

VICTORIA

87-489 16404

8/88



Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT  
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S) <b>GEOLOGICAL, GEOPHYSICAL</b>	TOTAL COST <b>\$ 2305.00</b>
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AUTHOR(S) **E. TRENT PELLOT** SIGNATURE(S) *[Signature]*  
**L. SOOKOCHOFF**

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED **Aug 11, 1987** YEAR OF WORK **1987**

PROPERTY NAME(S) **SPANAR**

COMMODITIES PRESENT \_\_\_\_\_  
B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN **92 G/SE (M1) & PLEASE NOTE #19 SPANAR**

MINING DIVISION **NEW WESTMINSTER** NTS **92 G/8W**  
LATITUDE **49° 18' 24"** LONGITUDE **122° 22' 48"** AREA

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

**STAR 5 - 8 (4 units total)**  
**GOLDEN SUN (16 units)**

OWNER(S)  
(1) **RUDY MITTERER** (2)

MAILING ADDRESS  
**590 - EAST 17<sup>th</sup> AVE.**  
**VANCOUVER, B.C. V5V 1B4**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

OPERATOR(S) (that is, Company paying for the work)  
(1) **AS ABOVE** (2)

**16,404**

MAILING ADDRESS  
**as above**

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):  
**THE CLAIMS ARE UNDERLAIN BY MEDIUM GRAINED QUARTZ DIORITE.**

**FILMED**

REFERENCES TO PREVIOUS WORK

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Geological Evaluation Report  
on the  
Golden Sun Claim Group

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INTRODUCTION

At the request of J. Burri and R. Mitterer the writer compiled information on the mineral property designated as the Golden Sun Claim Group as to the geological favorability to the inclusion of potentially economic gold mineralization.

The area is of historical interest in that placer and lode gold discoveries have been made as early as the 1890's. More recently, as a result of exploration activity to the north and south of the property, significant gold values in association with quartz veins have been reported.

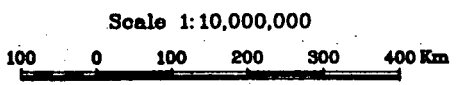
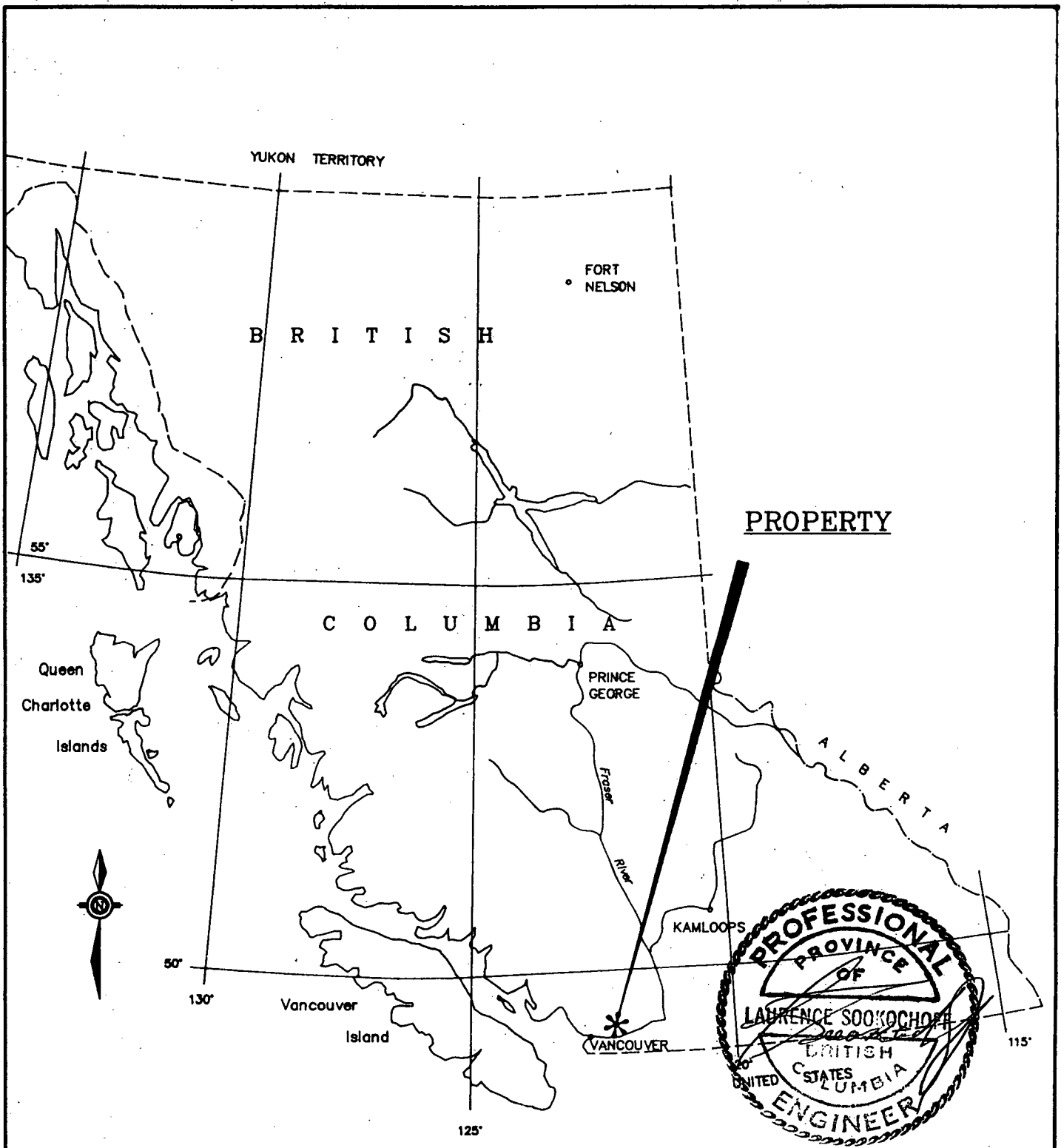
Information for the report was obtained from sources as cited under bibliography and from field work the writer has done in the immediate area. A personal property examination was completed May 16, 1987.

