84-#63 - 12100

ASSESSMENT REPORT

ON

THE SILICA PROJECT

KAMLOOPS MINING DIVISION

NTS: 92I/11W

50°40'N, 121°21'W

D. Gamble
January 1984

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INTRODUCTION

Work on the Silica Project claim area was conducted intermittently during the period from February 1983 through to December 1983 by Selco, A Division of BP Exploration Canada Limited and consisted of the following items:-

1) Topographical Survey - Orthophoto Mosaic Base Map,
2) Geophysical Surveys - Ground H.L.E.M. Surveys,
   - Ground Magnetometer Surveys,
   - Induced Polarization Surveys.
3) Lithogeochemical Survey
4) Two Diamond Drilling Programs

This report contains the results obtained from these work programs.

LOCATION AND ACCESS

The Silica Project area located 6.0 km southwest of Ashcroft, B.C. lies immediately west of the Thompson River, N.T.S. 92I/11W, Location Map Figure 1. The property straddles the Trans Canada Highway No. 1 and includes the topographic feature known as Red Hill with the summit having U.T.M. coordinates of 5,613,000 m north and 617,500 m east. Minaberriet Creek, Oregon Jack Creek and Venables Creek cut across the property.

Access to the property is gained via the Cornwall Hill and Venables Valley all-weather roads that lead from the Trans Canada Highway.

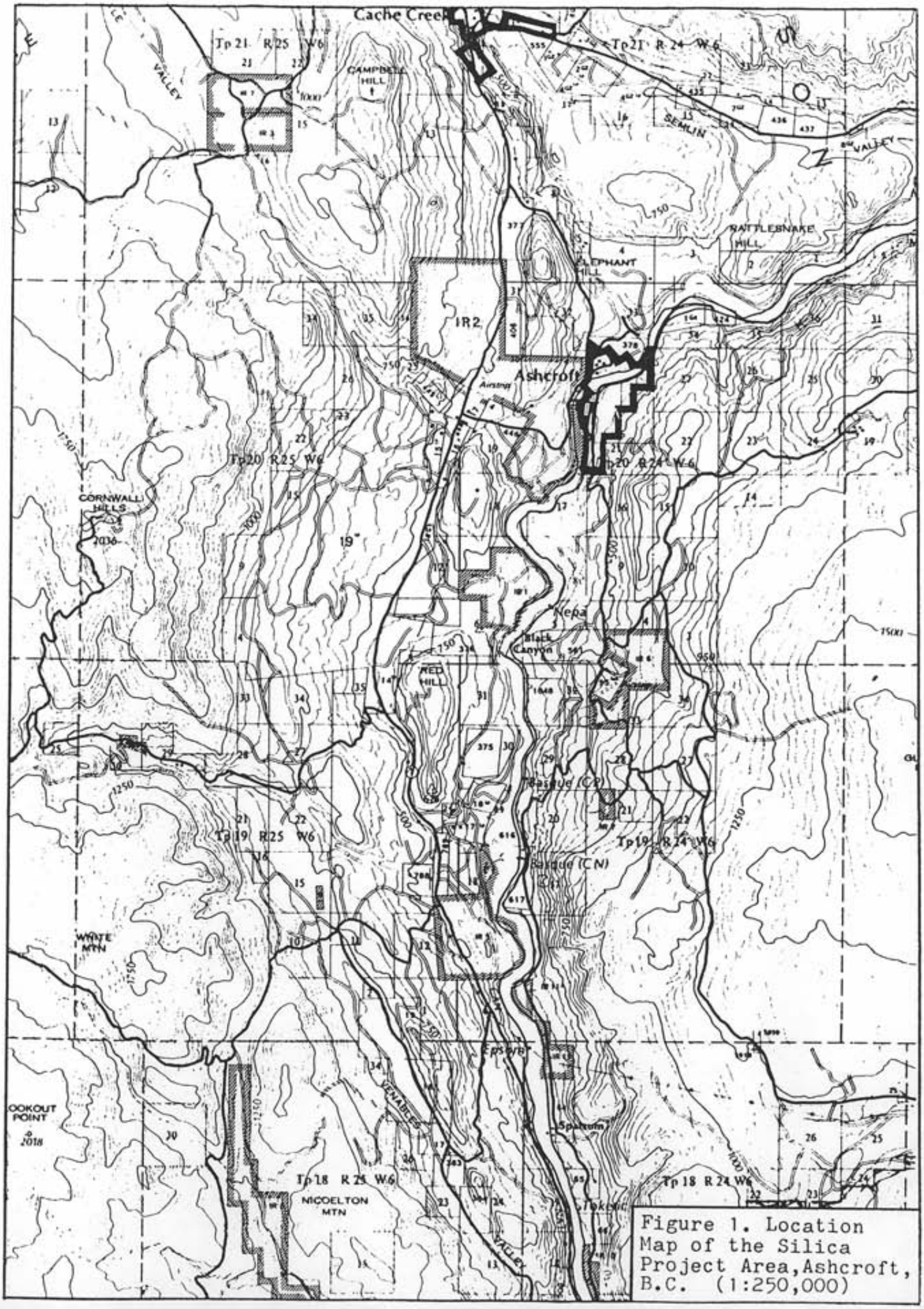


Figure 1. Location Map of the Silica Project Area, Ashcroft, B.C. (1:250,000)

Range, ranch and previous mineral exploration roads leading from the all-weather access routes provides excellent access to all parts of the property.

The limits of the project area claims are as follows:

The north boundary lies approximately 6.0 km southwest of Ashcroft, B.C.; the south boundary lies approximately 13.0 km north of Spences Bridge, B.C.; the east boundary approximates the Thompson River; the west boundary lies in Venables Valley and swings northwards at the north end of this small valley (Fig. 2).

CLAIM STATISTICS

All the claims within the Silica project area lie within the Kamloops Mining Division, N.T.S. 92I/11W. Silica 1-5 are registered in the name of Guichon Explorco Limited, of Toronto, while the balance of the claims listed below are registered in the name of BP Exploration Canada Limited, of Calgary. The names, record numbers, number of units, and recorded date are as tabulated:

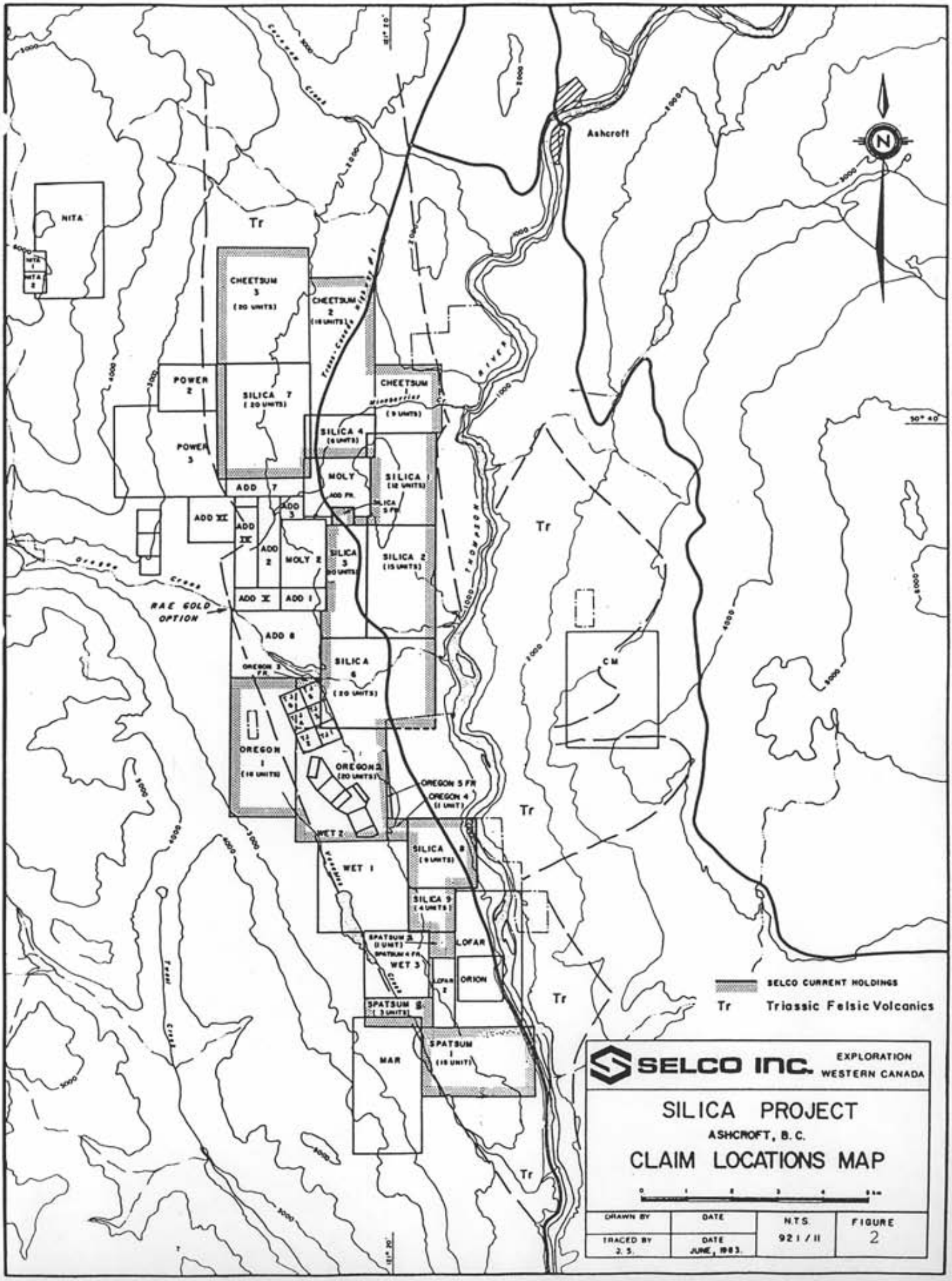
CLAIM NAME	RECORD NO.	UNITS	RECORD DATE
Silica 1	2365	12	29.01.80
Silica 2	2366	15	29.01.80
Silica 3	2367	10	29.01.80
Silica 4	2368	6	29.01.80

CLAIM NAME	RECORD NO.	UNITS	RECORD DATE
Silica 5 (FR.)	2369	1	29.01.80
Silica 6	4406	20	25.04.83
Silica 7	4407	20	25.04.83
Silica 8	4449	9	31.05.83
Silica 9	4448	4	31.05.83
Cheetsum 1	4596	9	26.07.83
Cheetsum 2	4597	18	26.07.83
Cheetsum 3	4598	20	26.07.83
Oregon 1	4599	18	26.07.83
Oregon 2	4600	20	26.07.83
Oregon 3(FR.)	4601	1	26.07.83
Oregon 4	4602	1	26.07.83
Oregon 5(FR.)	4603	1	26.07.83
Spatsum 1	4604	15	26.07.83
Spatsum 2	4605	1	26.07.83
Spatsum 3	4606	3	26.07.83
Spatsum 4(FR.)	4607	1	26.07.83

A total of 21 contiguous mineral claims,consisting of 205 units, make up the Silica Project area,(Fig.2), Claims Location Map.

TOPOGRAPHY AND VEGETATION

The topography throughout the Silica Project area varies from gentle to moderate changes in local relief. Elevations along the


Ashcroft
N
NITA
CHEETSUM 3 (20 UNITS)
CHEETSUM 2 (10 UNITS)
CHEETSUM 1 (9 UNITS)
POWER 2
POWER 3
SILICA 7 (20 UNITS)
SILICA 4 (6 UNITS)
SILICA 1 (12 UNITS)
SILICA 5 FR.
MOLY
400 FR.
ADD 7
ADD 3
ADD XI
ADD IX
ADD 2
MOLY 2
SILICA 3 (20 UNITS)
SILICA 2 (15 UNITS)
ADD X
ADD 1
RAE GOLD OPTION
ADD 8
OREGON 3 FR.
SILICA 6 (20 UNITS)
OREGON 1 (10 UNITS)
OREGON 2 (20 UNITS)
OREGON 5 FR.
OREGON 4 (1 UNIT)
WET 2
WET 1
SILICA 8 (9 UNITS)
SILICA 9 (4 UNITS)
SPATSUM 3 (1 UNIT)
SPATSUM 4 FR.
LOFAR
WET 3
LOFAR 2
ORION
SPATSUM 5 (3 UNITS)
MAR
SPATSUM 1 (18 UNIT)
CM
Tr
SELCO CURRENT HOLDINGS
Tr Triassic Felsic Volcanics
SELCO INC. EXPLORATION WESTERN CANADA
SILICA PROJECT
ASHCROFT, B.C.
CLAIM LOCATIONS MAP
DRAWN BY
DATE
N.T.S. 92 I / 11
FIGURE 2
TRACED BY J.S.
DATE JUNE, 1983.

Thompson River approximate 1000 feet A.S.L. with the river valley slopes quickly climbing to a 1500 foot A.S.L. valley bench. Along this valley bench, the relief is gently rolling with a gradual increase in elevation westward. Several north trending hills reach 2300 - 2800 feet elevation A.S.L. along this bench. Red Hill (2300 feet A.S.L.) and a ridge (2800 feet A.S.L.) lying between Venables Valley and the Thompson River are the most prominent hills on the property. Immediately west of the property,the elevations rise rapidly to mountaineous relief that host Cornwall Hills Fire Lookout (6684 feet A.S.L.), White Mountain (5800 feet A.S.L.), and Lookout Point (6637 feet A.S.L.), all part of the north to northwest trending Clear Mountain Range.

Vegetation consists of open grassland and sagebrush or farmland at the lower elevations changing to scattered fir and pine on the small hills on the property. West of the property along the margin of the Clear Range dense fir and pine forests exist.

PREVIOUS WORK

The Ashcroft Map Area, G.S.C. Memoir No. 262 by S. Duffell and K.C. McTaggart (1952) represents the first major geological survey and report of work conducted in the region. Ten years later, J.M. Carr included Red Hill and area in his report on the geology in the Thompson River Valley between Ashcroft and Spences Bridge in "Lode Metals in B.C." 1962. More recently, independent thesis and reports

by J.H. Ladd (1977,1979) and W.B. Travers (1978) have been conducted under the auspices of B.C.D.M. to further the understanding of the geology and structural complexities of the region.

Much of the area was staked previously with various follow-up exploration activities undertaken. The earliest recorded work within the Silica Project area is found in G.S.C. Memoir 262 (p. 112) which describes the Basque epsomite deposits that lie between Venables Valley and the Trans Canada Highway. The deposits occur in small ponds and consist of hydrous salts of magnesium, sodium and calcium, (epsomite-bloedite). The salts are leached from adjacent rocks and fed into the small basins from surface and underground channels and springs. The brine in these pools are concentrated by evaporation with salt crystallization taking place during the hot dry season. An estimated tonnage of 75,500 tons was made in 1924 and by 1952 only 3000 tons of epsomite had been removed.

Assessment Report No. 155, "Babys Own" claim ($50^{o}32'N$, $121^{o}18'W$) was worked by Ainsworth Base Metals in 1957. Work conducted on the property included ground magnetometer survey, geological survey and stripping over a magnetite-chalcopyrite-arsenopyrite skarn zone on a limestone/volcanic contact.

Assessment Report No. 299 covering the "Lucky Four, CCS, and Cache Creek Silica" claims was worked by Cache Creek Silica Co.

in 1959. The work involved geological mapping and sampling of "silica schist" units exploring for high silica content on the southwest part of Red Hill and adjacent area lying to the southwest.

Reported in "Lode Metals in B.C., 1982, Noranda Exploration Co. optioned a group of claims ("TS 1-5, M1-M10, M12-M22, M1(Fr)-M10(Fr)") that lie on the northern part of Red Hill. Work conducted consisted of soil geochemical survey, ground E.M. and magnetometer surveys, stripping and diamond drilling (8 holes totalling 890 feet). No assessment report was filed.

Reported in "Lode Metals in B.C." 1966, Delkirk Mining Ltd. held 99 claims in the Red Hill area. Work consisted of 1200 feet of bulldozer trenching and diamond drilling (3 x-ray holes totalling 300 feet). No assessment report was filed.

Reported in "Lode Metals in B.C." 1967, Cosmic-Lode Mines Ltd. conducted a soil geochemical survey over the "Moly" claims formerly known as "Baby's Own". Chalcopyrite is reported to occur in a vein in altered greenstone. No assessment report was filed.

Cannoo Mines Ltd. conducted prospecting on the "MSG, MS" claims in an area between Venables Lake and the Trans Canada Highway as reported in "Lode Metals in B.C.", 1967. In 1968, this company placed 4 diamond drill holes totalling 128 feet on the "MSG 1-8"

(formerly Martel Gold Mines Ltd) with molybdenum and silver values occurring in quartz veins and fractures as reported in "Lode Metals in B.C." 1968. No assessment report was filed.

Quintana Minerals Corporation optioned the Delkirk Mining Ltd. property on Red Hill and conducted a geological survey and drilled 4 deep rotary percussion holes totalling 2646 feet as reported in "Lode Metals in B.C.", 1968. Chalcopyrite, malachite and azurite is reported to occur in a large pyritic gossan. No assessment report was filed.

Cerro Mining Company of Canada Limited and Ducanex Resources Limited acquired the "RJ 1-51 and Bedard 1-18" claims on Red Hill and conducted a geological survey, a ground magnetometer survey and drilled 12 percussion holes totalling 3150 feet in 1970. The following year an Induced Polarization survey and 4 diamond drill holes totalling 1966 feet was carried out as reported in "G.E.M. in B.C.", 1970, 1971. No assessment report was filed.

Texas Gulf Sulphur Company conducted a soil geochemical survey and a geological survey on the "Salt" claims that lie northeast of Venables Lake. Pyrite and chalcopyrite were noted in heavily sheared rhyolite near a contact with argillaceous sedimentary rocks as reported in"G.E.M. in B.C.", 1970. No assessment report was filed.

G.G. Krause conducted reconnaissance geological and geochemical surveys as well as 2 diamond drill holes totalling 40 feet on the "Bob" claim that lies on the east side of Venables Lake. Anomalous copper (0.4%), zinc (0.070%) and molybdenum (.003%) were reported in the drilling results, Assessment Report No. 2947. Lone Creek Mines conducted an Induced Polarization survey over this property in 1971, Assessment Report No. 3679.

G.G. Krause conducted work on the "Jeff, Jack" claims that lie on the west side of the Trans Canada Highway opposite Red Hill. Geological, soil geochemical and magnetometer surveys and diamond drilling 12 x-ray holes totaling 750', Assessment Report No. 2947, were completed in 1970. Noranda Exploration Company Limited optioned the property and carried out a work program in 1971 consisting of geological and geochemical surveys, electromagnetic, magnetic and induced polarization surveys, and two diamond drill holes totalling 322 feet on "Jeff 4" claim, Assessment Reports No's 2978, 3359 and "G.E.M. in B.C.", 1971, (p. 300).

Noranda Exploration Company Limited conducted work on the "M1-8, 1 Fr., 2 Fr., Karen 1,2,4,5" claims on Red Hill in 1971 as well. Geological mapping, soil geochemical survey, induced polarization, electromagnetic and magnetometer surveys and one diamond drill hole totalling 500 feet on "M-4" were reported in "G.E.M. in B.C.", 1971, (p. 299), no assessment report filed.

In 1971 and 1972 El Paso Mining and Milling Company conducted geological and soil geochemical surveys over the "Mars 1-8" claims that lie on the Trans Canada Highway approximately 10 miles north of Spences Bridge, opposite Spatsum, Assessment Report No. 3680. In 1973, further work on the property consisted of 3 percussion drill holes totalling 1200 feet, as reported in "G.E.M. in B.C.", 1973, no assessment report was filed.

Bethlehem Copper Corporation in 1974 conducted work over the "Map 1-32" claims on Red Hill that consisted of soil geochemical and geological surveys, and three percussion holes totalling 580 feet, Assessment Report No. 5308.

Vantage Resources Limited in 1977 conducted work on the "Mar" claim that lies on the west side of Venables Lake. Soil geochemical survey, electromagnetic and magnetometer surveys and underground geological mapping of the old Martel Gold Mine workings were completed, Assessment Report No. 6318. (See Cannoo Mines Ltd. 1967, 1968 "MSG" claims previously described). In 1978 Vantage Resources Ltd. drilled 1262 metres as reported in "G.E.M. in B.C.", 1978, no assessment report was filed.

Penn Energy Corporation in 1978 carried out soil geochemical, electromagnetic and magnetometer surveys over the "EM77" claim (formerly "Baby's Own, Moly" claims that were previously described), Assessment Report 6713.

Cominco Limited in 1978 conducted various work programs on the "Lofar, Sofar and Hifar" claims that lie to the south of Red Hill. The work consisted of geological and soil geochemical surveys, electromagnetic, magnetometer and induced polarization surveys, Assessment Report No. 6918.

Prospecting by D.H. Wilson on the "Orion" claim that lies directly opposite Spatsum was conducted in 1978, Assessment Report No. 7102. This property was optioned to Cominco Limited who conducted induced polarization and magnetometer surveys in 1979, Assessment Report No. 7638, followed by percussion drilling on the "Lofar, Orion" claims, Assessment Report No. 8263.

L.W. Reaugh conducted a percussion drilling program on the "Moly" claim that straddles the Trans Canada Highway at Red Hill in 1979, Assessment Report No. 7907. Follow-up work on the "Add" and "Moly" claims were conducted by Rea Petro in 1981 consisting of soil geochemical and magnetometer surveys, Assessment Reports No.'s 10459, 10513.

Selco Inc. carried out geological and lithogeochemical surveys on the "Silica" claims that covers most of Red Hill in 1980, Assessment Report No. 8892. In 1981, a follow-up percussion drilling program was conducted, Assessment Report No. 9415.

In 1981, Esso Resources Canada conducted electromagnetic surveys over the "Power" and "Mina" claims west of Red Hill and over the "Wet" claims near Venables Lake, Assessment Reports No.'s 9366, 9472.

In 1981, Vantage Petroleum conducted an induced polarization survey over the "Mar" claim west of Venables Lake, (previously described), Assessment Report No. 9459

Laramide Resources in 1982 carried out electromagnetic and magnetometer surveys over the "TJ" claims that lie northeast of Venables Lake, Assessment Report No. 10546.

PROCEDURE

Grid preparation was accomplished in February (21st-24th, 1983) and in May (1st-2nd, 1983) using company personnel while in November (1st-30th, 1983) contract line cutters were utilized.

The February gridding consisted of 18.0 line kilometres on the "Silica South Grid: and 3.0 line kilometres of line extensions on the "Silica North Grid" in preparation for ground H.L.E.M. surveying in March, 1983. Compass surveyed, topofil chained and flagged lines were laid out.

The May grid preparation consisted of placing wooden pickets at 100 metre stations on the "Silica South and North Grids" that were

prepared in February. This was done to retain the ground control as flagging tends to quickly deteriorate in open semi-arid regions. Follow-up Genie electromagnetic surveying in May and induced polarization surveying in June and October were conducted over selected lines on the Silica North and South Grids.

Orthophoto mosaic base maps were prepared for the Silica Project area in October 1983 by McElhanney Surveying and Engineering Ltd. of Vancouver. Three orthophoto mosaic map sheets A,B, and C at 1:10 000 scale, with 20 metre topographical contours and U.T.M. coordinate fiducile marks provides an accurate ground control system for gridding and sampling.(Map Plan No.'s S-1, S-2, S-3.)

A major grid system to cover most of the Silica Project claims area was initiated in early November, 1983. By November 30th, approximately 120 line kilometres of gridding at 100 metre line spacing with 50 metre picketed stations were completed, Map Plan No.'s GC1, GC2. The baseline and tie lines were surveyed using a Distamat surveying instrument and accurately plotted on the 1:10 000 base maps. Grid lines were turned normal to the base and tie lines and then site picketed, chained and plotted on the base maps. Genie electromagnetic and magnetic surveys were conducted over this grid area during November - December, 1983.

During November and December, 1:5 000 blowups of the 1:10 000

orthophoto mosaic base maps and government 1:50 000 air photos were used in conjuction to locate and accurately plot lithogeochemical sample points onto the 1:10 000 scale maps, Map No.'s GC-1, GC-2.

This method of gridding, geophysical and geochemical surveys will be carried on into the 1984 field program.

GEOPHYSICAL SURVEYS

Introduction

Geophysical work conducted over the Silica South Grid, Silica North Grid and Silica Main Grid within the Silica Project claims area included 2 Induced Polarization surveys (June and October), three Horizontal Loop Electromagnetic surveys (March, May and November), and 2 Magnetic surveys (March and November). The purpose of these surveys was to try to obtain indications of massive sulphide mineralization as indicated by the favourable geological environment.

Max-Min II H.L.E.M. and Mag. Surveys - March 1983.

Field work was carried out on the Silica South grid and Silica North grid from February 21st - 24th, 1983 (gridding) and from February 28th - March 6th (geophysical surveying) using company personnel. A total of 20.0 line kilometres of Max-Min II H.L.E.M. and 4.0 line kilometres of Magnetics were completed at this time.

Survey Specifications

The basic principle of any electromagnetic survey is that when conductors are subjected to primary alternating fields secondary magnetic fields are induced in them. Measurement of these secondary fields give indications as to the size, shape and conductivity of conductors. In the absence of conductors, no secondary fields

are obtained.

The electromagnetic survey was carried out using a Max-Min II electromagnetic unit with the coils in the horizontal plane i.e. maximum coupled.

Readings of the in-phase and quadrature components of the secondary field were made every 25 metres along chained, flagged lines at frequencies of 444 and 1777 Hz respectively employing a coil separation of 150 metres.

The magnetic survey was carried out using a GSM-8 proton precession magnetometer. This instrument measures variations in the earth's magnetic field to an accuracy of $\pm$ 1 gamma. Corrections for diurnal variations were made by comparison of readings at a control base station.

The surveys were carried out over N30^{o}E lines on the Silica South Grid and over N45^{o}E lines on the Silica North Grid.

Discussion of Results

A total of seven discrete electromagnetic anomalies were located as seen in the accompanying 1:2 500 scale geophysical Maps, GP1 - GP4.

Silica South Grid

A total of 4 parallel conductors were located on the west side of the Trans Canada highway on Silica South grid. Conductor No. 1 has conductive axis at line 10W/4+60N, 11W/4+60N, at 444 Hz and 10W/4+60N, 11W/4+50N at 1777 Hz. This anomaly appears to follow the trend of a razorback ridge. Conductivity thickness products are 5 mhos for 444 Hz and 2 mhos for 1777 Hz. Depth is less than 15 metres and width is narrow. This infers that the conductor forms the core of the ridge, and as such, may represent a magnetic, resistive unit, (the ridge corresponds to a 200 gamma magnetic high).

Conductor two has axis at line 10W/185N, 11W/235N, 12W/285N on 1777 and 444 Hz. On line 10W the conductor appears to be less than 15 metres deep, and 11W and 12W appear slightly deeper. Conductivity thickness products are 5 mhos at 444 Hz and 2 mhos at 1777 Hz over a narrow zone. Directly along strike at 950W/175N an argillite was located. Although no graphite was observed in the hand specimens taken, it is thought that the argillite is the cause of the anomaly. The unit is possibly a double parallel conductor on line 11W. Dip is steeply to the south.

Conductor three has its axis on line 8W/2+60S, 10W/0+60S and likely line 14W/1+50N of 444 Hz. At 1777 Hz, line 10W/0+60S is the strongest section, 14W/1+50 is good, and there is evidence

of a continuation to lines 8N and 6N in a weak fashion. On line 10W, the anomaly appears to have a width of 50 metres and a conductivity thickness of 40 mhos at 444 Hz, which is a good conductor (1 mho/metre). (Anomalies one and two are likely quite thin, accounting for the low conductivity thickness products). Conductivity thickness products are poor on 1777 Hz, perhaps because of attenuation by the overburden. Depth to conductor top is estimated at 35 metres.

Conductor four has conductive axis at line 8W/4+70S, 10W/3+60S using 1777 Hz and, in addition, line 6W/5+10S at 444 Hz. On line 8W, high and low frequencies give conductivity thickness products of 6 and 9 mhos respectively. Both frequencies give a depth of 20 metres and a thin width. This anomaly is on the flat sage area near the road, no outcrop is visible in the vicinity.

All conductors agree with the regional strike, roughly 130°, dipping 80° south.

East of the Trans Canada, the Electromagnetic signature is notably quieter. Except for the power line on the north end of lines 6W to 2E, only one anomaly is present, number five. This is located on line 4E/0+60N. The anomaly itself is indistinct because of a wide band (2+25N-0+50S) of conductive ground, however at the

axis, phasor diagrams for 444 Hz give conductivity thickness of 10 mhos and a depth of 60 metres, while 1777 Hz gives a shallower depth estimate of 20 metres. This anomaly is very interesting because it is along strike from a percussion hole that intersected high zinc values.

Silica North Grid

On the Silica North Grid, the original Walcott anomaly (Walcott Survey, May 1982) on line 3N was extended to the south from 3N/1+75W to 0S/2+25W and picked up again at 4S/2+70W. This zone exhibits conductivities of between 5 and 9 mhos, depths of 45 to 75 metres, and widths of 1 to 25 metres. This zone should be drill tested.

On line 4S, anomaly number seven is present at 260E and continues to line 2S/275E. This anomaly shows a conductivity of 9 mhos over a few metres at a depth of 30 metres. The anomaly appears to strengthen to the south, and should be delineated further with electromagnetics before drilling. An arsenic geochem anomaly is coincident with this conductive zone, (Selco Lithogeochemical Survey, 1980).

In summary, seven conductive zones were located by the Electromagnetic survey. All are thought to be in prospective rocks,

and only one can be explained by a known argillite. This one is not fully explained, as no graphite was located in the hand specimens taken. One anomaly, number seven, requires further geophysical delineation.

Seven drill holes are thus required to test these seven conductors. Conductor axis and suggested hole locations are listed below.

CONDUCTOR			DRILL HOLE			
Number	Axis Location	Depth Meters	Location	Azimuth	Dip	Length (m)
1	10W/4+60N	15	10W/4+00N	035°	-45	100S
2	10W/1+85N	15	10W/1+25N	035°	-45	100
3	10W/0+60S	30	10W/1+10S	035°	-45	100
4	8W/4+70S	20	8W/5+30S	035°	-45	100
5	4E/0+60N	60	4E/0+10S	035°	-45	100
6	0S/2+25W	75	0S/2+85W	045°	-60	100+
7	4S/2+60E	30	4S/2+00E	045°	-45	100

SE-88 Genie E.M. and Mag. Surveys - 1983

From May 17th - 19th inclusive, a field test of the new Scintrex SE-88 Genie electromagnetic system was performed over selected lines on the Silica South and North grids. The location was selected as a test site because of its easy access, steep topography and known electromagnetic conductors.

From November 7th to December 9th, Genie E.M. and Magnetometer surveys were carried out by company personnel over the Silica Project new main grid. A total of approximately 60 line kilometres of grid lines running at 60°NE were surveyed.

The grid line spacing is 100 metres with picketed stations at 25 metre intervals. Notes on the Genie SE-88 E.M. system and interpretation of data is included in this report. (Appendix A)

Discussion of Results from the Genie E.M. Test Survey - May, 1983

On line 10W, north of the baseline, two anomalies were picked up by Max-Min (Map GP5). These are located at 1+85N and 4+60N. Both were interpreted to be shallow conductors, with the 4+60N anomaly interpreted as a ridge core. Subsequent drilling of the two conductors revealed the 1+85N anomaly to be a valid sulphide-graphite conductor, and the 4+60N axis to be likely due

to a concentration of magnetite in an esker-like ridge (i.e. no bedrock). Both anomalies had in phase to quadrature ratio of approximately 1:2. The Genie profile shows a similar trend to the Max-Min. Both the bedrock conductor and the esker response are equal in amplitude and shape to the Max-Min results.

On lines 2S and 4S (Map GP6) two weak, parallel Max-Min anomalies were located. Axis are L4S, 2+60E, L2S, 3+25E and L4S, 2+50W, L2S, 2+25W. Profiles of the Genie data (Map GP7) do locate these zones, however, the anomalies are at the detection limit.

Lines run under both high and low voltage power lines (Map GP8) tend to exhibit very similar characteristics to Max-Min II data, and as such, do not appear to be a significant advantage to the explorationist.

The chief advantage of the unit is the freedom of operation in rough terrain and the option to use flagged lines in lieu of formal line cutting. This represents a major cost savings to reconnaissance projects. The system appears able to locate anomalies which are weak, tenuous Max-Min anomalies and could have been attributed to errors in correcting for topography.

Initial production indicates that the unit is slower to operate

on a per reading basis than the Max-Min II, but as the effort and expense of major linecutting is negated, this time factor is not considered important.

In summary, the system appears to be a good cost-effective primary exploration tool and will enable us to produce reasonably useful data on a routine basis.

1+00S
0+00
1+00N
A
2+00N
3+00N
4+00N
B
5+00N

444 Hz
444 Hz
1777 Hz
1777 Hz
444 Hz
444 Hz
1777 Hz
1777 Hz

X——X 112/1012
o— —o 112/3037
100 m SPACING

GENIE

IN PHASE
X— —X QUADRATURE
150 m SPACING

MAX-MIN

A = STRINGER SULPHIDE, GRAPHITE
B = OVERBURDEN

VERTICAL SCALE 1cm = 5 %

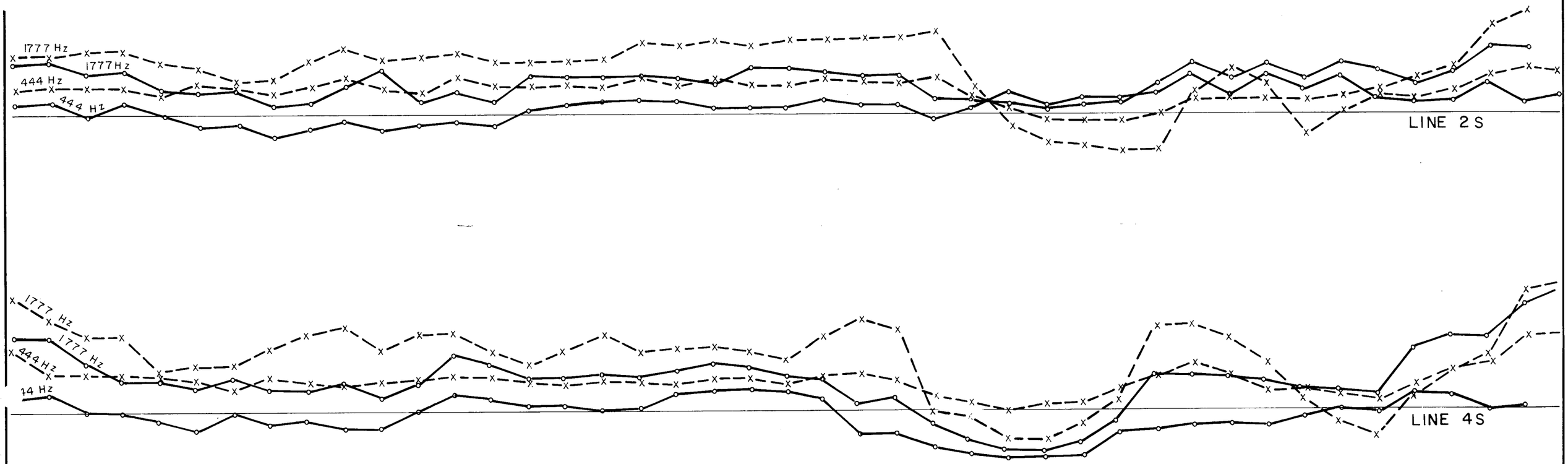
0 50 100 metres
Scale 1:2500

SELCO INC. EXPLORATION WESTERN CANADA

SILICA GROUP
SOUTH GRID
LINE 10W
GENIE - MAX-MIN COMPARISON

DRAWN BY	DATE	N.T.S.	PLAN
A. WYNNE	JUNE, 1983.	92I/11W	GP-5
TRACED BY J.S.	DATE JUNE, 1983.		

4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E



IN PHASE

X— —X QUADRATURE

VERTICAL SCALE 1 cm = 5 %

SEPARATION = 150 m

0 50 100 metres

Scale 1: 2 500

SELCO INC. EXPLORATION WESTERN CANADA

SILICA GROUP
NORTH GRID
HORIZONTAL LOOP
MAX - MIN II

DRAWN BY	DATE	N.T.S.	PLAN
A. WYNNE	JUNE, 1983.	92I/11W	GP-6
TRACED BY J.S.	DATE JUNE, 1983.		

