E, 21+00S	Figure #11
2244	Nil	lightly altered granodiorite	48+00E, 20+50S	Figure #11
2245	Nil	lightly altered granodiorite	48+00E, 25+00S	Figure #11

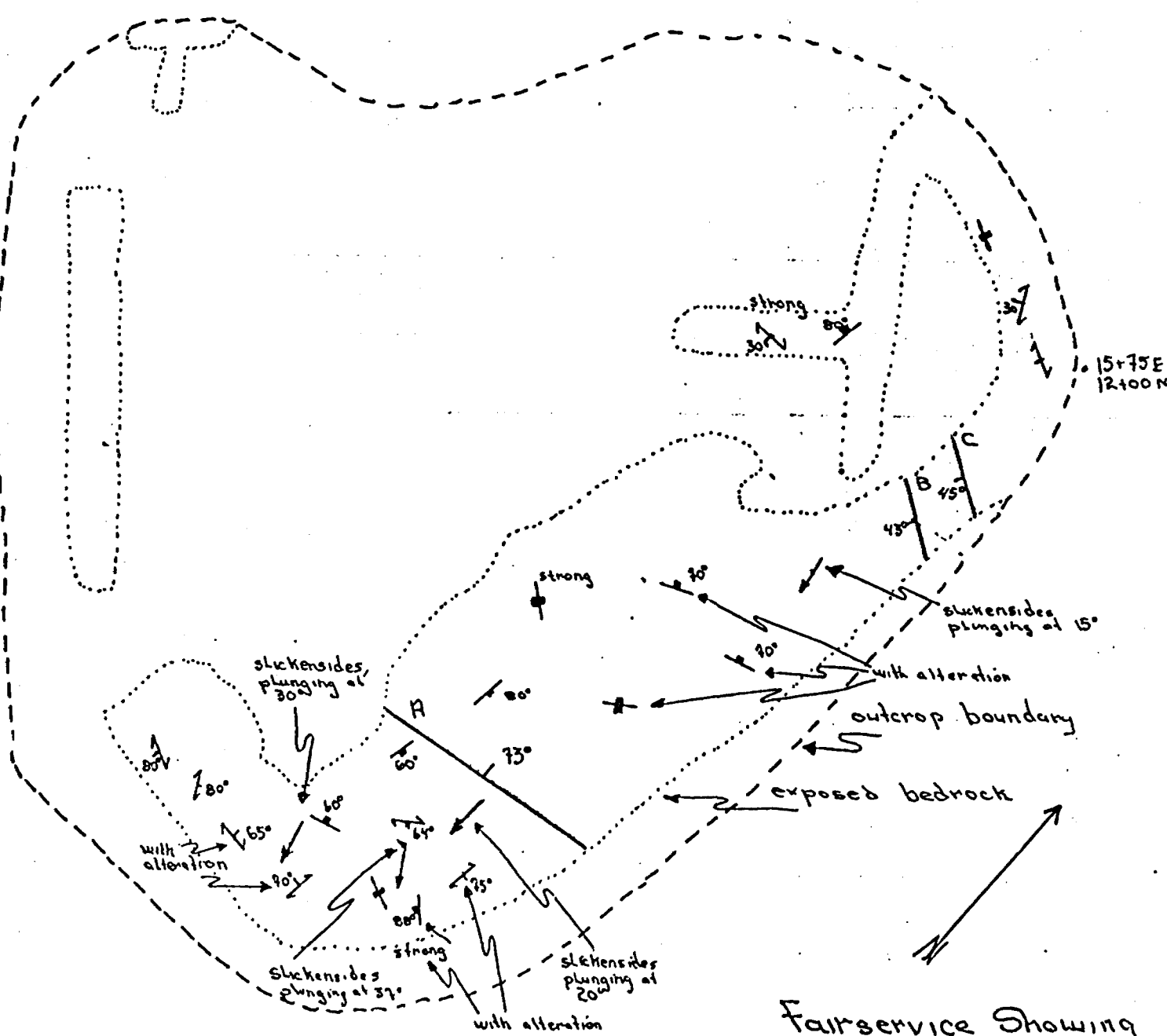
SAMPLE NO.	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
2246	.002	(5' chip) 8" quartz vein	60+00E, 25+00S	Figure #11
2247	Nil	boulder near quartz vein (grab)	36+00E, 16+10N	1980 Grid
2248	Nil	lft. wide quartz vein	39+60E, 0+00	1980 Grid
2249	Nil	massive, bleb-like quartz	44+00W, 21+00N	Grid Map #06418
2250	Nil	(5' chip) alteration zone	44+00W, 21+00N	Grid Map #06418
2251	Nil	pyritic siliceous zone from trench	next to line- cutters camp	Grid Map #06418
2252	Nil	(5' chip) pyritic alteration	33+00W, 13+00N	Grid Map #06418
2253	Nil	strong, sericite, sausserite (5' chip)	16+00W, 33+00N	Grid Map #06418
2254	Nil	strong, sericite, sausserite (5' chip)	16+00W, 33+00N	Grid Map #06418
2255	Nil	lightly altered granodiorite	7+50E, 15+70N	1980 Grid Map
2256	.003	light alteration	16+00E, 14+00N	1980 Grid Map
2257	Nil	pyrite quartz diorite	36+00W, 9+50N	Grid Map #06418
2258	Nil	pyrite quartz diorite	36+00W, 9+40N	Grid Map #06418
2259	Nil	pyrite zone	36+00W, 10+50N	Grid Map #06418
2260	Nil	pyrite mixed contact zone	36+00W, 14+00N	Grid Map #06418
2261	Nil	pyrite diorite	40+00W, 14+00N	Grid Map #06418
2262	Nil	pyrite diorite	40+00W, 13+00N	Grid Map #06418
2263	Nil	pyrite from old trench	40+00W, 10+00N	Grid Map #06418
2264	Nil	pyrite in cherty granodiorite	40+00W, 8+00N	Grid Map #06418

ASSAY SAMPLES

SAMPLE NO.	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
2265	Trace	2" quartz vein	12+00W, 84+00N	Grid Map #06418
2266	.03	pyrite zone in granodiorite	16+00W, 48+00N	Grid Map #06418
2267	.02	pyrite quartz vein in diorite	20+00W, 89+00N	Grid Map #06418
2268	Trace	disseminated pyrite in white granodiorite	24+00W, 62+00N	Grid Map #06418
2269	Trace	fine grained siliceous G.D. with pyrite	24+00W, 84+00N	Grid Map #06418
2270	Trace	mylonite zone	28+00W, 67+50N	Grid Map #06418
2271	Trace	mylonite zone	28+00W, 52+50N	Grid Map #06418
2272	Trace	altered zone	28+00W, 70+00N	Grid Map #06418
2273	Trace	pyrite milonite zone	36+00W, 49+50N	Grid Map #06418
2274	.04	pyrite, sericitic alteration	8+00E, 20+00N	Grid Map #06418
2275	Trace	quartz vein	23+00E, 20+00N	Grid Map #06418
2276	Trace	altered zone below quartz vein	23+00E, 20+00N	Grid Map #06418
2277	Trace	altered zone: north	23+00E, 20+00N	Grid Map #06418
2278	Trace	quartz vein	25+00E, 20+00N	Grid Map #06418
2279	Trace	altered zone	25+00E, 20+00N	Grid Map #06418
2280	.04	mylonite zone	31+00E, 20+20N	Grid Map #06418
2281	Trace	unaltered granodiorite	31+00E, 20+20N	Grid Map #06418
2282	Trace	altered zone	32+00E, 17+80N	1980 Grid Map
2283	.01	pyrite in granodiorite	32+00E, 17+80N	1980 Grid Map
2284	.06	alteration zone (top)	32+00E, 17+80N	1980 Grid Map
2285	Trace	pyrite in granodiorite	27+00W, 27+00N	Grid Map #06418
2286	Trace	Pine Center alteration	17+60E, 14+30N	Figure #3

SAMPLE NO.	RESULTS (oz/ton Au)	DESCRIPTION	LOCATION	MAP REFERENCE NO.
2287	Trace	Pine Center alteration	17+00E, 14+00N	Figure #3
2288	Trace	Pine Center alteration	17+50E, 13+00N	Figure #3
2289	Trace	Pine Center alteration	17+50E, 13+00N	Figure #3
2290	Trace	sericite-mylonite zone, east baseline altered zone	30+00E, 21+60N	Grid Map #06418
2291	Trace	pyrite-sauserite granodiorite	30+50E, 21+40N	Grid Map #06418
2292	Trace	quartz vein and pyritic host rock altered (5' chip)	30+80E, 21+60N	Grid Map #06418
2293	Trace	rubbly outcrop	32+00E, 19+60N	1980 Grid Map
2294	Trace		Bluff Point Lake	
2295	.02		Bluff Point Lake	
2296	Trace		Bluff Point Lake	

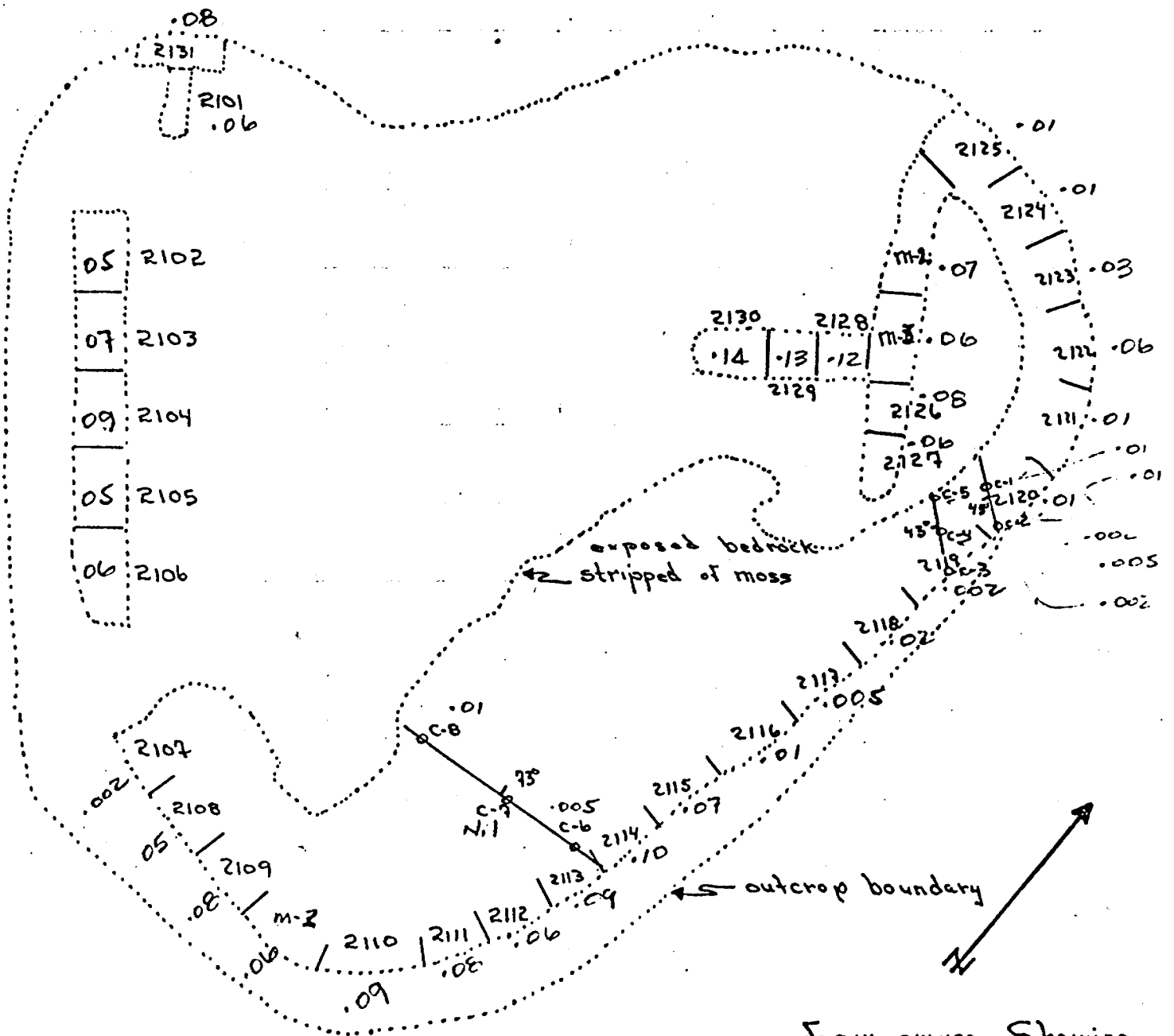




Joints — —  
 Solution, possibly joints — —

Fairservice Showing  
 Line 1600 E  
 Geology  
 Plan View  
 Scale: 1" = 10'  
 Date: May 26, 1981

Figure 1



Aug 0.06

Fairservice Showing -  
 Line 1600 E  
 Location of Samples  
 for Assay - m-1 - m-3  
 - 2101 - 2131  
 - c-1 - c-8