PROPERTY

The property consists of 20 contiguous two-post claims with a 16 unit block overstaking a portion of the two-post claims for an effective six two-post claims and a 16 unit area. Four additional contiguous two-post claims (Oro 1-4) are located within 500 metres west of the Golden Sun Claim.

Particulars of the claim are as follows:

<u>Claim Name</u>	<u>Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
Golden Sun	16	3059	Nov. 26, 1988
Sun 1-8		2745-2752	Dec. 23, 1988
Star 1-4		2922-2925	Aug. 14, 1988
Star 5-8		2926-2929	Aug. 14, 1988
Oro 1-4		2978-2981	Sept 22, 1988



SOOKCHOFF CONSULTANTS INC.			
GOLDEN SUN CLAIM GROUP			
NEW WESTMINSTER M.D.			
<i>LOCATION MAP</i>			
DATE July '87	N.T.S. 920/87	DRAWN BY GEO-COMP	FIGURE 1

LOCATION AND ACCESS (49° 18' N, 122° 22' W)

The property is located 17 Km north of Haney on the southern slopes of and south of Mount Crickmer. Haney is some 50 Km east of Vancouver adjacent to the north of the Fraser River. The property covers the southeasterly-flowing Kearsley Creek and the headwaters of Seventy-nine Creek.

Access is north from the Dewdney Trunk road via secondary logging roads to the claim group. Logging roads also provide access to most showings on the property.

TOPOGRAPHY AND TIMBER

Moderate to steep slopes prevail with elevations ranging from 300 metres along the Kearsley Creek valley at the southeast to 1200 metres on the northwest portion.

Most of the area has been logged with secondary growth prevailing.