3W 2W 1W 0 1E 2E 3E 4E 5E 6E

LINE 2S

LINE 4S

112/3037

X—X 112/1012

VERTICAL SCALE 1cm = 5%

SEPARATION = 100 m

0 50 100 metres

Scale 1:2500

SELCO INC. EXPLORATION WESTERN CANADA

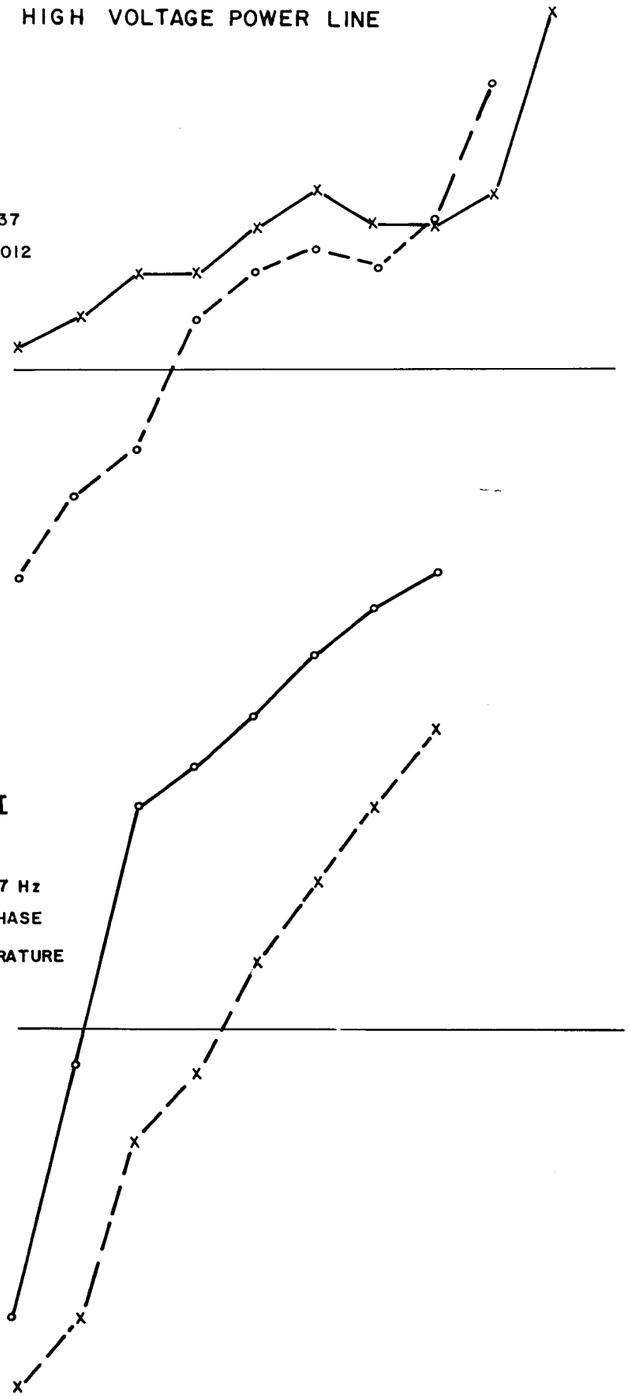
SILICA GROUP
NORTH GRID
HORIZONTAL LOOP
(GENIE)

DRAWN BY	DATE	N.T.S.	PLAN
A. WYNNE	JUNE, 1983.	92I/11W	GP-7
TRACED BY J. S.	DATE JUNE, 1983.		

HIGH VOLTAGE POWER LINE

GENIE

COIL SEP = 100 m
112 / 337
112 / 1012

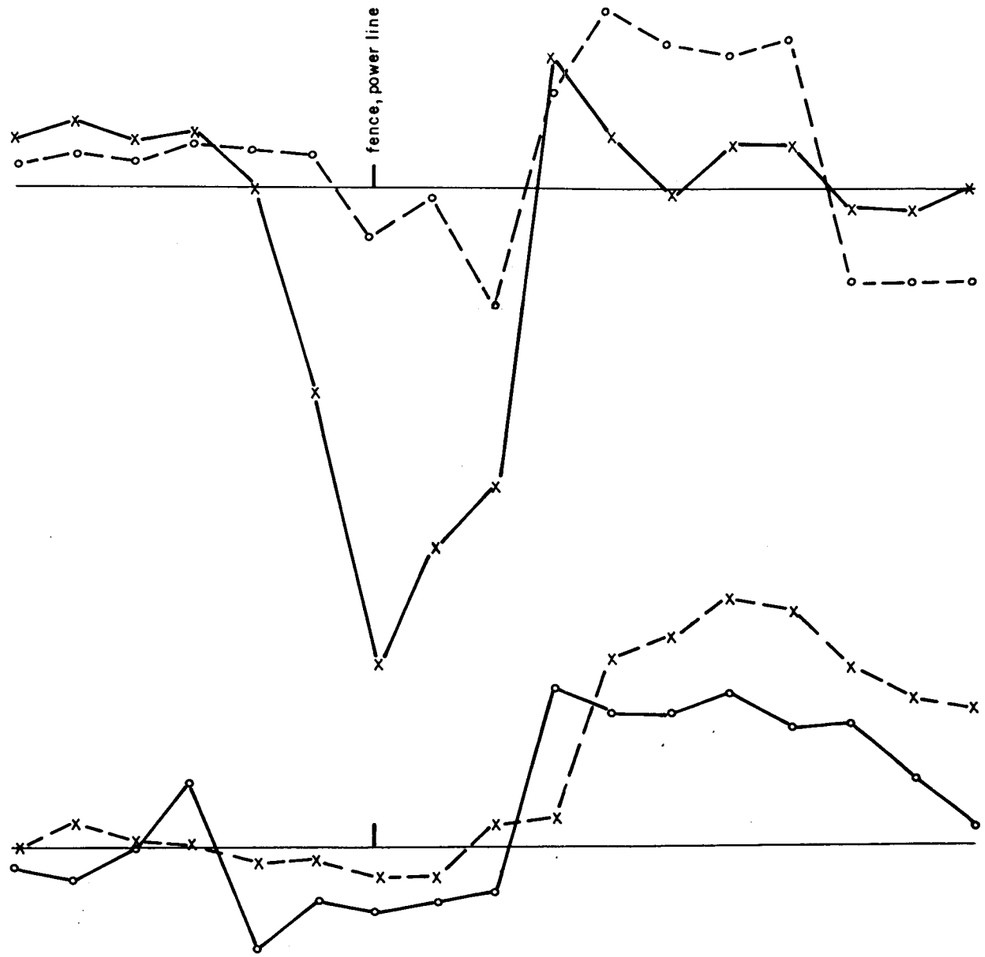


POWER LINE

MAX-MIN II

COIL SEP = 150 m
FREQUENCY = 1777 Hz
IN PHASE
QUADRATURE

LOW VOLTAGE POWER LINE



VERTICAL SCALE 1cm = 5%

0 50 100 metres

Scale 1: 2500

SELCO INC. EXPLORATION WESTERN CANADA

SILICA GROUP

POWER LINE RESPONSE

DRAWN BY	DATE	N.T.S.	PLAN
A. WYNNE	JUNE, 1983.	92 I / 11 W	
TRACED BY	DATE		
J. S.	JUNE, 1983.		

GP-8

Discussion of Results from the Genie E.M. and Mag. Survey - November 1983

A total of 14 discrete electromagnetic anomalies were located as seen in the accompanying 1:2 500 scale geophysical maps GP9 to GP12.

Anomaly A, exhibits conductor axis at L15+00S/15+20W to L19+00S/15+30W. Interpretation is hindered by proximity to a second conductor (B) but is known to dip steeply west. Conductivity thickness is 6 seimens, depth 25 metres.

Anomaly B, runs from L16+00S/13+00W to 19+00S/13+75W, dips vertical, and has a conductivity thickness of 2 seimens. Depth is 25 metres. The narrow negative peak (less than coil separation) suggests an overburden source. A magnetic high corresponds to this anomaly.

Anomaly C, runs from L18+00S/17+15W to 19+00S/17+25W. Conductivity thickness is 13 seimens, depth 40 metres. The unit dips steeply westerly, and has an indicated width of 50 metres on line 19+00S. Magnetics indicate a dipping sheet.

Anomaly D appears on L7+00S/6+90W to L5+00S/5+50W. Conductivity thickness is 1.5 seimens, depth 30 metres. Dip is to the west. The anomaly is located on the flank of a magnetics low. The narrow negative peak width indicates the response maybe caused by overburden.

Anomaly E runs from L8+00S/1+00W to 9+00S/0+80W. Weak responses on lines 6 and 7 indicate a possible extension to the north. Conductivity thickness is 3 siemens, depth 40 metres. Dip is to the west. A weak magnetic high corresponds with this anomaly.

Anomaly F appears on only one line 7+00S/7+90E. Dip is indeterminate, conductivity thickness 16 seimens, depth 50 metres. This response corresponds to a weak magnetic high.

Anomaly G is a one line response, L5+00S/7+40E. It corresponds to a magnetic high. Dip is steeply west, depth 40 metres, conductivity thickness 10 seimens.

Anomaly H is also a one line response, L1+00S/10+75E. Depth is 30 metres, conductivity thickness 3 seimens, the unit dips westerly and corresponds to a mag high.

Anomaly I runs from line 5+00N/14+60E - L1+00W/13+85E. Depth is 40 metres, conductivity thickness 9 seimens. Dip is west, and the response follows a magnetic low.

Anomaly J exhibits a conductive axis from L3+00N/10+60E to L2+00N/10+00E. Depth is 40 metres, conductivity thickness 9 seimens. Dip is west, there is no magnetic response.

Anomaly K runs from 9+00N/7+00E to 7+00N/8+75E. Dip is steep westerly, depth 30 metres, conductivity thickness 1.5 seimens. The magnetic signature is evident.

Anomaly L runs from 7+00N/6+50E to 6+00N/6+50E. Dip is indeterminate, depth 50 metres, conductivity thickness 13 seimens.

Anomaly M is very tenuous, which may be a result of depth, and runs from 1+00S/3+40E - 3+00S/3+60E.

Anomaly N is primarily very weak with axis at 2+00N/2+10W to 2+00S/1+80W.

It is recommended that these 14 anomalous responses each be tested by means of one I.P. and resistivity traverse in order to delineate between bedrock and overburden sources. Drill tests should be carried out on any valid bedrock conductive zones which appear to be geologically of interest.

Induced Polarization and Resistivity Surveys

Two Induced Polarization and Resistivity surveys have been completed on the Silica South Grid. On June 16, 1983 one line of frequency I.P. was run over L10W from 2+50S to 5+50N. The purpose of this test was to clarify whether I.P. could distinguish between a valid bedrock E.M. conductor and an E.M. conductor caused by clays in overburden. From October 10th - 13th, 1983 four lines of frequency I.P. surveying were completed over grid lines 13W, 12W, 9W and 8W from 2+00S to 4+00N totalling 2.4 line kilometres. The purpose of this survey was to follow-up the along strike E.M. conductive trend that extends through the coincidental anomalous I.P. response discovered on L10W/ 1+65N during June I.P. survey.

Survey Specifications

A Phoenix Model IPV-1, I.P. and Resistivity receiver unit was used in conjunction with a Phoenix Model IPT-1, I.P. and Resistivity transmitter powered by a 2 KW motor generator. I.P. effect is recorded directly as Percent Frequency Effect (P.F.E.) at the operating frequencies of 5.0 and 0.30 Hz. Apparent resistivities are normalized in units of ohm-metres. Metal factor values can be calculated according to the formula;

M.F. = (P.F.E. x 1000) ÷ Apparent Resistivity.

Dipole-Dipole array was utilized to make the majority of the measurements with a basic inter-electrode distance of 50 metres. Four dipole separations were recorded in every case.

The field work was carried out under contracts to Phoenix Geophysics Limited.

Presentation of Data

The Induced Polarization and Resistivity results are shown on the following data plots (pseudosections) in the manner described in the notes following this report. (Appendix B)

Since the Induced Polarization measurement is essentially an averaging process, as are all potential methods, it is frequently difficult to exactly pinpoint the source of an anomaly. Certainly no anomaly can be located with more accuracy than the electrode interval length; i.e. when using 50 metre electrode intervals the position of a narrow sulphide body can only be determined to lie between two stations 50 metres apart. In order to definitely locate, and fully evaluate, a narrow, shallow source, it is necessary to use shorter electrode intervals. In order to locate sources at some depth, larger electrode intervals must be used, with a corresponding increase in the uncertainties of location. Therefore, while the centre of the indicated anomaly probably

corresponds fairly well with source, the length of the indicated anomaly along the line should not be taken to represent the exact edges of the anomalous material.

Discussion of Results

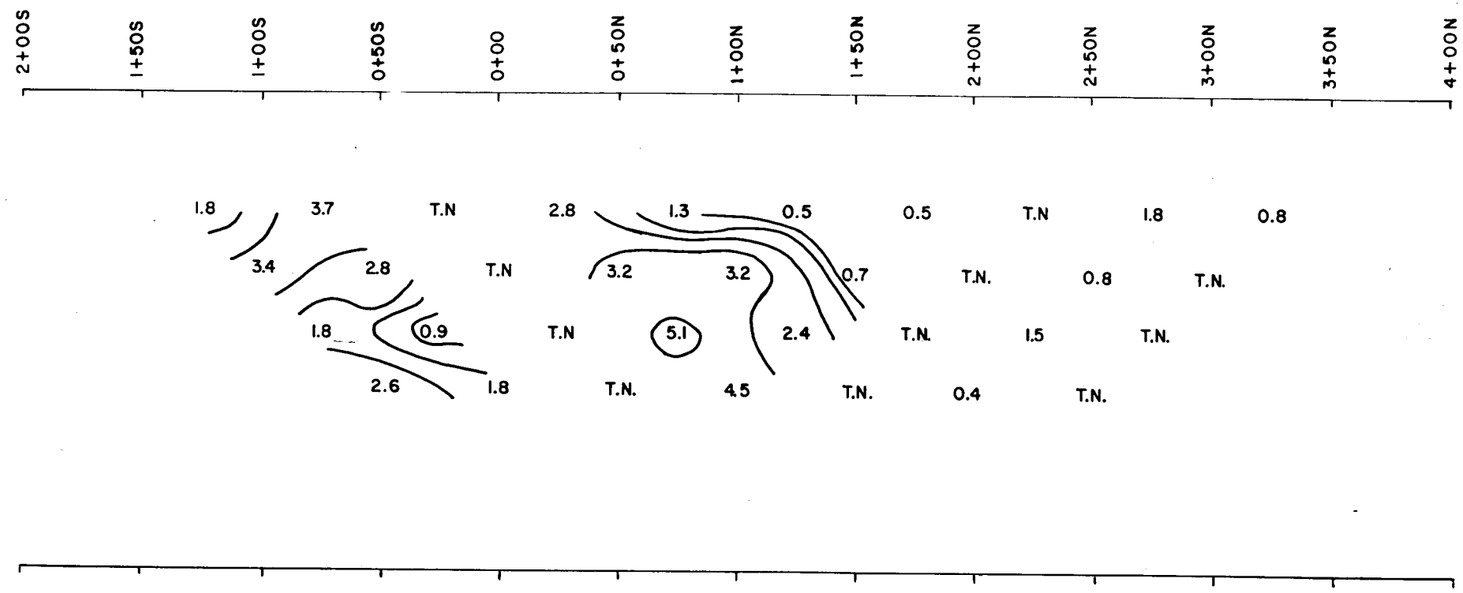
The results of the June I.P. survey on L10W(Map GP15) were very encouraging with a major I.P. anomaly astride the valid E.M. conductor at 1+65N, and no I.P. effect associated with the overburden E.M. anomaly at 4+65N. Note that there appears to be a polarizable body at depth at 0+65S. Also note the overburden at the north end of the line causes a definite layering of the resistivity values, a pattern which is not copied to the south. Therefore, it would appear that the 0+60S target is a bona-fide bedrock conductor.

The results of the October I.P. survey were also very encouraging with anomalous I.P. effects centred on L8W/0+75N, L9W/1+00N, L12W/3+25N and L13N/2+75N. (Plan No's GP13, 14, 16,17 respectively) An anomalous I.P. zone is, therefore, outlined over 500 metres along strike from line 8W to 13W which is also coincidental to an electromagnetic conductive trend.

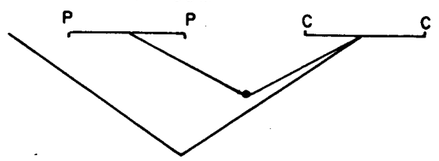
The results also indicate a possible anomalous zone lying south of the baseline. Additional surveying would be required to fully define this southern zone.

It is apparent that short I.P. lines over E.M. conductors should be utilized to discriminate between bedrock and overburden conductors before drilling.

The main I.P. anomalous zone is recommended for drill testing.



DIPOLE – DIPOLE ARRAY
A = 50m

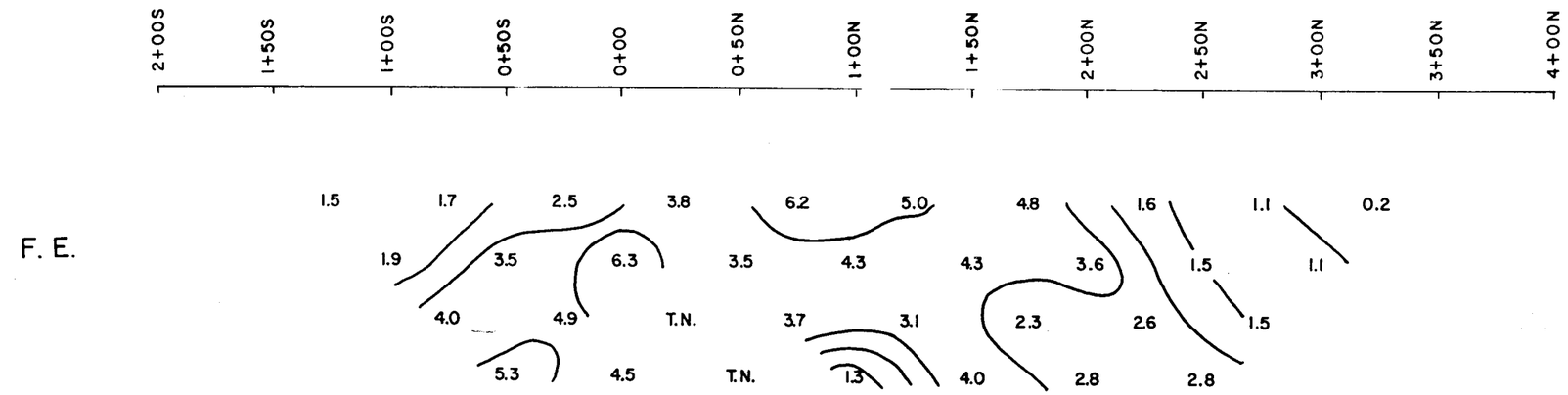


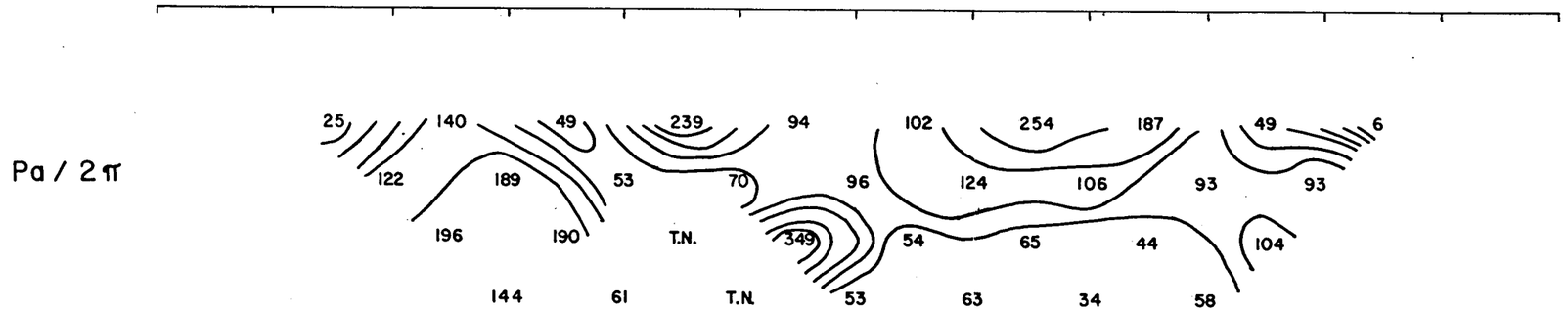
0 50 100 metres
Scale 1: 2500

SELCO INC. EXPLORATION WESTERN CANADA

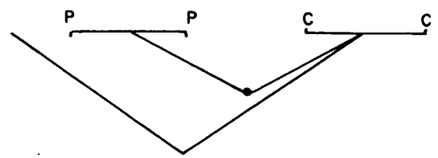
SILICA GROUP
SOUTH GRID
LINE 8W
I.P & RESISTIVITY PSEUDOSECTION

DRAWN BY	DATE	N.T.S.	PLAN
TRACED BY Z.J.W.	DATE JAN., 1984	92 I/11W	





DIPOLE – DIPOLE ARRAY
A = 50m

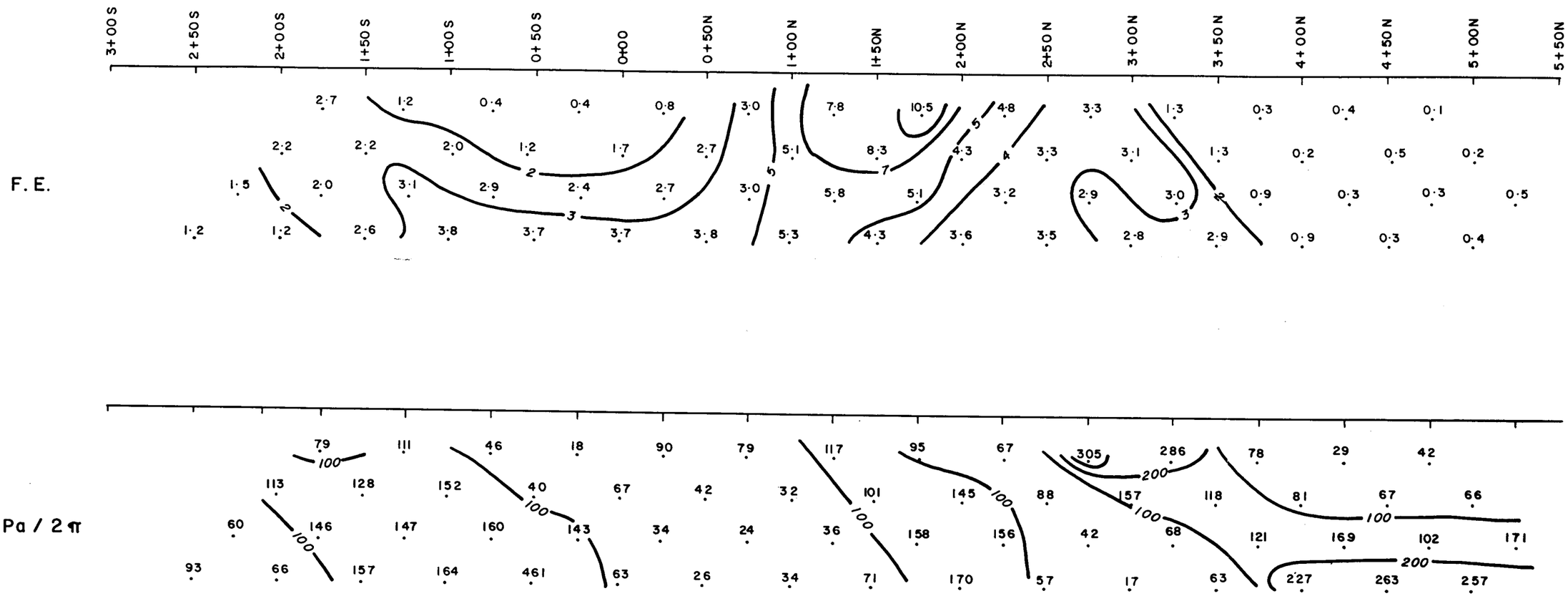


0 50 100 metres
Scale 1: 2500

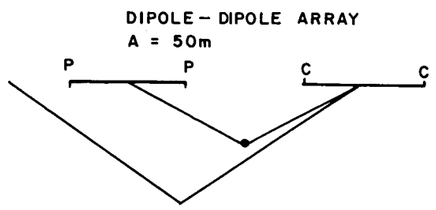
SELCO INC. EXPLORATION WESTERN CANADA

SILICA GROUP
SOUTH GRID
LINE 9W
I.P. & RESISTIVITY PSEUDOSECTION

DRAWN BY	DATE	N.T.S.	PLAN
TRACED BY Z-J-W	DATE JAN., 1984	92 I/11W	GP-14



DIPOLE – DIPOLE ARRAY
A = 50m



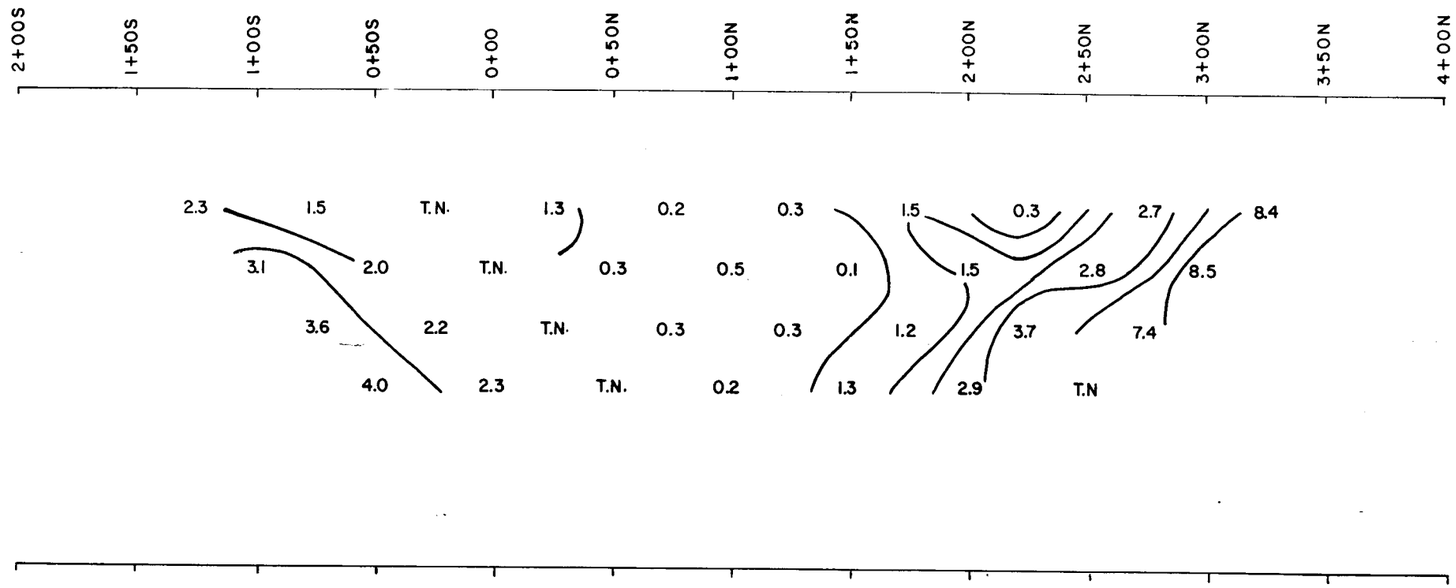
0 50 100 metres
Scale 1: 2500

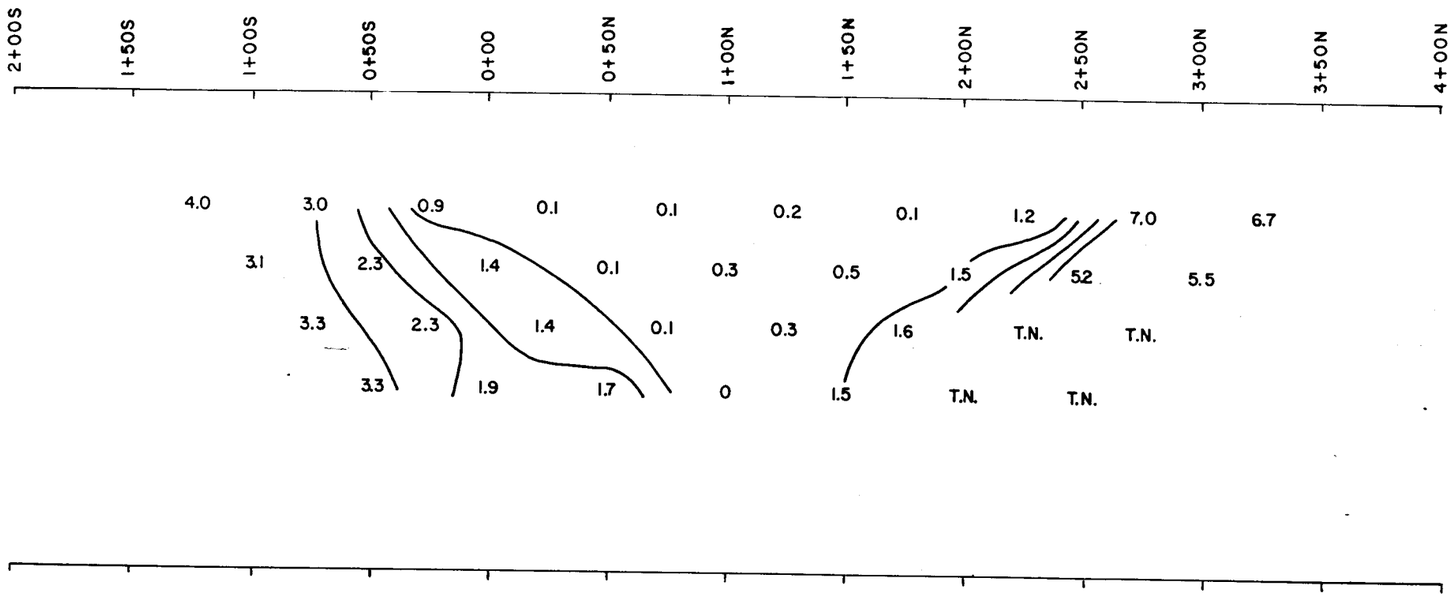
SELCO INC. EXPLORATION WESTERN CANADA

SILICA GROUP
SOUTH GRID
LINE 10W
I.P. & RESISTIVITY PSEUDOSECTION

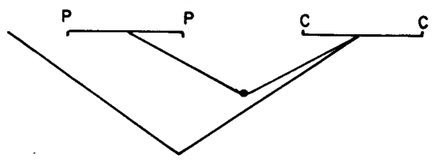
DRAWN BY	DATE	N.T.S.	PLAN
A. WYNNE	JUNE 1983.	92I/11W	
TRACED BY	DATE		
J.S.	JUNE, 1983.		

GP-15


2+00S
1+50S
1+00S
0+50S
0+00
0+50N
1+00N
1+50N
2+00N
2+50N
3+00N
3+50N
4+00N
F. E.
2.3
1.5
T.N.
1.3
0.2
0.3
1.5
0.3
2.7
8.4
3.1
2.0
T.N.
0.3
0.5
0.1
1.5
2.8
8.5
3.6
2.2
T.N.
0.3
0.3
1.2
3.7
7.4
4.0
2.3
T.N.
0.2
1.3
2.9
T.N
Pa / 2π
229
104
T.N.
37
17
32
40
51
40
33
227
100
T.N.
50
34
36
42
45
42
176
90
T.N.
57
47
42
36
48
137
83
T.N.
79
55
33
T.N.
DIPOLE – DIPOLE ARRAY
A = 50m
P
P
C
C
0
50
100 metres
Scale 1: 2500
SELCO INC. EXPLORATION WESTERN CANADA
SILICA GROUP
SOUTH GRID
LINE 12 W
I.P & RESISTIVITY PSEUDOSECTION
DRAWN BY
DATE
N.T.S.
PLAN
TRACED BY Z.J.W.
DATE JAN., 1984
92 I/11W
GP-16



DIPOLE – DIPOLE ARRAY
A = 50m



0 50 100 metres
Scale 1: 2500

SELCO INC. EXPLORATION WESTERN CANADA

SILICA GROUP
SOUTH GRID
LINE 13W
I.P. & RESISTIVITY PSEUDOSECTION

DRAWN BY	DATE	N.T.S.	PLAN
TRACED BY Z.J.W.	DATE JAN., 1984	92 I/11W	

LITHOGEOCHEMICAL SURVEY

A lithogeochemical sampling program was conducted over parts of the Silica Project claim area from November 1st to December 15, 1983. The procedure followed in this survey entailed the utilization of 1:5 000 scale blowups of the 1:10 000 orthophoto mosaic base maps and 1:50 000 government air photos to locate and accurately plot the lithogeochemical sample locations onto the 1:10 000 scale base maps. (Maps GC-1, GC-2)

A total of 56 rock samples were carefully selected for geochemical analyses. The samples were shipped to Chemex Labs Ltd. in Vancouver to be geochemically analysed for gold, silver, copper and zinc. Several samples were also analysed for cobalt and nickel in addition.

The range of the assay values for the rocks taken in this survey are as follows:

Gold: less than 5 ppb (10^{-9} g/tonne) to 0.2 g/tonne or 200 ppb

Silver: From 0.1 ppm (10^{-6} g/tonne) to 4.2 ppm

Copper: From 3.0 ppm (10^{-6} g/tonne) to 0.12% or 1200 ppm

Zinc: From 5 ppm (10^{-6} g/tonne) to 300 ppm

Cobalt: From 1 ppm (10^{-6} g/tonne) to 29 ppm

Nickel: From 11 ppm (10^{-6} g/tonne) to 80 ppm

The analyses appear in the following sample description list, and are cross referenced to Section 6, Certificates of analyses via sample number.

The distribution of values are shown below:

1)	Gold	0-5 ppb	46 samples
		6-10 ppb	5 samples
		11-15 ppb	0 samples
		16-20 ppb	1 sample
		21-25 ppb	0 samples
		26-30 ppb	1 sample
		30-100 ppb	2 samples
		100-200 ppb	1 sample
		Total	56 samples

2)	Silver	0-1.0 ppm	51 samples
		1.1-2.0 ppm	2 samples
		2.1-3.0 ppm	0 samples
		3.1-4.0 ppm	2 samples
		4.1-5.0 ppm	1 sample
		Total	56 samples

3)	Copper	0-50 ppm	48 samples
		51-100 ppm	3 samples
		101-150 ppm	2 samples
		151-200 ppm	0 samples
		201-1000 ppm	2 samples
		1001-2000 ppm	1 sample
		Total	56 samples

4)	Zinc	0-50 ppm	32 samples
		51-100 ppm	14 samples
		101-150 ppm	6 samples
		151-200 ppm	1 sample
		201-250 ppm	1 sample
		251-300 ppm	2 sample
		Total	56 samples

The results of this survey have generally returned low insignificant values for gold, silver, copper and zinc. The occassional spike like values of zinc, copper and silver tend to be isolated single element anomalies. The one exception are the samples of massive pyrite-pyrrhotite float that generally exhibit multiple element anomalous conditions. Sample #'s 22925, 22926 and 22927.

Further lithogeochemical sampling will continue in the 1984 field season.