Scale: 1" = 10'  
 Date: May 24, 1981

Figure 2

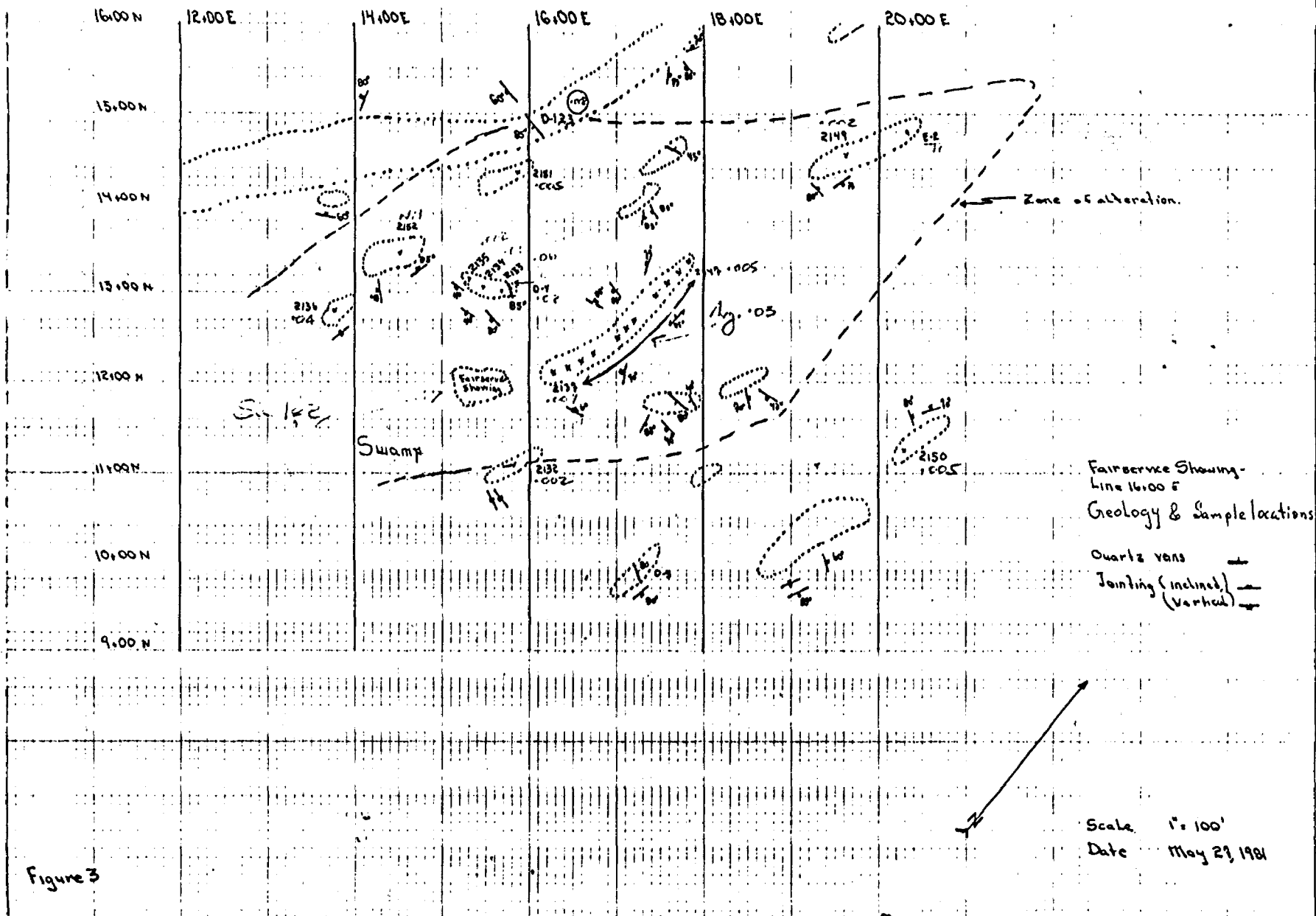


Figure 3

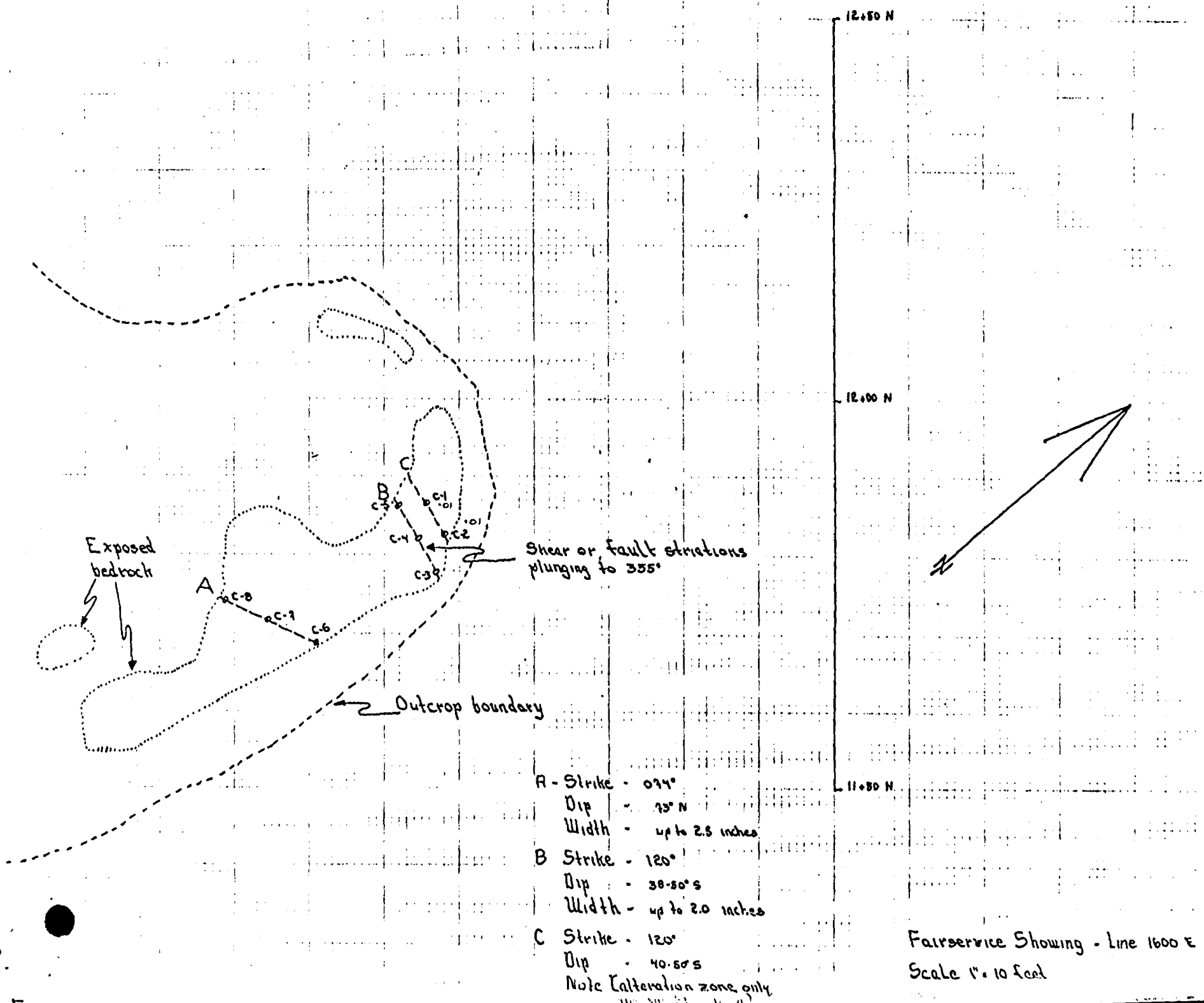


Figure 4

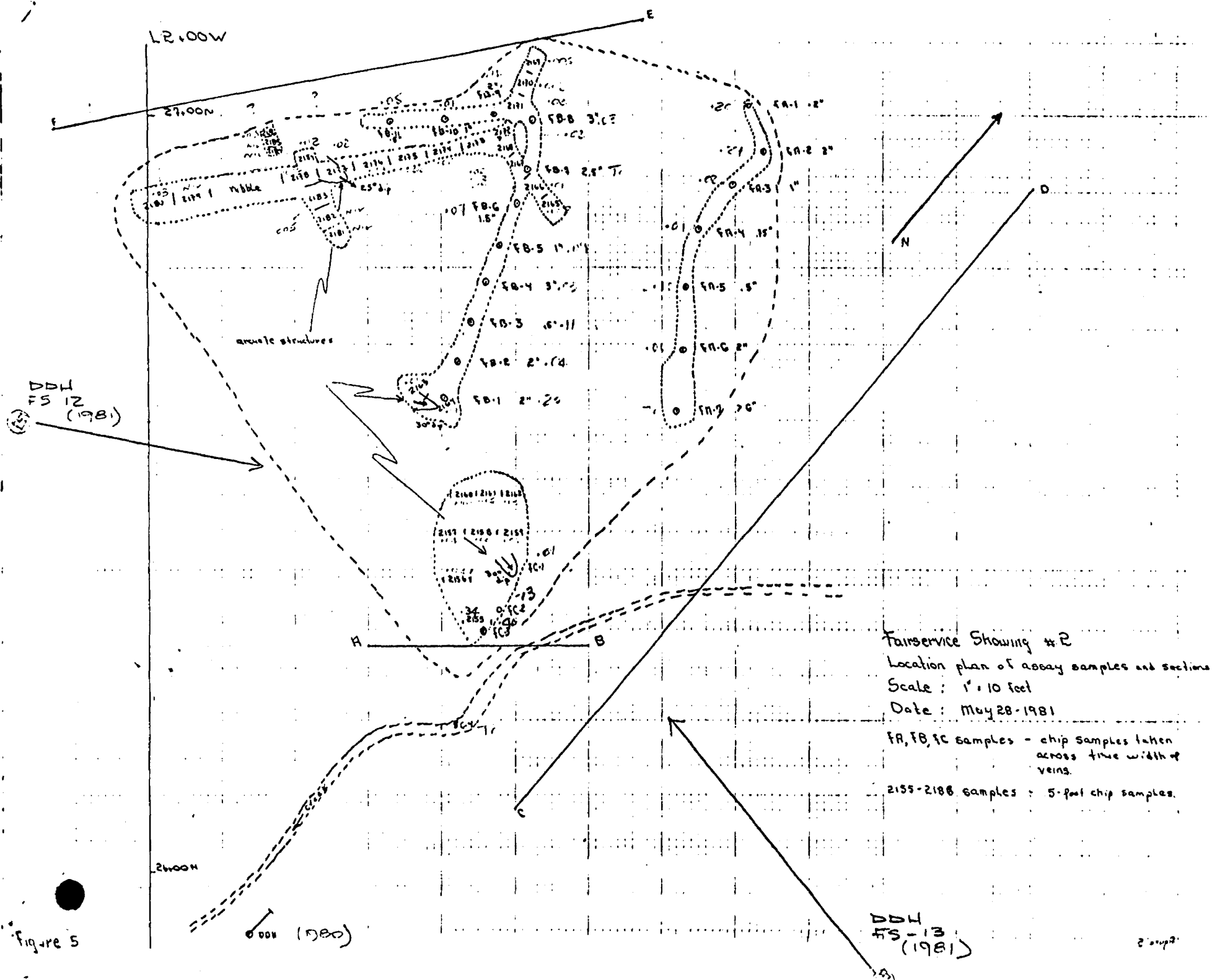


Figure 5

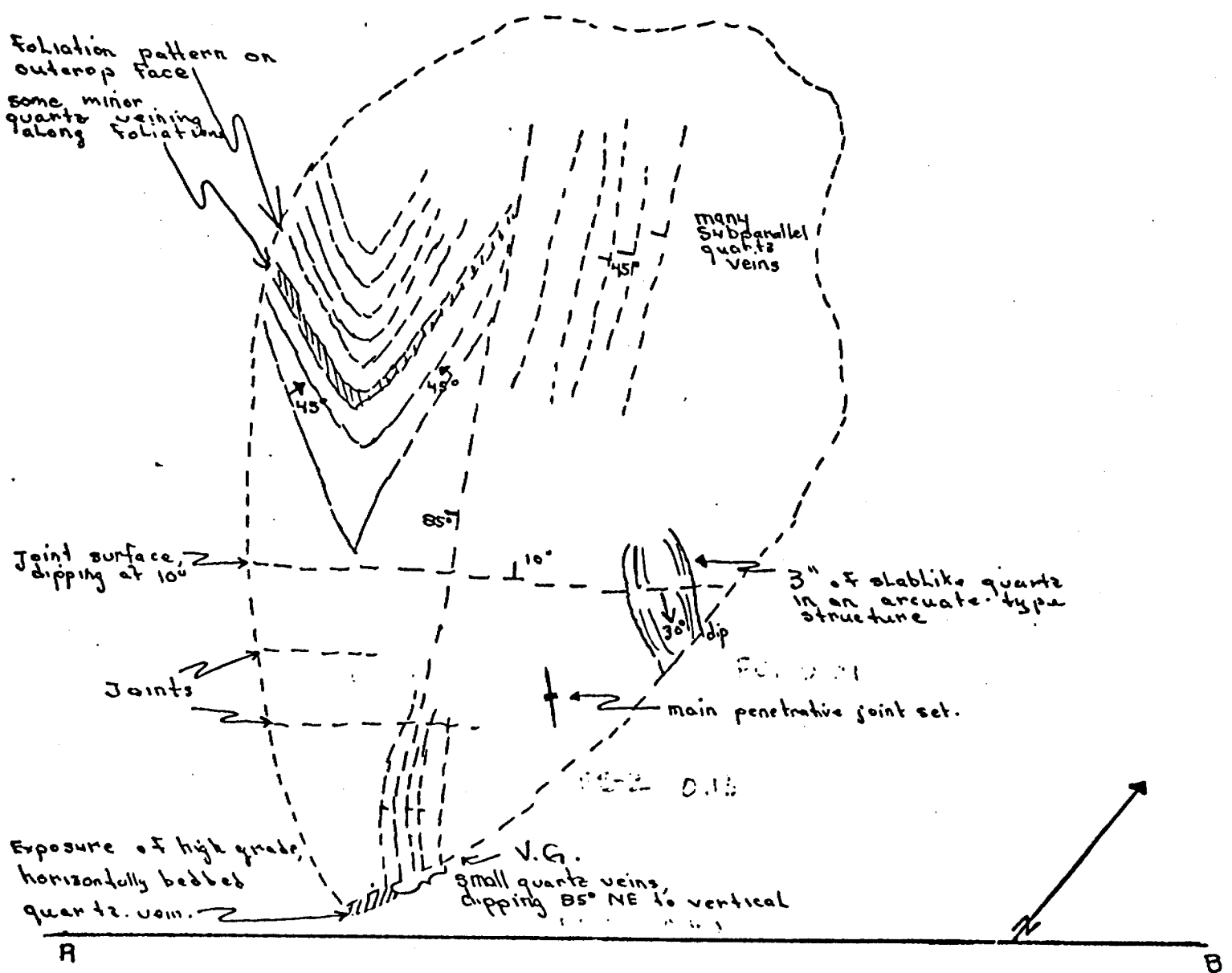


Figure 6

Fairservice Showing 2.  
 Section A-B  
 Scale: 1"=2' (approx)  
 Date: May 28, 1981

Surface plan of outcrop face.