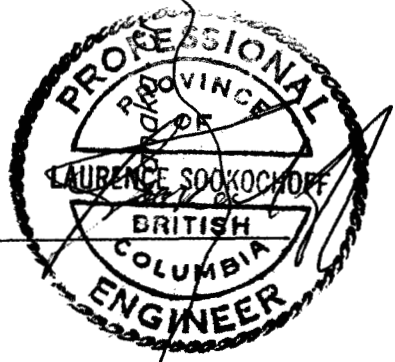
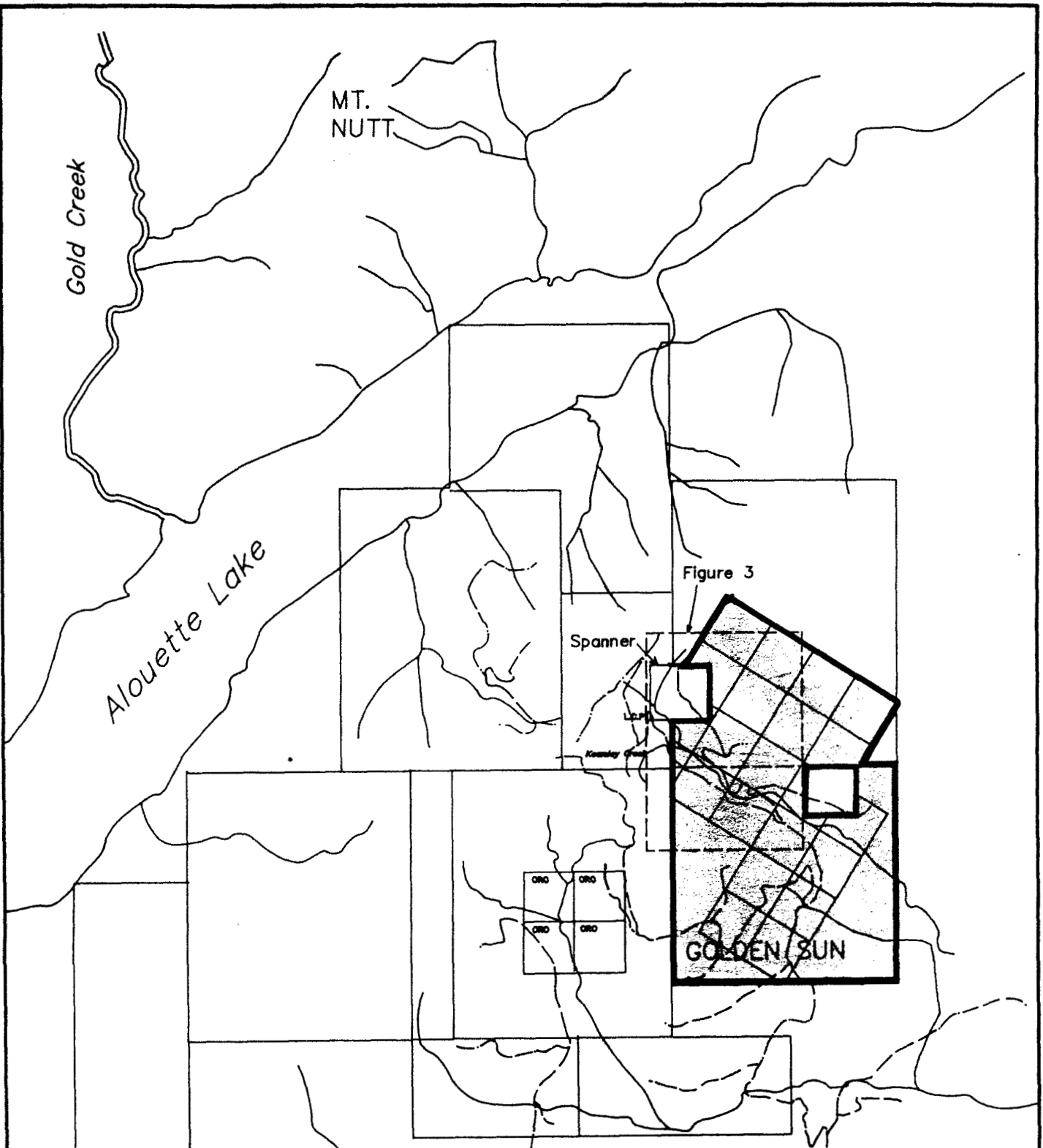
HISTORY

Prospecting in the Fraser Valley began in the 1860's with the discovery of placer gold in the Fraser River (Placer gold was discovered at the Ruskin Dam construction site during 1929-30).