SAMPL. LIST

DP= disseminated pyrite

SAMPLE NO.	DESCRIPTION	oz/t Au	oz/t Ag	% Cu	ppb Au	ppb Hg	ppm As	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Mo	ppm W
SP.11.83.1 (41555)	RHYOLITE: massive, siliceous, green quartz-sericite schist which contains rare quartz phenocrysts, disseminated pyrite -DP				<5			10		67	0.1		
SP.2.11.83.2 (41556)	RHYOLITE: quartz-feldspar porphyritic, quartz-sericite schist, disseminated pyrite - DP DP				<5			5		5	0.1		
SP.4.11.83.1 (41557)	RHYOLITE: quartz porphyritic, quartz-sericite schist, highly siliceous (alteration?), disseminated pyrite - DP				<5			120		28	0.1		
SP.11.11.83.2 (41558)	DACITE: quartz + feldspar, microphenocrysts (flow), chlorite-carbonate schist, disseminated pyrite -DP SP.7.1-sampled SP.9.2-sampled				<5			16		72	0.1		
SP.11.11.83.3 (41559)	DACITE: flow, carbonate-chlorite schist, disseminated pyrite - DP				<5			148		123	0.1		
SP.12.11.83.1 (41560)	RHYOLITE: quartz porphyritic, siliceous flow(?) quartz-sericite schist, disseminated pyrite- DP				<5			6		16	0.1		

SAMPLE LIST

DP=disseminated pyrite

SAMPLE NO.	DESCRIPTION	oz/t Au	oz/t Ag	% Cu	ppb Au	ppb Hg	ppm As	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Mo	ppm W
SP.12.11.83.3 (41561)	RHYOLITE: quartz porphyritic flow, quartz-sericite schist, disseminated pyrite - DP				<5			4		19	0.1		
SP.12.11.83.4 (41562)	RHYOLITE: quartz porphyritic flow, quartz-sericite schist, disseminated pyrite - DP				<5			8		25	0.1		
SP.14.11.83.1 (41563)	RHYOLITE: quartz porphyritic flow, quartz-sericite schist, disseminated pyrite - DP SP.14.2-sampled				<5			5		21	0.1		
SP.14.11.83.3 (41564)	RHYOLITE: quartz porphyitic flow, quartz-sericite schist, disseminated pyrite - DP SP.14.7A-sampled				<5			4		10	0.1		
SP.15.11.83.6 (41565	DACITE: strongly foliated, very fine-grained, green (scummy) rock, disseminated pyrite - DP				<5			9		56	0.1		
SP.15.11.83.7 (41566)	DACITE: same as SP.15.6				<5			6		120	0.1		

SAMPLE LIST

DP= disseminated Pyrite

SAMPLE NO.	DESCRIPTION	oz/t Au	oz/t Ag	% Cu	ppb Au	ppb Hg	ppm As	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Mo	ppm W
SP.16.11.83.1A (41567	RHYODACITE:quartz-feldspar phenocrysts in a highly siliceous green, non-foliated (massive) matrix (ash flow tuff) - contains broken crystals				<5			5		18	0.1		
	or rare lithic fragments- DP												
SP.16.11.83.2 (41568)	RHYODACITE: quartz-feldspar-porphyritic ash flow tuff 10-15% disseminated pyrite and calco.(?)				5			35		53	0.1		
SP.16.11.83.3 (41569)	RHYODACITE: quartz-feldspar-porphyritic ash flow tuff approximately 10% disseminated sulphides				<5			23		85	0.1		
SP.16.11.83.4 (41570)	RHYOLITE: rare quartz phenocrysts in a white (whitish-green), highly siliceous aphanitic matrix - DP				<5			4		57	0.1		
SP.16.11.83.7 (41571)	RHYODACITE: quartz-feldspar-porphyritic ash flow tuff - DP				<5			11		24	0.1		

SAMPLE LIST

DP= disseminated pyrite

SAMPLE NO.	DESCRIPTION	oz/t Au	oz/t Ag	% Cu	ppb Au	ppb Hg	ppm As	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Mo	ppm W
SP.16.11.83.9 (41572)	RHYOLITE BRECCIA: containing abundant white rhyolite fragments in a quartz feldspar microporphyritic, siliceous matrix - DP				<5			8		46	0.1		
SP.18.11.83.1b (41573)	RHYODACITE: quartz-feldspar-porphyritic ash flow tuff - DP				<5			4		55	0.1		
SP.18.11.83.2 (41574)	RHYODACITE: quartz-feldspar-porphyritic ash flow tuff - DP				<5			5		73	0.1		
SP.18.11.83.3A (41575) SP.18.1B	RHYODACITE: quartz-feldspar-porphyritic ash flow tuff silicified (alteration) disseminated pyrite and chalcopyrite(?)				<5			10		62	0.1		
SP.18.11.83.5A (41576)	RHYODACITE: same as SP.18.3A				<5			13		11	1.1		
SP.18.11.83.6 (41577)	RHYOLITE BRECCIA: sheared, abundant disseminated sulphide				<5			20		125	0.1		

SAMPLE LIST

DP = disseminated pyrite

SAMPLE NO.	DESCRIPTION	oz/t Au	oz/t Ag	% Cu	ppb Au	ppb Hg	ppm As	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Mo	ppm W
SP.18.11.83.8 (41578)	RHYOLITE BRECCIA: same as SP.18.6				<5			6		35	0.1		
SP.20.11.83.3 (41579)	ANDESITE: tuff(?) - altered to talc - abundant disseminated sulphides and minor sphalerite(?)				<5			100		102	0.1		
SP.22.11.83.5 (41580)	RHYOLITE BRECCIA: - DP				<5			4		19	0.1		
SP.22.11.83.6 (41581)	RHYODACITE: quartz-feldspar-porphyritic ash flow tuff - DP				5			21		260	0.1		
SP.22.11.83.7 (41582)	RHYODACITE: quartz-feldspar-porphyritic ash flow tuff - DP				<5			7		49	0.2		
SP.23.11.83.1 (41583)	RHYOLITE BRECCIA: - DP				<5			4		24	0.1		

SAMPL. LIST

DP = disseminated pyrite

SAMPLE NO.	DESCRIPTION	oz/t Au	oz/t Ag	% Cu	ppb Au	ppb Hg	ppm As	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Mo	ppm W
SP.23.11.83.2 (41584)	RHYOLITE BRECCIA: - DP				5			5		30	0.1		
SP.23.11.83.3 (41585)	RHYOLITE BRECCIA: - DP				<5			6		70	0.1		
SP.23.11.83.6 (41586)	RHYOLITE BRECCIA: - DP				<5			11		56	0.1		
SE.1.11.83.2 (41591)	Strongly foliated quartz-sericite schist, rhyolite quartz porphyritic flow approx. 3% pyrite				<5			15		26	0.1		
SE.1.11.83.5 (41592)	Fine-grained diorite approx. 1% pyrite				<5			39		102	0.1		
SE.2.11.83.17 (41593)	Massive white rhyolite flows with 3-5% pyrite				<5			4		5	0.1		

SAMPLE LIST

SAMPLE NO.	DESCRIPTION	oz/t Au	oz/t Ag	% Cu	ppb Au	ppb Hg	ppm As	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Mo	ppm W
SE.4.11.83.28 (41594)	White quartz porphyritic rhyolite flows 1-3% pyrite				<5			13		34	0.1		
SE.4.11.83.29 (41595)	Massive white rhyolite 2-5% pyrite				<5			3		5	0.1		
SE.7.11.83.38 (41596)	Massive white quartz - porphyritic rhyolite 1-3% pyrite				10			13		51	0.1		
SE.7.11.83.40 (41597)	Massive white rhyolite 3+% pyrite				10			5		17	0.1		
SE.7.11.83.40A (41598)	Massive white rhyolite with zone of 10+% pyrite				<5			4		49	0.1		
SE.11.11.83.50 (41599)	White - Dk. massive rhyolite with 10+% pyrite				<5			6		13	0.1		

SAMPLE LIST

SAMPLE NO.	DESCRIPTION	oz/t Au	oz/t Ag	% Cu	ppb Au	ppb Hg	ppm As	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Mo	ppm W
SE.13.11.83.62 (41600)	Foliated rhyolite quartz-sericite schist - strong gossan				30			35		155	4.2		
SE.13.11.83.64 (41603)	Massive white rhyolite with gossanous foliation				10			17		45	0.1		
SE.18.11.83.92 (41604)	Rhyolite Breccia, green, siliceous matrix with white + purple angular clasts - gossanous quartz-sericite schist				5			7		25	0.1		
SE.5.12.83.104 (41605)	Quartz-porphyritic rhyolite, very siliceous with gossanous foliation				20			20		38	0.1		
SE.4.11.83.24 (41606)	Quartz-porphyritic rhyolite flow, approx. 2-3% pyrite				<5			3		8	0.1		
SE.7.11.83.41 (41607)	Quartz-porphyritic rhyolite-white 305% Pyrite, Mod. foliation				<5			79		135	0.1		

SAMPLE LIST

SAMPLE NO.	DESCRIPTION	g /t Au	g/t Ag	% Cu	ppb Au	ppb Hg	ppm As	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Co	ppm Ni
SE.21.11.83.99 (41601)	Foliated Rhyolite Breccia 2-4 % Pyrite				10			16		36	0.1		
SE.22.11.83.104 (41602)	Foliated Rhyolite Breccia 5+% Pyrite				10			4		16	0.1		
GRAB #1 (22925)	Sulphide Float Massive Py-Po	<0.1	3.4	0.04						35		1	11
GRAB #2 (22926)	Sulphide float, 75% Py crystalline in a dark green matrix with occl 4-5 cm rhyolite breccia fragments	0.2	3.9	0.12						300		10	80

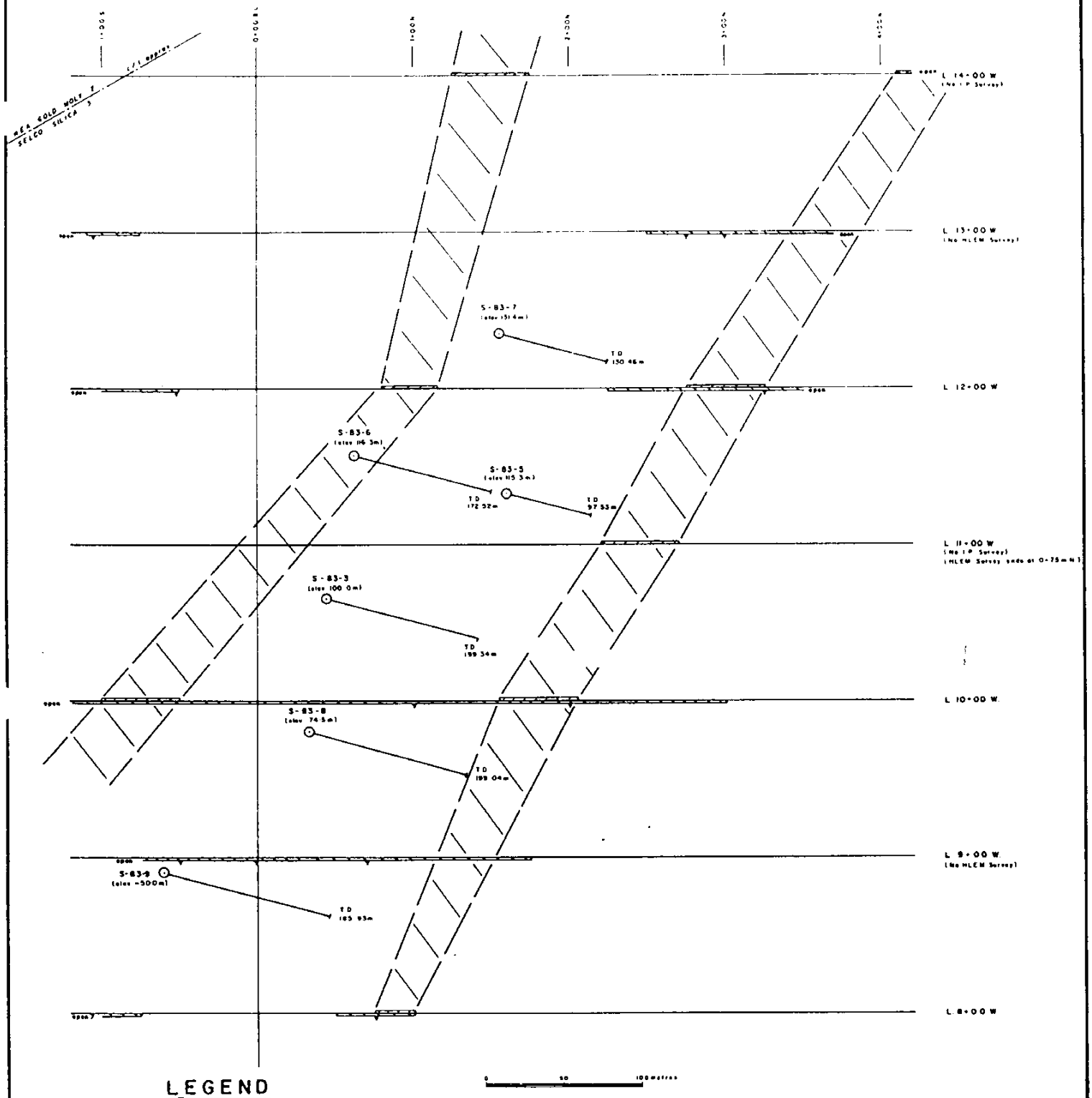
SAMPLE LIST

SAMPLE NO.	DESCRIPTION	g/t Au	g/t Ag	% Cu	ppb Au	ppb Hg	ppm As	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Co	ppm Ni
GRAB #3 (22927)	Sulphide float, 75% Py crystalline in a pale green 'earthy' chlorite matrix	<0.1	2.0	0.04						220		29	68
SP.7.11.83-1 (41587)	ANDESITE: fine-grained feldspar porphyritic flow with 1-2% disseminated pyrite				5			68		55	0.1		
SP.8.11.83-2 (41588)	RHYOLITE: quartz-feldspar porphyritic, greenish-white siliceous cut by quartz and pyrite fracture fillings				<5			8		15	0.1		
SP.14.11.83-7A (41589)	RHYOLITE: pale green aphanitic, siliceous flow				<5			12		67	0.1		
SP.14.11.83-2	RHYOLITE: quartz-feldspar porphyritic, sericitic, red gossonous, -D.P.				<5			4		8	0.1		

DIAMOND DRILLING

Two diamond drill programs were conducted on the Silica Project claims during 1983. The first program from April 25th - May 9th consisted of 2 diamond drill holes totalling 159.11 metres. The second program from October 20th - December 5th consisted of 6 diamond drill holes totalling 988.82 metres. The purpose of these holes were to test anomalies outlined by the H.L.E.M. and I.P. geophysical surveys on the Silica South Grid. The Silica South Grid H.L.E.M. plan No. GP 4 illustrates the geophysical anomalies and all drill hole locations. A compilation plan No. DD 1 illustrates the I.P. anomalous zones and H.L.E.M. conductive trends over a part of the Silica South Grid that hosts all but two of the diamond drill holes. Drill hole locations are as follows:

DDH NO.	COORDINATES (SILICA SOUTH GRID)	AZ/DIP	T.D.	VISIBLE MINERALIZATION
S-83-1	L10+18mW/4+05mN	040°/-45°	73.76 m	O/B
S-83-2	L8+26mW/5+20mS	050°/-45°	85.35 m	Py
S-83-3	L10+66mW/0+44mN	045°/-55°	199.34 m	Py, CPy, ZnS, Graphite
S-83-5	L11+33mW/1+60mN	045°/-50°	97.53 m	Graphite
S-83-6	L11+57mW/0+62mN	045°/-55°	172.52 m	Py, CPy, ZnS, Graphite
S-83-7	L12+35mW/1+55mN	045°/-50°	130.46 m	Py, Graphite
S-83-8	L9+80mW/0+33mN	045°/-55°	199.04 m	Py, CPy,Graphite
S-83-9	L8+90mW/0+60mS	045°/-55°	185.93 m	Py, CPy



LEGEND

- DIAMOND DRILL HOLES PROJECTED TO HORIZONTAL
- H.L.E.M. CONDUCTOR
- I.P. CONDUCTOR STRONG PEAK
- H.L.E.M. CONDUCTOR AXIS

N

SELCO INC. EXPLORATION WESTERN CANADA

PROGRESS MAP

SILICA 3 SULPHIDE ZONE

DRAWN BY	DATE	N.T.S.	FIGURE
D. G.	JAN. 1984.	92 I/11W	MAP DD-1
TRACED BY J. S.	DATE JAN. 1984.		

DRILL RESULTS

The results obtained from the drill programs and assays are reported in the accompanying diamond drill hole logs and illustrated on the series of drill sections, Dwg. No.'s DD-2 to DD-6.

Hole No.

S-83-1 Was drilled entirely in overburden; the cause of the H.L.E.M. conductor is still to be determined, however, it is believed to be caused by conductive overburden as illustrated on the I.P. profile.

S-83-2 Was collared in overburden and hit bedrock from 26-36 metres down the hole. From 36-64 metres the hole ran back into overburden followed by bedrock to 85.35 metres. The source of the H.L.E.M. conductor is unexplained and would appear to coincide with the "second" overburden interval from 36-64 metres. The rhyolite tuff above this overburden interval has weak sericite alteration, whereas below this overburden interval the rhyolitic rocks show intense sericitic alteration.

Drill holes S-83-3, S-83-5, S-83-6, S-83-7, S-83-8 and S-83-9 were drilled in an altered acid tuff assemblage that hosts an argillaceous siltstone/andesite horizon. Scattered chalcopyrite mineralization occurs in DDH's S-83-3, 6, 8, 9. The mineralization occurs as

disseminated stringer and conformable stringer chalcopyrite and pyrite in a strongly sericite altered rhyolite tuff to tuff-breccia assemblage. The best intersections are as follows:

S-83-3

- 0.33% Cu, 0.01% Zn, 7.59 g/t Ag, <0.1 g/t Au over 6.7 metres from 69.5 m - 76.2 m
- 0.12% Cu, 0.05% Zn, 6.0 g/t Ag, <0.1 g/t Au over 2.0 metres from 84.2 - 86.2 m
- 0.07% Cu, 0.15% Zn, 4.1 g/t Ag, <0.1 g/t Au over 2.0 metres from 92.2 - 94.2 m
- <0.1% Cu, 0.10% Zn, 3.9 g/t Ag, <0.1 g/t Au over 2.0 metres from 104.2 - 106.2 m
- 0.10% Cu, 0.03% Zn, 3.3 g/t Ag, <0.1 g/t Au over 8.0 metres from 114.2 - 122.2 m
- 0.13% Cu, 0.03% Zn, 4.10 g/t Ag, <0.1 g/t Au over 5.4 metres from 142.2-147.6 m

S-83-6

- 0.01% Cu, 0.03% Zn, 3.4 g/t Ag, 0.7 g/t Au over 6.1 metres from 93.6 - 99.7 m
- 0.12% Cu, 0.12% Zn, 5.1 g/t Ag, <0.1 g/t Au over 4.0 metres from 110.6 - 114.6 m
- 0.22% Cu, 0.01% Zn, 6.8 g/t Ag, <0.1 g/t Au over 1.0 metres from 123.1 - 124.1 m

  An overall assay section from 105.8 - 130.1 metres for Ag ran 4.80 g/t.

S-83-8

- 0.125% Cu, 0.024% Zn, 3.0 g/t Ag, <0.1 g/t Au over 15 metres from 58.0 - 73.0 metres
- 0.23% Cu, 0.01% Zn, 3.9 g/t Ag, <0.1 g/t Au over 2.8 metres from 81.9 - 84.7 m
- 0.19% Cu, 0.013% Zn, 2.7 g/t Ag, <0.1 g/t Au over 12.67 metres from 99.23 - 111.9 m

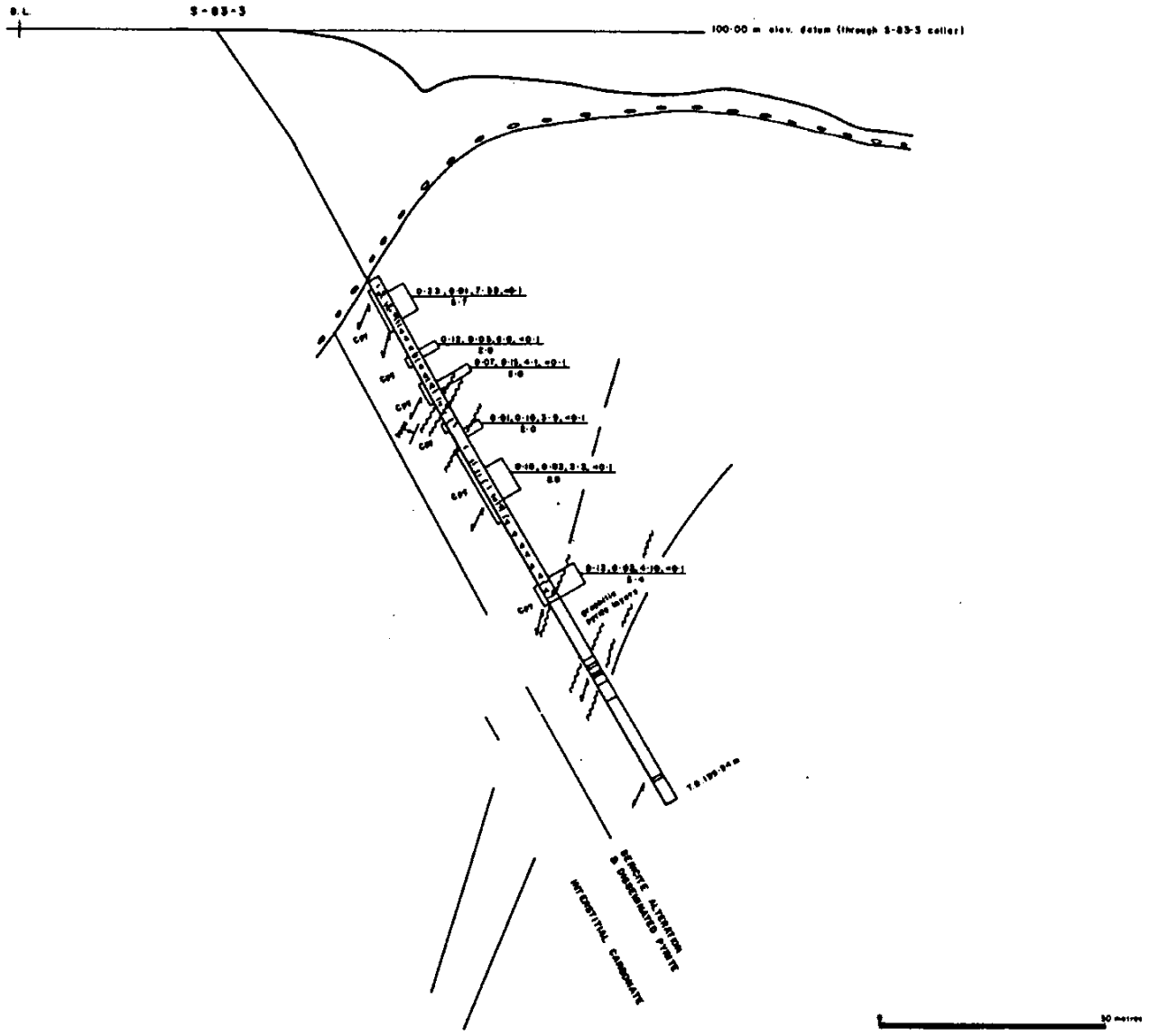
S-83-8 (Con't)

- 0.04% Cu, 0.13% Zn, 2.8 g/t Ag, <0.1 g/t Au over 8.0 metres from 157.0 - 165.0 m
- 0.56% Cu, 0.06% Zn, 11.5 g/t Ag, <0.1 g/t Au over 0.43 metres from 165.3 - 165.73 m
- 0.56% Cu, 0.02% Zn, 4.4 g/t Ag, <0.19 g/t Au over 0.26 metres from 172.12 - 172.38 m

S-83-9

- 0.11% Cu, 0.002% Zn, 3.6 g/t Ag, <0.1 g/t Au over 0.18 metres from 80.94 - 81.12 m
- 0.26% Cu, 0.02% Zn, 2.8 g/t Ag, <0.1 g/t Au over 0.81 metres from 93.07 - 93.88 m
- 0.23% Cu, 0.05% Zn, 3.3 g/t Ag, <0.1 g/t Au over 2.0 metres from 101.0 - 103.0 m
- 0.23% Cu, 0.02% Zn, 2.82 g/t Ag, <0.1 g/t Au over 5.0 metres from 162.3 - 167.3 m
- 0.22% Cu, 0.06% Zn, 3.07 g/t Ag, <0.1 g/t Au over 6.3 metres from 171.3 - 176.6 m

It is recommended that along strike and up section geophysical anomalies be drill tested.



MAP DD-2

LOOKING NORTH

GRID CO-ORD 10+95 mN 0+44 mE

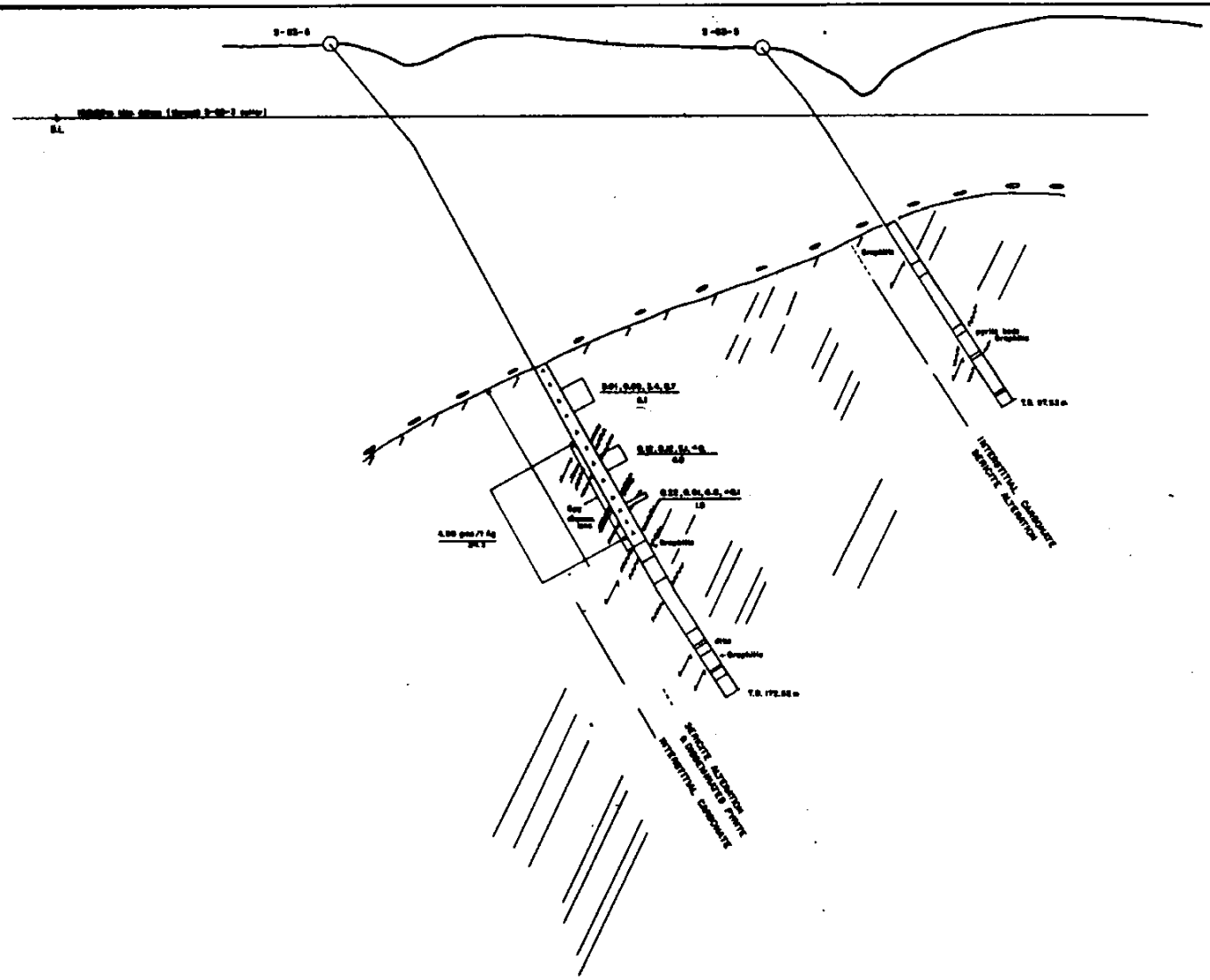
BEARING 049° DIP -55°

BELCO MINING CORP. LTD.

AREA SILICA

GRID SOUTH GRID

D.D.H. SECTION S-83-3

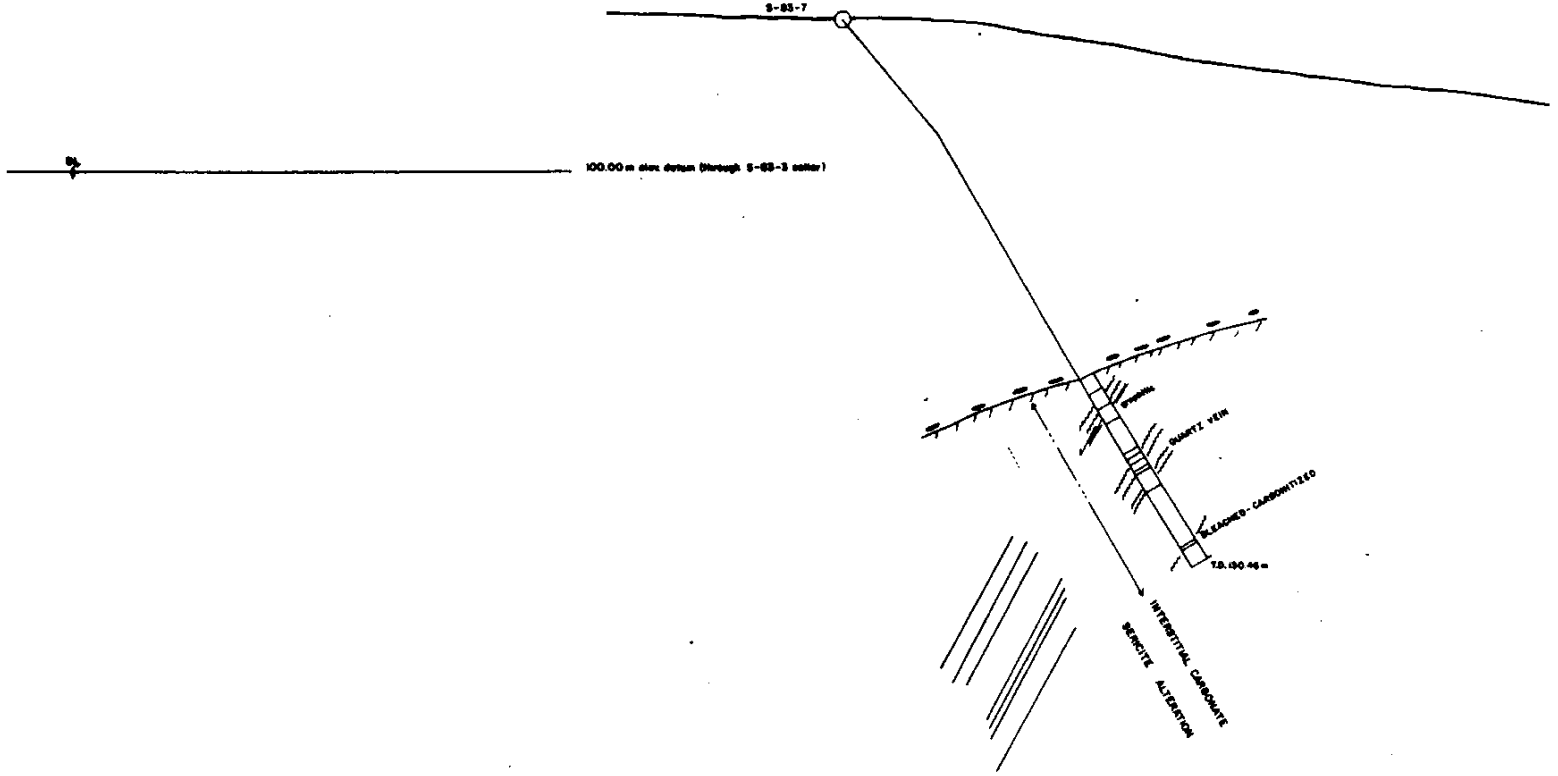


MAP DD-3

LOOKING NORTH

AREA	SILICA
GRID	SOUTH GRID
SECTION	S-03-5

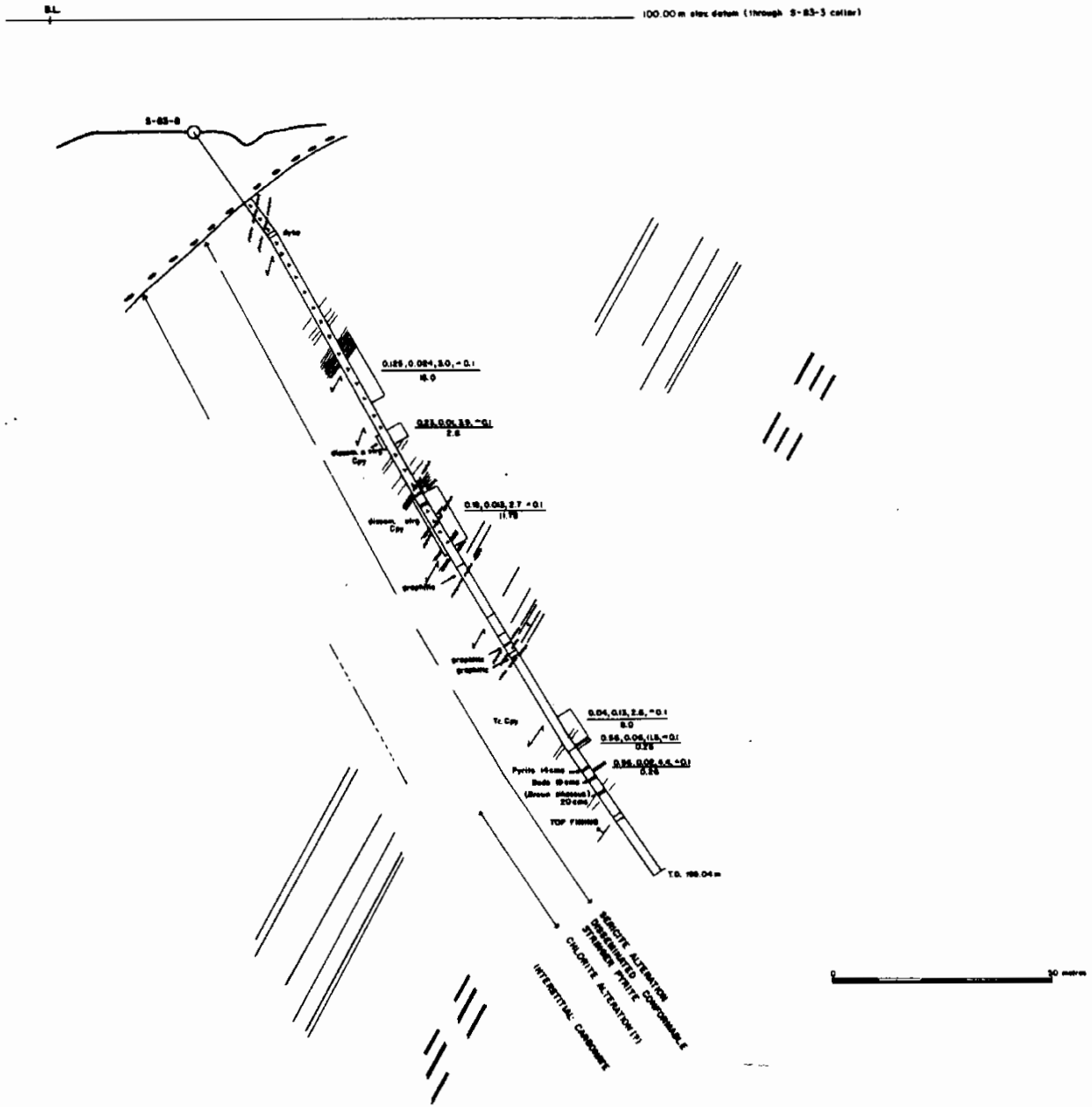
AREA	SILICA
GRID	SOUTH GRID
SECTION	S-03-6



MAP DD-4

LOOKING NORTH

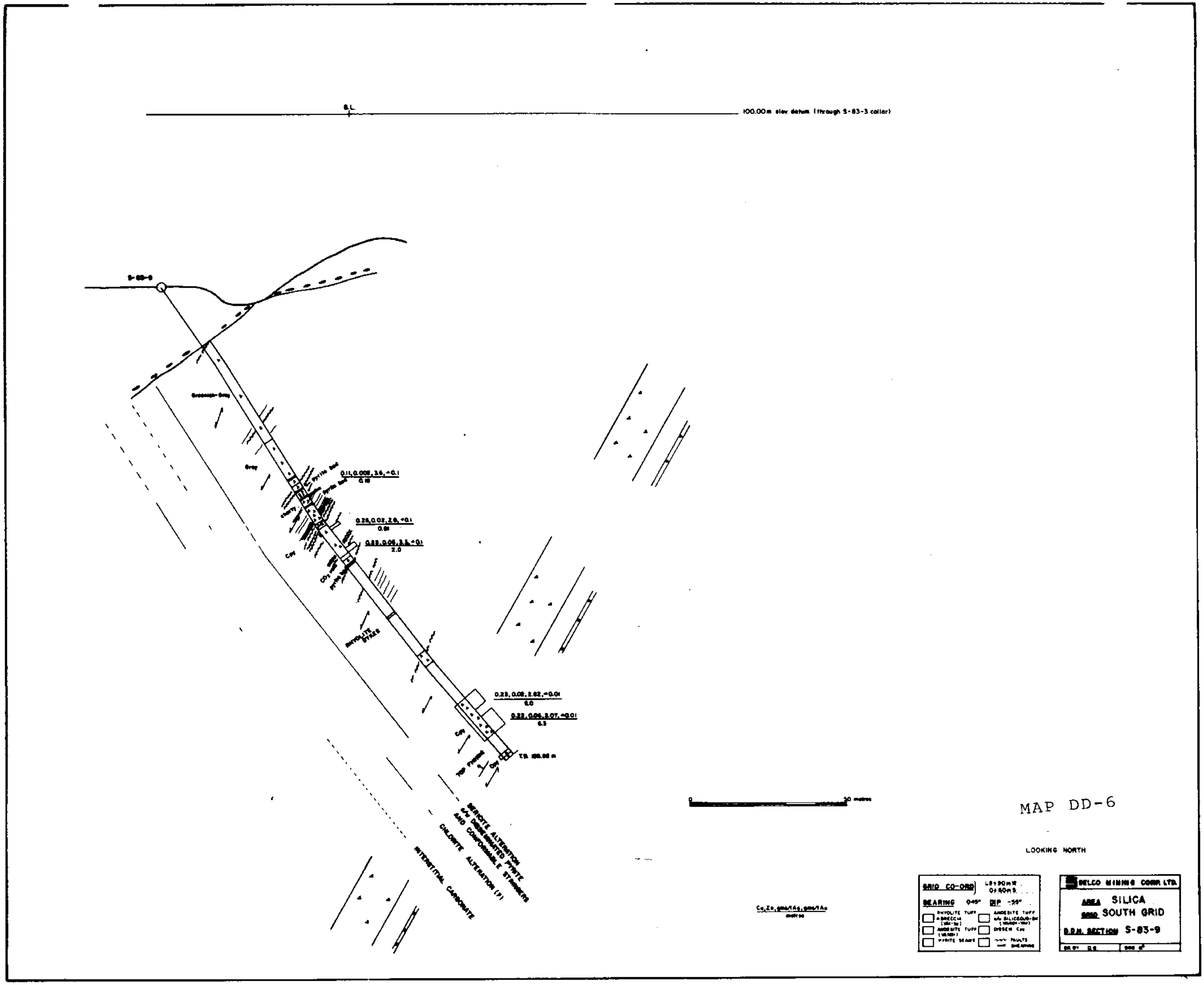
AREA SILICA
GRID SOUTH GRID
S.M.R. SECTION S-85-7



MAP DD-5

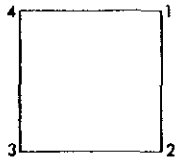
LOOKING NORTH

AREA	SILICA
GRID	SOUTH GRID
D.D.H. SECTION	S-83-8


S.L.
100.00m elev. datum (through S-83-3 collar)
Gray
0.11, 0.008, 3.6, <0.1
0.10
0.26, 0.02, 2.6, <0.1
0.91
2.0
RHYOLITE DYKES
0.23, 0.02, 2.62, <0.01
6.0
0.22, 0.06, 3.07, <0.01
6.5
SERICITE ALTERATION
AND CONFORMABLE STRINGERS
CHLORITE ALTERATION (?)
INTERSTITIAL CARBONATE
0
30 metres
MAP DD-6
LOOKING NORTH
Cu, Zn, gms/tAg, gms/tAu
metres
GRID CO-ORD
BEARING
DIP
RHYOLITE TUFF
ANDESITE TUFF
PYRITE SEAMS
FAULTS
SHEARING
SELCO MINING CORP. LTD.
AREA SILICA
GRID SOUTH GRID
D.D.H. SECTION S-83-9

SELCO MINING CORPORATION LIMITED

DIAMOND DRILL RECORD



HOLE NO. S-83-1 **PROPERTY** SILICA ELEVATION

SHEET NO 1 BEARING 040° TOTAL DEPTH 73.76M.