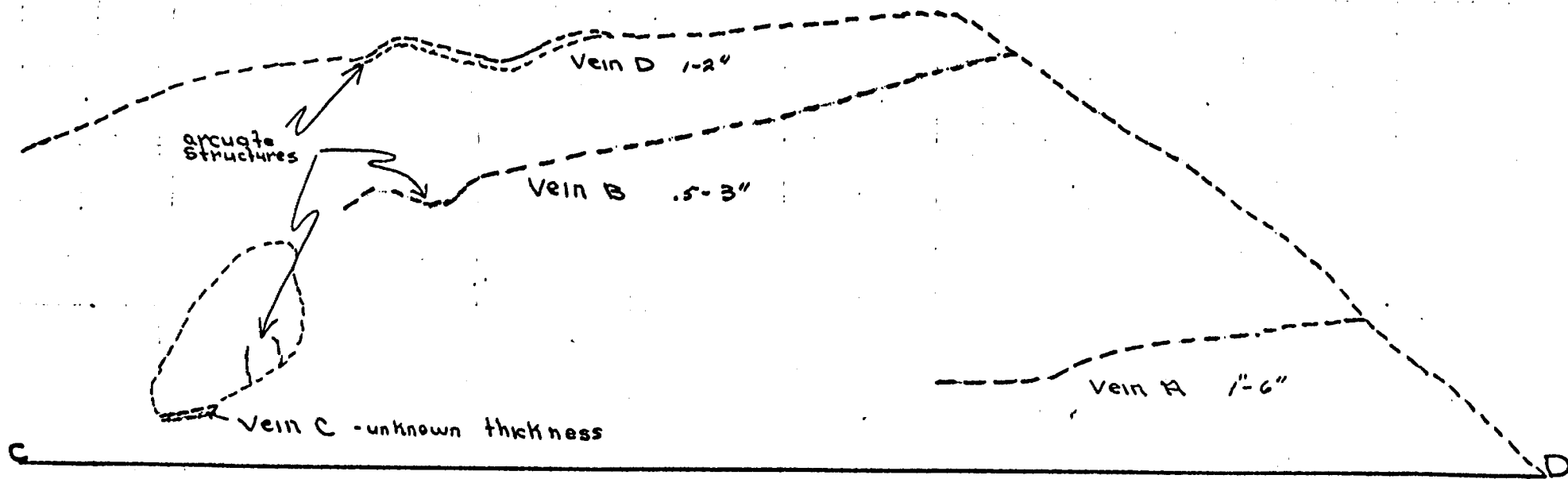


Figure 8

Fairservice Showing 2  
Section C-D  
Scale 1"=10' (approx)  
Date: May 28, 1981  
Looking toward 270°

Line 4.00 W

35+80 N

All exposures, diorite, some extensive sau

Rubble

1'-2' quartz vein - 070°-30°S

2196  
.02

← 2197  
.02

2198 .05  
30°

2199 .02  
40°

2200 .01  
30°

2201 .005

2202 .04

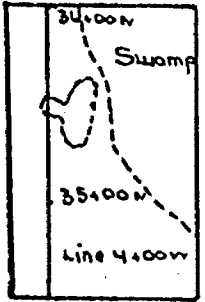
060°-40°S

11" thick quartz vein

.75" quartz vein with alteration  
137°-80° NE

12" thick Quartz vein  
0°-30°E

.5" vein with alteration  
160°-80°E



Index map  
Scale 1" = 100'

Both Large quartz veins have fractured along their alteration planes due to weathering, and although are not bedrock, they are from the immediate area.

Lucas Showing  
Line 4+00 W, 35+60 N  
Scale: 1" = 10'  
Date: May 28, 1981

Figure 9.

35+00 N

— 5 foot chip samples  
⊙ grab samples from veins

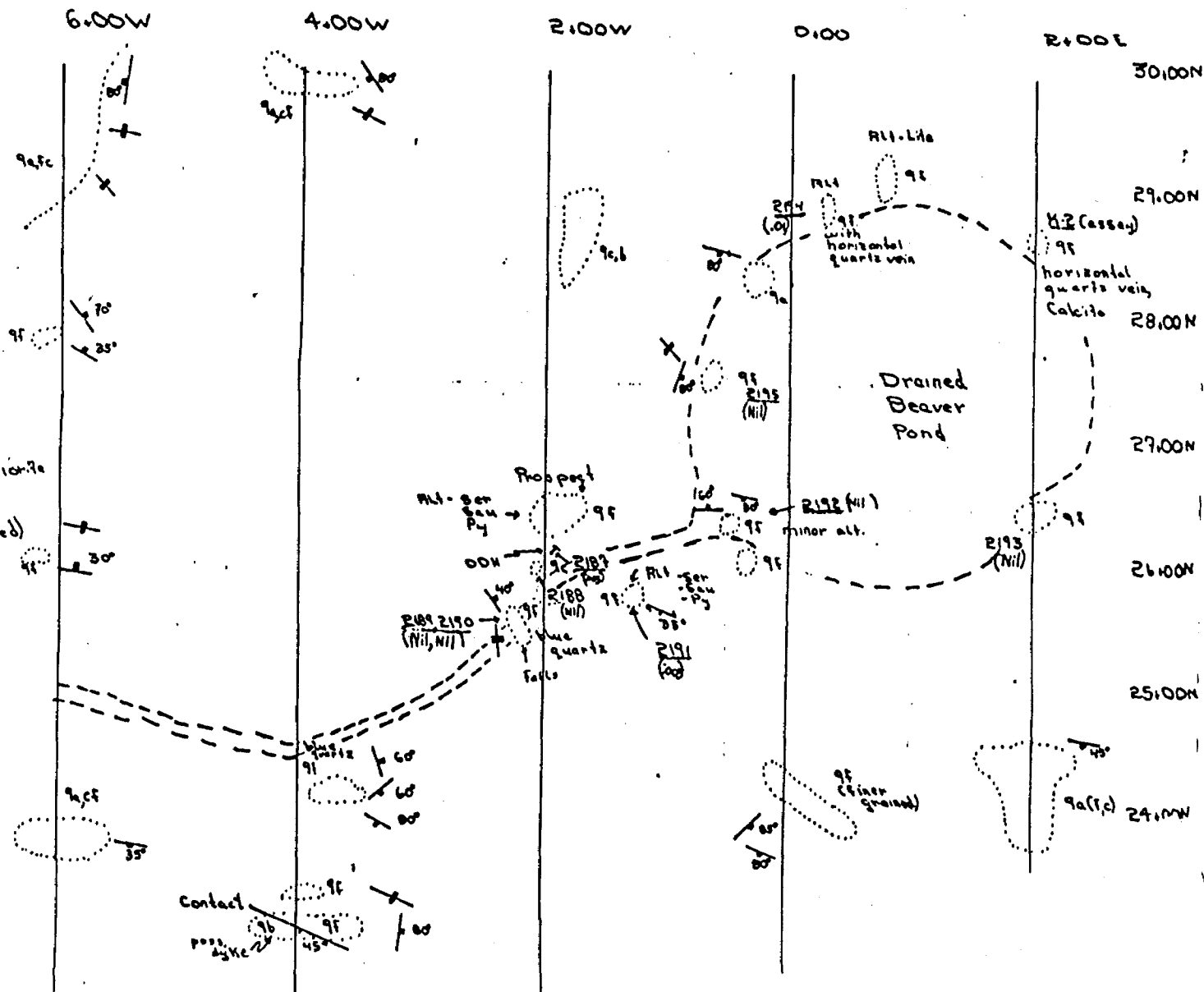


Fairservice Option  
 Number 2 Showing  
 Detail Mapping and  
 Assay Locations  
 Date: June 18, 1981  
 Scale: 1" = 100'

Legend

Lawrence Lake Batholith

- Mixed contact phase
- Diorite hornblende diorite
- Diorite hornblende quartz diorite
- Trondhjemite
- ✕ Joints (vertical, inclined)
- ↔ Foliation (vertical, inclined)
- Assay sample
- All. Alteration
- Py Pyritization
- Ser Sericitization
- Sau Sausseritization
- Mog Magnetite





52F03NW0031 2.5244 BLUFFPOINT LAKE

900

W8201-129

The Mi

Type of Survey(s) <b>GEOLOGICAL</b>		Township or Area <b>BLUFF POINT LAKE M2471</b>	
Claim Holder(s) <b>NORANDA EXPLORATION COMPANY, LIMITED</b>		Prospector's Licence No. <b>A34387</b>	
Address <b>BOX 2656, THUNDER BAY, ONT. P7B 5G2</b>			
Survey Company <b>SELCO INC.</b>	Date of Survey (from & to) Day   Mo.   Yr.   Day   Mo.   Yr. <b>MAY 80   JUNE 81</b>		Total Miles of line Cut
Name and Address of Author (of Geo-Technical report) <b>R.T. LUCAS, W.C. KERR, 1173 ROLAND ST., THUNDER BAY, ONT.</b>			

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
For each additional survey: using the same grid: Enter 20 days (for each)	Geological	20
	Geochemical	
Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	Geological	
	Geochemical	
Airborne Surveys	Geophysical	Days per Claim
<b>MINING LANDS SECTION</b> Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
K	486956	20	K	486993	20
	486957	20		486994	20
	486958	20		486995	20
	486959	20	C		
	486960	20		486997	20
	486961	20			
	486962	20		533115	20
	486963	20		533116	20
	486964	20		533117	20
	486965	20		533118	20
	486966	20			
	486967	20		533182	20
	486968	20		533183	20
	486969	20		533184	20
	486970	20		533185	20
	486971	20		533186	20
C				533187	20
	486976	20		533188	20
				533189	20
	486989	20		533190	20
	486990	20		533191	20
	486991	20			
	486992	20			

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 OCT 15 1982

Expenditures (excludes power stripping)

Type of Work Performed KEN MINING DIV.
Performed on Claim(s) OCT 12 1982
Calculation of Expenditures Total Expenditures \$ + 15 = Total Days Credits

486956

Total number of mining claims covered by this report of work. **39**

Instructions  
 Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only		RECORDING
Total Days Credits Recorded	Date Recorded	Mining Recorder
780	OCT 12/82	<i>W. H. ...</i>
Date Approved as Recorded	Branch Director	
83:07:12	<i>[Signature]</i>	

Date	Recorded Holder or Agent (Signature)
OCT 9 1982	<i>Paul Nelson</i>

Certification Verifying Report of Work  
 I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying	
PAUL NIELSON, BOX 2656, THUNDER BAY, ONT. P7B 5G2	
Date Certified	Certified by (Signature)
OCT. 9, 1982	<i>Paul Nelson</i>



**Report of Work**  
(Geophysical, Geological,  
Geochemical and Expenditures)

Instructions: - Please type or print. **#130**  
 - If number of mining claims traversed exceeds space on this form, attach a list.  
 Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.  
 - Do not use shaded areas below.

**W8201-130**

The Mining Act

**2.5244**

Type of Survey(s) <b>GEOLOGICAL</b>		Township or Area <b>BLUFF POINT LAKE M2471</b>	
Claim Holder(s) <b>NORANDA EXPLORATION COMPANY, LIMITED</b>		Prospector's Licence No. <b>A 34387</b>	
Address <b>BOX 2656, THUNDER BAY, ONT.</b>			
Survey Company <b>SELCO INC.</b>		Date of Survey (from & to) <b>80 JUNE 81</b> Day <b>MA&amp;</b>   Yr.   Day   Mo.   Yr.	Total Miles of line cut <b>1.01</b>
Name and Address of Author (of Geo-Technical report) <b>R.T. LUCAS, W.C. KERR, 1173 ROLAND ST., THUNDER BAY, ONT.</b>			

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
For each additional survey: using the same grid: Enter 20 days (for each)	Geological	40
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Geological	
	Geochemical	

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim		Expend. Days Cr.
	Number		
K	486972		40
	486973		40
	486974		40
	486975		40
	486996		40

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**OCT 15 1982**  
**MINING LANDS SECTION**  
**KENORA MINING DIV.**  
**OCT 12 1982**  
**AM 7:30 10 11 12 1 2 3 4 5 PM**

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$ 200 ÷ 15 = Total Days Credits 13

Instructions  
 Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

**486956**

Total number of mining claims covered by this report of work. **5**

For Office Use Only		Mining Recorder	
Total Days Recorded	Date Recorded	Recorded	Date
<b>200</b>	<b>Oct. 12/82</b>	<i>[Signature]</i>	
	Date Approved as Recorded	Branch Director	Date
	<b>July 22/83</b>	<i>[Signature]</i>	

Date **OCT. 9, 1982**

Recorded Holder or Agent (Signature) *[Signature]*

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying  
**PAUL NIELSON**  
**BOX 2656, THUNDER BAY, ONT. P7B 5G2**

Date Certified **Oct. 9, 1982**

Certified by (Signature) *[Signature]*



Ministry of Natural Resources

File \_\_\_\_\_

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL  
TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT  
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT  
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) GEOLOGICAL  
Township or Area Bluff Point Lake M2471  
Claim Holder(s) Noranda Exploration Company, Limited  
Suite 400-55 Yonge Street, Toronto M5E 1J4  
Survey Company Noranda Exploration Company, Limited  
Author of Report R.T. Lucas and W.C. Kerr  
Address of Author 1173 Roland St., Thunder Bay, Ontario  
Covering Dates of Survey January/80 to June/81  
(linecutting to office)  
Total Miles of Line Cut 1.01