Early reports of gold mineralization in quartz veins came from areas such as Hairsine Creek in the Stave Lake dam area, the Ruskin Dam area and the Hayward Lake area near Stave Falls.

In 1938, free gold was mined on "79 Hill" near the headwaters of Seventy-nine Creek, between Alouette Lake and Stave Lake and in the general location of the Golden Sun property. Prior to the ceasing of operations in 1939, some high-grade gold shipments were made from the 79 Mine. In the immediate area several old working are located.

In 1981, the area of the Oro 1-4 mineral claims was held by Goldview Mining Corporation and was explored for gold.



SOOKOCHOFF CONSULTANTS INC.			
GOLDEN SUN CLAIMS GROUP			
NEW WESTMINSTER M.D.			
<i>CLAIM MAP</i>			
SCALE: 1:50,000	DATE: June '87	N.T.S. 883/87	DRAWN BY: GEO-COMP
			FIGURE 2 <i>a</i>

GATEY

NTS 92G/8W

1:50,000

MT. NUTT

Florence Lake

NTS 92G-8W

Morgan Lake

1:50,000

MORGAN 2  
2481 (8)

MORGAN  
2480 (8)

SKY 104  
1050 (9)

SKY-107  
2537 (10)

SKY 103  
1043 (9)

GOLDEN STAR  
3058 (11)

SAYRES  
2478 (8)

SAYRES  
2479 (8)

Sayres Lake

STAR 1-8  
CLAIMS REC#  
2922-2929 (8)

SUN 1-8  
2745-2752  
(12).

GOLDEN  
SUN 3059 (11)

GOLDEN  
2239 (9)

ORD  
S ORO  
ORO ORO

ORO 1-4  
2978-2981 (9)

SKY 106  
1048 (9)

ROCKET  
2256 (10)

SPAWAR  
RECORD No. 162  
TAG No. 34266  
IN-16

TREASURE MTN.  
2240 (10)

PATRICIA  
2241 (10)

GOLDEN MOUNTAINS  
2243 (10)

GOLD CRYSTALS  
2561 (11)