LOCATION L10+18 meters W/4+05 meters N. DIP COLLAR -45° CORE SIZE BQ

STARTED April 25, 1983 COMPLETED May 3, 1983

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	ASSAYS				REMARKS
0	73.76	O/B (abandoned)										0-220 casing
	EOH	- material recovered consists of sand										220-242 drilled ahead
		and chips of diorite and acid volcanic										all casing pulled
		boulders.										
												Dip Test:
												47° at 73. meters.

DRILLED BY H. Allen Diamond Drilling Ltd.

SIGNED Dave Lamb

SELCO MINING CORPORATION LIMITED

DIAMOND DRILL RECORD

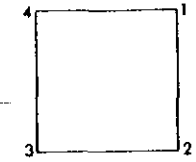
HOLE NO. S-83-2 **PROPERTY** SILICA

SHEET NO 1

LOCATION L8+26 meters W/S+20 meters S

BEARING 050°

DIP COLLAR -45°



ELEVATION

TOTAL DEPTH 85.35 M.

CORE SIZE BQ

STARTED May 3, 1983 COMPLETED May 9, 1983

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	ASSAYS				REMARKS
0	26.52	O/B										Acid Test:
												40° at 45.72 meters
26.52	35.97	RHYOLITE "Quartz Eye" Tuff.										
		- milky white to pale light green in colour										
		- rusty patches CO_2 ↑ mottled texture										disseminated fine pyrite
		coupled with numerous limonitic lined										1-2%, up to 5% locally.
		fractures in the upper 5 meters.										
		- occasional cream coloured carbonate as										
		lacy stringers.										
		- fine grained, aphanitic matrix with 1-4MM										
		clear and milky white quartz "eyes", rounded.										
		- very siliceous, hard										
		- minor sericite wisps marking foliation at										
		60-79° T.C.A.										
		- some sections appear more massive-flow like (?)										

SIGNED Dave Sanbol

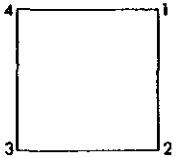
SELCO MINING CORPORATION LIMITED

DIAMOND DRILL RECORD

HOLE NO. S-83-2 **PROPERTY** SILICA

SHEET NO 2 BEARING 050°

LOCATION L8+26 meters W/5+20 meters S DIP COLLAR -45°



ELEVATION

TOTAL DEPTH 85.35 M

CORE SIZE BQ

STARTED May 3, 1983 COMPLETED May 9, 1983

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	ASSAYS	REMARKS
35.97	64.00	O/B - drilled through small ledge above and back into overburden. - 35.97 - 47.25 Sand with occasional rhyolite boulder chips. - 47.25 - 64.00 Rhyolite boulders with occasional chip containing heavy concentration of pyrite. One small piece of cored rhyolite contained fuchite wisps.							
64.00	71.63	RHYOLITE TUFF (BRECCIA) - light grey white siliceous quartz "eye" matrix with milky white rhyolite breccia fragments. Weak CO_2 ↑ in breccia fragments but not in the matrix - foliation marked by a pale green slippery micaceous mineral (talc or pyrophyllite?) at 55 - 65° T.C.A. - minor CO_2 ↑ - section becomes increasingly fractured and broken towards bottom of section. - 69.64 to 69.74 talcose fault gouge								disseminated and wisps of pyrite 2% to 5% pyrite locally

DRILLED BY H. Allen Diamond Drilling Ltd.

SIGNED Dave Lamb C

SELCO MINING CORPORATION LIMITED

DIAMOND DRILL RECORD

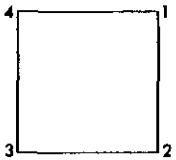
HOLE NO. S-83-2 **PROPERTY** SILICA

SHEET NO 3

LOCATION L8+26 meters W/5+20 meters S

BEARING 050°

DIP COLLAR -45°



ELEVATION

TOTAL DEPTH 85.35 M

CORE SIZE BQ

STARTED May 3, 1983 COMPLETED May 9, 1983

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	ASSAYS				REMARKS
71.63	72.34	CHLORITE SCHIST										
		- dark green, soft, fissile, fine grained CO_2										disseminated pyrite 2%
		stringers										
		- 72 - 72.3 Fault Zone containing brecciated chlorite										
		schist in the gouge.										
		- L. contact is irregular, approximately 60° T.C.A.										
72.34	81.76	MIXED RHYOLITE - DACITE TUFF										
		- light grey with pale green sections, bedded										Trace - 1% disseminated pyrite; local 5%
		sequence of tuffs at 60° T.C.A.										pyrite as disseminated seams and
		- 72.34 - 74.98 light grey rhyolite tuff										patches
		- 73.80 - 73.90 talc schist fault or shear zone										
		- 74.98 - 77.73 pale to medium green dacite tuff										NOTE: Some sections take on the appear-
		- 77.73 - 80.16 light grey rhyolite tuff										ance of a siliceous sinter especially
		- 78.23 - 78.60 talc schist fault or shear zone										when examining vuggy and thinly banded
		- 80.16 - 81.76 bedded tuff with alternating light										sections. There appears to be a
		grey and pale green thin beds at 60° T.C.A.										siliceous exhalite component to the acid
		- locally cut by white quartz stringers.										pile in this hole.
		- pale purple hematite dusting locally in cream										
		white coloured rhyolite tuff bands.										
		- both clear and milky quartz chips 1-3MM.										

DRILLED BY H. Allen Diamond Drilling Ltd.

SIGNED Dave Samson

SELCO MINING CORPORATION LIMITED

DIAMOND DRILL RECORD

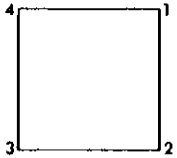
HOLE NO. S-83-2 **PROPERTY** SILICA

SHEET NO 4

LOCATION L8+26 meters W/5+20 meters S

BEARING 050°

DIP COLLAR -45°



ELEVATION

TOTAL DEPTH 85.35 M.

CORE SIZE BQ

STARTED May 3, 1983 COMPLETED May 9, 1983

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	ASSAYS				REMARKS
81.76	85.35	ANDESITE FLOW (altered)										
	EOH	- tuffaceous top or sheared flow top containing 1-2%										
		disseminated pyrite over the upper 1 meter.										
		- moderate to strong CO_2 ↑ interstitial and as										
		stringers in upper contact zone										
		- fault gouge at 82.0										
		82.2										
		82.4										
		- below the contact zone the rock becomes massive, fine										
		grained and medium green in colour. Either a flow or										
		fine grained intrusive sill (?).										
		- weak to moderate epidote + CO_2 ↑ alteration										
		- hematite lined fractures										

DRILLED BY H. Allen Diamond Drilling Ltd.

SIGNED Dave Lambert

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-3

DRILLING CO.	LOCATION SKETCH	DEPTH	TESTS DIP ANGLE	AZIMUTH	DATE STARTED: October 20, 1983
H. Allen Diamond Drilling Ltd.	N	COLLAR	-55°	045°	DATE COMPLETED: November 2, 1983
		60.96m	61°		COLLAR ELEV.: @ 100.00 metre "datum"
		121.92m	59°		NORTHING: STN 0+44 metres N.
		183.00m	57°		EASTING: Line 10+66 metres W
					AZIMUTH: 045°
					DEPTH: 199.34 metres
HOLE TYPE d.d.h.					CORE SIZE: NQ - BQ

PROJECT: #10111 SILICA
N.T.S.: 92I/11W
LOCATION: "South Grid"
DATE LOGGED: November 4, 1983
LOGGED BY: D. Gamble

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM m	TO m	CORE LENGTH m	CORE RECOVERED m	ASSAYS gms/t / ppm Au	Ag	Cu	Zn	REMARKS
0	65.53	Overburden										0-48.76m NW casing
		Sand, mud and pebbles to some large boulders. The basal										0-76.20m BW casing
		till material is compacted sand and was cored	41509	57.9	61.0	3.1	0.1	3.9	55	492		NW & BW casing sanded together
												& left in hole.
												65.53-76.20 NQ core
												76.20-199.34 BQ core
65.53	147.60	Rhyolite Tuff - Breccia (Vat-bx Sequence										
		An alternating tuff-breccia layered sequence, light										
		grey in colour, sericitic, with weak to moderate										
		disseminated pyrite and local disseminated chalcopyrite.										
		Clear to grey "quartz eyes" and white feldspar crystals										
		in crystal tuff. Breccia fragments up to 6 cm are										
		rhyolitic. Occasional interbedded "cherty" tuff thin										
		horizon										
		65.53-67.00m Vat "quartz eye", glassy quarts eyes	41510	65.5	67.5	2.0	85	<0.1	2.3	285	195	-66.6 Cpy-py strg. (2mm)
		rounded and irregular shaped 2-3mm in size in a cream										- 5% dissem. pyrite and
		white to light grey fine grained matrix. Red. brown and										oxidized pyrite on
		ochre oxidation along numerous fractures. Strong										fractures & slips.

SIGNED _____

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-3

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	ASSAYS Au	Ag	Cu	Zn	REMARKS
		sericite developed along foliation planes @ 50° T.C.A.										
		67.00-68.3m Vabx "quartz eye", light grey-white, fine	41511	67.5	69.5	2.0		<0.1	1.7	275	135	
		grained matrix of quartz, quartz eyes (1-2 mm) and										-67.4 Cpy-py conformable
		sericite with pale grey rhyolite stretched breccia										stringer (0.5 cm)
		fragments 5-6 cm (short axis) and greater than NQ core										-67.5 Cpy-py conformable
		diminsion (long axis). Stretching or flattening of										stringer (0.5 cm)
		breccia fragments are @ 50°T.C.A. Fragments are										-67.57 Cpy-py conformable
		aphanitic and may (+) contain fine quartz eyes (1 mm)										stringer (0.5 cm)
		Cut by conformable stringers of black fine grained										(black fine grained
		sulphides that is composed of finely disseminated										sulphides with py-cpy
		pyrite with chalcopyrite splashes.										splashes)
												- 5% dissem. pyrite
		68.3-68.46m Vat										
		Light grey fine grained siliceous ± sericite tuff inter-										- trace py-cpy dissem.
		bedded horizon with layering @ 80° T.C.A.										
		68.46-94.5m Vat-bx	41512	69.5	71.0	1.5		<0.1	10.0	6500	130	69.2m Cpy-py strg. (2mm)
		Light grey tuffaceous matrix with glassy quartz eyes,	41513	71.0	72.0	1.0		<0.1	10.0	1900	135	69.44m Cpy-py strg. (5mm)
		grey-white tuffaceous layering @ 40° T.C.A. at 74.4m	41514	72.0	73.5	1.5		<0.1	6.5	1550	130	70.0m Cpy strg. (2mm)
		Cream white aphanitic and pumaceous looking breccia	41515	73.5	75.5	2.0		<0.1	2.8	620	108	70.2m Cpy strg. (3mm)
		fragments. Wispy looking lenticular argillite clasts.	41516	75.5	76.2	0.7		<0.1	15.0	10,000	410	70.2-72.0m 10% strgs. py-cpy
		74.4-76.2m dark "bands" containing fine grained black	41517	76.2	78.2	2.0		<0.1	1.9	395	850	in a black fine grained
		sulphides ± argillaceous material + trace ZnS.	41518	78.2	80.2	2.0		<0.1	2.3	278	360	sulphide)ZnS?) both cutting
		(76.2m End of NQ Core, Start of BQ Core)	41519	80.2	82.2	2.0		<0.1	2.8	235	875	and conformable to the fabric.
		Continuation of grey Vat-bx generally lacking large	41520	82.2	84.2	2.0		<0.1	3.0	655	425	75.4-75.5 20% Py-Cpy dissem.
		acid fragments but containing 1-2 cm light and	41521	84.2	86.2	2.0		<0.1	6.0	1200	588	76.0-76.2 25% Py-Cpy dissem.
		medium grey clasts. Some acid clasts are rounded	41522	86.2	88.2	2.0		<0.1	2.5	75	275	

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-3

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	ASSAYS Au	Ag	Cu	Zn	REMARKS
		and contain 30% finely disseminated pyrite. Quartz eyes										5-10% disseminated pyrite
		and sericite alteration common. Foliation - layering										throughout. Some conformable
		fabric at: 79m @ 38° T.C.A.										strgs. or pyrite concentrated
		82m @ 30° T.C.A.										in syngenetic layers.
		91m @ 55° T.C.A.										Local cpy dissem. & as
		94.5-94.53 Vat cherty tuff, fine grained, grey buff	41526	94.2	96.2	2.0		<0.1	1.7	180	115	splashes @ 83.8m; 84.3m; 85.1m;
		finely laminated layers. Top layer is buff tan (oxidized)										90.6m; 92.7m; 93.3m
		1mm thick and has been scoured by overlying Vat-bx,										
		i.e. a scaltoped surface.										
		Therefore "TOPS UPHOLE"										
		94.53-96.0 Vat-bx)as previous)										95.75 MoS_2 - Cpy on slip.
		96.0-96.8 Fault - Shear Zone										
		96.8-97.8 Vat 'cherty' siliceous tuff, fine grained.	41527	96.2	98.2	2.0		<0.1	3.9	134	445	20% dissem. pyrite.
		97.8-100.2 Strong foliated Vat with Fault. Breccia +	41528	98.2	100.2	2.0		<0.1	3.3	30	170	
		Gouge @ 98.9-99.1m										
		100.2-106.1 Vat "Quartz Eye". Light grey, fine grained	41529	100.2	102.2	2.0		<0.1	1.0	145	90	- dissem. pyrite
		sericite altered siliceous tuff. Foliation fabric at	41530	102.2	104.2	2.0		<0.1	1.9	175	198	- Cpy @ 101.8m
		103.3m is @ 47° T.C.A. with a small crenulated fold	41531	104.2	106.2	2.0		<0.1	3.9	40	1000	
		at 102.2m with the fold axis at 15° T.C.A. and normal										
		to the general foliation.										
		106.1-106.4 Fault										
		106.4-120.1 Vat "Quartz Eye" (as preceding fault).	41532	106.2	108.2	2.0		<0.1	2.8	450	550	107.7m Cpy disseminated
		Foliation fabric 54° T.C.A. at 119.2m	41533	108.2	110.2	2.0		<0.1	1.7	55	230	110.3m py band (1 cm)
		Pyrite band at 110m @ 48° T.C.A.	41534	110.2	112.2	2.0		<0.1	3.0	135	385	110.5m py band (1 cm)
			41535	112.2	114.2	2.0		<0.1	1.3	36	120	111.7m py band (1 cm)
			41536	114.2	116.2	2.0		<0.1	3.6	1150	105	113.6m py + cpy (2 cm)

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-3

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	ASSAYS Au	Ag	Cu	Zn	REMARKS
			41537	116.2	118.2	2.0		<0.1	2.5	1900	88	114.2m py + cpy (1 cm)
			41538	118.2	120.2	2.0		<0.1	1.0	545	88	114.43m-114.95m py + cpy bands
												115.7 py (5 cm)
												116.9 py band (2 cm)
												117.4 cpy strgs.
												117.94 cpy strgs. (1 cm)
		120.1-147.6 Vat-bx. Pale to medium grey, quartz eyes	41539	120.2	122.2	2.0		<0.1	4.4	1680	650	120.45 cpy splash
		and white 102 mm feldspar crystals in the tuffaceous	41540	122.2	124.2	2.0		<0.1	3.6	610	195	121.2 cpy splash
		matrix of quartz and sericite. Breccia fragments 2-3 cm	41541	124.2	126.2	2.0		<0.1	4.7	550	795	125.77 cpy splash
		rhyolite white aphanitic. Argillite wispy fragments	41542	126.2	128.2	2.0		<0.1	1.9	40	138	140.3 Py-Cpy 2 cm banded
		3-4 cm long by 2-3 mm short axis. Dark grey acid	41543	128.2	130.2	2.0		<0.1	1.7	33	125	144.0-144.2 Py-Cpy strgs
		fragments containing 30% disseminated very fine grained	41544	130.2	132.2	2.0		<0.1	1.0	62	132	to bands
		pyrite. Occassional pumice fragments. 120.1-120.3	41545	132.2	134.2	2.0		<0.1	1.9	118	135	144.47-144.70 Py-Cpy strgs
		Rubbly top of unit containing pyrite and grading into	41546	134.2	136.2	2.0		<0.1	1.7	160	720	147.15-147.2 Py-Cpy band
		Vat-bx. Foliation fabric-layering at 129m @ 40° T.C.A.	41547	136.2	138.2	2.0		<0.1	1.9	83	410	
		134m @ 40° T.C.A.	41548	138.2	140.2	2.0		<0.1	1.7	92	230	
		145m @ 43° T.C.A.	41549	140.2	142.2	2.0		<0.1	1.9	180	210	
		The lower part of this interval becomes progressively	41550	142.2	144.2	2.0		<0.1	3.6	810	330	
		darker grey due to an increase in black carbonaceous	41551	144.2	146.2	2.0		<0.1	4.4	1680	263	
		content.	41552	146.2	147.6	1.4		<0.1	4.4	1600	430	
		140.9m Quartz veinlet 1 cm										
		141.7m Quartz veinlet 1 cm										
147.6	162.0	SILTSTONE - ARGILLITE (SARG)										
		Black, fine grained, layered argillaceous siltstone.	41553	148.0	154.4	6.5		<0.1	1.7	115	238	disseminated pyrite throughout
		Some colour banding of grey and black beds, generally	41554	155.0	161.5	6.5		<0.1	2.3	215	605	& pyrite rich layers locally
		thin. Some pyrite seams or thin bands, Some contorted										- occasional pyrite nodule

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-3

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	ASSAYS Au	Ag	Cu	Zn	REMARKS
		layered pyrite beds @ 160.8m near a small fault. Both										with white quartz shadow (1 cm)
		upper and lower contacts are faulted and broken. Quartz										
		and white carbonate thread-like fracture fillings and										CONDUCTIVE - graphitic strong
		strgs.										in some sections.
		Bedding varys from 30-65° T.C.A.										
162.0	163.72	RHYOLITE TUFF VAt.										
		Siliceous, fine grained, grey tuff (as previous)										
163.72	164.0	SILTSTONE - ARGILLITE (as previous)										
		Bedding at 45° T.C.A.										
		Some fine intercalated VAt layers within the black layered										
		sediment.										
164.0	165.3	DACITE TUFF VDt										
		Pale grey-green, fine grained, weakly sericitic, inter-										
		stitial carbonate and white calcite veinlets.										
		Upper contact broken.										
		Lower contact @ 60° T.C.A.										
165.3	165.5	RHYOLITE TUFF VAt										
		Pale grey, fine grained, layering @ 45° T.C.A. Siliceous										
		cherty looking.										
165.5	165.8	SILTSTONE - ARGILLITE SARG.										
		(as previous) black siliceous siltstone.										
165.8	166.25	DACITE TUFF VDt (as previous)										
		Upper contact - layering @ 55° T.C.A.										Pyrite thin layers
		Minor argillaceous seams near upper contact and feathering										
		out after the first 10 cm.										
		Pyrite layering.										

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-3

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	ASSAYS Au	Ag	Cu	Zn	REMARKS
166.25	168.25	SILTSTONE - ARGILLITE SARG.										CONDUCTIVE - graphitic
		(as previous)										
		166.32-166.72 Bull white quartz vein										
		167.1-167.3 Cherty grey sedimentary layer.										
		167.4-167.9 Fault Gouge.										
168.25	199.3	RHYOLITE TUFF VAt SEQUENCE										
	E.O.H.	168.25-172.57 VAt "quartz eye" grey, fine grained, bedd-										2-5% disseminated py.
		ing-foliation @ 60° T.C.A., sericite										
		alteration.										
		172.57-192.5 VAt "quartz eye", pale green, 2 mm quartz										
		eyes, in a pale green quartz-sericite-										
		± chlorite matrix. Foliation-bedding fabric										
		at 183m @ 60° T.C.A.										
		191m @ 57° T.C.A.										
		192.5-193.3 VAt "quartz eye" grey quartz porphyritic or										5% py disseminated & strgs.
		quartz eye tuff (as previous)										
		193.3-199.3 VaAt "quartz eye", pale green tuff (as										
		previous).										

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-5

DRILLING CO.	LOCATION SKETCH	DEPTH	TESTS DIP ANGLE	AZIMUTH		
H. Allen Diamond Drilling Ltd.	-N-	COLLAR	-50°	045°	DATE STARTED: November 4, 1983	PROJECT: #10111; SILICA
		30.48m	-58°		DATE COMPLETED: November 7, 1983	N.T.S.: 92I/11W
		91.44m	-57°		COLLAR ELEV.: 115.34 metres W.R.T. "datum"	LOCATION: "South Grid"
					NORTHING: STN 1+60 metres N.	
					EASTING: Line 11+33 metres W.	
					AZIMUTH: 045°	
					DEPTH: 97.53 metres	DATE LOGGED: November 4, 1983
HOLE TYPE d.d.h.					CORE SIZE: BQ	LOGGED BY: D. Gamble

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS Au	Ag	% Cu	Zn	REMARKS
0	48.76	OVERBURDEN										Pulled casing
48.76	59.3	SILTSTONE - ARGILLITE (SARG)										CONDUCTIVE - graphitic
		48.76-53.3 Broken ground at ledge	41395	54.85	57.0	2.15		<0.1	2.0	<0.01	0.03	
		53.3-59.3 Black, fine grained, bedding @ 58° T.C.A., grey										trace fine grained pyrite ±
		calcareous beds @ 57.6-57.9m										ZnS(?)
		58.4-58.5m										
		White carbonate veinlets filling small fractures										
59.3	62.9	SILTSTONE (Sslst)	41396	59.3	61.9	2.6		<0.1	2.0	<0.01	0.01	
		Grey, fine grained, bedding-layering @ 54° T.C.A.,										2% pyrite disseminated and
		interstitial strong carbonate. Minor intercalated										thin layers of py.
		argillite layers at 60.2 (10 cm), 62.0 (10 cm), 62.5-62.9m										
62.9	64.9	ANDESITE TUFF ALTERED (V and t altd.)										
		Upper contact conformable grey to buff green colour,										
		fine grained, strong interstitial carboante, 64.7m shear										
		+ Co_2 veinlet.										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-5

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	g/tonne ASSAYS Au	Ag	% Cu	Zn	REMARKS
64.9	76.58	ANDESITE TUFF (V and t)										
		Green, fine grained, uniform to massive texture, inter-										
		stitial carbonate. Under hand lens rock exhibits a fine										
		granular texture with <1mm chips and grains.										
		65.5m 2 cm Carbonate-Quartz Veinlet										
		66.2m 1 cm Carbonate-Chlorite Veinlet										
		66.66m 2 cm Carbonate-Quartz Veinlet										
		66.8m 2 cm Carbonate-Quartz Veinlet										
		69.0-69.6 30% strgs carbonate & quartz										
		71.0 2 cm Carbonate Veinlet										
		71.23 5 cm Carbonate Veinlet										
		71.43 10 cm Carbonate Veinlet										
		74.56 2 cm Carbonate Veinlet										
76.58	78.47	ANDESITE TUFF ALTERED (V and t altd) (as previous)	41397	76.6	78.48	1.88	<0.01	0.3	<0.01	0.01		Pyrrhotite ± pyrite wisps
		conformable lower contact @ 70° T.C.A.										Trace chalcopyrite
78.47	83.85	SILTSTONE - ARGILLITE (SARG)	41398	81.7	83.8	2.1	.	<0.1	6.2	0.03	0.06	Weak pyrite-pyrrhotite disseminated
		Black, fine grained, finely laminated carbonaceous										Some thin layered pyrite 2 mm
		siltstone. Minor convoluted bedding surfaces. Occassional										beds.
		grey siltstone intercalated layers at 81.0-81.3m. White										
		carbonate hairlike strgs both conformable and cross										
		cutting the bedding.										
		Bedding at 81.5 @ 72° T.C.A.										
		83.6 @ 56° T.C.A.										
		Fault Zone Gouge 79.5-79.9m.										

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-5

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS Au	Ag	% Cu	Zn	REMARKS
		Lower contact faulted and broken.										
83.85	84.9	ANDESITE TUFF Altered (V and t altd.)										
		Buff grey, foliated, fine grained, interstitial										
		carbonate (as previous)										
84.9	93.93	ANDESITE TUFF (Vand t)										Trace pyrite-pyrrhotite
		Medium to pale green, fine grained with 1 mm siliceous										
		chips and flattened mafic clasts (1-2 mm), generally										
		a massive uniform section. Interstitial carbonate.										
		85.3-85.7m carbonate-quartz strgs.										
		86.1m chlorite fault slip.										
		86.3m carbonate strgs.										
		86.8m carbonate knot 2-3 cm										
		87.0-88.0m 8 carbonate strgs/m.										
93.93	94.45	ANDESITE TUFF ALTERED (V and t altd.)										
		Buff grey (as previous) irregular ragged contact at										
		60° T.C.A.										
		Sericite alteration, crenulated and small S folds with										
		axial plane 10° T.C.A.										
94.45	97.5	ANDESITE TUFF (Vand t)										Trace pyrite
	E.O.H.	Green (as previous)										
		95.25m carbonate-quartz (2 cm)										
		95.3m quartz veinlet (4 cm) / 95.95-96.46 quartz vein.										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-6

DRILLING CO.	LOCATION SKETCH	DEPTH	TESTS DIP ANGLE	AZIMUTH
H. Allen Diamond Drilling Ltd.		COLLAR	-55°	045°
		60.96m	-62°	
		121.92m	-61°	
		172.52m	-57°	
HOLE TYPE				

DATE STARTED:	November 8, 1983
DATE COMPLETED:	November 13, 1983
COLLAR ELEV.:	116.28m W.R.T. "datum"
NORTHING:	STN 0+62m N.
EASTING:	Line 11+57m W.
AZIMUTH:	045°
DEPTH:	172.52metres
CORE SIZE:	B.Q.

PROJECT:	#10111 SILICA
N.T.S.:	92I/11W
LOCATION:	"South Grid"
DATE LOGGED:	November 16, 1983
LOGGED BY:	D. Gamble

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS Au	Ag	% Cu	Zn	REMARKS
0	86.87	OVERBURDEN										0-86.87 BW casing left.
86.87	132.7	RHYOLITE TUFF-BRECCIA (Vat-bx)										
		Grey, fine to medium grained tuff with clear quartz eyes										86.87-93.10 lost core ground
		(1-3 mm) and siliceous fine grained lenticular and										93.10-105.8 broken ground 50%
		rounded 2-3 cm breccia fragments. Strong foliated fabric	41399	93.6	99.7	6.1	50%	0.7	3.4	0.01	0.03	
		delineated by abundant sericite developed along foliation	1400	99.7	105.8	61.	40%	<0.1	2.0	0.05	0.06	5-10% dissem. pyrite overall with
		planes. Fabric at 106m @ 50° T.C.A.										local pyritic bands (up to 30% py)
		118m @ 45° T.C.A.										Chalcopyrite ± Sphalerite locally
		127m @ 45° T.C.A.	41401	105.8	107.6	1.8	100%	<0.1	2.7	0.02	0.05	concentrated as splashes or diss-
		132m @ 45° T.C.A.	41402	107.6	110.6	3.0	90%	<0.1	4.1	<0.01	0.02	eminations with pyrite at:
		Shear Zone strong 110.35-110.7	41403	110.6	112.6	2.0	90%	<0.1	6.8	0.09	0.19	106.45 Cpy
		Fault Zone Gouge 115.5-112.3 (clay)	41404	112.6	114.6	2.0	90%	<0.1	3.4	0.15	0.05	106.7 Cpy - ZnS
		Fault Zone Gouge 113.75-114.38										107.5 Cpy
		Fault Zone Gouge 121.9	41405	114.6	116.6	2.0	100%	<0.1	6.2	0.07	0.05	111.25 Cpy - ZnS
		Fault Zone Gouge 122.0										112.6 Cpy
		Fault Zone Gouge 122.4-122.5	41406	116.6	118.6	2.0	100%	<0.1	3.4	<0.01	0.02	113.1 Cpy
		Shear Zone 123.8-123.9										114.38 Cpy + Q.V.

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-6

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS Au	Ag	% Cu	Zn	REMARKS
		Shear Zone 126.2-126.3	41407	118.6	120.1	1.5	100%	<0.01	2.7	<0.01	0.01	115.0 Cpy
		Quartz carbonate vein 113.65 (4 cm)										115.1 Cpy
		Quartz vein 114.38 (4 cm) + Cpy	41408	120.1	121.5	1.4	75%	<0.1	6.8	0.04	0.01	115.4 Cpy
		Quartz vein 127.2 (4 cm)										115.7 Cpy
			41409	121.5	123.1	1.6	75%	<0.1	6.8	<0.01	0.01	116.85 Cpy
		Lower Contact faulted with the underlying sediments at										118.1 Cpy
		55° T.C.A. and normal to the foliation fabric of the	41410	123.1	124.1	1.0	100%	<0.1	0.22	0.01		118.2 Cpy + ZnS
		Vat (i.e. angular unconformity).										118.4 Cpy + ZnS
			41411	124.1	126.9	2.8	100%	<0.1	4.8	<0.01	0.01	118.6 Cpy
												119.15 Cpy
			41412	126.9	130.1	3.2	100%	<0.1	4.8	<0.01	0.01	119.55 ZnS
												120.65 Cpy
			41413	130.1	132.6	2.5	100%	<0.1	14.	<0.01	0.02	121.2 Cpy
												122.05 Cpy
												123.06 Cpy
												122.0-124.0 30% pyrite
												124.0 Cpy
												127.72 Cpy
												130.2 Cpy
												131.6 Cpy
												131.7 Cpy
												132.3 ZnS
												132.35 Cpy
132.7	136.92	SILTSTONE - ARGILLITE (SARG)										
		Black, fine grained, finely layered @ 55° T.C.A., carbon-										Disseminated pyrite (5%)

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-6

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	g/tonne ASSAYS Au	Ag	% Cu	Zn	REMARKS
		ate strgs; 135.6 - 135.8 Fault gouge. Lower Contact @										Conductors - graphitic
		55° T.C.A.										
136.92	142.3	SILTSTONE (Sslst)	41414	140.1	140.8	0.7	100%	<0.1	2.7	<0.01	0.01	
		Grey, fine grained, layered calcareous stiltstone with										
		fine black "thread like" siltstone (argillite) to 140.1										
		metres. Carbonate stringers at 138.2 (5 cm), 138.4, 138.5,										
		139.1, 139.6. Light grey, fine grained interbed with										
		ragged upper contact @ 80° T.C.A. at 140.10 m, and lower										
		contact (141.0) @ 40° T.C.A.										
		140.5 - 140.7 Silicified + Quartz Strgs.										
		Conformable lower contact at 142.3m @ 45° T.C.A.										
142.3	155.75	ANDESITE TUFF (Vand t)										
		Green, fine grained, granular texture under lens,										
		massive uniform throughout (flow or sill?), weak to										
		moderate interstitial carbonate,										
		Fault Gouge 145.4-145.5m										
		Quartz-Carbonate Strg. 150.4 (4 cm)										
		Quartz-Carbonate Strg. + Vein 155.0 (15 cm)										
		Lower Contact stringly calcareous @ 30° T.C.A.										
155.75	159.05	SILTSTONE (Sslst)										
		Grey-pale green, fine grained, layered strong interstitial										
		carbonate, conformable lower contact @ 60° T.C.A. carbon-										
		ate vein at 156.0 (17 cm) (It appears that the Andesite										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-6

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS Au	Ag	% Cu	Zn	REMARKS
		unit is generally flanked by an overlying and underlying										
		carbonate rich fine grained siltstone or carbonate altered										
		andesite tuff.										
159.05	159.70	SILTSTONE - ARGILLITE (SARG.)										
		Black fine grained layered broken core, Lower Contact										Pyritic
		is an intrusive contact at 85° T.C.A.										Conductive - graphitic
159.70	162.00	RHYOLITE DIKE										
		Buff yellow to white, aphanitic to very fine grained,										
		massive, lower contact @ 75° T.C.A. is irregular and										Trace - 1% wispy pyrite
		ragged. Siliceous.										
162.00	165.77	SILTSTONE - ARGILLITE (SARG.)										Weakly conductive
		Dark grey to black fine grained layered carbonaceous										
		siltstone. Bedding @ 55° T.C.A. Minor carbonate strgs.										
		and fracture fillings (thread like).										
165.77	166.15	RHYOLITE TUFF (Vat)										
		Light grey, fine grained sericitic siliceous tuff.										
		Upper contact at 59° T.C.A.(small slip surface). Lower										
		contact is gradational masked by Quartz-carbonate rich										
		section.										
166.15	172.50	ANDESITE TUFF (Vand t)										
	E.O.H.	Grey to green, fine grained, interstitial carbonate →										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-6

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS Au	Ag	Cu	% Zn	REMARKS
		calcareous, 166.15-168.25. Pale grey Sslst or strongly										
		carbonitized Vandt. Bedding at 167m @ 64° T.C.A.										
		Carbonate strgs at 167.05-167.14, 167.48, 167.64, and										
		167.87 (2 cm each).										
		168.25-172.4 Green tuff with interbedded contact at										
		172.3 @ 74° T.C.A.										
		At 172.4 an interbedded ragged contact from green tuff										
		to grey tuff with carbonate strgs at the contact.										
		Chloritic Slips @ 169.9, 170.07, 170.44										
		Carbonate Strgs. @ 169.8, 170.28, 171.1, 171.2, 171.5-										
		171.7 metres.										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-7

DRILLING CO.	LOCATION SKETCH	DEPTH	TESTS DIP ANGLE	AZIMUTH
H.Allen Diamond Drilling	-N-	COLLAR	-50°	045°
		60.96m	-60°	
		126.5m	-59°	
HOLE TYPE d.d.h.				