**MINING CLAIMS TRAVERSED**  
List numerically

K	486972
(prefix)	(number)
	486973
	486974
	486975
	486996

**RECEIVED**  
NOV 24 1982

**MINING LANDS SECTION**

TOTAL CLAIMS 5

If space insufficient, attach list

<u>SPECIAL PROVISIONS</u> <u>CREDITS REQUESTED</u>	Geophysical	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	-Electromagnetic _____	
	-Magnetometer _____	
	-Radiometric _____	
	-Other _____	
ENTER 20 days for each additional survey using same grid.	Geological <u>40</u>	
	Geochemical _____	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)  
Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: Nov. 9/82 SIGNATURE: Paul Lucas  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications \_\_\_\_\_

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

# GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS — If more than one survey, specify data for each type of survey

Number of Stations \_\_\_\_\_ Number of Readings \_\_\_\_\_

Station interval \_\_\_\_\_ Line spacing \_\_\_\_\_

Profile scale \_\_\_\_\_

Contour interval \_\_\_\_\_

MAGNETIC

Instrument \_\_\_\_\_

Accuracy — Scale constant \_\_\_\_\_

Diurnal correction method \_\_\_\_\_

Base Station check-in interval (hours) \_\_\_\_\_

Base Station location and value \_\_\_\_\_

ELECTROMAGNETIC

Instrument \_\_\_\_\_

Coil configuration \_\_\_\_\_

Coil separation \_\_\_\_\_

Accuracy \_\_\_\_\_

Method:  Fixed transmitter  Shoot back  In line  Parallel line

Frequency \_\_\_\_\_  
(specify V.L.F. station)

Parameters measured \_\_\_\_\_

Instrument \_\_\_\_\_

Scale constant \_\_\_\_\_

Corrections made \_\_\_\_\_

Base station value and location \_\_\_\_\_

Elevation accuracy \_\_\_\_\_

Instrument \_\_\_\_\_

Method  Time Domain  Frequency Domain

Parameters — On time \_\_\_\_\_ Frequency \_\_\_\_\_

— Off time \_\_\_\_\_ Range \_\_\_\_\_

— Delay time \_\_\_\_\_

— Integration time \_\_\_\_\_

Power \_\_\_\_\_

Electrode array \_\_\_\_\_

Electrode spacing \_\_\_\_\_

Type of electrode \_\_\_\_\_

INDUCED POLARIZATION  
RESISTIVITY

SELF POTENTIAL

Instrument \_\_\_\_\_ Range \_\_\_\_\_

Survey Method \_\_\_\_\_

Corrections made \_\_\_\_\_

RADIOMETRIC

Instrument \_\_\_\_\_

Values measured \_\_\_\_\_

Energy windows (levels) \_\_\_\_\_

Height of instrument \_\_\_\_\_ Background Count \_\_\_\_\_

Size of detector \_\_\_\_\_

Overburden \_\_\_\_\_

(type, depth -- include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey \_\_\_\_\_

Instrument \_\_\_\_\_

Accuracy \_\_\_\_\_

Parameters measured \_\_\_\_\_

Additional information (for understanding results) \_\_\_\_\_

AIRBORNE SURVEYS

Type of survey(s) \_\_\_\_\_

Instrument(s) \_\_\_\_\_

(specify for each type of survey)

Accuracy \_\_\_\_\_

(specify for each type of survey)

Aircraft used \_\_\_\_\_

Sensor altitude \_\_\_\_\_

Navigation and flight path recovery method \_\_\_\_\_

Aircraft altitude \_\_\_\_\_ Line Spacing \_\_\_\_\_

Miles flown over total area \_\_\_\_\_ Over claims only \_\_\_\_\_

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken \_\_\_\_\_

Total Number of Samples \_\_\_\_\_

Type of Sample \_\_\_\_\_  
(Nature of Material)

Average Sample Weight \_\_\_\_\_

Method of Collection \_\_\_\_\_

Soil Horizon Sampled \_\_\_\_\_

Horizon Development \_\_\_\_\_

Sample Depth \_\_\_\_\_

Terrain \_\_\_\_\_

Drainage Development \_\_\_\_\_

Estimated Range of Overburden Thickness \_\_\_\_\_

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis \_\_\_\_\_

General \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ANALYTICAL METHODS

Values expressed in:      per cent      
   p. p. m.      
   p. p. b.   

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others \_\_\_\_\_

Field Analysis (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Field Laboratory Analysis

No. (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Commercial Laboratory (\_\_\_\_\_ tests)

Name of Laboratory \_\_\_\_\_

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

General \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Ministry of Natural Resources

File \_\_\_\_\_

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL  
TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT  
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT  
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Type of Survey(s) GEOLOGICAL  
Township or Area Bluff Point Lake M2471  
Claim Holder(s) Noranda Exploration Company, Limited  
Suite 400-55 Yonge St., Toronto M5E 1J4  
Survey Company Selco Inc.  
Author of Report R.T. Lucas and W. C. Kerr  
Address of Author 1173 Roland St., Thunder Bay, Ontario  
Covering Dates of Survey May/80 to June/81  
(linecutting to office)  
Total Miles of Line Cut \_\_\_\_\_

MINING CLAIMS TRAVERSED  
List numerically

K (prefix)	486956 (number)
.....	486957
.....	486958
.....	486959
.....	486960
.....	486961
.....	486962
.....	486963
.....	486964
.....	486965
.....	486966
.....	486967
.....	486968
.....	486969
.....	486970
.....	486971
.....	486976
.....	486989
.....	486990
.....	486991
.....	486992
.....	486993
.....	486994
.....	486995
.....	486997
.....	533115
.....	533116
.....	533117
.....	533118
.....	533182
.....	533183
.....	533184
.....	533185
.....	533186
.....	533187
.....	533188
.....	533189
.....	533190
.....	533191

If space insufficient, attach list

**RECEIVED**

MINING LANDS SECTION

TOTAL CLAIMS 39

SPECIAL PROVISIONS  
CREDITS REQUESTED

DAYS  
per claim

ENTER 40 days (includes  
line cutting) for first  
survey.  
ENTER 20 days for each  
additional survey using  
same grid.

Geophysical  
-Electromagnetic \_\_\_\_\_  
-Magnetometer \_\_\_\_\_  
-Radiometric \_\_\_\_\_  
-Other \_\_\_\_\_  
Geological 20  
Geochemical \_\_\_\_\_

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: Nov. 9/82 SIGNATURE: Paul Threlkeld  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications \_\_\_\_\_

Previous Surveys

File No.	Type	Date	Claim Holder
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

OFFICE USE ONLY



**GEOPHYSICAL TECHNICAL DATA**

GROUND SURVEYS -- If more than one survey, specify data for each type of survey

Number of Stations \_\_\_\_\_ Number of Readings \_\_\_\_\_

Station interval \_\_\_\_\_ Line spacing \_\_\_\_\_

Profile scale \_\_\_\_\_

Contour interval \_\_\_\_\_

**MAGNETIC**

Instrument \_\_\_\_\_

Accuracy -- Scale constant \_\_\_\_\_

Diurnal correction method \_\_\_\_\_

Base Station check-in interval (hours) \_\_\_\_\_

Base Station location and value \_\_\_\_\_

**ELECTROMAGNETIC**

Instrument \_\_\_\_\_

Coil configuration \_\_\_\_\_

Coil separation \_\_\_\_\_

Accuracy \_\_\_\_\_

Method:  Fixed transmitter  Shoot back  In line  Parallel line

Frequency \_\_\_\_\_  
(specify V.L.F. station)

Parameters measured \_\_\_\_\_

**GRAVITY**

Instrument \_\_\_\_\_

Scale constant \_\_\_\_\_

Corrections made \_\_\_\_\_

Base station value and location \_\_\_\_\_

Elevation accuracy \_\_\_\_\_

**INDUCED POLARIZATION  
RESISTIVITY**

Instrument \_\_\_\_\_

Method  Time Domain  Frequency Domain

Parameters -- On time \_\_\_\_\_ Frequency \_\_\_\_\_

- Off time \_\_\_\_\_ Range \_\_\_\_\_

- Delay time \_\_\_\_\_

- Integration time \_\_\_\_\_

Power \_\_\_\_\_

Electrode array \_\_\_\_\_

Electrode spacing \_\_\_\_\_

Type of electrode \_\_\_\_\_

SELF POTENTIAL

Instrument \_\_\_\_\_ Range \_\_\_\_\_

Survey Method \_\_\_\_\_

Corrections made \_\_\_\_\_

RADIOMETRIC

Instrument \_\_\_\_\_

Values measured \_\_\_\_\_

Energy windows (levels) \_\_\_\_\_

Height of instrument \_\_\_\_\_ Background Count \_\_\_\_\_

Size of detector \_\_\_\_\_

Overburden \_\_\_\_\_

(type, depth -- include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey \_\_\_\_\_

Instrument \_\_\_\_\_

Accuracy \_\_\_\_\_

Parameters measured \_\_\_\_\_

Additional information (for understanding results) \_\_\_\_\_

AIRBORNE SURVEYS

Type of survey(s) \_\_\_\_\_

Instrument(s) \_\_\_\_\_

(specify for each type of survey)

Accuracy \_\_\_\_\_

(specify for each type of survey)

Aircraft used \_\_\_\_\_

Sensor altitude \_\_\_\_\_

Navigation and flight path recovery method \_\_\_\_\_

Aircraft altitude \_\_\_\_\_ Line Spacing \_\_\_\_\_

Miles flown over total area \_\_\_\_\_ Over claims only \_\_\_\_\_

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken \_\_\_\_\_

Total Number of Samples \_\_\_\_\_

Type of Sample \_\_\_\_\_  
(Nature of Material)

Average Sample Weight \_\_\_\_\_

Method of Collection \_\_\_\_\_

Soil Horizon Sampled \_\_\_\_\_

Horizon Development \_\_\_\_\_

Sample Depth \_\_\_\_\_

Terrain \_\_\_\_\_

Drainage Development \_\_\_\_\_

Estimated Range of Overburden Thickness \_\_\_\_\_

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis \_\_\_\_\_

General \_\_\_\_\_

ANALYTICAL METHODS

Values expressed in: per cent   
p. p. m.   
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others \_\_\_\_\_

Field Analysis (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Field Laboratory Analysis

No. (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Commercial Laboratory (\_\_\_\_\_ tests)

Name of Laboratory \_\_\_\_\_

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

General \_\_\_\_\_

May 27, 1983

2.5244

Noranda Exploration Company Limited  
Box 2656,  
Thunder Bay, Ontario  
P7B 5G2

Attention: Mr. J. Tomchick

RE: Geological Survey submitted on Mining Claims K486956  
et al in the area of Bluff Point Lake

---

We are endeavouring to compile a list of qualification of those persons who sign reports and maps of geotechnical surveys submitted to this Ministry for assessment work credits. It would be appreciated therefore, if you would please furnish brief resumes of the qualifications of Mr. T.T. Lucas, Mr. W.C. Kerr and Mr. Paul Neilson.

Enclosed is a copy titled "Qualifications of Author of Geotechnical Survey report submitted for assessment work credits" for your reference.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1380

R. Pitchette;mc  
Encls.

cc: Mining Recorder  
Kenora, Ontario

129, 130

1982 12 29

2.5244

Mining Recorder  
Ministry of Natural Resources  
808 Robertson Street  
Box 5160  
Kenora, Ontario  
P9N 3X9

Dear Sir:

We have received reports and maps for a Geological Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims K 486956 et al in the area of Bluff Point Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1380

DW:sc

cc: Noranda Exploration Co Ltd  
Thunder Bay, Ontario

cc: R.T. Lucas,  
W.C. Kerr,  
Thunder Bay, Ontario

Noranda Exploration Company, Limited

(no personal liability)

P.O. Box 2656

Thunder Bay, Ontario P7B 5G2

**noranda**

November 25, 1982

Mr. E. F. Anderson, Director  
Lands Administration Branch  
Ontario Ministry of Natural Resources  
Room 6450, Whitney Block  
Queen's Park  
Toronto, Ontario  
M7A 1W3

**RECEIVED**

NOV 29 1982

Dear Sir:

**MINING LANDS SECTION**

Re: Claim Numbers K486956, et al

Find enclosed reports, maps and Technical Data Statements for a geological survey reported on these claims.

The survey was performed by Selco and our geologist, Paul Nielsen, has signed where appropriate on their behalf. We trust this is adequate.

Yours truly,

*Jim Tomchick*

Jim Tomchick

JT:cmb

Enclosures

c.c. Wade Mathews ✓

File 617

				2.5244	
	Geol.		Geol.		Geol.
K-486956	✓	K-486972 ↑	1/2	K-533117	✓
57	✓	73 ↓	1/2	18	1/4 (Lake)
58	✓	74 ↓	1/2	533182	✓
59	✓	75	1/4	83	✓
60	✓	76	✓	84	✓
61	✓	486989	1/4	85	✓
62	✓	90	✓	86	✓
63	✓	91	✓	87	✓
64	✓	92	✓	88	✓
65	✓	93	✓	89	✓
66	1/4	94	✓	90	✓
67	1/4	95	✓	533191	✓
68	✓	(cont.) 96	3/4		
69	✓	486997	NV		
70	✓	533115	✓		
486971	✓	16	✓		
<p>- Good overall mapping, and detailed report with photos, Rose diagrams, etc. Accepted</p>					
D.K.					