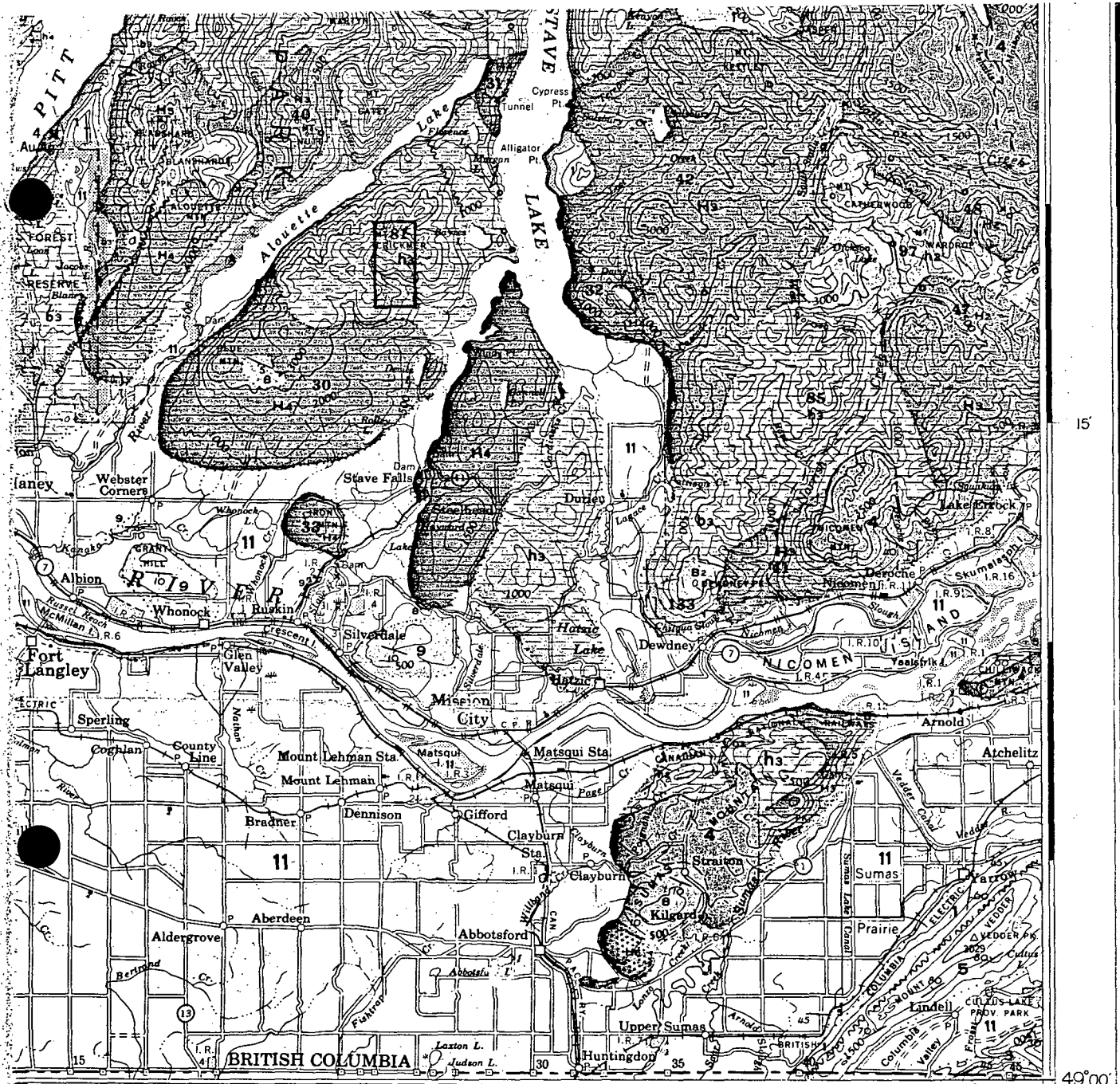
GOLDEN WHISPER'S  
2217 (9)  
Devils Lake

TREASURE  
2244 (10)

CAROL LEE-2  
2757 (11)

CLAIM MAP

Fig 2b



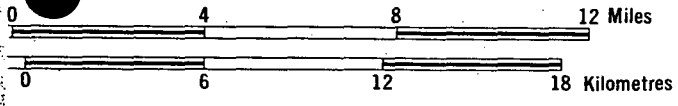
30' WASHINGTON Scale: 1:253,440 122°00' 15' 49°00' 1 in. = 4 mi.

MAP 1151A  
 GEOLOGY  
**PITT LAKE**  
 (Vancouver, East Half)  
 BRITISH COLUMBIA

INDEX MAP  
GOLDEN UNIVERSE GROUP CLAIMS  
 NTS 92G/8w

Fig. 2c

Scale 1:253,440  
 1 inch to 4 miles



TEX



In 1981, Skyrocket Explorations and Resources Inc. held a large claim area between Alouette and Stave Lakes covering most of the property presently held under the Golden Sun claim Group.

In 1981, an area presently the northwestern portion of the Sun and the Star claims was explored by Skyrocket. A geochemical and geophysical survey was completed. The survey area includes the Spaner claim which is excluded from the Golden Sun claim Group at the northwest of the Star and Sun claims.

The results of the 1981 program were reported as not definitive in outlining a high-priority drill target. Spotty anomalous geochemical gold values were revealed.

Undated news releases issued by Skyrocket relate surface assays running from .656 oz Au per ton to 1.52 oz Au per ton from within a major shear zone trending northeast-southwest through the property.