DATE STARTED:	November 14, 1983
DATE COMPLETED:	November 19, 1983
COLLAR ELEV.:	131.41m W.R.T. "datum"
NORTHING:	STN 1+55 metres N
EASTING:	Line 12+35 metres W
AZIMUTH:	045°
DEPTH:	130.46 metres
CORE SIZE:	B.Q.

PROJECT:	#10111 SILICA
N.T.S.:	92I/11W
LOCATION:	"South Grid"
DATE LOGGED:	November 19, 1983
LOGGED BY:	D. Gamble

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	ASSAYS	REMARKS
0	86.87	OVERBURDEN							B.W. Casing left
		(fine sand, andesite pebbles & bldrs.)							
86.87	90.37	ANDESITE TUFF (Vand t)							
		Medium green, fine grained, massive to foliated at 35°							
		T.C.A., numerous fractures and broken core.							
		Carbonate filled fractures and interstitial carbonate.							
		Rusty brown oxidation along fractures. Lower contact							
		ragged @ 30° T.C.A. with the lower .5 metre carbonitized							
		with white CO_2 Strgs.							
90.37	93.57	SILTSTONE (Sslts) - ALTERED ANDESITE TUFF (Vand t altd)							
		Grey, fine grained, calcareous, strong foliation -							
		layering @ 35° T.C.A., cut by 1-3 mm white carbonate							
		stringers; some shearing/foliation parrallel to core axis							
		and at low angles 10-15° T.C.A. Shear zonw 93.0-93.10							
		Lower contact broken.							

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-7

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	ASSAYS				REMARKS
93.57	108.95	SILTSTONE ARGILLITE (SARG) WITH INTERBEDDED GREY SILTSTONE										
		TUFF										
		93.57-93.88 Argillite (Sarg), black fine grained 1mm										Conductive (weak)
		finely laminated bedding layers 40° T.C.A. Conformable										
		lower contact.										
		93.88-94.18 Grey tuff or sediment as at 90.37m.										
		Calcareous										
		94.18-94.34 Argillite sarg										
		94.34-95.09 Grey calcareous tuff sediments, variable										
		foliation both parallel and 35° T.C.A. small folds										
		and crenulations,. Lower contact sharp @ 35° T.C.A.										
		94.40 Fault Gouge										
		95.09-95.25 Argillite Sarg in sheared zone. Lower contact										
		at 80° T.C.A.										
		95.25-95.4 Sericite schist, grey tuff, crenulated										
		foliation, wavy sheared lower contact @ 70° T.C.A.										
		95.4-95.64 Argillite (Sarg) bedding @ 70° T.C.A., conform-										
		able lower contact at 60° T.C.A. with some feathering										
		of sericite schist, grey tuff.										
		95.9-97.0 Argillite S(arg) with medium grey layered										Conductive - graphitic
		siltstone Fault at 96.7m										Trace dissem. pyrite
		Lower contact slip @ 30° T.C.A.										
		97.0-103.9 Grey tuff-sediment, uniform fine grained										
		texture, calcareous.										
		103.9-105.75 Grey tuff-sediment with thin intercalated										
		argillite laminations alternating with grey siliceous										

sediments.

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-7

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	ASSAYS				REMARKS
		105.75-106.97 Cherty sediments, fine grained, siliceous										
		with minor wispy black carbonaceous material and										
		thin layers of argillite. Lower contact faulted.										Trace - 1% pyrite.
		106.97-107.0 Grey foliated sediments.										
		107.0-107.07 Quartz Vein + pyrite.										2% pyrite in quartz vein
		107.07-108.3 Argillite										Conductive - weak
		108.3-108.95 Quartz vein, barren, white. Lower contact										
		faulted with minor black carbonaceous gouge.										
108.95	130.46	ANDESITE TUFF (Vand t)										
	E.O.H.	108.95-113.8 Grey to grey-green in colour, fine grained,										
		interstitial carbonate, uniform massive, foliation										
		weak @ 50° T.C.A. Near 113.8 gradational colour change										
		to pale - medium green with same texture.										
		112.0 Fault Gouge (6 cm)										
		112.16 Quartz Vein (20 cm)										
		112.47 Quartz Vein (5 cm)										
		113.8-130.46 Green, fine grained, Andesite tuff. Upper										
		contact is gradational which signifies the upper										
		grey section is probably an altered bleached top.										
		115.52 Quartz vein (5 cm)										
		119.48 Quartz Vein (3 cm) with 3 cm shear zone.										
		124.96 Quartz Vein (3 cm)										
		126.04-126.65 Bleached zone, carbonatized andesite to										
		a buff cream white to pale yellow with white carbonate										

stringers.

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-7

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	ASSAYS				REMARKS
		127.6-127.7 Strong shear zone. Sericitic,gounge.										
		127.7-130.46 Green, fine grained massive andesite										
		(flow?), minor carbonate stringers. Fracturing										
		characterized by darker green chlorite along fractures-										
		(fractured flow?). There are some gradational intervals										
		of grey coloured carbonitized material that grade										
		back to green colouration without any significant										
		textural change.										

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-8

DRILLING CO.	LOCATION SKETCH	DEPTH	TESTS DIP ANGLE	AZIMUTH
H. Allen Diamond Drilling Ltd.	-N-	COLLAR	-55°	045°
		60.96m	-60°	
		130.46m	-58°	
		195.07m	-53°	
HOLE TYPE d.d.h.				

DATE STARTED: November 20, 1983
DATE COMPLETED: November 26, 1983
COLLAR ELEV.: 74.48 metres W.R.T. "datum"
NORTHING: STN 0+33m N
EASTING: Line 9+80m W
AZIMUTH: 045°
DEPTH: 199.04 metres
CORE SIZE: B.Q.

PROJECT: #10111 SILICA
N.T.S.: 92I/11W
LOCATION: "South Grid"
DATE LOGGED: November 26, 1983
LOGGED BY: D. Gamble

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
0	20.1	OVERBURDEN										B.W. casing left
20.1	29.1	RHYOLITE TUFF - BRECCIA (Vat-bx)										
		Light greenish grey colour, coarse breccia fragments	41462	20.5	24.5	4.0		<0.1	1.7	55	260	Fault Gouge 23.8m
		(5-6 cm) that are pale grey-white aphanitic with clear										Fault Gouge and broken ground
		quartz eyes (2mm) near top of interval. The matrix is	41463	25.0	29.0	4.0		<0.1	1.3	48	85	27.2-28.0m.
		fine grained pale grey-green, sericitic, with quartz eyes										
		(13-mm) and white feldspar crystals and lapilli (1-3mm).										
		Weak to moderate interstitial carbonate and 3mm carboante										Stretched fragments with
		"eyes". Grey pyritiferous breccia fragments that are										foliation at 25m @ 40° T.C.A.
		flattened to ellipsoidal in shape (1-4 cm x .5 cm).										
		Disseminated pyrite 1-5% in matrix.										
29.1	29.98	ANDESITE SILL (Vand)										
		Upper contact slip surface @ 40° T.C.A., fine grained,										
		medium to dark green, massive, hematitic slip coatings,										
		- weak interstitial carbonate.										
		- lower contact @ 40° T.C.A. and marked by 1 cm white carbonate veinlet.										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-8

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
29.98	116.1	RHYOLITE TUFF (as previous) (Vat)	41464	30.5	35.5	5.0		<0.1	2.3	47	155	Foliation/bedding at
		- shear zone 32.65 - 32.70m										34m @ 45° T.C.A.
		- interstial weak carbonate to 59.5m locally occassional	41465	36.0	41.0	5.0		<0.1	2.3	198	600	52m @ 54° T.C.A
		carbonate stringers.										64.6m @ 45° T.C.A
		- at 47.8m small fold axis at 10° T.C.A.	41466	41.5	46.5	5.0		<0.1	1.0	55	72	74.0 @ 45° T.C.A.
		- small quartz stringer at 46.0m	41467	47.0	52.0	5.0		<0.1	1.3	30	67	83.0 @ 55° T.C.A.
		- 60.9, a 10 cm band of light grey, fine grained tuff-	41468	52.5	57.5			<0.1	1.9	147	1180	91.0 @ 52° T.C.A.
		sediments, conformable.										110.0 @ 60° T.C.A
		- shearing intense @ 50.3, 52.7, 53.6, 54.4, 58.5, 58.7,	41469	58.0	63.0	5.0		<0.1	3.9	2180	225	115.0 @ 55° T.C.A.
		59.2, 59.5-63.1, 86.5-86.8, 87.5, 91.5-92.0, 93.6-94.0										
		96.3-97.5, 106.0-106.7, 111.0-111.9, 113.75-114.0	41470	63.5	68.5	5.0		<0.1	2.3	820	138	
		- disseminated pyrite and conformable stringers										
		throughout.	41471	69.0	74.0	5.0		<0.1	2.8	750	365	
			41472	74.5	79.5	5.0		<0.1	1.7	70	170	
		63.66-72.05m 10-15% pyrite (64.5-64.63 60% py.)										Q.V. @ 63.2m (5 cm)
												75.4m (1 cm)
												Carbonate vein @ 63.7 (2 cm)
		- disseminated Cpy locally @ 58.0, 58.4-58.6, 59.0, 61.7	41473	80.6	81.9	5.0		<0.1	1.3	85	138	
		66.4, 67.0, 67.2, 67.4, 68.0, 69.5, 71.4, 73.9, 77.6,	41474	81.9	82.9			<0.1	3.0	2130	148	Shearing +
		78.2, 78.4, 81.9-84.7, 97.5-100.2, 101.5, 102.2-107.25,	41475	82.9	83.7	0.8		<0.1	4.4	2530	85	Fault Gouge 96.3-96.5
		108.65-110.25, 111.25-111.31	41476	84.7	85.5	1.0		<0.1	4.4	2280	78	Fault Gouge 97.2-97.5
			41477	84.7	85.5	1.0		<0.1	1.0	360	74	Fault Gouge (@ 90° T.C.A.)
		- bedding contact at 72.05m from pyritiferous grey	41478	85.5	91.0	5.5		<0.1	0.5	37	82	Fault Gouge 106.0-106.2
		tuffs to light grey tuffs @ 55° T.C.A.	41479	91.5	97.5	6.0		<0.1	0.8	32	78	Fault Gouge 113.9-114.0
		- Green chloritic tuff at 99.46-99.53 at 60° T.C.A.	41480	97.5	98.65	1.15		<0.1	2.8	1180	140	Fault Gouge (U.CT. 60° T.C.A.)

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-8

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	g/tonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
		- Green chloritic tuff at 105.03-105.06 @ 60° T.C.A	41481	98.65	99.23	0.58		<0.1	1.0	55	105	
		114.0-114.3 buff tan, fine grained, sericite rhyolite	41482	99.23	100.23	1.0		<0.1	3.3	2450	235	
		dikelets	41483	100.5	102.0	1.5		<0.1	1.7	290	203	
		114.5-114.55 Quartz vein & weak CO_2↑ Lower contact	41484	102.2	103.2	1.0		<0.1	3.3	2600	87	Cpy-py disseminated
		conformable @ 50° T.C.A.	41485	103.2	104.0	0.8		<0.1	7.0	73-0	105	Cpy-py disseminated
			41486	104.0	106.0	1.0		<0.1	3.3	1580	116	Cpy-py disseminated
			41487	105.0	106.0	1.0		<0.1	2.8	2900	105	Cpy-py disseminated
			41488	106.0	107.25	1.25		<0.1	1.7	1280	120	Cpy-py disseminated
			41489	108.65	109.45	0.80		<0.1	1.3	990	105	Cpy-py disseminated
			41490	109.45	110.25	0.80		<0.1	1.7	1000	135	Cpy-py disseminated
			41491	111.0	111.9	0.9		<0.1	2.8	2480	130	Shear fault & 5 cm cpy-dissem.
			41492	111.9	112.9	1.0		<0.1	1.9	153	178	pyrite
			41493	113.0	116.0	3.0		<0.1	1.3	138	545	
116.1	117.85	ARGILLITE (SARG)										Weakly conductive
		- black, fine grained, finely laminated										
		- strongly calcareous, CO_2↑ interstitial and as small	41494	116.5	117.5	1.0		<0.1	3.6	255	420	bedding at 117m @ 57° T.A.C.
		bands and fracture/slip fillings										
		- Upper contact conformable @ 50° T.C.A.										
		- Lower contact slip @ 80° T.C.A.										
		- fine disseminated pyrite throughout 2-5% and										
		occassional 1-2mm seamlets										
117.85	129.6	ANDESITE DIKE (Vand)										
		- medium green, fine grained massive texture										

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-8

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS Ppm Au	Ag	Cu	Zn	REMARKS
		- strong interstitial carbonate for 1 metre from upper										
		contact										
		- weak carbonate throughout and fracture related as										
		small thread like fillings										
		- weak epidote - sausseritized feldspar, some 1-2mm										
		white feldspar crystals										
		- lower contact irregular and fingering into succeeding										
		unit.										
129.6	134.4	RHYOLITE TUFF (Vat)										
		- pale green, fine grained "cherty", grey quartz eyes										layering at 131.2m @ 57° T.C.A.
		(1-2mm)										
		- subtle colour layering										
		- weak pyrite <1%										
		- weak to moderate interstial carbonate and carbonate										
		lined fractures.										
134.4	139.0	ANDESITE (as pervious) (Vand)										
		- upper contact broken										
		- CO_2↑strgs. and fracture fillings of carbonate and										
		hematite lined fractures										
		- 136.8 - 136.93 ARGILLITE small fault block of argillite										
		& pyrite + carbonate, weakly conductive										
		- 136.93 - 139.0 bleached ANDESITE olive green colour,										trace py.
		massive texture, CO_2↑ strgs. and interstitial										
		- lower contact broken - gouge										

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-8

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
139.0	140.2	ARGILLITE (Sarg)										
		- fine grained, grey and black layered siltstone -	41495	139.0	140.0	1.0		<0.1	1.7	150	420	
		layering @ 40° T.C.A.										
		- non conductive										
		- local pyrite layers & disseminated pyrite										
		- grey layers are strongly calcareous										
		- lower contact broken.										
140.2	156.7	RHYOLITE TUFF & CERTY LAYERS (Vat)										Strong Shear/Fault
		- upper contact broken	41496	142.0	147.0	5.0		<0.1	1.0	280	80	140.6- 40 9m
		- weak carbonaceous content near upper contact										
		- bedding and layering at 60° T.C.A. at 141.0 metres	41497	147.5	152.5	5.0		<0.1	<0.3	17	170	141.9 trace cpy in pyritic
		141.05 - 141.25 cherty layer										fragments
		141.25 - 141.50 mixed tuffs & cherty tuff layers, grey										144.9 trace cpy dissem.
		fine grained										
		141.5 - 141.8 layered grey tuff and py seam @ 65° T.C.A.										
		145.1 - 146.5 medium green chlorite altered tuff -										143.1 -2 cm quartz vein
		siliceous fine grained matrix and chlorite with siliceous										@ 30° T.C.A.
		cherty fragments and carbonate "eyes"										
		147.3 - 150.44 Rhyolite Bx. Grey fine grained matrix										
		with light grey fragments (Rhy) 1-2 cm x 3-4 cm CO_2 ↑										
		interstitial vuggy locally with pyrite 2-5%										
		150.44 - 156.7 Rhyolite Tuff., fine grained aphanitic	41498	153.0	156.7	3.7		<0.1	0.5	18	70	
		light grey matrix with quartz eyes grey clear and										
		white fsps - crystal tuff; weak disseminated pyrite										
		approx. 1-2%										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-8

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	g/tonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
		- no interstitial carbonate.										
156.7	199.03	RHYOLITE TUFF - Breccia (Vat-bx)	41499	157.0	161.0	4.0		<0.1	2.3	330	1380	Strong Shear @ 162.6m;
	E.O.H.	- 156.7 - 165.0 pale grey-green fine grained matrix with										163.7m; 175.98m; 176.84 m;
		grey white cherty rhyolite clasts 1cm x 3cm & chlorite	41500	161.5	165.0	3.5		<0.1	3.3	580	1300	178.14m
		wisps (dark green); local interstitial carbonate;										
		occassional sulphide rich (pyrite) fragment. Some acid										
		breccia fragments up to 5-6cm										
		- 165.0 - 165.3 grey-white cherty layer and pyrite.										
		- 165.3 - 166.20 grey "chert" bx with local concentrations	41501	165.3	165.73	0.43		<0.1	11.5	5650	610	
		of Cpy disseminated										
		- 166.2 - 168.75 pale green Rhyolite breccia, pale										168.68 - 168.72 quartz-
		green matrix, chlorite wisps and chlorite rimming	41502	166.0	169.5	3.5		<0.1	1.3	230	166	CO_2 Vein
		grey-white rhyolite breccia clasts. Wispy sericite.										
		Trace to 2% pyrite locally (pale green quivalent to	41503	169.5	170.7	1.2		<0.1	2.8	58	450	
		165.3 - 166.2)										
		- 168.75 - 169.14 pale grey-green fine grained rhyolite										
		tuff										
		- 169.14 - 170.70 pyritiferous rhyolite bx. Approx 5%										
		local concentrations to 10%										
		- 170.36 - 170.44 grey fine grained cherty disseminated										
		pyrite layer										
		- 170.7 - 170.89 grey brown fine grained pyrite ± (ZnS)?	41504	170.7	170.89	0.19		0.2	8.1	165	195	
		in a cherty matrix. The sulphide are extremely fine										
		grained. Contacts 60° T.C.A.										
		- 170.89 - 172.12 Rhyolite Bx, matrix pale green with	41505	170.89	171.4	0.51		<0.1	1.9	38	268	

white fragments

CIPHER

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-8

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	g/tonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
		- 172.12 - 172.38 Strong chlorite matrix with acid	41506	172.12	172.38	0.26		<0.1	4.4	5600	213	
		lapilli and disseminated Cpy.										
		- 172.38 - 172.8 Rhy Bx (as previous)										
		- 172.80 - 173.08 Chlorite altered bx with pyrite dissem.	41507	172.80	173.08	0.28		<0.1	4.4	100	85	
		- 173.08 - 174.17 Rhyolite Bx (as previous)	41508	176.5	176.8	0.3		<0.1	1.0	56	165	
		- 174.17 175.16 Rhyolite Tuff (as previous)										
		- 175.16 - 175.7 Rhyolite Bx (as previous)										
		- 175.7 - 176.0 Rhyolite Tuff (as previous)										
		- 176.0 - 176.54 Rhyolite Bx (as previous										
		- 176.54 - 176.85 50% stony pyrite bands and rimming										
		coarse bx fragments, medium brown (ZnS?)										
		- 176.9 - 177.13 cherty layer tuff										
		- 177.13 - 183.83 Ryholite Tuff-Bx										
		- 183.83 - 184.3 Top fining tuff from underlying bx. i.e.										188.1 - 188.3 shear zone
		tops up hole.										
		184.3 - 199.03 Rhyolite T-Bx pale green with fine										
		grained tuff and cherty tuff layers at 185.46 - 185.53										
		cherty tuff; 193.15 - 194.8 tuff; 197.04 - 197.8 tuff										
		layering @ 65° T.C.A.										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-9

DRILLING CO.	LOCATION SKETCH	DEPTH	TESTS DIP ANGLE	AZIMUTH
H. Allen Diamond Drilling Ltd.	-N-	COLLAR	-55°	045°
		60.96m	-58°	
		121.92m	-52°	
		182.88m	-49°	
HOLE TYPE d.d.h.				

DATE STARTED: November 28, 1983
DATE COMPLETED: December 5, 1983
COLLAR ELEV.: Approx. 50.0m W.R.T. "datum"
NORTHING: STN 0+60m S
EASTING: Line 8+90M W
AZIMUTH: 045°
DEPTH: 185.93 metres
CORE SIZE: BQ

PROJECT: #10111 SILICA
N.T.S.: 92I/11W
LOCATION: "South Grid"
DATE LOGGED: December 15, 1983
LOGGED BY: D. Gamble

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
0	21.34	OVERBURDEN										BW Casing left
21.34	59.84	RHYOLITE CRYSTAL TUFF (Vat)										
		- *light grey to greenish-grey in colour*										Foliation - Fabrics
		- crystal tuff with gradational breccia clastic										@ 23.6m 50° T.C.A. bedding
		component locally										27.2m 45° T.C.A. foliation
		- quartz eyes & chips, round to irregular shaped, 2-5										32.12m 50° T.C.A. bedding
		mm equidimensional in size grey, translucent, fractured										39.5m 50° T.C.A. foliation
		to clear transparent quartz eyes										43.8m 45° T.C.A. bedding
		- white feldspar chips & broken crystals										48.6m 50° T.C.A. foliation
		- yellow to greenish-yellow sericite wisps exhibiting										55.8m 50° T.C.A. foliation/
		the foliation fabric - minor weak chlorite developed as										bedding
		well as sericite										
		- 10% disseminate prite with local concentrations to 20%										Faults - broken (ground - mud)
		pyrite conformable stringers ≤ 1mm seams										@ 22.72m fault
		- pyrite rich rhyolite breccia fragments (50% pyrite)										52.73m sheared
		.5 cm x 3.0 cn *lenticular/tapered*										54.2m shear/fault
		- interstitial CO_2 ↑ weak to moderate locally, some										59.65m crenulated small fold

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-9

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	g/tonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
		feldspar chips + CO_2, minor stringers CO_2 and one thin										@ 30° T.C.A.
		carbonate layer or conformable vein @ 43.75m-43.80 @										
		45° T.C.A.										
		- 1-3 CO_2 stringers per metre										
		- occassional andesite fragments i.e. 38.95m										
		- occassional pumaceous fragments i.e. 33.60m very	41415	21.34	27.74	6.4		<0.1	2.3	100	138	- below shear @ 54.2m little
		irregular buff yellow aphanitic with clear glassy	41416	28.16	34.44	6.28		<0.1	0.8	76	90	to no interstitial carbonate
		quartz eyes in pumaceous clast										CO_2 strgs. are present as
		- stretched/flattened fragments of pyrite rich ryholite	41417	34.80	40.0	5.20		<0.1	0.5	69	64	above
		fragments @ 45° T.C.A.										shear/fault
		- limy CO_2↑ rich fragments @ 45.10m 1 cm x 3 cm	41418	46.0	51.0	5.0		<0.1	0.5	45	66	- below shear tuff is fine
		flattened 45° T.C.A.										grained and pale green quartz
		- lower contact sharp distinct @ 45° T.C.A. conformable	41420	51.5	55.5	4.0		<0.1	0.5	23	98	eye-sericite ± chlorite
		- overall feature of unit is a layered tuff with some										
		colour banded variations	41421	56.0	59.5	3.5		<0.1	0.5	24	100	
59.84	73.61	RHYOLITE GREY QUARTZ-EYE-SERICITE TUFF										
		- light grey siliceous aphanitic matrix with grey quartz	41422	60.0	65.0	5.0		<0.1	0.5	27	68	
		eyes (rounded) and chips (angular) 1-4 mm; also										
		containing milky white partially resorbed feldspar	41423	65.5	70.5	5.0		<0.1	0.5	23	215	
		crystals that generally have rounded fuzzy crystal										
		boundaries and contain minor CO_2↑ (2-4 mm)	41424	71.0	76.0	5.0		<0.1	1.7	142	77	
		- moderate interstitial carbonate plus stringers and										
		carbonate lined slips. Also small carbonate "eyes"	41425	76.5	78.0	1.5		<0.1	1.7	112	56	
		or chips)1-2 mm)										
		- this tuff unit is a lighter grey than previous unit,	41426	78.0	78.4	0.4		<0.1	2.3	50	40	massive pyrite

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-9

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	g/tonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
		a fine grained siliceous matrix with quartz & feldspar										
		crystal chips & "eyes", sericite and carbonate. Strong										
		sericite developed on foliation planes & pervasive										
		throughout										
		- quartz stringers .5 - 1.0 cm convoluted from 62.2-62.35										
		- occassional pyrite rich acid volcanic rounded										61.0m 50° T.C.A. foliation
		lensoidal shaped fragment 2 cm x .4 cm										64.96m 55° T.C.A. bedding
		- 64.49 to 64.54 a 5 cm conformable band of soft gypsum(?)										68.8m 60° T.C.A. bedding
		+ minor carbonate										72.4m 65° T.C.A. bedding
		- colour banded tuff layers from light grey to cream white										
		locally										
		- fine disseminated pyrite 5% throughout with local										
		concentrations up to 25% as thin conformable seamlets										
		and fragments										
		- pyrite seams increase in number from 67m and downwards										
		averaging 5-10% pyrite overall (approximate)										
		- quartz minor carbonate veinlets from 73.12 - 73.31 ≙										
		1.0-2.0 cm thick veinlets										
		- occassional acid fragment rimmed with pyrite, i.e. @										
		68.60m										
		- some of the lighter grey coloured "bands" of tuff(?) may										
		represent acid breccia fragments. Fragments boundaries										
		seen in similar compositional clasts. If this is the										
		case some fragments would reach 5 cm in short axis										
		dimension.										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-9

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	ASSAYS g/tonne Au	Ag	ppm Cu	Zn	REMARKS
73.77	76.12	As unit preceeding ANDESITE TUFF Lower contact sheared.										
76.12	78.00	RHYOLITE TUFF - Bx										
		Upper contact sheared; no interstial CO_2 weak $CO_2\uparrow$ in										
		some fractures strong shearing - quartz veining and										
		crenulated sericite rich zones and fault gouge.										76.85 - 76.9 fault gouge
		- pale green to grey highly foliated rhyolite tuff -										77.06 - 77.09 fault gouge
		quartz-sericite schist										77.54 - 77.61 fault gouge
78.0	78.4	MASSIVE PYRITE SECTION										
		- fine grained massive pyrite in a siliceous matrix - 60%										
		pyrite 40% quartz matrix										
		- banded pyrite										
		- upper and lower contact broken and fault gouge respect-										
		ively										
78.4	78.6	FAULT GOUGE										
		- grey sericite rich gouge										
78.6	80.94	RHYOLITE TUFF - Bx	41427	79.0	84.5	5.5		<0.1	0.8	34	48	
		- grey fine grained matrix of quartz-sericite, with strong										
		sericite on foliation planes										
		- white to light grey aphanitic rhyolite breccia clasts										
		that are rounded .5 cm - 2 cm										
		- quartz eyes										
		- disseminated pyrite 1-5%										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-9

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	g/tonne ASSAYS Au	Ag	Cu	ppm Zn	REMARKS
		- small band of massive pyrite 80.50-80.54m										
		- occassional pyrite rich acid volcanic lapilli										
		- fragments > (concentrations) matrix imparting a tightly										
		packed agglomeration texture										
80.94	81.12	CHERTY TUFF	41428	80.94	81.12	0.18		<0.1	3.6	1130	23	
		- fine grained, aphanitic, medium grey coloured inter-										
		bedded layer in preceeding unit										
		- fine disseminated pyrite and thin seams and stringers										
		of pyrite ≅ 30% pyrite										
		- upper contact broken but has 1 cm thin white siliceous										
		cherty top										
		- Lower contact broken										
81.12	84.89	RHYOLITE TUFF - Bx as previous										
		unit preceeding above chert layer										
		83.84-83.9 fine grained interbedded cherty tuff-grey										831.-83.7 strongly sheared
		84.6-84.89 fine grained interbedded cherty tuff-grey										
84.89	85.11	MASSIVE PYRITE	41429	84.89	85.11	0.22		<0.1	2.3	99	68	
		60% pyrite layered massive with siliceous matrix (40%)										
		Layering 60° T.C.A.										
85.11	90.2	RHYOLITE TUFF - Bx (as 81.12-84.89)	41430	85.5	90.0	4.5		<0.1	1.0	14	100	85.84-86.4 strongly sheared
		- quartz vein 86.88-86.93 white										broken
												87.93-90.2 broken sheared
												ground

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-9

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	gtonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
90.2	92.06	FAULT ZONE	41431	90.5	92.0	1.5		<0.1	1.0	19	103	
		- gouge and strongly sheared Rhyolite-bx.										
92.06	103.02	RHYOLITE TUFF with cherty layers										
		- grey, fine grained, layered tuff with interbedded	41432	93.07	93.88	0.81		<0.1	2.8	2600	230	93.01-93.09 Cpy dissem
		cherty layers										93.20-93.26 Cpy dissem.
		95.0-95.2 grey chert, fine grained with 5% dissem. py.	41433	94.0	100.5	6.5		<0.1	1.0	36	100	93.67-93.68 Cpy seam
		98.4-98.6 grey chert, fine grained layered 60° T.C.A.										102.98-103.02 Cpy dissem.
		with 5% pyrite	41434	101.0	103.0	2.0		<0.1	3.3	2300	510	95.36-95.38 fault gouge
		99.9-100.6 grey cherty fine grained with 5% pyrite										95.7-97.53 strongly sheared
		70° T.C.A.										gouge
		- some sections containing 1-3 cm breccia fragments,										101.1-101.46 strongly sheared
		rounded and lenticular shaped										gouge
		- pyrite rich acid fragments feathered and lenticular										101.75-101.8 fault gouge
												102.57-102.59 fault gouge
103.02	103.60	LIMESTONE or CARBONATE VEIN										
		- bull white fine grained limestone containing acid										
		volcanic wisps, chips and fragments. The clasts tend										
		to be wispy to lenticular (fragile looking)										trace cpy at lower contact
		lower contact conformable @ 50° T.C.A.										
		upper contact slip surface @ 70° T.C.A.										
103.60	106.16	RHYOLITE TUFF - Bx (as before preceeding unit)	41435	104.0	106.0	2.0		<0.1	1.0	105	305	
		lower contact conformable @ 55° T.C.A.										
		- interbedded +-bx contact at 107.90m @ 55° T.C.A. above										
		light to medium grey whereas below grey white tuff-bx										

to lower contact.

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-9

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS Au	Ag	Cu	ppm Zn	REMARKS
106.16	142.67	RHYOLITE QUARTZ-EYE SERICITE TUFF										
		- fine grained tuff, light grey with very fine grained	41436	106.5	111.5	5.0		<0.1	2.3	56	105	106.96 Fault Gouge
		reworked tuff-ash top with seams of fine grained to										115.83 strong shear fault.
		stoney pyrite. ± cherty tuff 108.16-106.78	41437	112.0	117.0	5.0		<0.1	2.3	68	66	
		- strong foliation/shearing										
		- pyrite seams and disseminations in @ 60° T.C.A. -	41438	117.5	122.5	5.0		<0.1	0.5	230	63	
		foliation at 60° T.C.A.@ 120.0m										
		- strongly foliated sericite schist with 1-2mm quartz	41439	123.0	128.0	5.0		<0.1	0.3	283	61	- weakly dissem. py.
		eyes										some thin seamlets of
		- 4 small olive green pale sericite rich dikes @	41440	128.5	133.5	5.0		<0.1	0.5	138	65	pyrite throughout
		126.80-126.82)										- extensive sericite +
		126.96-127.00)	41441	134.0	139.0	5.0		<0.1	0.5	8	60	crenulated minor folds
		127.05-127.13) near conformable contacts										
		127.18-127.24)	41442	139.5	142.5	3.0		<0.1	1.0	40	75	of sericite
142.67	146.92	RHYOLITE-SILICEOUS TUFF (Bx)	41443	142.7	146.7	4.0		<0.1	0.8	9	72	
		- medium to grey green colour										
		- siliceous, low concentrations of sericite, only on										
		foliation slip surfaces										
		- contains fine grained mottled mediun brown sulphides										Fault Zone 143.87-144.48m
		(ZnS)? and fine grained pyrite										ground-gouge
		- green colouration - chlorite?										
		- occassional siliceous breccia fragment.										
146.92	162.3	RHYOLITE TUFF - (Sericite-Quartz Eye Schist)	41444	147.0	152.0	5.0		<0.1	0.5	10	58	
		- pale greenish yellow coloured with some light grey layers										

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SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-9

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOVERED	ASSAYS g/tonne Au	ASSAYS ppm Ag	Cu	Zn	REMARKS
		- strong sericite concentrations with 2-4mm quartz eyes	41445	152.5	157.5	5.0		<0.1	0.5	95	68	152m 65° T.C.A. foliation
		- minor CO_2 stringers and some patchy white carbonate										159m 70° T.C.A. foliation
		- minor crenulated folds in sericite cutting the	41446	158.0	162.0	4.0		<0.1	0.5	8	58	
		foliation - (early fault development)										
		- lower contact conformable at 70° T.C.A. carbonate at										
		contact										
162.3	176.66	ANDESITE TUFF (Mineralized Py.-Cpy.)										
		- medium to dark green colour	41447	162.3	163.3	1.0		<0.1	2.3	1380	225	
		- fine grained chloritic matrix										
		- colour banding from medium to dark green, diffuse to	41448	163.3	164.3	1.0		<0.1	2.8	4200	200	
		sharp colour variation @ 70° T.C.A										
		- the entire unit contains rounded quartz clasts from	41449	164.3	165.3	1.0		<0.1	1.7	1250	200	
		4mm up to 4 cm. The small clast tend to be round										
		equidimensional to lensoidol. The larger clasts are	41450	165.3	166.3	1.0		<0.1	2.3	1480	280	
		equidimensional round to irregular fragment boundaries										*Foliation/layering @ 70°-*
		- quart ± carbonate cut the interval - (some may be	41451	166.3	167.3	1.0		<0.1	5.0	3200	230	80° T.C.A.
		large fragments?)										
		- pyrite dissemination and conformable stringers/seams	41452	167.3	168.3	1.0		<0.1	1.7	242	193	Pyrite seams/stringers
		of pyrite occur throughout										conformable at 70-80° T.C.A.
		- accompanying the pyrite and fragments of quartz in	41453	168.3	169.3	1.0		<0.1	1.0	228	170	
		dissemination Cpy. ≃ (1% overall)										
		- there are sections that exhibit a strong darker green	41454	169.3	170.3	1.0		<0.1	1.7	165	185	
		colouration - Chlorite alteration with accompanying										
		Cpy. disseminated mineralization	41455	170.3	171.3	1.0		<0.1	2.8	700	192	
		There is a remote possibility that the entire unit										

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-9

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS ppm Au	Ag	Cu	Zn	REMARKS
		represents an extremely chlorite altered acid	41456	171.3	172.3	1.0		<0.1	2.8	1750	290	
		fragmental (??)	41457	172.3	173.3	1.0		<0.1	2.8	2250	452	
		173.06-173.27 small interbedded pale green rhyolite	41458	173.3	174.3	1.0		<0.1	3.0	2000	285	
		tuff (sericite + quartz lapilli)	41459	174.3	175.3	1.0		<0.1	5.0	5000	880	
			41460	175.3	176.6	1.3		<0.1	2.3	1480	1550	
176.66	183.37	RHYOLITE TUFF										
		- pale-medium green to grey quartz eye - sericite										
		± chloritic schist (tuff)										
		- quartz-eyes and chips and 2mm x 5 mm lapilli										
		carbonate fragments										
		- bleached sections are higher in interstitial										
		carbonate										
		179.23-179.43m pale green CO_2 ↑										
		181.00-181.50m pale green to white CO_2 (exhalite?)										
		181.50-182.47m pyrite seams in fine grained siliceous	41461	181.5	181.8	0.3		<0.1	1.0	66	78	
		'cherty' tuff, at top of interval underlain by										
		rhyolite tuff-bx (no carbonate)										
		182.47-183.37 pale green sericite quartz rhyolite tuff										
183.37	184.50	AND-DACITE TUFF										
		- layered medium - dark green andesite layers with pale										
		to medium green siliceous layers with acid										
		fragments (.5 x 2 cm)										
		- disseminated and conformable stringers of pyrite										
		Trace Cpy (similar to previous "andesite" unit)										

SELCO INC. EXPLORATION WESTERN CANADA

DRILL LOG

HOLE NO. S-83-9

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	CORE LENGTH	CORE RECOV-ERED	g/tonne ASSAYS ppm				REMARKS
								Au	Ag	Cu	Zn	
184.50	185.93	RHYOLITE TUFF										
	E.O.H.	- pale green to light grey siliceous tuff - top is										
		cherty grey. Siliceous grey white clasts (2-5mm)										
		rounded to (1 x 2 cm) Chlorite wisps-dark green										Fabric 70° T.C.A. foliation
		Sericite on foliation planes										

SIGNED

COST STATEMENT - SCHEDULE A

SILICA PROJECT - CACHE CREEK, BC

Silica 1-5	Record Nos.	2365-2369
Silica 6,7	Record Nos.	4406-4407
Silica 8,9	Record Nos.	4449,4448
Cheetsum 1-3	Record Nos.	4596-4598
Oregon 1-5	Record Nos.	4599-4603
Spatsum 1-4	Record Nos.	4604-4607

1. GRID PREPARATION (Silica 1-4)

Feb.21-24, 1983:
21 line km by company personnel (D. Gamble, G. Owsiacki)

Labour and materials - 4 days @ $400/day	$ 1,600.00
Vehicle lease and operation - 4 days @ $40/day	160.00

2. GEOPHYSICAL SURVEY H.L.E.M. (Silica 1-4)

Feb.28-Mar.6, 1983:
21 line km by company personnel (A. Wynne, G. Owsiacki)

Labour - 7 days @ $400/day	2,800.00

3. DIAMOND DRILLING (Silica 3)

Apr.25-May 9, 1983:

159.11 metres as per invoice May 20, 1983 H. Allen Diamond Drilling Limited	11,558.70
Supervision - 15 days @ $200/day	3,000.00
Vehicle lease and operation - 15 days @ $40/day	600.00
Reclamation by seeding - 1 day	
Labour and materials - 1 man day @ $170/day	170.00
Accommodation and food - 1 man day @ $56/day	56.00
Vehicle lease and operation - 1 day @ $40/day	40.00

cont....