LAWRENCE LAKE M-2579

AREA OF  
**BLUFFPOINT LAKE**

DISTRICT OF  
KENORA

KENORA  
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- |                       |        |
|-----------------------|--------|
| PATENTED LAND         | ⊕      |
| CROWN LAND SALE       | C.S.   |
| LEASES                | ⊙      |
| LOCATED LAND          | Loc.   |
| LICENSE OF OCCUPATION | L.O.   |
| MINING RIGHTS ONLY    | M.R.O. |
| SURFACE RIGHTS ONLY   | S.R.O. |
| ROADS                 | —      |
| IMPROVED ROADS        | —      |
| KING'S HIGHWAYS       | —      |
| RAILWAYS              | —      |
| POWER LINES           | —      |
| MARSH OR MUSKEG       | —      |
| MINES                 | —      |

NOTES

400' Surface Rights Reservation along the shores of all Lakes and Rivers.

DATE OF ISSUE  
JUL - 6 1983  
Ministry of Natural Resources  
TORONTO

NATIONAL TOPOGRAPHIC SERIES 52F3

PLAN NO. **M-2471**

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH

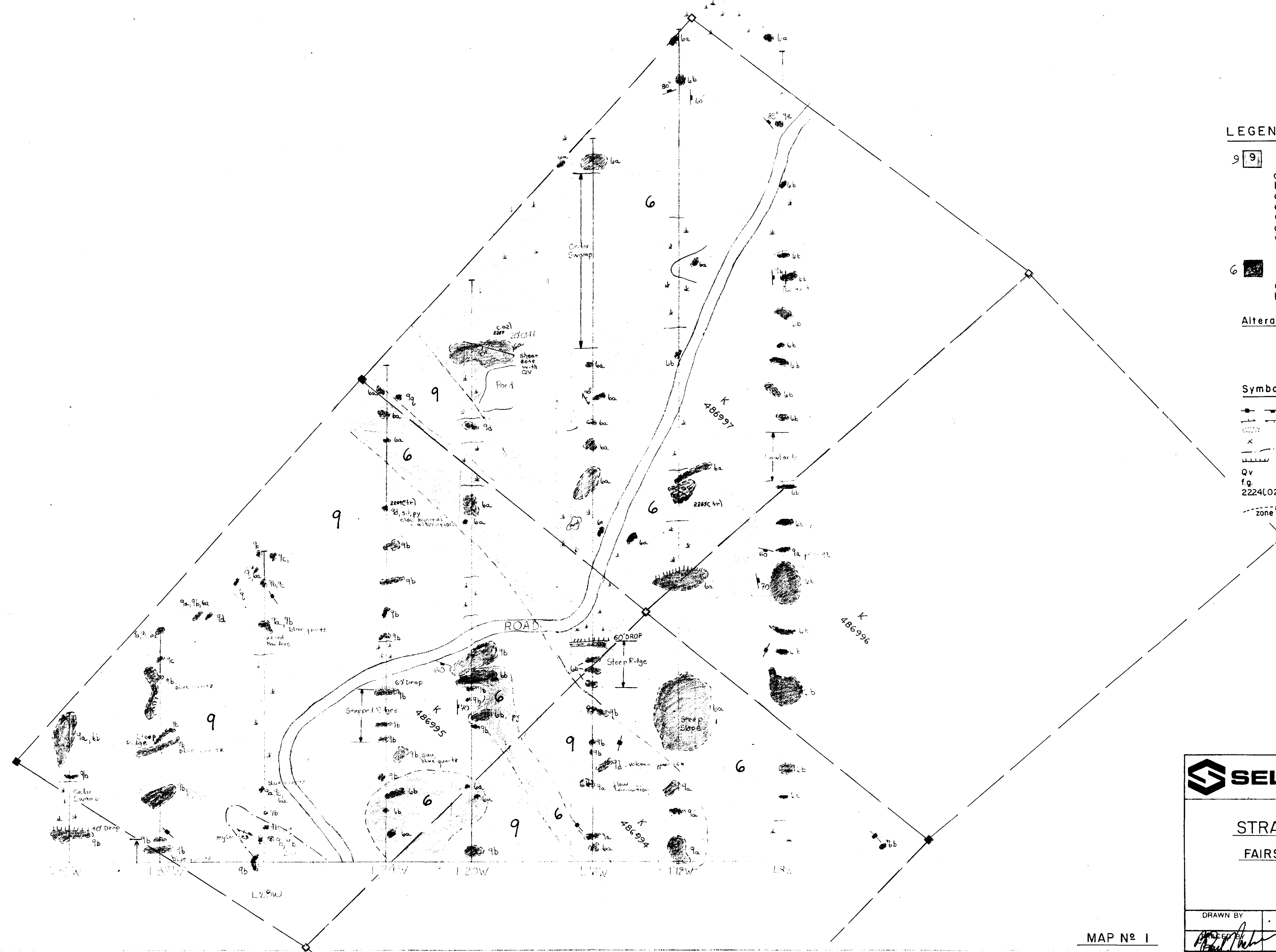
BROOKS LAKE M-2473

NAPANEE LAKE M-2469

KAIARSKONS LAKE M-2430







**LEGEND**

- 9 [9] - LAWRENCE LAKE BATHOLITH
- a - mixed contact zone
  - b - pink feldspathic granodiorite
  - c - white granodiorite
  - d - cherty weathering chilled granodiorite
  - e - impure granodiorite
  - g - feldspar porphyry, porphyry dikes
  - v - aplitic and felsite dikes
- 6 [6] - MAFIC INTRUSIVE ROCKS
- a - biotite-hornblende diorite
  - b - biotite-hornblende quartz diorite

Alteration: py - pyrite  
 ser - sericite  
 sau - saussurite  
 sil - silification

**Symbols**

- Joints, vertical, dipping
- Foliation, vertical, dipping
- Outcrop boundary
- x - Small outcrop
- Geological boundary
- Cliff face
- Qv - Quartz vein
- f.g. - Fine grained
- 2224(02) - Assay number, value in oz/ton
- zone A - Alteration zones (approx.)

**SELCO INC.** EXPLORATION

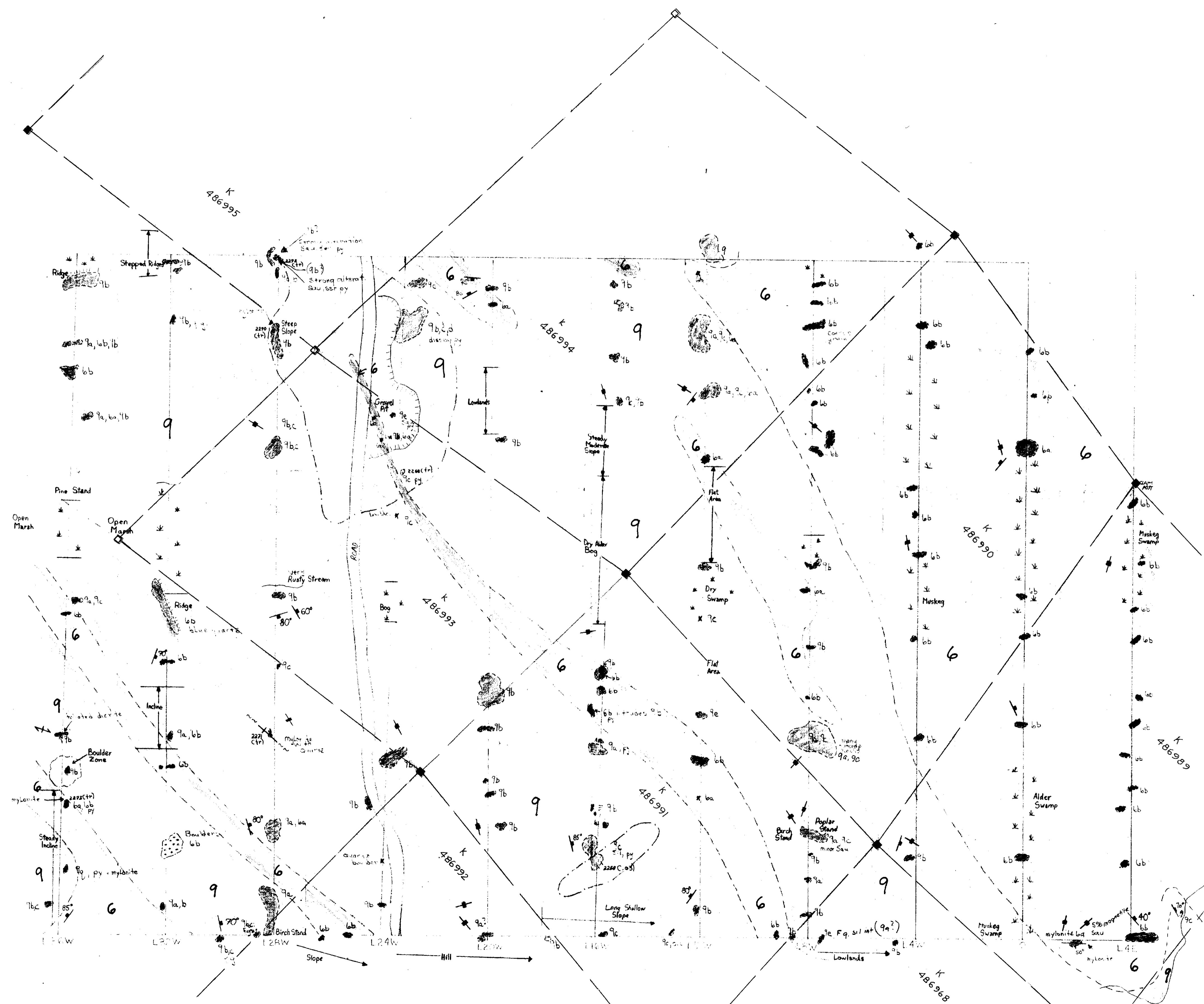
STRAW LAKE PROJECT  
 FAIRSERVICE # 3 PROPERTY  
 GEOLOGY

DRAWN BY	DATE	N.T.S.	PLAN
<i>[Signature]</i>	DATE		ST. 3299



52F83N0031 2.5244 BLUFFPOINT LAKE

hncs



**LEGEND**

- 9** - LAWRENCE LAKE BATHOLITH
- a - mixed contact zone
  - b - pink feldspathic granodiorite
  - c - white granodiorite
  - d - cherty weathering chilled granodiorite
  - e - impure granodiorite
  - g - feldspar porphyry, porphyry dikes
  - v - aplitic and felsite dikes

- 6** - MAFIC INTRUSIVE ROCKS
- a - biotite-hornblende diorite
  - b - biotite-hornblende quartz diorite

- Alteration:** py - pyrite  
 ser - sericite  
 sau - saussurite  
 sil - silification

- Symbols**
- Joints, vertical, dipping
  - Foliation, vertical, dipping
  - Outcrop boundary
  - Small outcrop
  - Geological boundary
  - Cliff face
  - Qv - Quartz vein
  - f.g. - Fine grained
  - 2224(02) - Assay number, value in oz/ton
  - zone A - Alteration zones (approx.)

**SELCO INC.** EXPLORATION

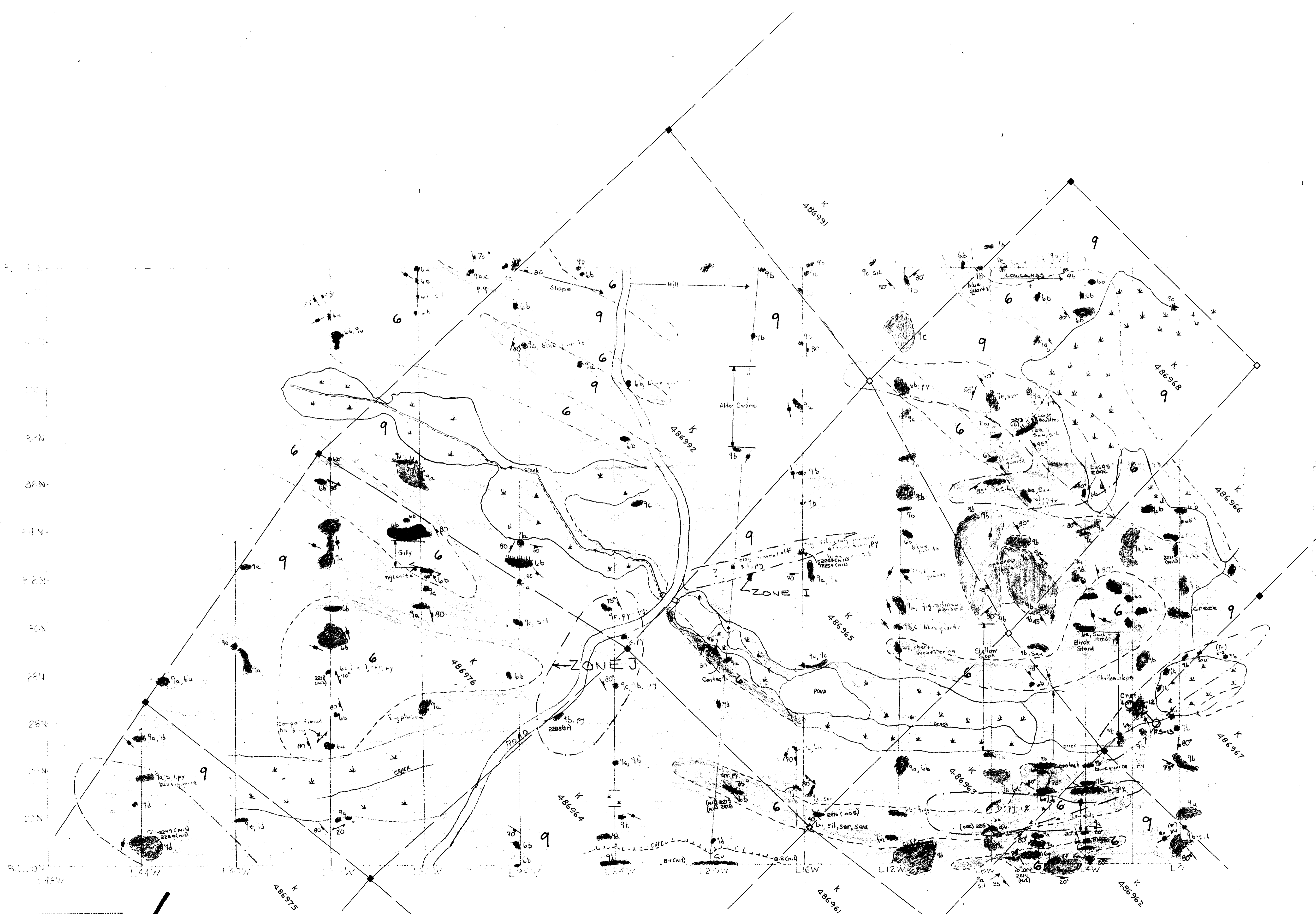
**STRAW LAKE PROJECT**  
**FAIRSERVICE # 3 PROPERTY**  
**GEOLOGY**

DRAWN BY	DATE	N.T.S.	PLAN
DATE	25244	ST. 3300	

MAP No 2



220



- LEGEND**
- 9 - LAWRENCE LAKE BATHOLITH**
- a - mixed contact zone
  - b - pink feldspathic granodiorite
  - c - white granodiorite
  - d - cherty weathering chilled granodiorite
  - e - impure granodiorite
  - g - feldspar porphyry, porphyry dikes
  - v - aplitic and felsite dikes
- 6 - MAFIC INTRUSIVE ROCKS**
- a - biotite-hornblende diorite
  - b - biotite-hornblende quartz diorite
- Alteration:**
- py - pyrite
  - ser - sericite
  - sau - saussurite
  - sil - silification
- Symbols**
- Joints, vertical, dipping
  - Foliation, vertical, dipping
  - Outcrop boundary
  - Small outcrop
  - Geological boundary
  - Cliff face
  - Quartz vein
  - Fine grained
  - 2224(02) - Assay number, value in oz/ton
  - zone A - Alteration zones (approx.)