4. GRID PREPARATION (Silica 1-4)

May 1-2, 1983:
21 line km of placing pickets by company personnel
(G. Evans, M. Nighswander)

2 days @ $300/day	$	600.00
Accommodation and food - 4 man days @ $56/day		224.00
Vehicle operation and lease - 2 days @ $40/day		80.00

5. GEOPHYSICAL SURVEY GENIE E.M. (Silica 1-4)

May 16-20, 1983:
4 line km of field test surveys by company personnel
(B. Somerville, M. Johnson, A. Wynne and 1 labourer)

4 days @ $750/day	3,000.00

6. GEOPHYSICAL SURVEY I.P. (Silica 3)

June 19, 1983:
1.0 line km by Phoenix Geophysics Limited as per invoice no. 3677, June 30, 1983 — 850.00

7. GEOPHYSICAL SURVEY I.P. (Silica 3 & Silica South Group)

Oct.10-13, 1983:
3.0 line km by Phoenix Geophysics Limited as per invoice no. 3880, October 20, 1982 — 1,725.00

8. ORTHOPHOTO MOSAIC BASE MAPS (Silica North, Silica South Groups & Spatsum 1)

September/October 1983:
McElhanney Surveying and Engineering Ltd. as per invoice October 28, 1983 — 10,027.72

cont....

9. DIAMOND DRILLING (Silica 3 & Silica South Group)

October 20-December 5, 1983:		
984.82 metres as per invoice nos.	690 Nov.14/83	$ 36,624.14
	691 Dec. 6/83	35,332.31
H. Allen Diamond Drilling Limited		
Drill supervision by company personnel - 49 days @ $150/day		7,350.00
Vehicle lease and operation - 49 days @ $25/day		1,225.00
Accommodation - 7 weeks @ $125/week		875.00
Food - 49 days @ $23/day		1,127.00

10. GEOCHEMICAL ANALYSIS (Silica 3 & Silica South Group)

Analyses of drill core by Chemex Labs Ltd. as per invoices:	
Dec.1/83 Inv.No. 8316541	441.00
Jan.9/84 Inv.No. 8316980	721.21
Jan.11/84 Inv.No. 8317011	721.21
Jan.12/84 Inv.No. 8410011	705.87
Jan.13/84 Inv.No. 8410058	593.86
Sample bags, containers, shipping charges	150.00

11. GENERAL SUPERVISION (Silica 3 & Silica South Group)

Oct.20-Dec.5, 1983: - Drill Contract Supervision (D. Gamble) 7 days @ $200/day	1,400.00
Vehicle lease and operation - 7 days @ $40/day	280.00
Nov.15-Dec.31, 1983: - Logging and sampling 10 days @ $200/day	2,000.00

12 GRID PREPARATION (Silica North & Silica South Groups)

Nov.1-30, 1983: 117.2 line km by Amex Exploration Services Ltd. as per invoice dated Nov.30, 1983	34,908.62
Field supervision - 7 days @ $200/day	1,400.00

cont....

13. GEOPHYSICAL SURVEYS GENIE E.M. & MAG (Silica North & Silica South Groups)

Nov.7-Dec.9, 1983:

Labour by company personnel (B. Somerville, D. Flentge) 28 days @ $400/day	$ 11,200.00
Supervision and reporting (A. Wynne) 16.5 days @ $250/day	4,125.00

14. LITHOGEOCHEMICAL SURVEY (Silica North & Silica South Groups)

Nov.1-Dec.15, 1983:

Labour - 42 man days @ $105/day	4,200.00
Accommodation - 6 weeks @ $125/week	750.00
Food - 42 man days @ $23/day	966.00
Vehicle lease - 6 weeks @ $210/week	1,260.00
Vehicle operation - 42 days @ $20/day	840.00
Geochemical analyses by Chemex Labs Ltd. as per invoice Nos. 8316436	60.21
8410058	593.86

15. OFFICE SUPERVISION (Silica North & Silica South Groups)

Dec.15-Jan.25, 1983:

Reporting and compilation of report - 10 man days @ $200/day	2,000.00
Drafting of maps, drill sections, lithogeochemistry, geophysical surveys - 24 man days @ $200/day	4,800.00
Typing - 3 man days @ $150/day	450.00
Reproduction costs and materials	800.00
TOTAL	$194,391.71

SCHEDULE B

ITEMIZED BREAKDOWN FOR ASSESSMENT CREDIT

FROM SCHEDULE A

ITEM	TOTAL	CLAIMS CREDITED	BREAKDOWN
1 (Gridding)	$ 1,760.00	Silica 1,2,4	$ 880.00
		Silica 3,5	880.00
2 (Geophysics)	2,800.00	Silica 1,2,4	1,400.00
		Silica 3,5	1,400.00
3 (Drilling)	15,424.70	Silica 3,5	15,424.70
4 (Gridding)	904.00	Silica 1,2,4	452.00
		Silica 3,5	452.00
5 (Geophysics)	3,000.00	Silica 1,2,4	1,500.00
		Silica 3,5	1,500.00
6 (Geophysics)	850.00	Silica 3,5	850.00
7 (Geophysics)	1,725.00	Silica 3,5	1,725.00
		Balance of Silica South Group	000.00
Base Maps)	10,027.72	Silica 1,2,4	1,323.66
		Balance of Silica North Group	2,687.43
		Silica 3,5	000.00
		Balance of Silica South Group	3,008.32
		Spatsum 1	3,008.31
9 (Drilling)	82,533.45	Silica 3,5	000.00
		Balance of Silica South Group	82,533.45
10 (Geochemical)	3,333.15	Silica 3,5	000.00
		Balance of Silica South Group	3,333.15
11 (Drilling Support)	3,680.00	Silica 3,5	000.00
		Balance of Silica South Group	3,680.00
12 (Gridding)	36,308.62	Silica 1,2,4	8,387.29
		Balance of Silica North Group	17,028.74
		Silica 3,5	000.00
		Balance of Silica South Group	10,892.59
13 (Geophysics)	15,325.00	Silica 1,2,4	3,540.07
		Balance of Silica North Group	7,187.43
		Silica 3,5	000.00
		Balance of Silica South Group	4,597.50

Cont....

ITEM	TOTAL	CLAIMS CREDITED	BREAKDOWN
14 (Geochemical)	$ 8,670.07	Silica 1,2,4	1,430.56
		Balance of Silica North Group	2,904.47
		Silica 3,5	000.00
		Balance of Silica South Group	4,335.04
15 (Support Reports etc.)	8,050.00	Silica 1,2,4	896.95
		Balance of Silica North Group	1,618.05
		Silica 3,5	000.00
		Balance of Silica South Group	5,535.00
TOTAL	$194,391.71	TOTAL	$194,391.71

PHOENIX Geophysics Limited

200 YORKLAND BLVD., WILLOWDALE, ONTARIO, CANADA M2J 1R5

TELEPHONE (416) 493-6350
Telex: 06-986856
Cable: PHEXCO TORONTO

INVOICE

INVOICE No. 3677
DATE: June 30, 1983.

Selco Mining Corp Ltd.,
55 University Avenue
Suite 1700
Toronto, Ontario
M5J 2H7

JUL 13 1983

REFERENCE: Geophysical Survey Contract PV 1405
IP and Resistivity Survey - Lac La Hache, B.C.

CREW: J. Marsh, P. Gardner, G. Richardson

PERIOD: June 8, 1983 to June 19, 1983

14.35 l.km. @ $780.00/l.km	$11,193.00	1/2 10140, 1/2 10145
One Operating Day @ $850.00/day	850.00	10111
	$12,043.00 ✓	

DATE GOODS RECEIVED JUL 13 1983
PRICES O.K.
EXTENSION CHECKED
O.K. FOR PAYMENT

JOB NUMBER	CODE		
221	2440	10140	= 5596.50
221	2440	10145	= 5596.50
221	2440	10111	= 850.00

PHOENIX GEOPHYSICS LIMITED

allocation phoned Ed Meyers July 18/83

PHOENIX Geophysics Limited

200 YORKLAND BLVD., WILLOWDALE, ONTARIO, CANADA M2J 1R5

TELEPHONE (416) 493-6350
Telex: 06-986856
Cable: PHEXCO TORONTO

I N V O I C E

October 20, 1983
INVOICE NO. 3880

OCT 24 1983

Mr. Alan Wynne,
Selco Mining Corp. Ltd.
403-535 Thurlow Street,
VANCOUVER, B.C.
V6E 3L2

REFERENCE: Geophysical Survey - PV-1420, IP and Resistivity Survey, Cache Creek, B.C.

CREW: D. Labrecque, Y. Nadeau

PERIOD: October 10, 1983 to October 13, 1983

2½	Operating days	@	$550.00/day	$1,375.00 ✓
1	Travel	@	$350.00/day	350.00 ✓
½	Standby day	@	N.C.	N.C.
				$1,725.00 ✓

PHOENIX GEOPHYSICS LIMITED

DATE GOODS RECEIVED	OCT 24 1983
PRICES O.K.	Oct 31/83 - Cheque # 1346
EXTENSION CHECKED	
O.K. FOR PAYMENT	
JOB NUMBER	CODE
221	-2440 - 10111

INVOICE

McElhanney Surveying
& Engineering Ltd.

200 - 1166 Alberni Street
Vancouver B.C. V6E 3Z3

OCT 31 1983

McElhanney

Please remit to
200 - 1166 Alberni Street
Vancouver, B.C. V6E 3Z3

In account with: SELCO INC.
Suite 401 - 535 Thurlow St.
Vancouver, B.C.
V6E 3L2

Attention: Hugh Squair

Invoice No. 9023960

Date 28 October, 1983

Your Order No.

Our Job. No. 40084-0

FOR PROFESSIONAL SERVICES IN RESPECT TO:

Provision of orthophoto mapping at the scale of 1:10,000 and 1:5,000 of your area of interest in the vicinity of Ashcroft as per our letter dated 29 August 1983

Original sent to Toronto for Payment - Oct 31/83
J.P

Original Fee		$ 10,000.00
Additional Prints	$23.76	
F.S.T. @ 9%	2.14	
P.S.T. @ 7%	1.82	
		27.72 ✓
TOTAL FEE		$ 10,027.72 ✓

DATE GOODS RECEIVED	OCT 31 1983
PRICES O.K.	
EXTENSION CHECKED	
O.K. FOR PAYMENT	
JOB NUMBER	CODE
221	2060 10111

P.J. Boase, Branch Manager

Silica Project

CLIENT'S COPY

Terms: Net 30 days. Interest at 2% per month will be charged on overdue accounts

AMEX EXPLORATION SERVICES LTD.

A A. (AB) ABLETT

Confidential Work

BUS. 376-0433
RES. 376-7490

1714 CLIFFORD AVE.
V2B 4G6

BOX 286
KAMLOOPS, B.C.

Selco Inc.
402-535 Thurlow Street,
Vancouver, B.C.

November 30, 1983

Attention: Mr. Dave Gamble

STATEMENT OF ACCOUNT

Re: Baseline survey and grid preparation, Red Hill Area, Cache Creek, Kamloops, Mining Division.

AMEX FEES

Distamat Base Line survey 31.9 km @ $436.83/km	= $	13,934.88
Sight Picket and Chaining 85.3 km cross lines @ $176.48/km	=	15,053.74
16,000 pickets cut, pointed and painted @ 37¢/picket	=	5,920.00
Total Requested	= $	34,908.62

Respectfully submitted,

A.A. Ablett, President
Amex Exploration Services Ltd.

/ca

RECEIVED DEC - 7 1983

221-2440-10111

Project # 10111

Mailed Dec. 9/83 to Toronto for pmt.

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

*** INVOICE ***

To : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

Invoice # : I8316436

Date : 25-NOV-83
P.O. # : NONE
Project 10111

Invoice for analytical work reported on certificate(s) A8316436-001

Quantity	Analysed for code	description	unit price	amount
3	008 - Ni	ppm		
	009 - Co	ppm		
	301 - Cu	%		
	384 - Ag FA	g/tonne		
	397 - Au FA	g/tonne	18.55	55.65 ✓

Sample preparation and other charges :

3	207 - Assay - PULVERIZE		3.75	11.25 ✓

TOTAL	$	66.90 ✓
Discount (10 %)	$	6.69 ✓
Please pay this amount ---->	$	60.21 ✓

TERMS -- NET 30 DAYS
1.5 % per month (18 % per annum) charged on overdue accounts

DATE GOODS RECEIVED	NOV 28 1983
PRICES O.K.	
EXTENSION CHECKED	
O.K. FOR PAYMENT	
JOB NUMBER	CODE
221-	2710-10111 = 10.12
221-	2720-10111 = 50.09

CTA MEMBER CANADIAN TESTING ASSOCIATION

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

*** INVOICE ***

o : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

Invoice # : I8316541
Date : 1-DEC-83
P.O. # : NONE
Project 10111

nvoice for analytical work reported on certificate(s) A8316541-001

uantity	Analysed for code	description	unit price	amount
20	301 - Cu	%		
	316 - Zn	%		
	384 - Ag FA	g/tonne		
	397 - Au FA	g/tonne	20.75	415.00

Sample preparation and other charges :

20	207 - Assay - PULVERIZE	3.75	75.00

TOTAL	$ 490.00
Discount (10 %)	$ 49.00
Please pay this amount ---->	$ 441.00

TERMS -- NET 30 DAYS
1.5 % per month (18 % per annum) charged on overdue accounts

DATE GOODS RECEIVED	DEC - 1 1983
PRICES O.K.	
EXTENSION CHECKED	
O.K. FOR PAYMENT	

JOB NUMBER	CODE
221-	2710-10111 = 67.50
221-	2720-10111 = 373.50

CTA MEMBER CANADIAN TESTING ASSOCIATION

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

JAN 27 1984

*** INVOICE ***

PROFORMA

: SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

Invoice # : I8316980

Date : 23-DEC-83
P.O. # : NONE
Project 10111

voice for analytical work reported on certificate(s) A8316980-001 to -002

antity	Analysed for code	description	unit price	amount
47	002 - Cu	ppm		
	005 - Zn	ppm		
	386 - Ag AA	g/tonne		
	399 - Au	g/tonne	13.30	625.10

Sample preparation and other charges :

47	207 - Assay - PULVERIZE	3.75	176.25

TOTAL	$ 801.35
Discount (10 %)	$ 80.14
Please pay this amount ---->	$ 721.21

MS -- NET 30 DAYS
% per month (18 % per annum) charged on overdue accounts

CHEMEX LABS LTD.

JAN 27 1984

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE (604) 984-0221
TELEX 043-52597

- ANALYTICAL CHEMISTS - GEOCHEMISTS - REGISTERED ASSAYERS

*** INVOICE ***

: SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

Invoice # : I8317011

Date : 31-DEC-83
P.O. # : NONE
Project 10111

Invoice for analytical work reported on certificate(s) A8317011-001 to -002

Quantity	Analysed for code	description	unit price	amount
47	002 - Cu	ppm		
	005 - Zn	ppm		
	386 - Ag AA	g/tonne		
	399 - Au	g/tonne	13.30	625.10

Sample preparation and other charges :

47	207 - Assay - PULVERIZE		3.75	176.25

TOTAL	$ 801.35
Discount (10 %)	$ 80.14
Please pay this amount ---->	$ 721.21

RMS -- NET 30 DAYS
5 % per month (18 % per annum) charged on overdue accounts

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

*** INVOICE ***

To : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

Invoice # : I8410011

Date : 12-JAN-84
P.O. # : NONE
Project 10111

Invoice for analytical work reported on certificate(s) A8410011-001 to -002

Quantity	Analysed for code	description		unit price	amount
46	002	Cu	ppm		
	005	Zn	ppm		
	386	Ag AA	g/tonne		
	399	Au	g/tonne	13.30	611.80 ✓

Sample preparation and other charges :

46	207	Assay - PULVERIZE	3.75	172.50 ✓

TOTAL	$	784.30 ✓
Discount (10 %)	$	78.43 ✓
Please pay this amount ---->	$	705.87 ✓

TERMS -- NET 30 DAYS
1.5 % per month (18 % per annum) charged on overdue accounts

DATE GOODS RECEIVED	JAN 13 1984
PRICES O.K.	
EXTENSION CHECKED	TO
O.K. FOR PAYMENT	
JOB NUMBER	CODE
221-	2710 - 10111 = 155 25
221-	2720 - 10111 = 550 62

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

*** INVOICE ***

To : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

Invoice # : I8410058

Date : 13-JAN-84
P.O. # : NONE
Project 1011

Invoice for analytical work reported on certificate(s) A8410058-001 to -002

Quantity	Analysed for code	description		unit price	amount
53	002 - Cu		ppm		
	006 - Ag		ppm		
	100 - Au ppb		FA+AA		
	005 - Zn		ppm	9.95	527.35 ✓

Sample preparation and other charges :

53	205 - Rock geochem - RING	2.50	132.50 ✓

TOTAL	$ 659.85 ✓
Discount (10 %)	$ 65.99 ✓
Please pay this amount ---->	$ 593.86 ✓

TERMS -- NET 30 DAYS
1.5 % per month (18 % per annum) charged on overdue accounts

DATE GOODS RECEIVED	JAN 16 1984
PRICES O.K.	
EXTENSION CHECKED	KO
O.K. FOR PAYMENT	

JOB NUMBER	CODE
221	2710-10111 = 147.25
221	2720-10111 = 474.61

CTA MEMBER CANADIAN TESTING ASSOCIATION

Province of British Columbia Ministry of Energy, Mines and Petroleum Resources
MINERAL RESOURCES DIVISION – TITLES BRANCH

GOLD COMMISSIONER
2040
JAN 30 1984
KAMLOOPS 191 554 E
BRITISH COLUMBIA

MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

I, A. P. David Gamble (Name) Agent for Guichon Explorations (Name)

7182 Blackwell Road (Address) 1700-55 University Avenue (Address)

Kamloops, B.C. Toronto, Ontario

V2C 2J3 (Postal Code) 573-3408 (Telephone Number) M5J 2H7 (Postal Code) 361-0794 (Telephone Number)

Valid subsisting F.M.C. No. 265030 Valid subsisting F.M.C. No. 264405

STATE THAT

1. I have done, or caused to be done, work on the SILICA 3, 5 (Fr.) Claim(s)

Record No.(s) 2367, 2369

Situate at Cache Creek, B.C. in the Kamloops Mining Division,

to the value of at least $22,231.70 dollars. Work was done from the 21st day

of February 19 83, to the 25th day of January 19 84

2. The following work was done in the 12 months in which such work is required to be done: Yes

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING)

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)

(Give details as required by section 13 of regulations.)

	COST
TOTAL PHYSICAL	

I wish to apply $ ..... of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

B. PROSPECTING (Details in report submitted as per section 9 of regulations.)
(The itemized cost statement must be part of the report.)

COST

I wish to apply $ ..... of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

(For C and D sections, please turn over.)

DRILLING (Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)	COST
	$ 15,424.70

D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL (Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)	
Grid Preparation & Geophysical H.L.E.M. Surveys	4,232.00
Geophysical Induced Polarization Surveys	2,575.00
TOTAL OF C AND D	$ 22,231.70

Who was the operator (provided the financing)?

Name Selco

Address 402 - 535 Thurlow Street
Vancouver, B.C. V6E 3L2

Portable Assessment Credits (PAC) Withdrawal Request	AMOUNT
Amount to be withdrawn from owner(s) or operator(s) account(s):	
Name of Owner	
(May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.) 1.	
2.	
3.	
4.	
TOTAL WITHDRAWAL	
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL	

I wish to apply $ 22,000.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

10 Years, January - Silica 3 - 2367

10 Years, January - Silica 5 (Fr.) 2369

Value of work to be credited to portable assessment credit (PAC) account(s).

(May only be credited from the approved value of C and (or) D not applied to claims.)

	Name	AMOUNT
In owner(s) name.	1.	
	2.	
	3.	
In operator(s) name (party providing the financing).	1.	
	2.	
	3.	

(Signature of Applicant)

Province of British Columbia Ministry of Energy, Mines and Petroleum Resources

MINERAL RESOURCES DIVISION – TITLES BRANCH

GOLD COMMISSIONER

#2096 FY

JAN 30 1984

KAMLOOPS 19 1554

BRITISH COLUMBIA

MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

I, A.P. David Gamble (Name)

7182 Blackwell Road (Address)

Kamloops, B.C.

V2C 2J3 (Postal Code) 573-3408 (Telephone Number)

Valid subsisting F.M.C. No. 265030

Agent for Guichon Exploration Inc. (Name)

1700-55 University Avenue (Address)

Toronto, Ontario

M5J 2H7 (Postal Code) 361-0794 (Telephone Number)

Valid subsisting F.M.C. No. 264405

STATE THAT

1. I have done, or caused to be done, work on the SILICA 1, 2, 4 Claim(s)

Record No.(s) 2365, 2366, 2368

Situate at Cache Creek, B.C. in the Kamloops Mining Division,

to the value of at least $19,810.53 dollars. Work was done from the 21st day

of February 19 83, to the 25th day of January 19 84.

2. The following work was done in the 12 months in which such work is required to be done: Yes

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING)

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)

(Give details as required by section 13 of regulations.)

	COST
TOTAL PHYSICAL	

I wish to apply $ ..... of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

B. PROSPECTING (Details in report submitted as per section 9 of regulations.)
(The itemized cost statement must be part of the report.)

COST

I wish to apply $ ..... of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

(For C and D sections, please turn over.)

DRILLING (Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)	COST

D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL (Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)	
Orthophoto Mosaic Base Maps & Reporting	$ 2,220.61
Grid Preparation & Geophysical H.L.E.M/Mag Surveys	16,159.36
Lithogeochemical Survey	1,430.56
TOTAL OF C AND D	$ 19,810.53

Who was the operator (provided the financing)?

Name SELCO

Address 402 - 535 Thurlow Street,

Vancouver, B.C. V6E 3L2

Portable Assessment Credits (PAC) Withdrawal Request	AMOUNT
Amount to be withdrawn from owner(s) or operator(s) account(s):	
Name of Owner	
y be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.) 1.	
2.	
3.	
4.	
TOTAL WITHDRAWAL	
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL	

I wish to apply $ 19,800.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

3 Years, January - Silica 1 - 2365

3 Years, January - Silica 2 - 2366

3 Years, January - Silica 4 - 2368

Value of work to be credited to portable assessment credit (PAC) account(s).

(May only be credited from the approved value of C and (or) D not applied to claims.)

	Name	AMOUNT
In owner(s) name.	1.	
	2.	
	3.	
perator(s) name y providing ncing).	1.	
	2.	
	3.	

(Signature of Applicant)

GOLD COMMISSIONER
JAN 30 1984
(VANCOUVER)
BRITISH COLUMBIA
7585 & 7
191553E

Province of British Columbia Ministry of Energy, Mines and Petroleum Resources
MINERAL RESOURCES DIVISION – TITLES BRANCH

MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

I, A. P. David Gamble (Name), 7182 Blackwell Road (Address), Kamloops, B.C., V2C 2J3 (Postal Code), 573-3408 (Telephone Number)

Agent for B.P. Exploration Canada Limited (Name), 333 - 5th Avenue S.W. (Address), Calgary, Alberta, T2P 3B6 (Postal Code), 237-1234 (Telephone Number)

Valid subsisting F.M.C. No. 265030

Valid subsisting F.M.C. No. 264289

STATE THAT

1. I have done, or caused to be done, work on the SILICA 7, CHEETSUM 1,2,3. Claim(s)

Record No.(s) 4407,4596,4597,4598.

Situate at Cache Creek, B.C. in the Kamloops Mining Division,

to the value of at least $31,426.12 dollars. Work was done from the 1st day of September 19 83, to the 15th day of December 19 83

2. The following work was done in the 12 months in which such work is required to be done: Yes.

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING)

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)

(Give details as required by section 13 of regulations.)

	COST
TOTAL PHYSICAL	

I wish to apply $ ..... of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

B. PROSPECTING (Details in report submitted as per section 9 of regulations.) (The itemized cost statement must be part of the report.)

COST

I wish to apply $ ..... of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

(For C and D sections, please turn over.)

		COST
C. DRILLING (Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)		
D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL (Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)		
Orthophoto Mosaic Base Maps &Reporting		$ 4,305.48
Grid Preparation & Geophysical H.L.E.M./Mag. Surveys		24,216.17
Lithogeochemical Survey		2,904.47
	TOTAL OF C AND D	$ 31,426.12

Who was the operator (provided the financing)?

Name Selco

Address 402 - 535 Thurlow Street
Vancouver, B.C. V6E 3L2

Portable Assessment Credits (PAC) Withdrawal Request		AMOUNT
Amount to be withdrawn from owner(s) or operator(s) account(s):		
Name of Owner		
(May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.)	1.	
	2.	
	3.	
	4.	
	TOTAL WITHDRAWAL	
	TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL	

I wish to apply $ 30,800.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

4 Years, April, Silica 7 4407
2 Years, July, Cheetsum 1 4596
4 Years, July, Cheetsum 2 4597
4 Years, July, Cheetsum 3 4598

Value of work to be credited to portable assessment credit (PAC) account(s).

(May only be credited from the approved value of C and (or) D not applied to claims.)

	Name	AMOUNT
In owner(s) name.	1.	
	2.	
	3.	
In operator(s) name (party providing the financing).	1.	
	2.	
	3.	

(Signature of Applicant)

Province of British Columbia Ministry of Energy, Mines and Petroleum Resources

MINERAL RESOURCES DIVISION – TITLES BRANCH

GOLD COMMISSIONER

JAN 30 1984

KAMLOOPS BRITISH COLUMBIA

7585 (2) TY

191553E

MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

I, A. P. David Gamble (Name)
7182 Blackwell Road (Address)
Kamloops, B.C.
V2C 2J3 (Postal Code) 573-3408 (Telephone Number)
Valid subsisting F.M.C. No. 265030

Agent for B.P. Exploration Canada Limited (Name)
333 - 5th Avenue S.W. (Address)
Calgary, Alberta
T2P 3B6 (Postal Code) 237-1234 (Telephone Number)
Valid subsisting F.M.C. No. 264289

STATE THAT

1. I have done, or caused to be done, work on the SILICA 6,8,9; OREGON 1,2,3(Fr.),4,5(Fr.); SPATSUM 2,3,4(Fr.). Claim(s)
Record No.(s) 4406,4449,4448,4599,4600,4601,4602,4603,4605,4606,4607.
Situate at Cache Creek, B.C. in the Kamloops Mining Division,
to the value of at least $117,915.05 dollars. Work was done from the 1st day
of September 19 83, to the 15th day of December 19 83

2. The following work was done in the 12 months in which such work is required to be done: Yes.

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING)

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)

(Give details as required by section 13 of regulations.)

	COST
TOTAL PHYSICAL	

I wish to apply $ ..... of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

B. PROSPECTING (Details in report submitted as per section 9 of regulations.)
(The itemized cost statement must be part of the report.)

COST

I wish to apply $ ..... of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

(For C and D sections, please turn over.)

C. DRILLING (Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)	COST
	$ 89,546.60
D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL (Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)	
Orthophoto Mosaic Base Maps & Reporting	8,543.32
Grid Preparation & Geophysical H.L.E.M./Mag Surveys	15,490.09
Lithogeochemical Survey	4,335.04
TOTAL OF C AND D	$117,915.05

Who was the operator (provided the financing)?

Name Selco

Address 402-535 Thurlow Street

Vancouver, B.C. V6E 3L2

Portable Assessment Credits (PAC) Withdrawal Request	AMOUNT
Amount to be withdrawn from owner(s) or operator(s) account(s): Name of Owner	
(May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.) 1.	
2.	
3.	
4.	
TOTAL WITHDRAWAL	
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL	

I wish to apply $ 117,900.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

9 Years, April, Silica 6, 4406
9 Years, May, Silica 8, 4449
9 Years, May, Silica 9, 4448
9 Years, July, Oregon 1, 4599
9 Years, July, Oregon 2, 4600
9 Years, July, Oregon 3(Fr.) 4601
9 Years, July, Oregon 4, 4602
9 Years, July, Oregon 5(Fr.), 4603
9 Years, July, Spatsum 2, 4605
8 Years, July, Spatsum 3, 4606
9 Years, July, Spatsum 4(Fr.), 4607

Value of work to be credited to portable assessment credit (PAC) account(s).

(May only be credited from the approved value of C and (or) D not applied to claims.)

	Name	AMOUNT
In owner(s) name.	1.	
	2.	
	3.	
In operator(s) name (party providing the financing).	1.	
	2.	
	3.	

(Signature of Applicant)

GOLD COMMISSIONER

Province of British Columbia Ministry of Energy, Mines and Petroleum Resources

MINERAL RESOURCES DIVISION – TITLES BRANCH

JAN 30 1984 # 7585

191553E

KAMLOOPS BRITISH COLUMBIA

MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

I, A.P. David Gamble (Name) Agent for B.P. Exploration Canada Limited (Name)

7182 Blackwell Road (Address) 333 - 5th Avenue S.W. (Address)

Kamloops, B.C. Calgary, Alberta

V2C 2J3 (Postal Code) 573-3408 (Telephone Number) T2P 3B6 (Postal Code) 237-1234 (Telephone Number)

Valid subsisting F.M.C. No. 265030 Valid subsisting F.M.C. No. 264289

STATE THAT

1. I have done, or caused to be done, work on the SPATSUM 1 Claim(s)

Record No.(s) 4604

Situate at Cache Creek, B.C. in the Kamloops Mining Division,

to the value of at least 3008.31 dollars. Work was done from the 1st day

of September 19 83, to the 31st day of October 19 83

2. The following work was done in the 12 months in which such work is required to be done: Yes

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING)

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)

(Give details as required by section 13 of regulations.)

	COST
TOTAL PHYSICAL	

I wish to apply $ ..... of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

B. PROSPECTING (Details in report submitted as per section 9 of regulations.)
(The itemized cost statement must be part of the report.)

COST

I wish to apply $ ..... of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

(For C and D sections, please turn over.)

C. DRILLING (Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)

	COST

D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL

(Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)

Orthophoto Mosaic Base Map	$ 3008.31
TOTAL OF C AND D	$ 3008.31

Who was the operator (provided the financing)?

Name Selco

Address 402 - 535 Thurlow Street,

Vancouver, B.C. V6E 3L2

Portable Assessment Credits (PAC) Withdrawal Request

Amount to be withdrawn from owner(s) or operator(s) account(s):

(May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.)

Name of Owner	AMOUNT
1.	
2.	
3.	
4.	
TOTAL WITHDRAWAL	
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL	

I wish to apply $ 3000.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

2 Years, July, Spatsum 1, 4604

Value of work to be credited to portable assessment credit (PAC) account(s).

(May only be credited from the approved value of C and (or) D not applied to claims.)

	Name	AMOUNT
In owner(s) name.	1.	
	2.	
	3.	
In operator(s) name (party providing the financing).	1.	
	2.	
	3.	

(Signature of Applicant)

CERTIFICATE OF AUTHOR

I, Alan Wynne, of 8573 Eboy Terrace, Sidney, British Columbia hereby certify that:

1. I am a geophysicist residing at the above address.

2. I am a graduate of the University of British Columbia with a B.Sc. in Geology/Geophysics (1976).

3. I have practised my profession for more than seven years.

4. I supervised and interpreted the geophysical work described herein.

5. I hold no interest, direct or indirect, in the claims which are the subject of this report.

Respectfully submitted,

A. Wynne
Geophysicist

Vancouver, B.C.
February 1984

CERTIFICATE OF AUTHOR

I, Dave Gamble, of 7182 Blackwell Road, Kamloops, British Columbia hereby certify that:

1. I am a geologist residing at the above address.

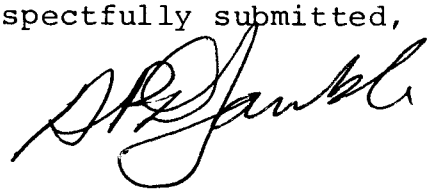
2. I am a graduate of the University of Ottawa with an Honours B.Sc. degree in Geology (1973) and have completed two years graduate studies leading to a M.Sc. at Laurentian University.

3. I have practised my profession for more than 7 years.

4. I supervised the survey work on the Silica Project claims and interpreted the results of the survey described herein.

5. I hold no interest, direct or indirect, in the Silica Project claims which is the subject of this report.

Respectfully submitted,



A.P.D. Gamble
Project Geologist

Kamloops, B.C.
February 1984

CERTIFICATE OF AUTHOR

I, Hugh Squair of 4287 Staulo Crescent, Vancouver, British Coloumbia, hereby certify that:

1. I am a geologist residing at the above address.

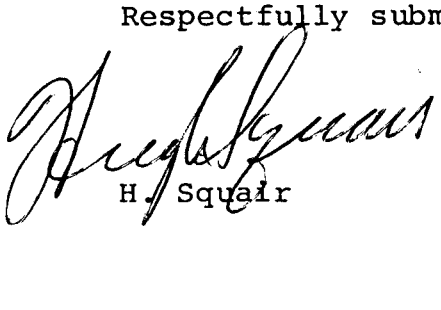
2. I am a graduate of the University of Saskatchewan and London with B.A. 1959 and Phd. 1965, degrees in Geology and Mining Geology and have practiced my profession for eighteen years.

3. I am registered as a member of the Association of Professional Engineers of the Province of Ontario.

4. I directed the drilling, geophysical and geochemical work carried out on the Silica Claim Project by Mr. A.P.D. Gamble and attest that the values presented and their spatial relationships to each other are correct within reasonable limits of error.

5. I hold no interest direct or indirect in the Silica Claim Group which is the subject of this report.

Respectfully submitted,



H. Squair

Vancouver, B.C.
February 1984

APPENDIX A

NOTES ON THE THEORY, PRESENTATION AND INTERPRETATION OF DATA FOR THE GENIE SE-88 PORTABLE ELECTROMAGNETIC SYSTEM. (SOURCE OF INFORMATION - SCINTREX OPERATION MANUAL AND INTERPRETATION MANUAL.

1. Introduction

The SE-88 Portable Electromagnetic System is designed mainly for use in mineral prospecting for massive sulphide ore bodies. It may also be used for the detection of faults or shear zones and to give information about subsurface conductivity for geological mapping, sand and gravel or ground water exploration. The SE-88 has been dubbed the "GENIE", an acronym for GEometry Normalized In-Phase Electromagnetic system.

Advantages of the GENIE

All previous portable electromagnetic systems, whether making in-and-out-of-phase (Slingram), tilt angle or amplitude measurements, are sensitive to the relative geometry of the transmitter and receiver coils. Small errors in orientation or separation of these coils introduce appreciable noise which degraded useful sensitivity and thereby the effective depth of exploration. While it is possible to reduce these errors by taking great care in making the measurements, production rates may be affected appreciably. These coil geometry errors are especially troublesome when surveys are to be made in topographically rugged and/or forested areas where the operators cannot see each other or measure distances accurately.

The GENIE, designed for rapid two person operation, minimizes geometrically derived errors. The measurement is based on the simultaneous transmission of two preselected, well separated frequencies and the comparison of the amplitudes of the two signals at the receiver. The two transmitted frequencies are picked up by a single receiving coil, amplified and noise filtered. A proportional DC voltage (V_{signal} for the higher frequency, $V_{reference}$ for the lower frequency) is obtained from each signal, averaged over a selectable time period and then the computed result $(V_{signal}/V_{reference} - 1) \times 100$ is displayed in percent on the digital display with a resolution of 0.1%. Under most field conditions the system, whose sensitivity and repeatability are basically only limited by atmospheric noise, can detect amplitude ratio changes to better than 0.5 percent. Useful measurements may be made to a transmitter-receiver separation of 200 m.

Test surveys have been conducted with this system over known subsurface conductors in a variety of geological environments and climatic conditions. Compared with other portable electromagnetic systems, similar anomaly amplitudes have been observed in all cases, but the noise levels are invariably lower in the GENIE profiles, resulting in an enhanced signal-to-noise ratio. The time required to measure a low noise profile with the new system

is significantly less than with standard horizontal loop (Slingram) equipment. The presence of known bedrock conductors beneath as much as 85 m of overburden has been clearly indicated by the GENIE.

A comprehensive program of model studies has been carried out on the University of Toronto electromagnetic modelling facility to provide the basis for interpretation of GENIE results.

For more theoretical information...

Further information about the SE-88 is available in a 1981 Society of Exploration Geophysicists (SEG) paper given by Scintrex and Esso Minerals Canada Limited entitled, "A Novel Geometry Invariant Portable Ground Electromagnetic Reconnaissance System" by Doborzynski, Rentsch, Rudniski, Brcic and LaFleche.

3. QUANTITATIVE INTERPRETATION

3.1 Recommended Dataset

Thus far, we have examined the nature of the response to be expected from selected conductor models. A familiarity with these profiles will, in a qualitative or semi-quantitative sense, permit the user to interpret the gross features of subsurface conductors that he may encounter. From the most rudimentary of data, e.g. obtained in routine profiling for one frequency pair and one coil spacing, he will be able to quickly determine the location and dip direction of conductors. He may differentiate thin, plate-like bodies from thick, "spherical" type bodies.

Quantitative interpretation of the various conductor parameters of potential interest, however, require a wider data set, preferably involving a range of frequency pairs and coil spacings. Whereas it is not always practical to repeat all profiles at all frequencies and coil spacings, the following field procedure would suffice where quantitative interpretation is desired:

a) Select the coil spacing which is to be used as standard for traversing all lines (see Appendix E). Select the frequency pair to be used for this coverage, viz: the lowest reference frequency that the ambient noise permits us to use at the coil spacing selected, and the highest signal frequency that the geologic noise (conducting overburden) permits us to use at this coil spacing. Traverse all lines accordingly with a station interval not exceeding the coil spacing.

b) When a conductor is found, perhaps on more than one line, its intersection (usually the strongest) on one line will be selected for detailed investigation for quantitative interpretation purposes.

   This intersection will be traversed at coil spacing of 50, 100, 150 and 200 m, using one frequency pair (usually the original discovery traverse frequency). Shorter spacings may also be used if the overburden is less than 10 m. Station intervals on each spacing should not exceed the spacing value, e.g. 25 m stations for 25 m coil separation.

   Select one spacing which yields a substantial conductor response and repeat the traverse across the conductor intersection with it, using the reference frequency of 112.5 Hz and all three signal frequencies.

The data thus obtained over the conductor intersection will provide us with the material necessary for the quantitative interpretation of its parameters.

The profiles of Appendix A for dipping plate bodies are not directly suited to quantitative interpretation, so that a different set of curves, viz: parametric response curves, have been computed and drawn for this purpose. These curves are indexed and shown in Appendix D.

It should be noted that the dataset as specified may not be achievable in all cases. Data of consistent accuracy, for example, may be difficult to achieve in certain environments at large coil separations. The recommended dataset should therefore be thought of as that required for a number of interpretations, the average of which is one's best estimate of dip, depth and conductance. It is, however, possible to arrive at estimates of these parameters with a lesser requirement (see Section 4). Under optimum conditions, for example, it is possible to arrive at reasonable estimates of dip, depth and conductance given no more than traverses at two frequency pairs for a fixed coiled separation. Frequency pair and coil separation selections would in this case need to be those combinations best suited to the inversion problem at hand.

3.2 Dipping Plate Conductor

3.2.1 Determination of Dip

The direction of dip of a tabular conductor may normally be determined from the observation that one positive flanking peak is larger than the other. If so, the higher peak will be on the hanging wall side (down dip side) of the conductor. This disparity in positive peak values is more readily seen at larger values of h/L, i.e. $h > 0.25\ L$. For smaller values (e.g. $h/L = 0.125$, Figure 9D) the disparity is less pronounced. For this reason we will assume that we will only use coil separations $L < 4h$ for dip interpretation purposes, i.e. normally coil separations which are the smallest to yield substantial responses.

Figures 44A, 44B and 44C are employed for dip determination purposes. Having selected the value of L to be used, one calculates the ratio of positive peak values for all three signal frequencies employed using the large peak value as numerator.

It is important to use the empirical local ratio level as zero level for the peak determination. This local level is usually offset, in the positive sense, due to overburden conduction (see

later) and, exceptionally, there may be a small instrumental offset level as well. In any case, one should not assume that the instrumental zero is the true geophysical zero level against which the local bedrock conductor anomaly is determined.

The three peak ratios are then plotted, on the same linear scale as Figures 44, on a vertical line on a transparent sheet. This sheet is overlain on Figures 44A, B and C and shifted horizontally on each until the best fit for all three data points is obtained. This procedure will normally determine the dip to within ±15°.

Ostensibly the same determination of dip will also yield a value of h/L, although this is not regarded as being a reliable way of so doing. A preferred mechanism for so doing will be discussed below.

One possible region of ambiguity of determination of dip is for 30° dip and h/L of 0.3, for which nearly the same set of peak ratios at all frequencies may be observed as for 45° dip and h/L of 0.5. This ambiguity may be resolved readily by repeating this procedure using a different value of L.

3.2.2 Determination of Depth

The determination of depth to a dipping conductor is a rather complex matter if attempted in full generality, for the response curves are a function of conductor size, dip, conductance and depth, as well as the coil spacing and the frequencies employed. We have, however, found it possible to simplify the procedure by employing a technique which is sufficiently accurate for practical purposes. In any event, no simple model fully predicts the response to be expected from the complex geometry and conductivity distribution of real earth situations.

The model selected is that which has been used extensively in these model studies, viz: a tabular body, 400 m in strike extent and 200 m in dip extent.

It has been noted that the form of variation of peak (negative) response for this body with coil separation is primarily a function of the depth of the body below surface and only, to a much lesser extent, of its dip and conductance, or of the frequencies employed. Thus, if we plot the variation of peak response against coil separation (50 to 200 m) on a log-log basis for each frequency pair employed, we can overlay it on the family of curves shown in Figure 45. By translation of the field data parallel to the horizontal axes of the Figure 45, the best fit may be obtained using the proper value of dip obtained above. The value of coil separation for which L/h = 1 (in Figure 45) then determines h.

It will be noted that there is a slight variation in the response curves for different values of dip. Thus, representative curves are given for dips of 30°, 45°, 60° and 90° so that the most appropriate curve may be employed.

This procedure may be done separately for all frequency pairs which yield adequate responses. A test of validity of the depth value so determined is the measure of agreement between the various depth estimates obtained using the different frequency pairs, if such measurements have been made.

3.2.3 Determination of Conductance

Having determined h, we may now determine the conductance of the body. In order to do so expeditiously we employ another simplification. We note that if we plot the variation of peak response for any value of L against the σtL parameter, we find that the response curves are very similar in shape (although differing in amplitude) for dipping tabular bodies, regardless of their dip (between 30° and 90°) and that they vary little with h/L ratio. If one determines the GENIE response at all three signal frequencies (R_H, R_M and R_L) for the reference frequency of 112.5 Hz, we may then normalize the responses at the two lower frequencies (R_M and R_L) by that at the 3037.5 Hz (R_H). This gives us two ratios of responses at different frequencies. Let us call

R_M/R_H = ratio of responses at 1012.5/112.5 and 3037.5/112.5 Hz

and R_L/R_H = ratio of responses at 337.5/112.5 and 3037.5/112.5 Hz

The mean theoretical values of these parameters (for various values of dip, etc.) have been plotted, on a linear basis, against one another on Figure 46. Two curves showing the variation of R_M/R_H vs. R_L/R_H have been presented. Figure 46A shows the curve for a very shallow conductor, (h/L = 0.125), whereas 46B shows it for a deeper conductor (h/L = 0.3125). For each curve the values of σtL corresponding to various points on the curve are shown.

The procedure to determine σt for a dipping conducting tabular body is therefore as follows:

1) Calculate h/L as per instructions in previous section using all spacings employed, for each frequency pair.

2) Select a coil spacing L which gives a substantial response (i.e. good signal/noise ratio).

3) Determine the peak (negative) values of the GENIE response over the conductor at all three signal frequencies R_H (3037.5 Hz) R_M (1012.5 Hz) and R_L (337.5 Hz) for that value of L.

4) Calculate ratios of R_M/R_H and R_L/R_H.

5) Plot these two ratios against one another on an overlay of Figure 46 and to the same scale. Use Figure 46A if $h/L < 0.25$ and 46B if $h/L > 0.25$. The point so determined should lie close to the curve. Interpolate between the adjacent values of σtL on either side of the nearest point on the curve. This will provide an estimate of the appropriate value of σtL.

6) Divide this value by L (metres) to determine the appropriate value of the conductance σt (Siemens).

7) If the point (in 5) does not lie near the theoretical curve, then either the plate model used is not appropriate to the actual conductor, or there is an error in the working. For example, the effect of conducting overburden on the "zero level" of the measurement near the conductor may not have been adequately taken into account.

   Theoretically, the value of either R_M/R_H or R_L/R_H individually may be used singly to determine σtL, through the use of Figure 46. However, by using both ratios simultaneously one obtains a measure of the reliability of the procedure. It should also be pointed out that for $R_L/R_H < 0.1$, the curvature of the curves suggest that only R_M/R_H should be relied upon to determine σtL. Similarly, for $R_M/R_H > 0.9$, only R_L/R_H should be relied upon.

8) Repeat the above for different values of L to obtain other estimated of σt and therefore an indication of its validity.

3.2.4 Determination of Location and Thickness

It has been earlier indicated that the portion of the negative peak on any profile very closely denotes the vertical projection of the upper edge of the conductor. This is true even for conductors dipping as flatly as 30°. For such flatly dipping bodies there is a slight shift of the peak towards the hanging wall side of the conductor (i.e. down dip) but this displacement will not exceed about 25% of the coil separation used, even in the extreme. Thus, if one wishes to investigate a dipping conductor by drilling, the drillhole should extend into the footwall side of the conductor at least 25% of the coil spacing (on which the conductor was determined).

As has been indicated above, the zero crossings on either side of the negative peak marking a thin plate conductor are separated by the coil spacing. When the conductor increases in width, or is composed of a series of parallel conductors over a width which is greater than about 25% of the coil spacing, the zero crossings will appreciably increase in separation, in fact, by the width of the conductor zone.

Thus, to determine the conductor width, we measure the separation of the zero crossings and subtract the coil spacing.

3.2.5 Strike Direction

As has been indicated above, the response profiles are little affected by the strike of a conductor relative to the profile between at least 90° and 45°. Thus, the strike of a conductor is best established from connecting the conductor indications on adjacent lines. In fact, in a regular grid survey, if a conductor appears in one line only it will be wise to run intermediate lines in order to obtain at least one flanking intersection and thus determine a strike direction.

3.3 Spherical Conductor

Quantitative Interpretation diagrams for a spherical conductor are not available at this time. The reader is referred back to section 2.2.2 for a qualitative appraisal of responses where the conductor is thought to be best modelled by a spherical source.

3.4 Horizontally Stratified Earth

Determination of resistivity for the homogeneous earth model and conductance for the horizontal thin sheet at surface may be made directly from figures 38 and 39. In such cases, only one reading at one coil separation is theoretically required. More confidence in the interpretation may be gained by a wider suite of measurements. Readings taken at a variety of coil separations (geometric sounding) or frequency pairs (frequency sounding) would serve, when plotted over the response curves shown to determine appropriateness of the model chosen and confidence in the resistivity or conductance estimates determined.

For the horizontal thin sheet at depth or overburden conductors of variable thickness, a full set of sounding curves would be required. The current presentation is not in a form which can be used directly in a sounding experiment. All of the information required to do a geometric sounding is however presented.

4. INTERPRETATION EXAMPLES

4.1 Near Surface Dipping Conductor

The results of a GENIE survey over one line are shown in Figure T1. The conductors consist of semi-massive sulphides in two zones marked A and B. Overburden cover in the area is minor.

From the field profiles we can pick off the necessary amplitudes.

Frequency Pair	Left Pos. Peak (%)	Right Pos. Peak (%)	Ratio Pos. Peaks	Negative Peak (%)
337.5/112.5	+1.4	+2.6	1.86	-13.0
1012.5/112.5	+3.3	+5.7	1.73	-22.7
3037.5/112.5	+5.4	+9.0	1.67	-33.2

Dip Determination: The only reasonable fit to the master curves (Figures 44A, 44B, 44C) is for a body dipping 60° to the east with an h/L ratio approximately 0.13.

Depth Determination: Using the negative peak amplitude at the 3037.5/112.5, Figure 45 suggests an L/h ratio of 6.0 (assuming a dip of 60°). Given that the coil separation used was 50 m, a depth of burial of 8.3 meters is interpreted. It should be noted that it is based upon data gained for a single coil separation.

Conductance Determination: The necessary ratios for Figure 46A are R_M/R_H and R_L/R_H. Using the negative peak amplitudes, we get $R_M/R_H = 0.68$ and $R_L/R_H = 0.39$. The inferred conductance x coil separation product (from Figure 46A) is 2000 (using R_M/R_H) and 4000 (using R_L/R_H). If the average σtL product is used, the source has an interpreted conductance of (3000/50) = 60 Siemens.

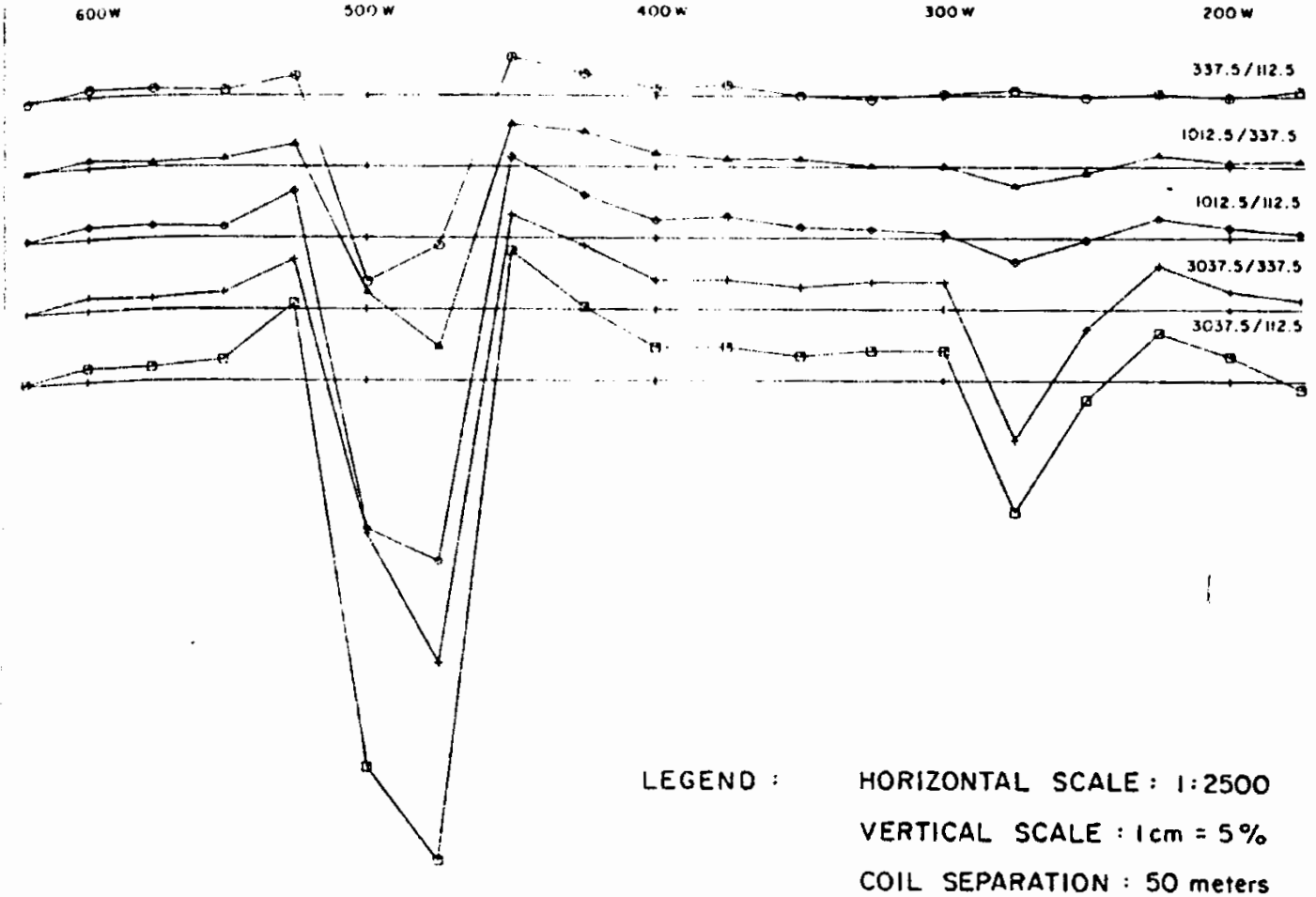
Comparing actual and interpreted source parameters in table form,

	Actual	Interpreted
Dip	50-60°	60°
Depth	2-4 m	8.3 m
Conductance	50 Siemens	60 Siemens

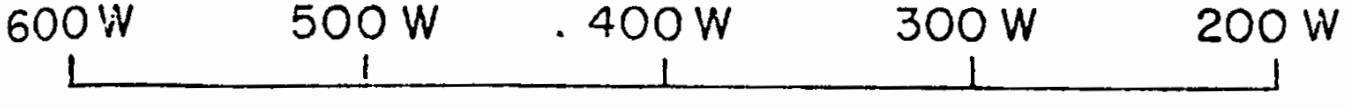
It should be noted that estimates of conductance varies widely. 50 Siemens is used to represent an average of the measured values.

In this test case, the interpreted source parameters are quite close to those as measured by other means. The fit is optimum due primarily to a judicious selection of coil separation over a target which is near surface, isolated and closely approximated by a dipping plate.

Figure T1 : SE - 88 GENIE PROFILE



LEGEND : HORIZONTAL SCALE : 1:2500
VERTICAL SCALE : 1cm = 5%
COIL SEPARATION : 50 meters



4.2 Conductor at Depth

The conductor in this case is a near vertical graphitic argillite under approximately 85 meters of resistive overburden. The GENIE profiles are given in Figure T2. The interpretation is attempted with the minimum dataset required (1012.5/112.5 and 3037.5/112.5 at one coil separation).

From the field profiles, we can pick off the necessary amplitudes.

Frequency Pair	Left Pos. Peak (%)	Right Pos. Peak (%)	Ratio Pos. Peaks	Negative Peak (%)
1012.5/112.5	+1.7	+6.8	4.0	-8.0
3037.5/112.5	+5.8	+17.2	3.0	-12.4

Dip Determination: A reasonable fit to the master curves (Figures 44A, 44B, 44C) is found for a body dipping at 30° (h/L = 0.18).

Depth Determination: Figure 45 suggests L/h = 2.6 (Dip = 30°). This gives an apparent depth of burial of (150/2.6=) 58 meters.

Conductance Determination: Given a R_M/R_{II} ratio of (-8.0/-12.4=) 0.64, we interpret a σtL value of 1300 and a conductance of (1300/150=) 8 Siemens.

Although the conductance value could be considered as reasonable, the dip and depth are not. The conductor is a broad near vertical source at 85 meters sub-surface. The breadth of the conductor will cause some difficulties. The asymmetry of the profiles suggests interference from a conductor (conductive overburden?) to the right of the main zone at 500S. A shorter coil separation might isolate the response due to the main conductor.

4.3 Conductor at Depth Under Conductive Overburden

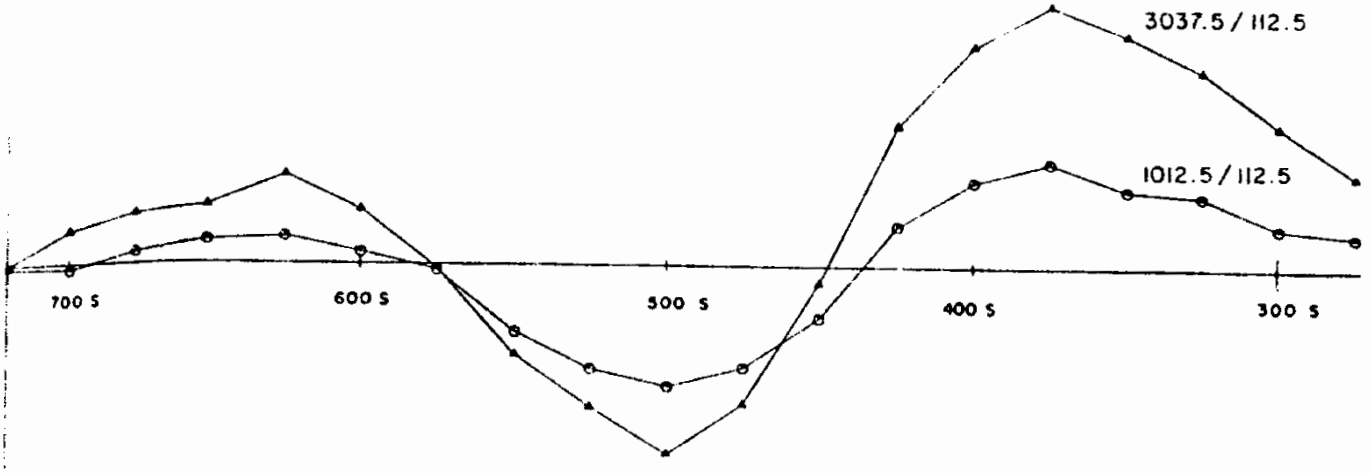
The field profiles (Figurd T3) was gained over a known EM target. Drilling has shown the target to be a series of steeply dipping graphitic bands of a total breadth of approximately 50 meters, under 42 meters of conductive overburden.

Both GENIE profiles show a consistent offset due to the conductive overburden. From the profiles, positive offsets of 4% (1012.5/112.5) and 17% (3037.5/112.5) are seen.

Figures 42 and 43 may be used in an attempt to interpret conductivity and thickness of an overburden layer. In essence, one is looking for a solution which gives the response levels seen at both frequency pairs. Using Figure 42, we draw a line parallel to the x-axis and intersecting the y-axis at 4%. At each point

Figure T2 : SE - 88 GENIE PROFILE

LEGEND : HORIZONTAL SCALE : 1:2500
VERTICAL SCALE : 1cm = 5%
COIL SEPARATION : 150 meters



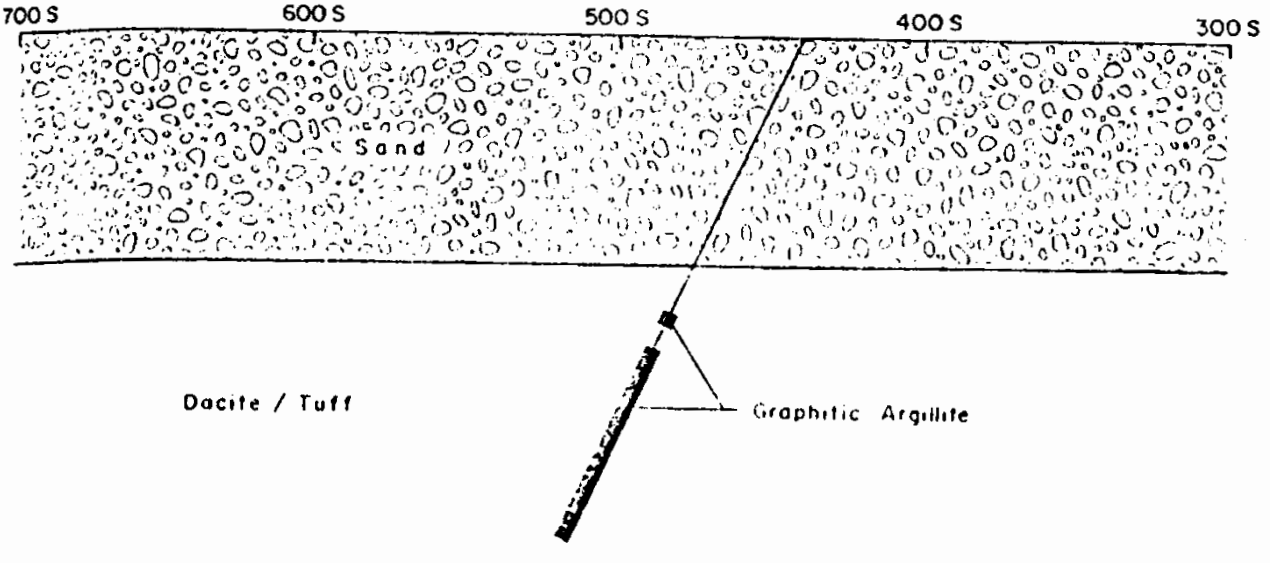


Figure T3 : SE - 88 GENIE PROFILE

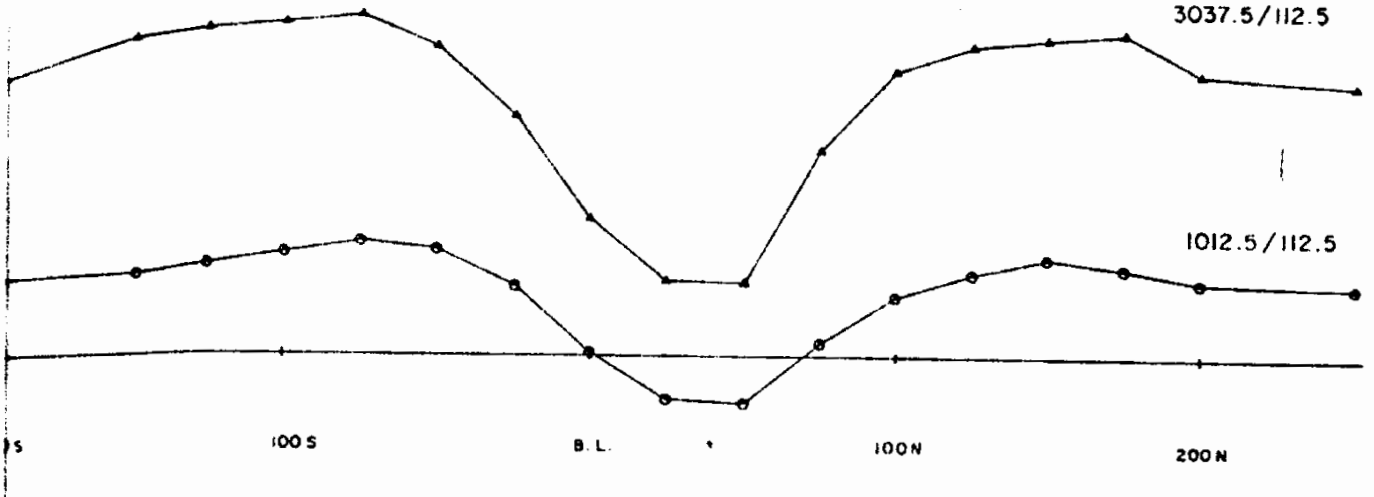
LEGEND : HORIZONTAL SCALE : 1:2500

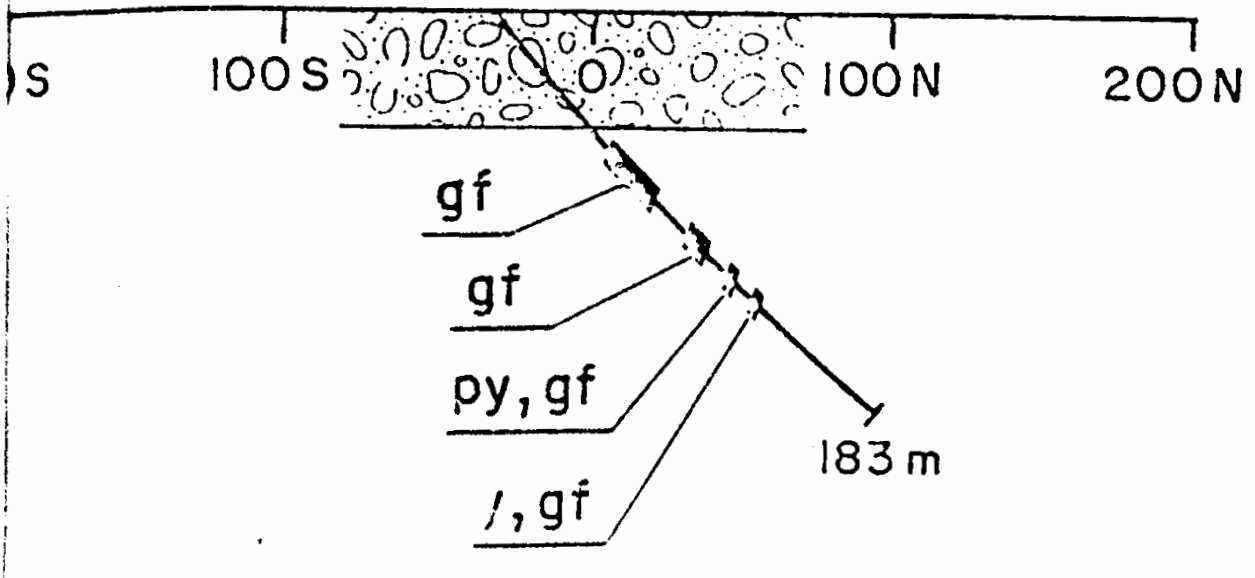
VERTICAL SCALE : 1 cm = 5%

COIL SEPARATION : 100 meters

gf - grophytic argillite

py - pyritic argillite





where this line intercepts the h/L curves, a vertical line is drawn. This same line (for the correct solution) should go through a similar intercept in Figure 43. This exercise shows good agreement for the solutions (h/L = 0.5, σL^2 = 130) and (h/L = 0.25, σL^2 = 250). The agreements for (h/L = 2.0, σL^2 = 67), (h/L = 0.125, σL^2 = 480) and (h/L = 0.0625, σL^2 = 1000) are almost as good. Although there is some preference for h/L of approximately 0.375 and a σL^2 of approximately 190, it is clear that only σhL is reasonably well determined at 62.5.

Using our preferred estimates, an overburden layer of 37.5 meters thickness and a conductivity of 0.019 Siemens or a resistivity of 52 ohm-meters is interpreted. Drilling established the overburden as being 42 meters thick.

Although the interpreted value of thickness was reasonably close to the actual value, the procedure is not recommended. The instabilities in the inversion could best be overcome by data at more frequencies or coil separations or both. Given the limited range of frequencies, geometric soundings are expected to be the better approach in most cases.

Subtracting the responses due to a conductive layer, the anomaly has the following diagnostic amplitudes.

Frequency Pair	Left Pos. Peak (%)	Right Pos. Peak (%)	Ratio	Negative Peak (%)
1012.5/112.5	+3.4	+2.4	1.5	-7.0
3037.5/112.5	+5.4	+4.0	1.3	-12.5

Dip Determination: There is no obvious fit of the ratios of positive peaks to curves shown in Figures 44A, 44B and 44C. There is some preference for a dip of 60 degrees or greater. The positive peak amplitudes are not large, however, and their ratio consequently unstable. In the absence of evidence to the contrary, a dip of 90° is assumed.

Depth Determination: Figure 45 suggests an L/h of 3.05 (Dip = 90°) or 2.95 (Dip = 60°). Assuming an average L/h of 3.0, the interpreted depth of burial is (100/3=) 33 meters.

Conductance Determination: The ratio of negative peak amplitudes (R_H/R_H) is 0.55. From Figure 46B, a σtL value of 900 is suggested. This gives an interpreted conductance of 9 Siemens.

Given the thick layer of conductive cover and the banded nature of the conductor, the interpretation scheme has yielded at least reasonable estimates of the primary model parameters.

APPENDIX B

NOTES ON THE THEORY, METHOD OF FIELD OPERATION AND PRESENTATION OF DATA FOR THE INDUCED POLARIZATION METHOD.

PART B

PHOENIX GEOPHYSICS LIMITED

NOTES ON THE THEORY, METHOD OF FIELD OPERATION AND PRESENTATION OF DATA FOR THE INDUCED POLARIZATION METHOD

Induced Polarization as a geophysical measurement refers to the blocking action or polarization of metallic or electronic conductors in a medium of ionic solution conduction.

This electro-chemical phenomenon occurs wherever electrical current is passed through an area which contains metallic minerals such as base metal sulphides. Normally, when current is passed through the ground, as in resistivity measurements, all of the conduction takes place through ions present in the water content of the rock, or soil, i.e., by ionic conduction. This is because almost all minerals have a much higher specific resistivity than ground water. The group of minerals commonly described as "metallic", however, have specific resistivities much lower than ground waters. The induced polarization effect takes place at those interfaces where the mode of conduction changes from ionic in the solutions filling the interstices of the rock to electronic in the metallic minerals present in the rock.

The blocking action or induced polarization mentioned above, which depends upon the chemical energies necessary to allow the ions to give up or receive electrons from the metallic

surface, increases with the time that a d.c. current is allowed to flow through the rock; i.e., as ions pile up against the metallic interface the resistance to current flow increases. Eventually, there is enough polarization in the form of excess ions at the interfaces, to appreciably reduce the amount of current flow through the metallic particle. This polarization takes place at each of the infinite number of solution-metal interfaces in a mineralized rock.