**SELCO INC.** EXPLORATION

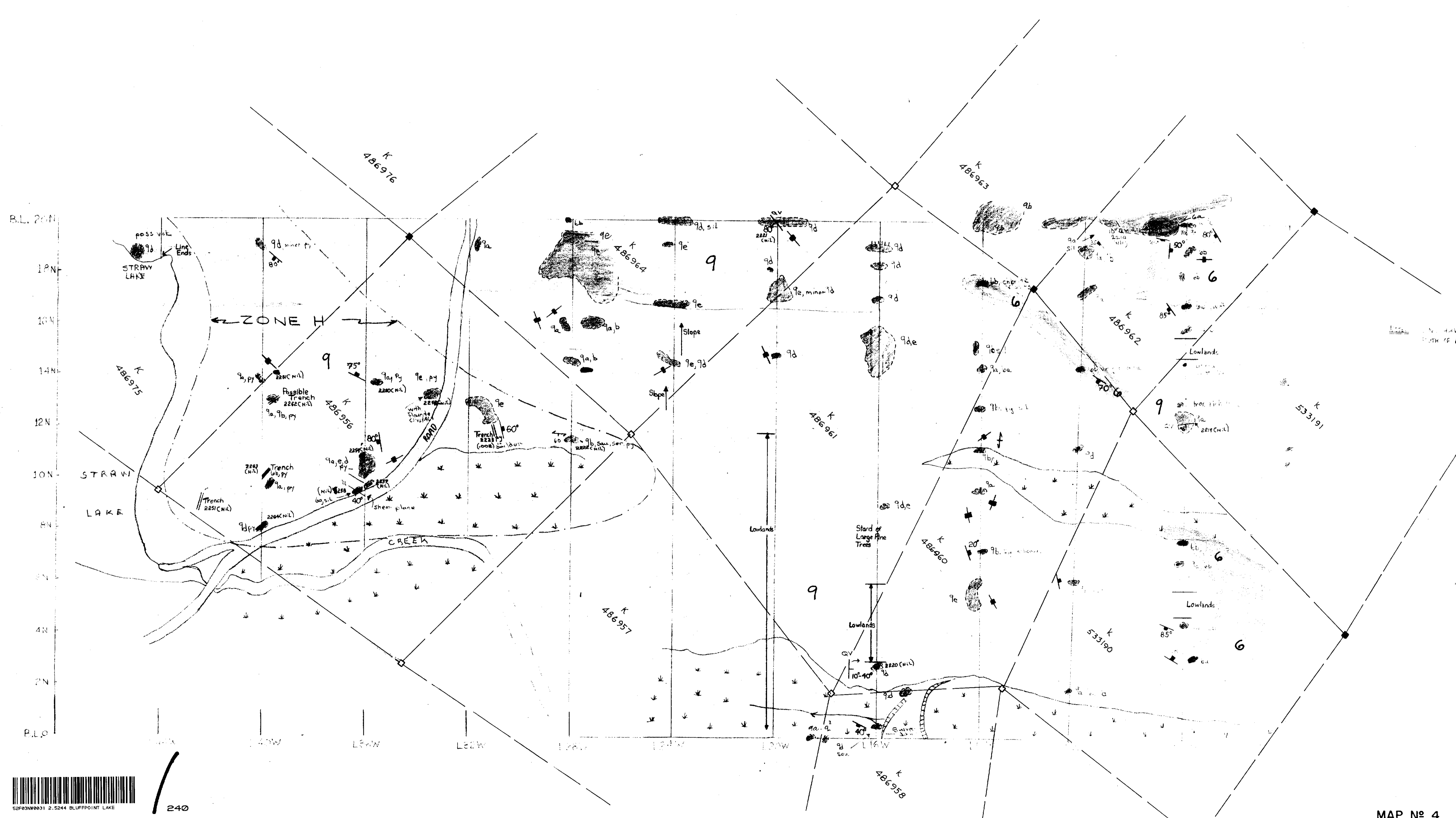
**STRAW LAKE PROJECT**

**FAIRSERVICE # 3 PROPERTY**

**GEOLOGY**

DRAWN BY	DATE	N.T.S.	PLAN
DATE	DATE	25244	ST.3301

MAP # 3



**LEGEND**

- 9** - LAWRENCE LAKE BATHOLITH
- a- mixed contact zone
  - b- pink feldspathic granodiorite
  - c- white granodiorite
  - d- cherty weathering chilled granodiorite
  - e- impure granodiorite
  - g- feldspar porphyry, porphyry dikes
  - v- aplitic and felsite dikes
- 6** - MAFIC INTRUSIVE ROCKS
- a- biotite-hornblende diorite
  - b- biotite-hornblende quartz diorite
- Alteration: py - pyrite  
 ser - sericite  
 sau - saussurite  
 sil - silification

**Symbols**

- ↗ ↘ - Joints, vertical, dipping
- ↗ ↘ - Foliation, vertical, dipping
- - Outcrop boundary
- - Small outcrop
- - Geological boundary
- - Cliff face
- Qv - Quartz vein
- fg - Fine grained
- 2224(02) - Assay number, value in oz/ton
- zone A - Alteration zones (approx.)

P.L.O.  
 2N  
 4N  
 6N  
 8N  
 10N  
 12N  
 14N  
 16N  
 18N

L10W L11W L12W L13W L14W L15W L16W



240

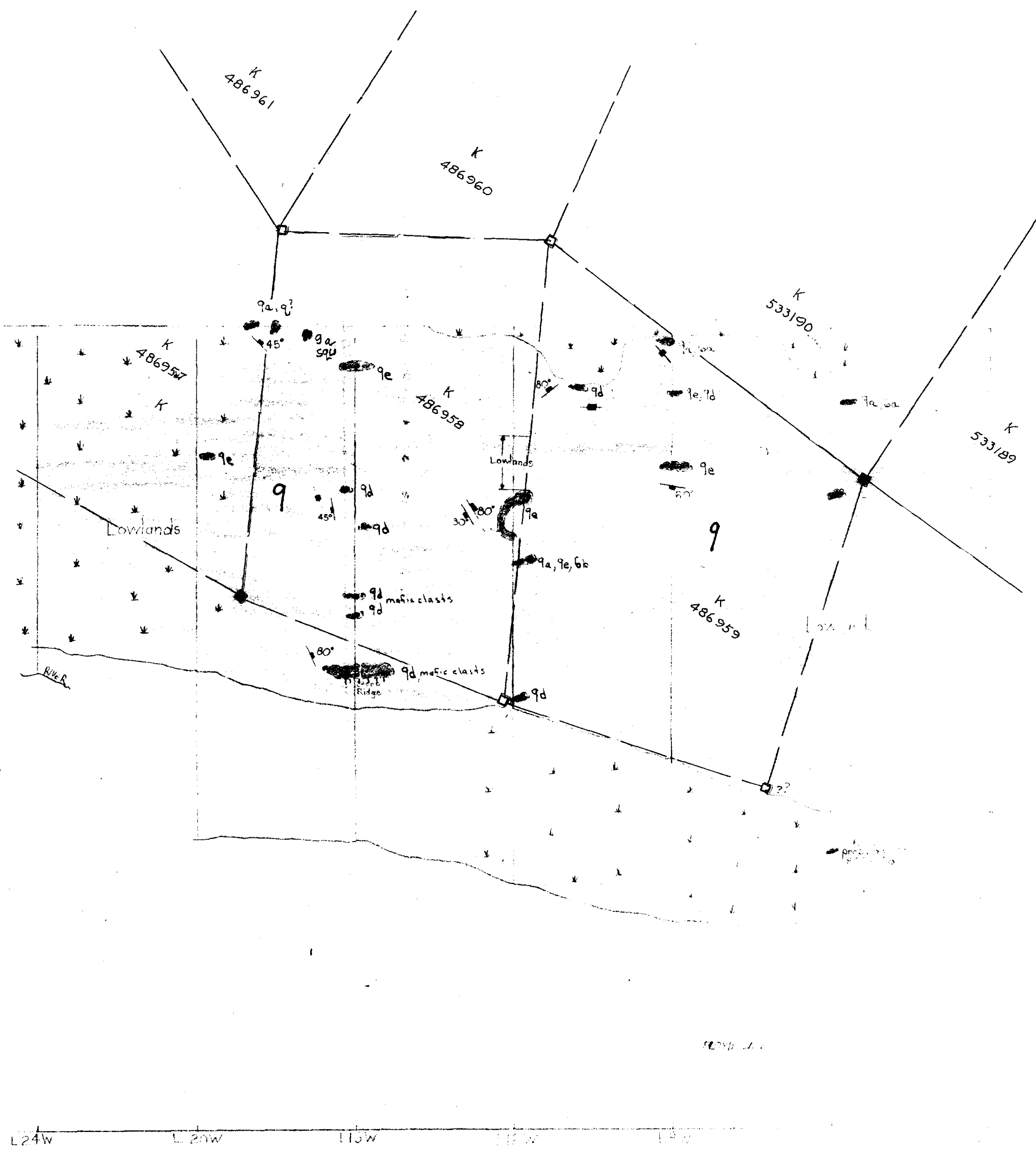
**SELCO INC.** EXPLORATION

**STRAW LAKE PROJECT**  
**FAIRSERVICE # 3 PROPERTY**  
**GEOLOGY**

DRAWN BY	DATE	N.T.S.	PLAN
<i>[Signature]</i>	DATE		ST. 3302

MAP No 4

80  
 90  
 40  
 50  
 60  
 70  
 80  
 105  
 120  
 140  
 150  
 160  
 180  
 B.L. 205

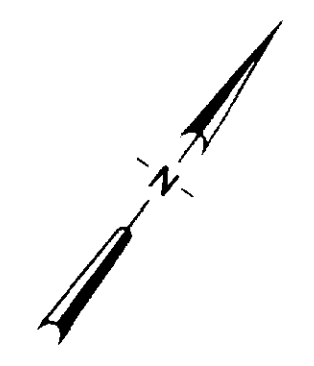


**LEGEND**

- 9** - LAWRENCE LAKE BATHOLITH
- a - mixed contact zone
  - b - pink feldspathic granodiorite
  - c - white granodiorite
  - d - cherty weathering chilled granodiorite
  - e - impure granodiorite
  - g - feldspar porphyry, porphyry dikes
  - v - aplitic and felsite dikes
- 6** - MAFIC INTRUSIVE ROCKS
- a - biotite-hornblende diorite
  - b - biotite-hornblende quartz diorite
- Alteration:** py - pyrite  
 ser - sericite  
 sau - saussurite  
 sil - silification

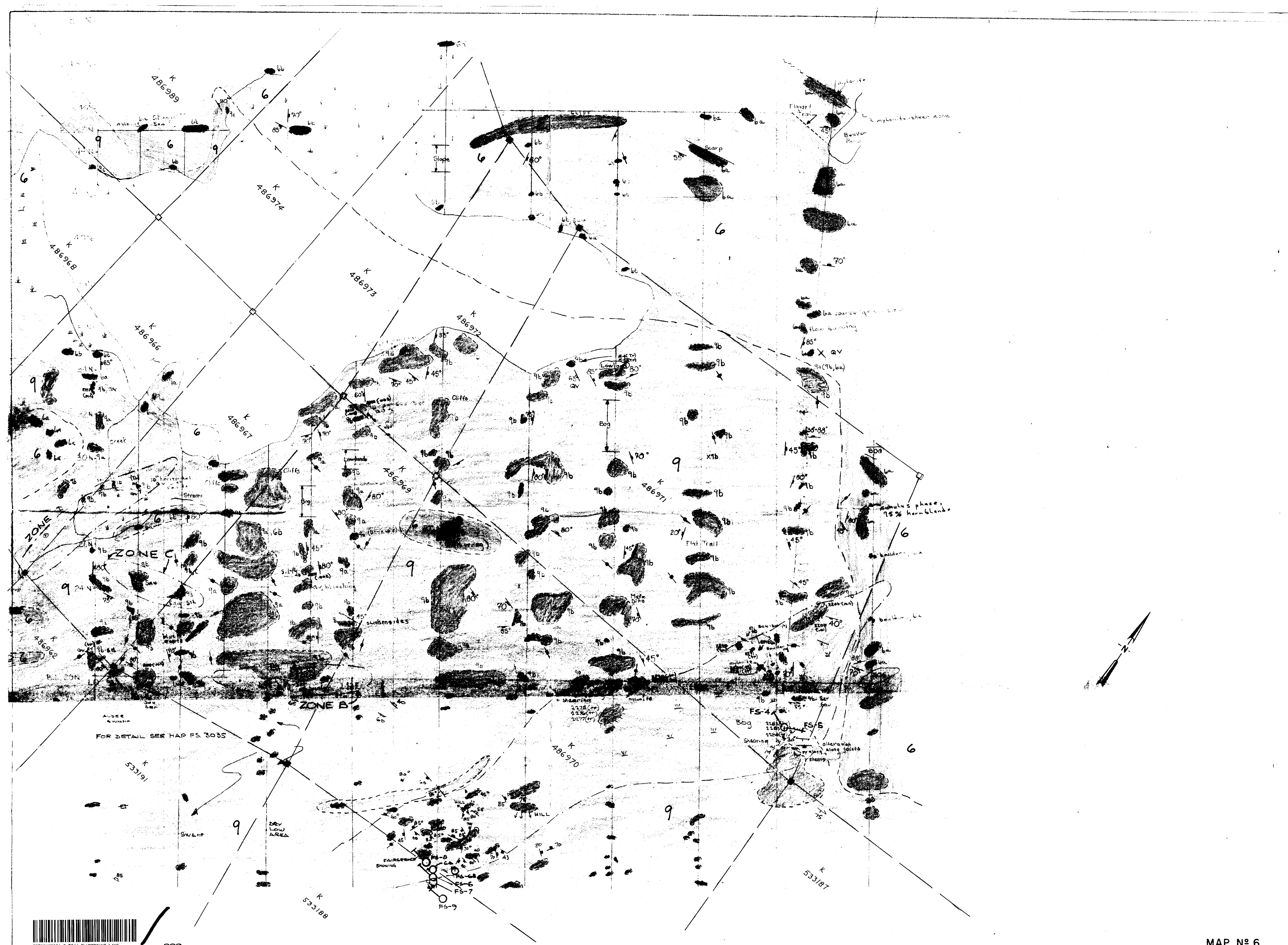
**Symbols**

- 40° — Joints, vertical, dipping
- 40° — Foliation, vertical, dipping
- — Outcrop boundary
- x — Small outcrop
- — Geological boundary
- — Cliff face
- Qv — Quartz vein
- f.g. — Fine grained
- 2224(02) — Assay number, value in oz/ton
- Zone A — Alteration zones (approx.)



250

<b>SELCO INC.</b> EXPLORATION			
<b>STRAW LAKE PROJECT</b>			
<b>FAIRSERVICE # 3 PROPERTY</b>			
<b>GEOLOGY</b>			
DRAWN BY W.C. KERR	DATE JUNE, 1981	N.T.S.	PLAN ST. 3303
MAP N° 5			



**LEGEND**

- 9** - LAWRENCE LAKE BATHOLITH
- a - mixed contact zone
  - b - pink feldspathic granodiorite
  - c - white granodiorite
  - d - cherty weathering chilled granodiorite
  - e - impure granodiorite
  - g - feldspar porphyry, porphyry dikes
  - v - aplitic and felsite dikes
- 6** - MAFIC INTRUSIVE ROCKS
- a - biotite-hornblende diorite
  - b - biotite-hornblende quartz diorite

- Alteration:** py - pyrite  
 ser - sericite  
 sau - saussurite  
 sil - silification

**Symbols**

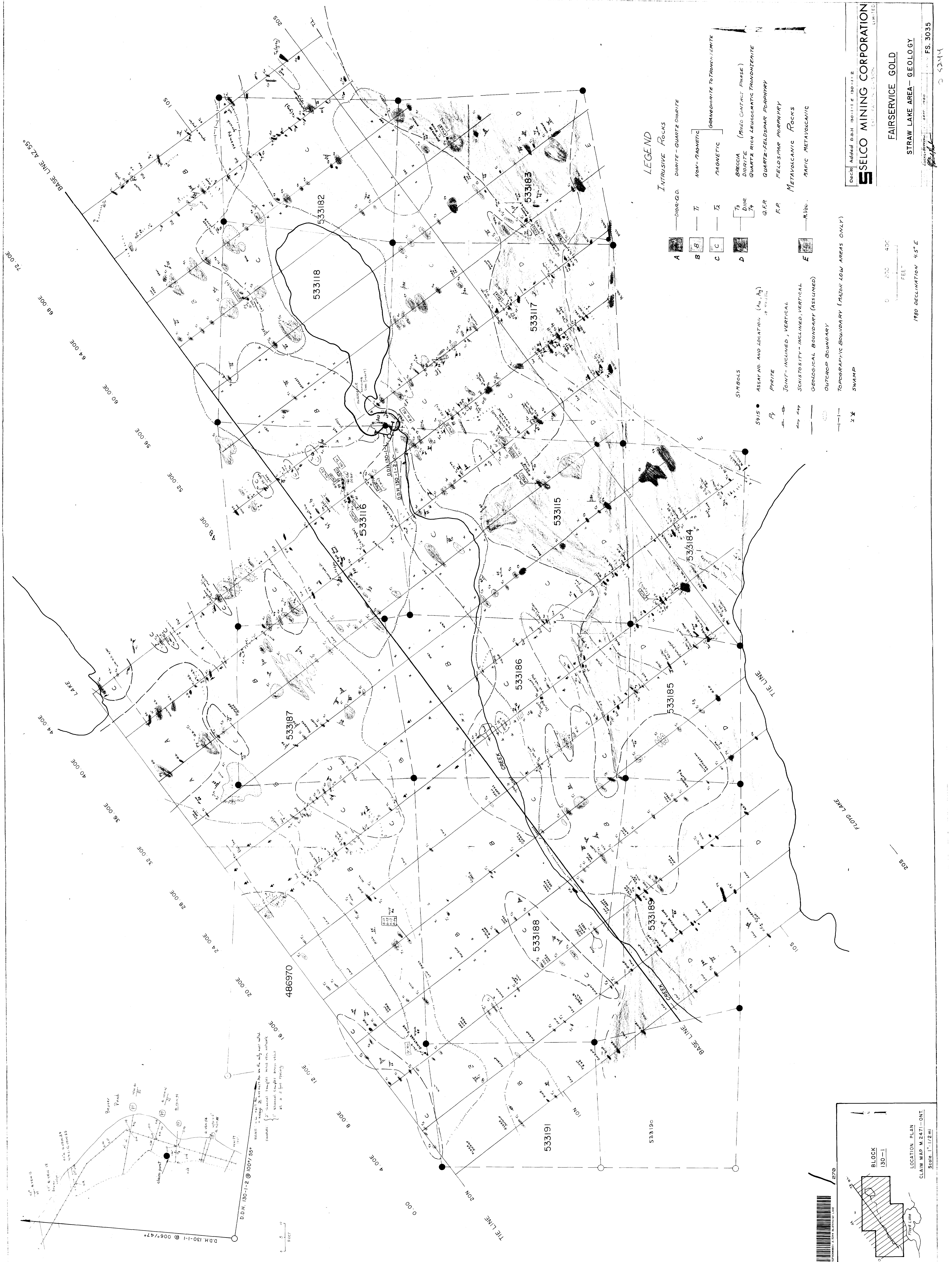
- Joints, vertical, dipping
- Foliation, vertical, dipping
- Outcrop boundary
- Small outcrop
- Geological boundary
- Cliff face
- Quartz vein
- Fine grained
- 2224(02) - Assay number, value in oz/ton
- zone A - Alteration zones (approx.)

FOR DETAIL SEE MAP FS. 3035

<b>SELCO INC.</b>		EXPLORATION	
<b>STRAW LAKE PROJECT</b>			
<b>FAIRSERVICE #3 PROPERTY</b>			
<b>GEOLOGY</b>			
DRAWN BY	DATE	N.T.S.	PLAN
<i>[Signature]</i>			ST. 3304

MAP # 6





**LEGEND**

**INTRUSIVE ROCKS**

- A Diorite - Quartz Diorite
- B Non-magnetic
- C Magnetic
- D Breccia (Mixed Contact Phase)
- E Diorite
- F Quartz-rich Leucocratic Trondhjemite
- G Quartz-Feldspar Porphyry
- H Feldspar Porphyry
- I Metavolcanic Rocks
- J mafic Metavolcanic

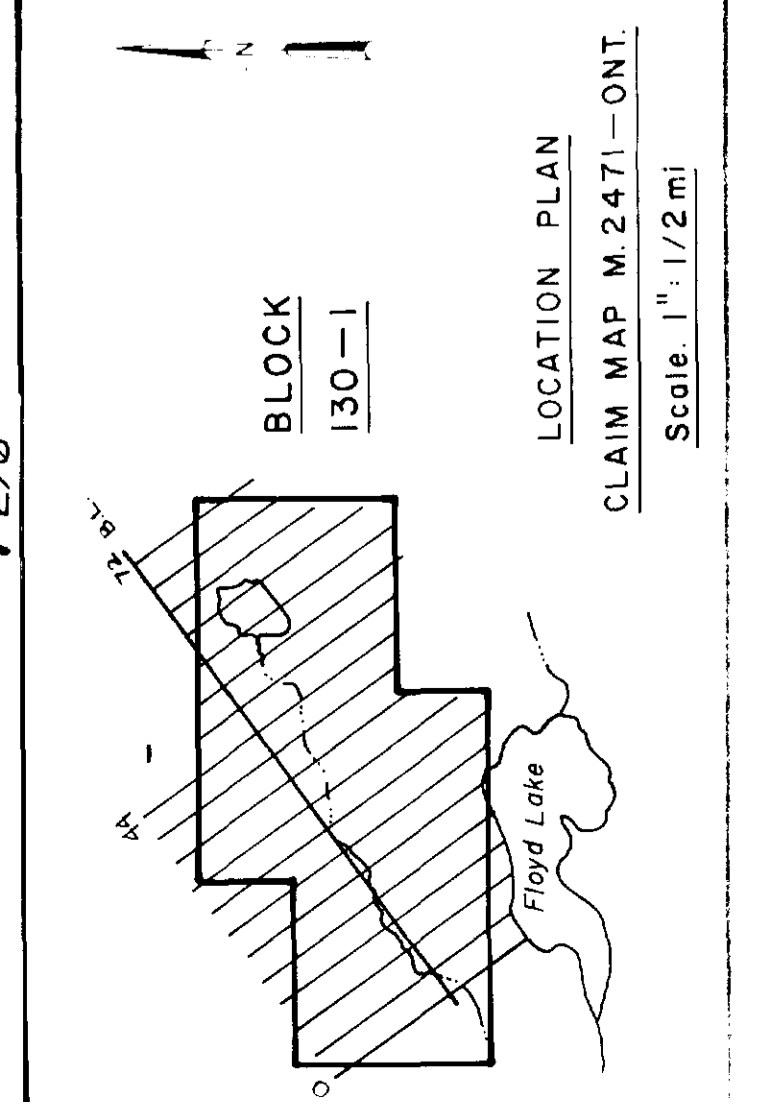
**SYMBOLS**

- 5415 • Assay No. and Location (Au, Ag)
- F Pirite
- Joint - Inclined, Vertical
- Schistosity - Inclined, Vertical
- Geological Boundary (Assumed)
- Outcrop Boundary
- Topographic Boundary (Major Low Areas Only)
- Swamp

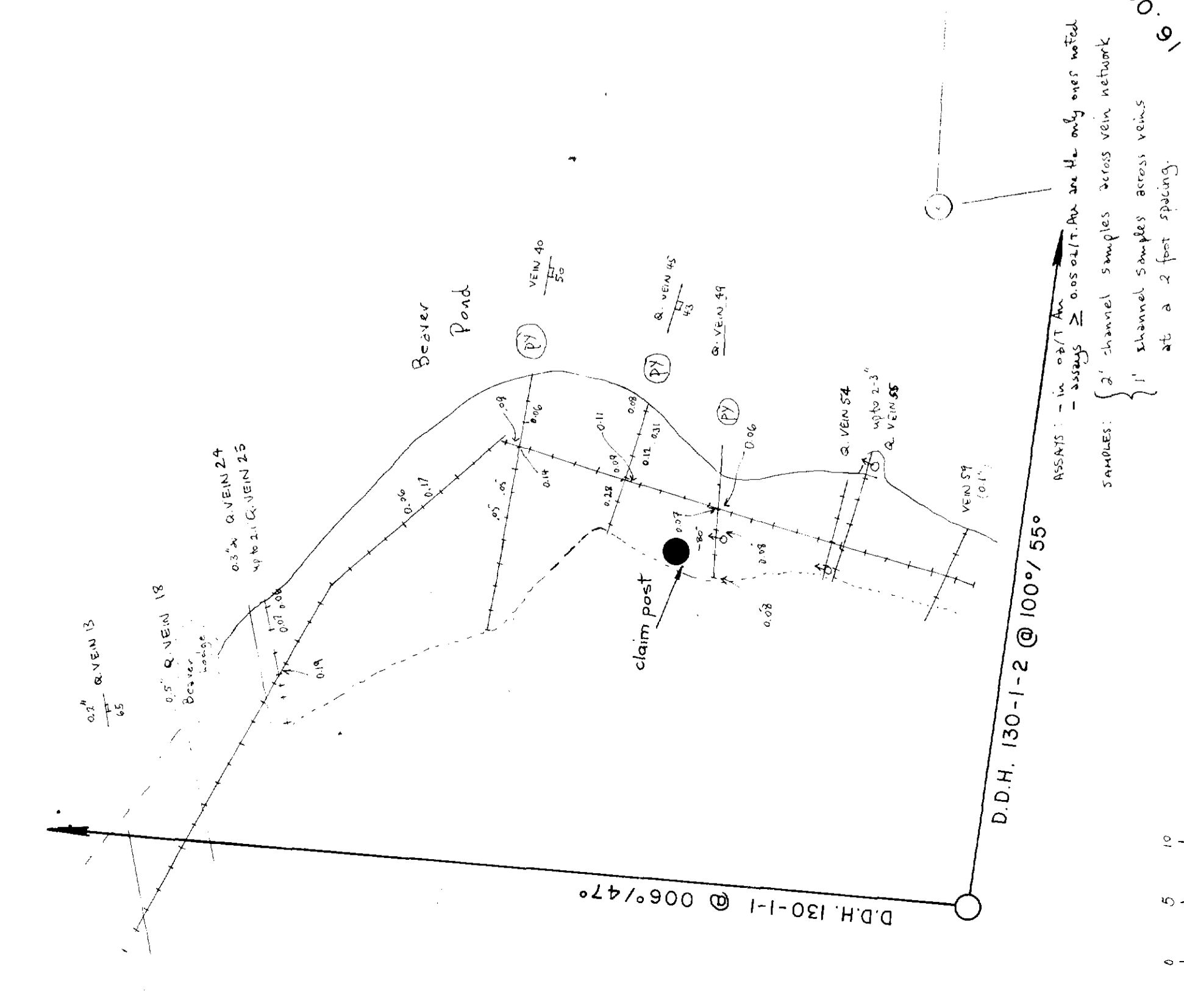
Doc# 130-1-1-2 @ 100° 55'  
**SELCO MINING CORPORATION**  
 LIMITED