When the d.c. voltage used to create this d.c. current flow is cut off, the Coulomb forces between the charged ions forming the polarization cause them to return to their normal position. This movement of charge creates a small current flow which can be measured on the surface of the ground as a decaying potential difference.

From an alternate viewpoint it can be seen that if the direction of the current through the system is reversed repeatedly before the polarization occurs, the effective resistivity of the system as a whole will change as the frequency of the switching is changed. This is a consequence of the fact that the amount of current flowing through each metallic interface depends upon the length of time that current has been passing through it in one direction.

The values of the per cent frequency effect or F.E. are a measurement of the polarization in the rock mass. However, since the measurement of the degree of polarization is related to the apparent resistivity of the rock mass, it is found that the metal factor values or M.F. can be useful values

determining the amount of polarization present in the rock mass. The MF values are obtained by normalizing the F.E. values for varying resistivities.

The Induced Polarization measurement is perhaps the most powerful geophysical method for the direct detection of metallic sulphide mineralization, even when this mineralization is of very low concentration. The lower limit of volume per cent sulphide necessary to produce a recognizable IP anomaly will vary with the geometry and geologic environment of the source, and the method of executing the survey. However, sulphide mineralization of less than one per cent by volume has been detected by the IP method under proper geological conditions.

The greatest application of the IP method has been in the search for disseminated metallic sulphides of less than 20% by volume. However, it has also been used successfully in the search for massive sulphides in situations where, due to source geometry, depth of source, or low resistivity of surface layer, the EM method cannot be successfully applied. The ability to differentiate ionic conductors, such as water-filled shear zones, makes the IP method a useful tool in checking EM anomalies which are suspected of being due to these causes.

In normal field applications the IP method does not differentiate between the economically important metallic minerals such as chalcopyrite, chalcocite, molybdenite, galena, etc., and the other metallic minerals such as pyrite. The Induced Polarization effect is due to the total of all electronic conducting minerals in the rock mass. Other electronic conducting

materials which can produce an IP response are magnetite, pyrolusite, graphite, and some forms of hematite.

In the field procedure, measurements on the surface are made in a way that allows the effects of lateral changes in the properties of the ground to be separated from the effects of vertical changes in the properties. Current is applied to the ground at two points in distance (X) apart. The potentials are measured at two points (X) feet apart, in line with the current electrodes is an integer number (n) times the basic distance (X).

The measurements are made along a surveyed line, with a constant distance (nX) between the nearest current and potential electrodes. In most surveys, several traverses are made with various values of (n); i.e., (n) = 1, 2, 3, 4, etc. The kind of survey required (detailed or reconnaissance) decides the number of values of (n) used.

In plotting the results, the values of apparent resistivity, apparent per cent frequency effect, and the apparent metal factor measured for each set of electrode positions are plotted at the intersection of grid lines, one from the center point of the current electrodes and the other from the center point of the potential electrodes. (See Figure A) The resistivity values are plotted at the top of the data profile, above the metal factor values. On a third line, below the metal factor values, are plotted the values of the percent frequency effect. The lateral displacement of a given value is determined by the location along the survey line of the center

point between the current and potential electrodes. The distance of the value from the line is determined by the distance (nX) between the current and potential electrodes when the measurement was made.

The separation between sender and receiver electrodes is only one factor which determines the depth to which the ground is being sampled in any particular measurement. The plots then, when contoured, are not section maps of the electrical properties of the ground under the survey line. The interpretation of the results from any given survey must be carried out using the combined experience gained from field results, model study results and the theoretical investigations. The position of the electrodes when anomalous values are measured is important in the interpretation.

In the field procedure, the interval over which the potential differences are measured is the same as the interval over which the electrodes are moved after a series of potential readings has been made. One of the advantages of the Induced Polarization method is that the same equipment can be used for both detailed and reconnaissance surveys merely by changing the distance (X) over which the electrodes are moved each time. In the past, intervals have been used ranging from 25 feet to 2000 feet for (X). In each case, the decision as to the distance (X) and the values of (n) to be used is largely determined by the expected size of the mineral deposit being sought, the size of the expected anomaly and the speed with which it is desired to progress.

The diagram in Figure A demonstrates the method used in plotting the results. Each value of the apparent resistivity, apparent metal factor, and apparent per cent frequency effect is plotted and identified by the position of the four electrodes when the measurement was made. It can be seen that the values measured for the larger values of (n) are plotted farther from the line indicating that the thickness of the layer of the earth that is being tested is greater than for the smaller values of (n); i.e., the depth of the measurement is increased.

The IP measurement is basically obtained by measuring the difference in potential or voltage (Δ V) obtained at two operating frequencies. The voltage is the product of the current through the ground and the apparent resistivity of the ground. Therefore, in field situations where the current is very low due to poor electrode contact, or the apparent resistivity is very low, or a combination of the two effects; the value of (Δ V) the change is potential will be too small to be measurable. The symbol "TL" on the data plots indicates this situation.

In some situations spurious noise, either man-made or natural, will render it impossible to obtain a reading. The symbol "N" on the data plots indicates a station at which it is too noisy to record a reading. If a reading can be obtained, but for reasons of noise there is some doubt as to its accuracy, the reading is bracketed in the data plot ( ).

In certain situations negative values of Apparent Frequency Effect are recorded. This may be due to the geologic

environment or spurious electrical effects. The actual negative frequency effect value recorded is indicated on the data plot; however, the symbol "NEG" is indicated for the corresponding value of Apparent Metal Factor. In contouring negative values the contour lines are indicated to the nearest positive value in the immediate vicinity of the negative value.

The symbol "NR" indicates that for some reason the operator did not attempt to record a reading, although normal survey procedures would suggest that one was required. This may be due to inaccessible topography or other similar reasons. Any symbol other than those discussed above is unique to a particular situation and is described within the body of the report.

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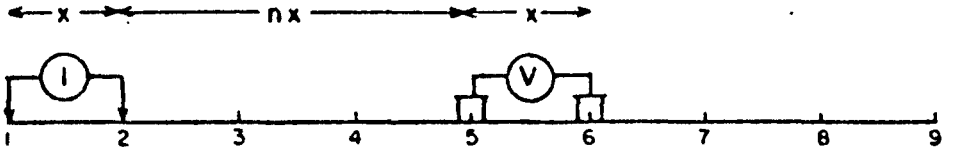
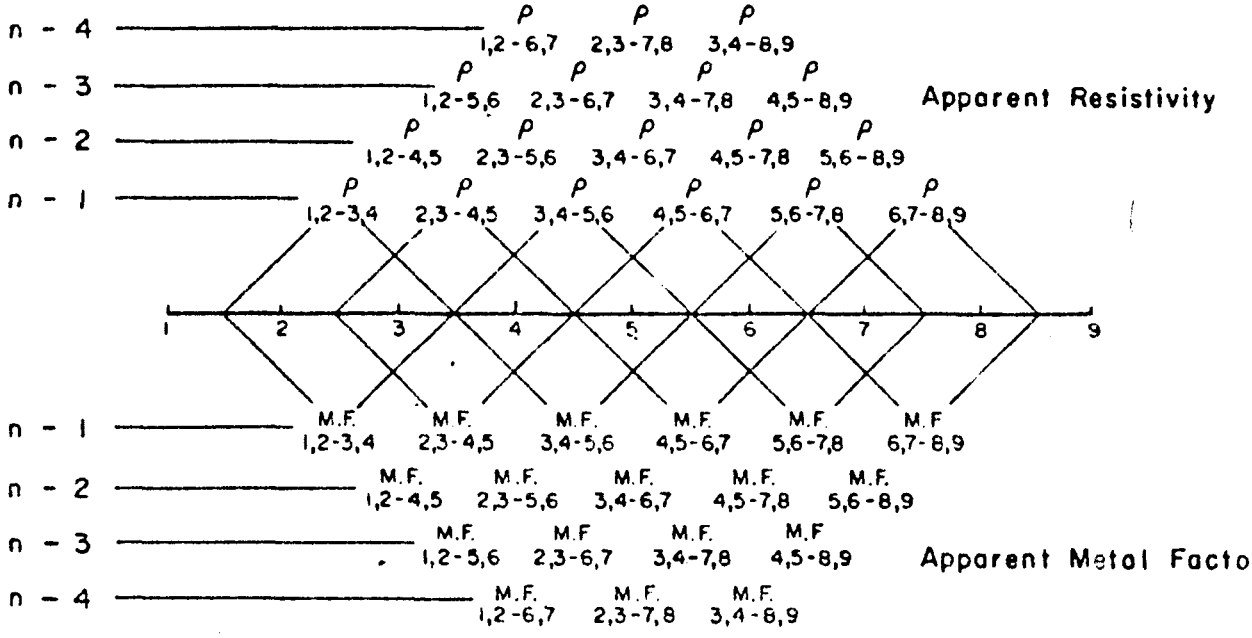
METHOD USED IN PLOTTING DIPOLE-DIPOLE INDUCED POLARIZATION AND RESISTIVITY RESULTS



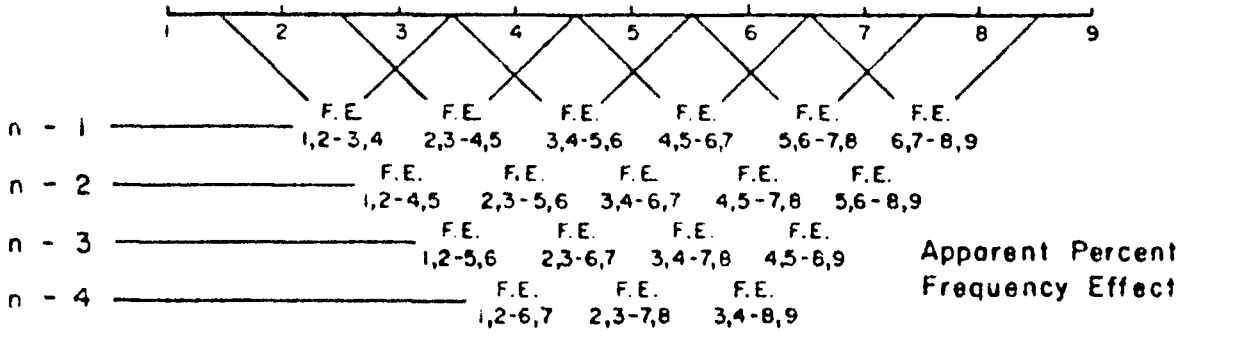
Stations on line

x = Electrode spread length
n = Electrode separation



Apparent Resistivity

Apparent Metal Factor



Apparent Percent Frequency Effect

Fig. A

APPENDIX C

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JAN 10 1984

CERT. # : A8316980-001-A
INVOICE # : I8316980
DATE : 9-JAN-84
P.O. # : NONE
10111

CC: DAVID GAMBLE

Sample description	Prep code	Cu ppm	Zn ppm				
41415	207	100	138	--	--	--	--
41416	207	76	90	--	--	--	--
41417	207	69	64	--	--	--	--
41418	207	45	66	--	--	--	--
41419	207	58	75	--	--	--	--
41420	207	23	98	--	--	--	--
41421	207	24	100	--	--	--	--
41422	207	27	68	--	--	--	--
41423	207	23	215	--	--	--	--
41424	207	142	77	--	--	--	--
41425	207	112	56	--	--	--	--
41426	207	50	40	--	--	--	--
41427	207	34	48	--	--	--	--
41428	207	1130	23	--	--	--	--
41429	207	99	68	--	--	--	--
41430	207	14	100	--	--	--	--
41431	207	19	103	--	--	--	--
41432	207	2600	230	--	--	--	--
41433	207	36	100	--	--	--	--
41434	207	2300	510	--	--	--	--
41435	207	105	305	--	--	--	--
41436	207	56	105	--	--	--	--
41437	207	68	66	--	--	--	--
41438	207	230	63	--	--	--	--
41439	207	283	61	--	--	--	--
41440	207	138	65	--	--	--	--
41441	207	8	60	--	--	--	--
41442	207	40	75	--	--	--	--
41443	207	9	72	--	--	--	--
41444	207	10	58	--	--	--	--
41445	207	95	68	--	--	--	--
41446	207	8	58	--	--	--	--
41447	207	1380	225	--	--	--	--
41448	207	4200	200	--	--	--	--
41449	207	1250	200	--	--	--	--
41450	207	1480	280	--	--	--	--
41451	207	3200	230	--	--	--	--
41452	207	242	193	--	--	--	--
41453	207	228	170	--	--	--	--
41454	207	165	185	--	--	--	--

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INVOICE # : I8316980
DATE : 9-JAN-84
P.O. # : NONE
10111

CC: DAVID GAMBLE

Sample description	Prep code	Cu ppm	Zn ppm				
41455	207	700	192	--	--	--	--
41456	207	1750	290	--	--	--	--
41457	207	2250	452	--	--	--	--
41458	207	2000	285	--	--	--	--
41459	207	5000	880	--	--	--	--
41460	207	1480	1550	--	--	--	--
41461	207	66	78	--	--	--	--

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INVOICE # : I8316980
DATE : 9-JAN-84
P.O. # : NONE
10111

CC: DAVID GAMBLE

Sample description	Prep code	Ag AA g/tonne	Au g/tonne				
41415	207	2.3	<0.1	--	--	--	--
41416	207	0.8	<0.1	--	--	--	--
41417	207	0.5	<0.1	--	--	--	--
41418	207	0.5	<0.1	--	--	--	--
41419	207	1.0	<0.1	--	--	--	--
41420	207	0.5	<0.1	--	--	--	--
41421	207	0.5	<0.1	--	--	--	--
41422	207	0.5	<0.1	--	--	--	--
41423	207	0.5	<0.1	--	--	--	--
41424	207	1.7	<0.1	--	--	--	--
41425	207	1.7	<0.1	--	--	--	--
41426	207	2.3	<0.1	--	--	--	--
41427	207	0.8	<0.1	--	--	--	--
41428	207	3.6	<0.1	--	--	--	--
41429	207	2.3	<0.1	--	--	--	--
41430	207	1.0	<0.1	--	--	--	--
41431	207	1.0	<0.1	--	--	--	--
41432	207	2.8	<0.1	--	--	--	--
41433	207	1.0	<0.1	--	--	--	--
41434	207	3.3	<0.1	--	--	--	--
41435	207	1.0	<0.1	--	--	--	--
41436	207	2.3	<0.1	--	--	--	--
41437	207	2.3	<0.1	--	--	--	--
41438	207	0.5	<0.1	--	--	--	--
41439	207	0.3	<0.1	--	--	--	--
41440	207	0.5	<0.1	--	--	--	--
41441	207	0.5	<0.1	--	--	--	--
41442	207	1.0	<0.1	--	--	--	--
41443	207	0.8	<0.1	--	--	--	--
41444	207	0.5	<0.1	--	--	--	--
41445	207	0.5	<0.1	--	--	--	--
41446	207	0.5	<0.1	--	--	--	--
41447	207	2.3	<0.1	--	--	--	--
41448	207	2.8	<0.1	--	--	--	--
41449	207	1.7	<0.1	--	--	--	--
41450	207	2.3	<0.1	--	--	--	--
41451	207	5.0	<0.1	--	--	--	--
41452	207	1.7	<0.1	--	--	--	--
41453	207	1.0	<0.1	--	--	--	--
41454	207	1.7	<0.1	--	--	--	--

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TO : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

ddh
S-83-9

JAN 10 1984

CC: DAVID GAMBLE

CERT. # : A8316980-002-A
INVOICE # : I8316980
DATE : 9-JAN-84
P.O. # : NONE
10111

Sample description	Prep code	Ag AA g/tonne	Au g/tonne				
41455	207	2.8	<0.1	--	--	--	--
41456	207	2.8	<0.1	--	--	--	--
41457 S83-9	207	2.8	<0.1	--	--	--	--
41458	207	3.0	<0.1	--	--	--	--
41459	207	5.0	<0.1	--	--	--	--
41460	207	2.3	<0.1	--	--	--	--
41461	207	1.0	<0.1	--	--	--	--

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CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

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d.d.h
S-83-8

JAN 12 1984

CERT. # : A8317011-001-A
INVOICE # : I8317011
DATE : 11-JAN-84
P.O. # : NONE
10111

CC: D. GAMBLE

Sample description	Prep code	Ag AA g/tonne	Au g/tonne				
41462	207	1.7	<0.1	--	--	--	--
41463	207	1.3	<0.1	--	--	--	--
41464	207	2.3	<0.1	--	--	--	--
41465	207	2.3	<0.1	--	--	--	--
41466	207	1.0	<0.1	--	--	--	--
41467	207	1.3	<0.1	--	--	--	--
41468	207	1.9	<0.1	--	--	--	--
41469	207	3.9	<0.1	--	--	--	--
41470	207	2.3	<0.1	--	--	--	--
41471	207	2.8	<0.1	--	--	--	--
41472	207	1.7	<0.1	--	--	--	--
41473	207	1.3	<0.1	--	--	--	--
41474	207	3.0	<0.1	--	--	--	--
41475	207	4.4	<0.1	--	--	--	--
41476	207	4.4	<0.1	--	--	--	--
41477	207	1.0	<0.1	--	--	--	--
41478	207	0.5	<0.1	--	--	--	--
41479	207	0.8	<0.1	--	--	--	--
41480	207	2.8	<0.1	--	--	--	--
41481	207	1.0	<0.1	--	--	--	--
41482	207	3.3	<0.1	--	--	--	--
41483	207	1.7	<0.1	--	--	--	--
41484	207	3.3	<0.1	--	--	--	--
41485	207	7.0	<0.1	--	--	--	--
41486	207	3.3	<0.1	--	--	--	--
41487	207	2.8	<0.1	--	--	--	--
41488	207	1.7	<0.1	--	--	--	--
41489	207	1.3	<0.1	--	--	--	--
41490	207	1.7	<0.1	--	--	--	--
41491	207	2.8	<0.1	--	--	--	--
41492	207	1.9	<0.1	--	--	--	--
41493	207	1.3	<0.1	--	--	--	--
41494	207	3.6	<0.1	--	--	--	--
41495	207	1.7	<0.1	--	--	--	--
41496	207	1.0	<0.1	--	--	--	--
41497	207	<0.3	<0.1	--	--	--	--
41498	207	0.5	<0.1	--	--	--	--
41499	207	2.3	<0.1	--	--	--	--
41500	207	3.3	<0.1	--	--	--	--
41501	207	11.5	<0.1	--	--	--	--

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V6E 3L2

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S-83-8

JAN 12 1984

CERT. # : A8317011-002-A
INVOICE # : I8317011
DATE : 11-JAN-84
P.O. # : NONE
10111

CC: D. GAMBLE

Sample description	Prep code	Ag AA g/tonne	Au g/tonne				
41502	207	1.3	<0.1	--	--	--	--
41503	207	2.8	<0.1	--	--	--	--
41504	207	8.1	0.2	--	--	--	--
41505	207	1.9	<0.1	--	--	--	--
41506	207	4.4	<0.1	--	--	--	--
41507	207	4.4	<0.1	--	--	--	--
41508	207	1.0	<0.1	--	--	--	--

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ddh JAN 12 1984
S-83-8

CERT. # : A8317011-001-A
INVOICE # : I8317011
DATE : 11-JAN-84
P.O. # : NONE
10111

CC: D. GAMBLE

Sample description	Prep code	Cu ppm	Zn ppm				
41462	207	55	260	--	--	--	--
41463	207	48	85	--	--	--	--
41464	207	47	155	--	--	--	--
41465	207	198	600	--	--	--	--
41466	207	55	72	--	--	--	--
41467	207	30	67	--	--	--	--
41468	207	147	1180	--	--	--	--
41469	207	2180	225	--	--	--	--
41470	207	820	138	--	--	--	--
41471	207	750	365	--	--	--	--
41472	207	70	170	--	--	--	--
41473	207	85	138	--	--	--	--
41474	207	2130	148	--	--	--	--
41475	207	2530	85	--	--	--	--
41476	207	2280	78	--	--	--	--
41477	207	360	74	--	--	--	--
41478	207	37	82	--	--	--	--
41479	207	32	78	--	--	--	--
41480	207	1180	140	--	--	--	--
41481	207	55	105	--	--	--	--
41482	207	2450	235	--	--	--	--
41483	207	290	203	--	--	--	--
41484	207	2600	87	--	--	--	--
41485	207	7300	105	--	--	--	--
41486	207	1580	116	--	--	--	--
41487	207	2900	105	--	--	--	--
41488	207	1280	120	--	--	--	--
41489	207	990	105	--	--	--	--
41490	207	1000	135	--	--	--	--
41491	207	2480	130	--	--	--	--
41492	207	153	178	--	--	--	--
41493	207	138	545	--	--	--	--
41494	207	255	420	--	--	--	--
41495	207	150	420	--	--	--	--
41496	207	280	80	--	--	--	--
41497	207	17	170	--	--	--	--
41498	207	18	70	--	--	--	--
41499	207	330	1380	--	--	--	--
41500	207	580	1300	--	--	--	--
41501	207	5650	610	--	--	--	--

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TO : SELCO MINING CORPORATION LTD

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VANCOUVER, B.C.
V6E 3L2

ddh
S-83-8

JAN 12 1984

CC: D. GAMBLE

CERT. # : A8317011-002-A
INVOICE # : I8317011
DATE : 11-JAN-84
P.O. # : NONE
10111

Sample description	Prep code	Cu ppm	Zn ppm				
41502	207	230	166	--	--	--	--
41503	207	58	450	--	--	--	--
41504	207	165	195	--	--	--	--
41505	207	38	268	--	--	--	--
41506	207	5600	213	--	--	--	--
41507	207	100	85	--	--	--	--
41508	207	56	165	--	--	--	--

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TO : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

DEC - 1 1983

CC: GEORGE OWSIACKI

CERT. # : A8316541-001-A
INVOICE # : I8316541
DATE : 1-DEC-83
P.O. # : NONE
10111

d.d.h's

Sample description	Prep code	Cu %	Zn %	Ag FA g/tonne	Au FA g/tonne		
41395	207	<0.01	0.03	2.0	<0.1	--	--
41396	207	<0.01	0.01	2.0	<0.1	--	--
41397	207	<0.01	0.01	0.3	<0.1	--	--
41398	207	0.03	0.06	6.2	<0.1	--	--
41399	207	0.01	0.03	3.4	0.7	--	--
41400	207	0.05	0.06	2.0	<0.1	--	--
41401	207	0.02	0.05	2.7	<0.1	--	--
41402	207	<0.01	0.02	4.1	<0.1	--	--
41403	207	0.09	0.19	6.8	<0.1	--	--
41404	207	0.15	0.05	3.4	<0.1	--	--
41405	207	0.07	0.05	6.2	<0.1	--	--
41406	207	<0.01	0.02	3.4	<0.1	--	--
41407	207	<0.01	0.01	2.7	<0.1	--	--
41408	207	0.04	0.01	6.8	<0.1	--	--
41409	207	<0.01	0.01	6.8	<0.1	--	--
41410	207	0.22	0.01	6.8	<0.1	--	--
41411	207	<0.01	0.01	4.8	<0.1	--	--
41412	207	<0.01	0.01	4.8	<0.1	--	--
41413	207	<0.01	0.02	1.4	<0.1	--	--
41414	207	<0.01	0.01	2.7	<0.1	--	--

S-83-5

S-83-6

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402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

JAN 13 1984

dah S-83-3

CC: DAVID GAMBLE

CERT. # : A8410011-001-A
INVOICE # : I8410011
DATE : 12-JAN-84
P.O. # : NONE
10111

Sample description	Prep code	Cu ppm	Zn ppm				
41509	207	55	492	--	--	--	--
41510	207	285	195	--	--	--	--
41511	207	275	135	--	--	--	--
41512	207	6500	130	--	--	--	--
41513	207	1900	135	--	--	--	--
41514	207	1550	130	--	--	--	--
41515	207	620	108	--	--	--	--
41516	207	>10000	410	--	--	--	--
41517	207	395	850	--	--	--	--
41518	207	278	360	--	--	--	--
41519	207	235	875	--	--	--	--
41520	207	655	425	--	--	--	--
41521	207	1200	588	--	--	--	--
41522	207	75	275	--	--	--	--
41523	207	260	220	--	--	--	--
41524	207	145	138	--	--	--	--
41525	207	700	1500	--	--	--	--
41526	207	180	115	--	--	--	--
41527	207	134	445	--	--	--	--
41528	207	30	170	--	--	--	--
41529	207	145	90	--	--	--	--
41530	207	175	198	--	--	--	--
41531	207	40	1000	--	--	--	--
41532	207	450	550	--	--	--	--
41533	207	55	230	--	--	--	--
41534	207	135	385	--	--	--	--
41535	207	36	120	--	--	--	--
41536	207	1150	105	--	--	--	--
41537	207	1900	88	--	--	--	--
41538	207	545	88	--	--	--	--
41539	207	1680	650	--	--	--	--
41540	207	610	195	--	--	--	--
41541	207	550	795	--	--	--	--
41542	207	40	138	--	--	--	--
41543	207	33	125	--	--	--	--
41544	207	62	132	--	--	--	--
41545	207	118	135	--	--	--	--
41546	207	160	720	--	--	--	--
41547	207	83	410	--	--	--	--
41548	207	92	230	--	--	--	--

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TO : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

JAN 13 1984

dah 5-83-3

CC: DAVID GAMBLE

CERT. # : A8410011-002-A
INVOICE # : I8410011
DATE : 12-JAN-84
P.O. # : NONE
10111

Sample description	Prep code	Cu ppm	Zn ppm				
41549	207	180	210	--	--	--	--
41550	207	810	330	--	--	--	--
41551	207	1680	263	--	--	--	--
41552	207	1600	430	--	--	--	--
41553	207	115	238	--	--	--	--
41554	207	215	605	--	--	--	--

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JAN 13 1984

d.a.h. S-83-3

CC: DAVID GAMBLE

CERT. # : A8410011-001-A
INVOICE # : I8410011
DATE : 12-JAN-84
P.O. # : NONE
10111

Sample description	Prep code	Ag AA g/tonne	Au g/tonne				
41509	207	3.9	0.1	--	--	--	--
41510	207	2.3	<0.1	--	--	--	--
41511	207	1.7	<0.1	--	--	--	--
41512	207	10.0	<0.1	--	--	--	--
41513	207	10.0	<0.1	--	--	--	--
41514	207	6.5	<0.1	--	--	--	--
41515	207	2.8	<0.1	--	--	--	--
41516	207	15.0	<0.1	--	--	--	--
41517	207	1.9	<0.1	--	--	--	--
41518	207	2.3	<0.1	--	--	--	--
41519	207	2.8	<0.1	--	--	--	--
41520	207	3.0	<0.1	--	--	--	--
41521	207	6.0	<0.1	--	--	--	--
41522	207	2.5	<0.1	--	--	--	--
41523	207	3.9	<0.1	--	--	--	--
41524	207	1.7	<0.1	--	--	--	--
41525	207	4.1	<0.1	--	--	--	--
41526	207	1.7	<0.1	--	--	--	--
41527	207	3.9	<0.1	--	--	--	--
41528	207	3.3	<0.1	--	--	--	--
41529	207	1.0	<0.1	--	--	--	--
41530	207	1.9	<0.1	--	--	--	--
41531	207	3.9	<0.1	--	--	--	--
41532	207	2.8	<0.1	--	--	--	--
41533	207	1.7	<0.1	--	--	--	--
41534	207	3.0	<0.1	--	--	--	--
41535	207	1.3	<0.1	--	--	--	--
41536	207	3.6	<0.1	--	--	--	--
41537	207	2.5	<0.1	--	--	--	--
41538	207	1.0	<0.1	--	--	--	--
41539	207	4.4	<0.1	--	--	--	--
41540	207	3.6	<0.1	--	--	--	--
41541	207	4.7	<0.1	--	--	--	--
41542	207	1.9	<0.1	--	--	--	--
41543	207	1.7	<0.1	--	--	--	--
41544	207	1.0	<0.1	--	--	--	--
41545	207	1.9	<0.1	--	--	--	--
41546	207	1.7	<0.1	--	--	--	--
41547	207	1.9	<0.1	--	--	--	--
41548	207	1.7	<0.1	--	--	--	--

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402 - 535 THURLOW ST.
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V6E 3L2

JAN 13 1984

ddh S-83-3

CC: DAVID GAMBLE

CERT. # : A8410011-002-A
INVOICE # : I8410011
DATE : 12-JAN-84
P.O. # : NONE
10111

Sample description	Prep code	Ag AA g/tonne	Au g/tonne				
41549	207	1.9	<0.1	--	--	--	--
41550	207	3.6	<0.1	--	--	--	--
41551	207	4.4	<0.1	--	--	--	--
41552	207	4.4	<0.1	--	--	--	--
41553	207	1.7	<0.1	--	--	--	--
41554	207	2.3	<0.1	--	--	--	--

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CERTIFICATE OF ANALYSIS

TO : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

JAN 16 1984

Lithogeochem Survey

CC: GEORGE OWSIACKI

CERT. # : A8410058-001-A
INVOICE # : I8410058
DATE : 13-JAN-84
P.O. # : NONE
10111

Sample description	Prep code	Cu ppm	Ag ppm	Au ppb FA+AA	Zn ppm		
41555	205	10	0.1	<5	67	--	--
41556	205	5	0.1	<5	5	--	--
41557	205	120	0.1	<5	28	--	--
41558	205	16	0.1	<5	72	--	--
41559	205	148	0.1	<5	123	--	--
41560	205	6	0.1	<5	16	--	--
41561	205	4	0.1	<5	19	--	--
41562	205	8	0.1	<5	25	--	--
41563	205	5	0.1	<5	21	--	--
41564	205	4	0.1	<5	10	--	--
41565	205	9	0.1	<5	56	--	--
41566	205	6	0.1	<5	120	--	--
41567	205	5	0.1	<5	18	--	--
41568	205	35	0.1	5	53	--	--
41569	205	23	0.1	<5	85	--	--
41570	205	4	0.1	<5	57	--	--
41571	205	11	0.1	<5	24	--	--
41572	205	8	0.1	<5	46	--	--
41573	205	4	0.1	<5	55	--	--
41574	205	5	0.1	<5	73	--	--
41575	205	10	0.1	<5	62	--	--
41576	205	13	1.1	<5	11	--	--
41577	205	20	0.1	<5	125	--	--
41578	205	6	0.1	<5	35	--	--
41579	205	100	0.1	<5	102	--	--
41580	205	4	0.1	<5	19	--	--
41581	205	21	0.1	5	260	--	--
41582	205	7	0.2	<5	49	--	--
41583	205	4	0.1	<5	24	--	--
41584	205	5	0.1	5	30	--	--
41585	205	6	0.1	<5	70	--	--
41586	205	11	0.1	<5	56	--	--
41587	205	68	0.1	5	55	--	--
41588	205	8	0.1	<5	15	--	--
41589	205	12	0.1	<5	67	--	--
41590	205	4	0.1	<5	8	--	--
41591	205	15	0.1	<5	26	--	--
41592	205	39	0.1	<5	102	--	--
41593	205	4	0.1	<5	5	--	--
41594	205	13	0.1	<5	34	--	--

Certified by ..Ian Bickler...

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TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

JAN 16 1984

Lithogeochem Survey

CC: GEORGE OWSIACKI

CERT. # : A8410058-002-A
INVOICE # : I8410058
DATE : 13-JAN-84
P.O. # : NONE
1011

Sample description	Prep code	Cu ppm	Ag ppm	Au ppb FA+AA	Zn ppm		
41595	205	3	0.1	<5	5	--	--
41596	205	13	0.1	10	51	--	--
41597	205	5	0.1	10	17	--	--
41598	205	4	0.1	<5	49	--	--
41599	205	6	0.1	<5	13	--	--
41600	205	35	4.2	30	155	--	--
41601	205	16	0.1	10	36	--	--
41602	205	4	0.1	10	16	--	--
41603	205	17	0.1	10	45	--	--
41604	205	7	0.1	<5	25	--	--
41605	205	20	0.1	20	38	--	--
41606	205	3	0.1	<5	8	--	--
41607	205	79	0.1	<5	135	--	--

Certified by Hart Bichler

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

cc: D. GAMBLE

JAN 27 1984

Lithogeochem Survey

CERT. # : A8410206-001-A
INVOICE # : I8410206
DATE : 25-JAN-84
P.O. # : NONE
10111

Sample description	Prep code	Zn ppm					
22925	214	35	--	--	--	--	--
22926	214	300	--	--	--	--	--
22927	214	220	--	--	--	--	--

Certified by ....Hart Bichler.

CHEMEX LABS LTD.

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

CC: DAVID GAMBLE

CERT. # : A8316436-001-A
INVOICE # : I8316436
DATE : 25-NOV-83
P.O. # : NONE
10111

Lithogeochem Survey

Sample description	Prep code	Ni ppm	Co ppm				
22925	207	11	1	--	--	--	--
22926	207	80	10	--	--	--	--
22927	207	68	29	--	--	--	--

CTA MEMBER CANADIAN TESTING ASSOCIATION

Certified by ..... Hart Bichler

CHEMEX LABS LTD.

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : SELCO MINING CORPORATION LTD

402 - 535 THURLOW ST.
VANCOUVER, B.C.
V6E 3L2

CC: DAVID GAMBLE

CERT. # : A8316436-001-A
INVOICE # : I8316436
DATE : 25-NOV-83
P.O. # : NONE
10111

Lithogeochem Survey

Sample description	Prep code	Cu %	Ag FA g/tonne	Au FA g/tonne			
22925	207	0.04	3.4	<0.1	--	--	--
22926	207	0.12	3.9	0.2	--	--	--
22927	207	0.04	2.0	<0.1	--	--	--

B. Stewart

Registered Assayer, Province of British Columbia

GOLD COMMISSIONER
191592
SEP 24
5240
KAMLOOPS
BRITISH COLUMBIA

Province of British Columbia Ministry of Energy, Mines and Petroleum Resources
MINERAL RESOURCES DIVISION – TITLES BRANCH

MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

I. A.P. David Gamble (Name)
7182 Blackwell Road (Address)
Kamloops, B.C.
V2C 2J3 (Postal Code) 573-3408 (Telephone Number)
Valid subsisting F.M.C. No. 265030

Agent for Guichon Explorco Ltd. (Name)
1700-55 University Avenue (Address)
Toronto, Ontario,
M5J 2H7 (Postal Code) 361-0794 (Telephone Number)
Valid subsisting F.M.C. No. 264405

STATE THAT

1. I have done, or caused to be done, work on the HC 1 Claim(s)
Record No.(s) 4363
Situate at 25 kms. SW of Clearwater B.C. in the Kamloops Mining Division,
to the value of at least $12,104.41 dollars. Work was done from the 6th day
of June 19 83, to the 16th day of June 19 83

2. The following work was done in the 12 months in which such work is required to be done: Yes

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING)

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)
(Give details as required by section 13 of regulations.)

	COST
TOTAL PHYSICAL	

I wish to apply $ ..... of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

B. PROSPECTING (Details in report submitted as per section 9 of regulations.)
(The itemized cost statement must be part of the report.)

COST

I wish to apply $ ..... of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

(For C and D sections, please turn over.)

C. DRILLING (Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)	COST

D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL (Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)	
Soil & Lithogeochemical Surveys	$12,104.41
TOTAL OF C AND D	$12,104.41

Who was the operator (provided the financing)?

Name Selco Inc.,

Address 402-535 Thurlow Street,

Vancouver, B.C. V6E 3L2

Portable Assessment Credits (PAC) Withdrawal Request	AMOUNT
Amount to be withdrawn from owner(s) or operator(s) account(s):	
Name of Owner	
(May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.) 1.	
2.	
3.	
4.	
TOTAL WITHDRAWAL	
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL	

I wish to apply $ 10,800.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

6 Years, February - HC 1 - 4363 (12 Units)

Value of work to be credited to portable assessment credit (PAC) account(s).

(May only be credited from the approved value of C and (or) D not applied to claims.)

	Name	AMOUNT
In owner(s) name.	1. Guichon Explorco Ltd.	$ 1304.41
	2.	
	3.	
In operator(s) name (party providing the financing).	1.	
	2.	
	3.	

(Signature of Applicant)