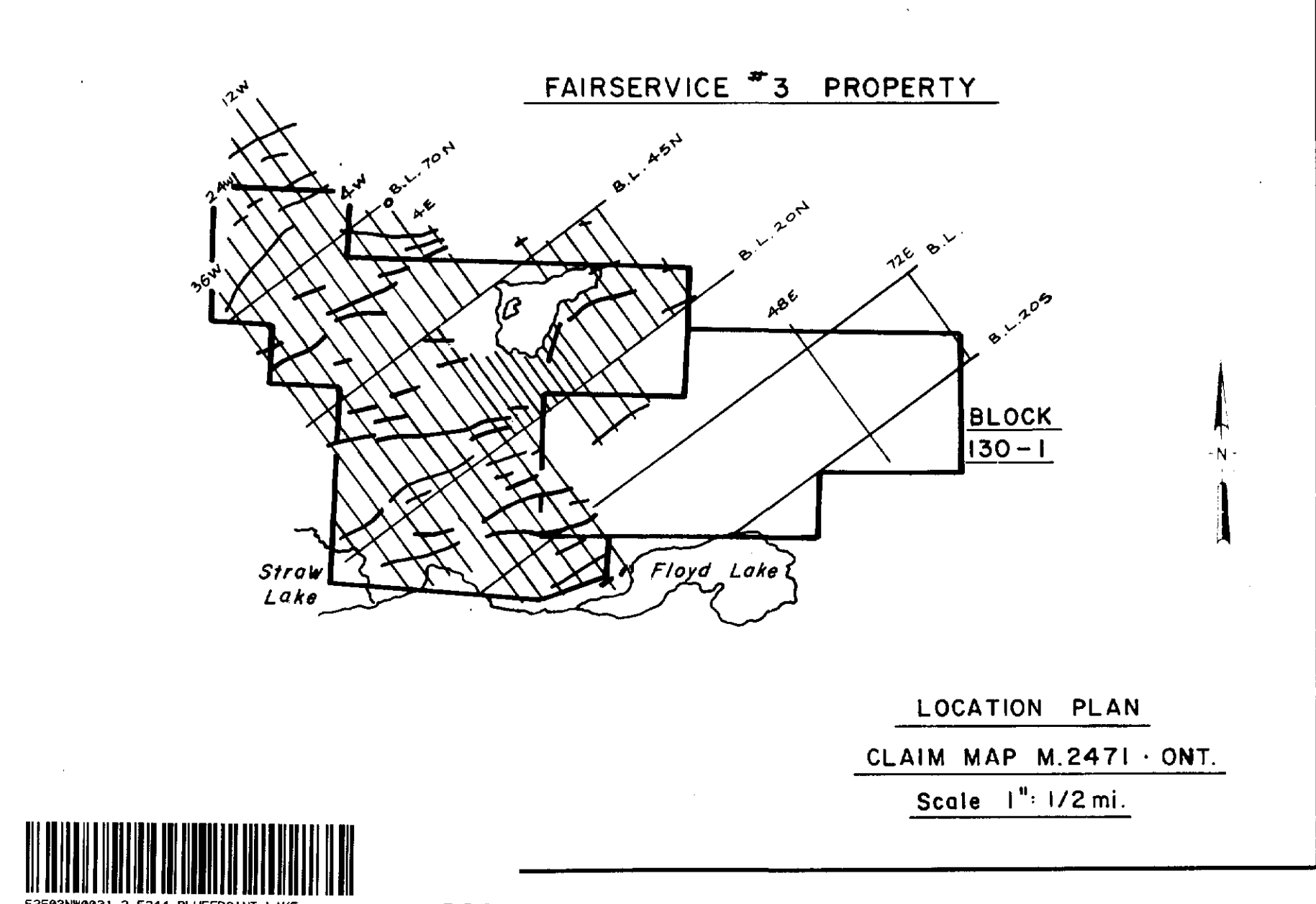
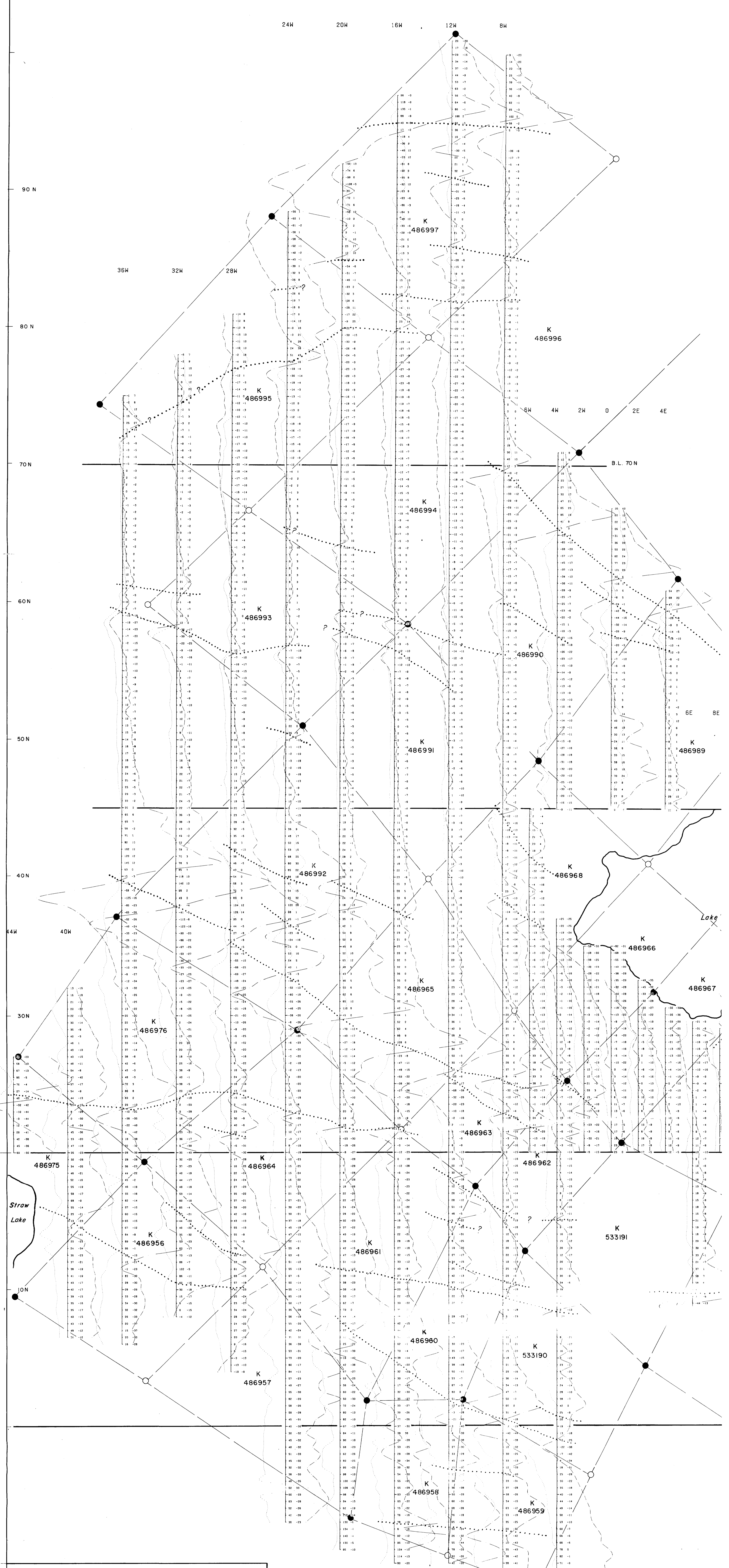
**FAIRSERVICE GOLD**  
 STRAW LAKE AREA - GEOLOGY  
 FS. 3035

1980 DECLINATION 41.5° E  
 Scale 1" = 1/2 mi



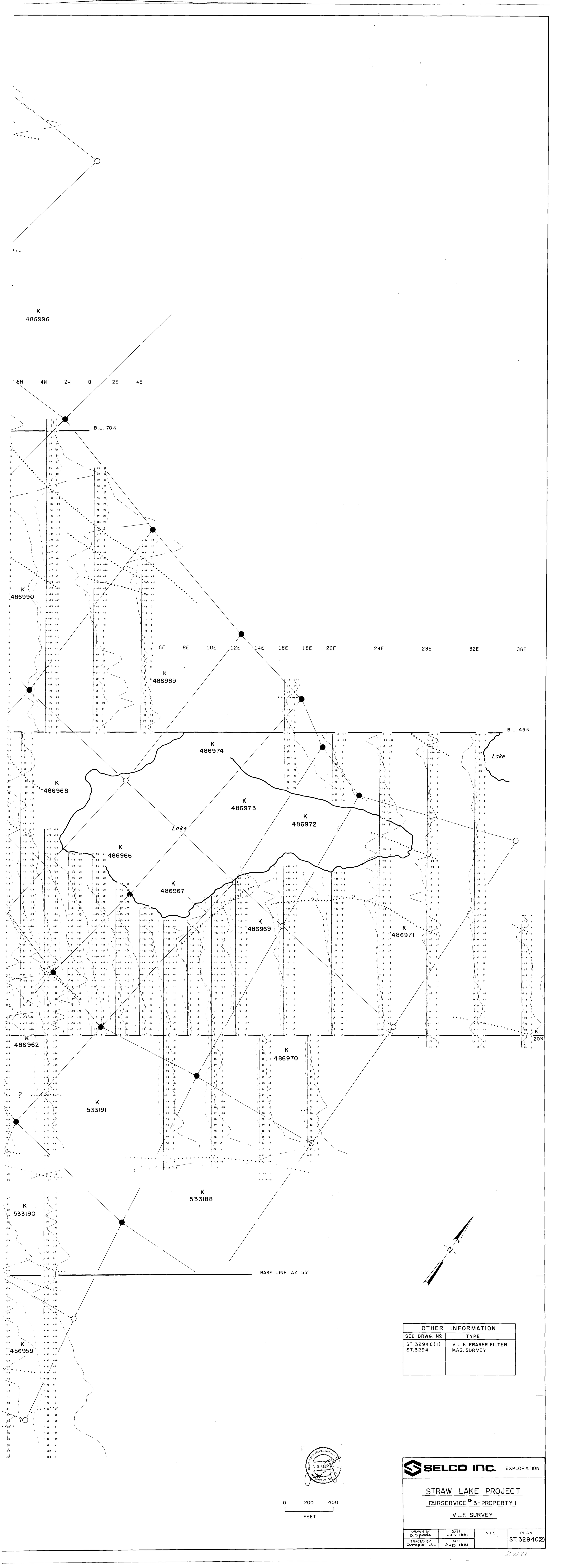
Block 130-1  
 LOCATION PLAN  
 CLAIM MAP M. 2471-ONT.  
 Scale 1" = 1/2 mi



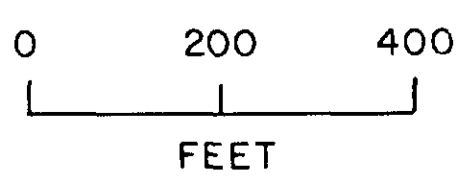
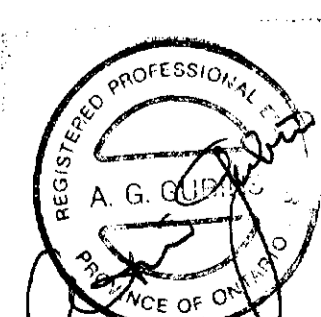


**ELECTROMAGNETIC INSTRUMENT**  
TYPE: V.L.F.  
Instrument: GEONICS E.M. 16 Station: Seattle, Washington  
Profile Scale: I.P. 1" = 40' Q.P. 1" = 40'  
Filtered Dip Angles (Fraser)  
Contour Interval:





OTHER INFORMATION	
SEE DRWG. NO	TYPE
ST. 3294 C(1) ST. 3294	V.L.F. FRASER FILTER MAG. SURVEY



**SELCO INC.** EXPLORATION

**STRAW LAKE PROJECT**  
**FAIRSERVICE #3-PROPERTY I**  
**V.L.F. SURVEY**

DRAWN BY B. Spade	DATE July 1961	NTS	PLAN ST. 3294C(2)
TRACED BY Dataplot J.L.	DATE Aug. 1961		