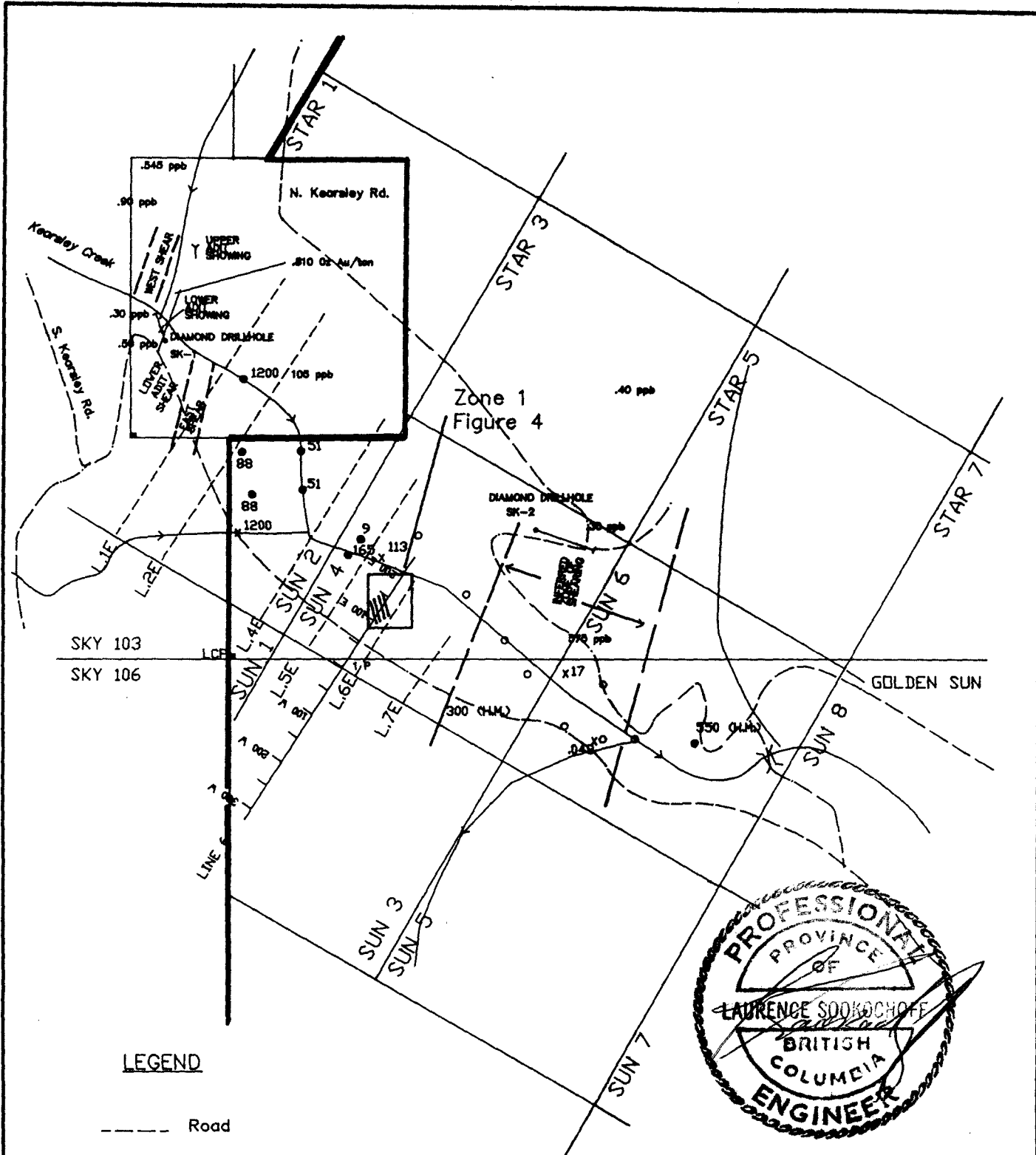
In 1983, Skyrocket completed a diamond drill hole on the shear structure which returned up to .054 oz Au/ton over "33.5 feet" which reportedly "suggested that the zone held potential for the development of a large tonnage low-grade gold deposit".

In the follow-up 1984 exploration program, detailed sampling of the adit showings was completed in addition to additional surface sampling and percussion drilling in and around Kearsley Creek. This work was done predominantly in the Spaner claim which is enveloped on three sides by the Golden Sun claim group.

The more significant results of the program were three samples from the crosscut of the upper adit averaging .07 oz Au/ton with a "fourth (a flat-dipping shear in the north wall) yielding a ppb equivalent of 1.60 oz Au/ton.

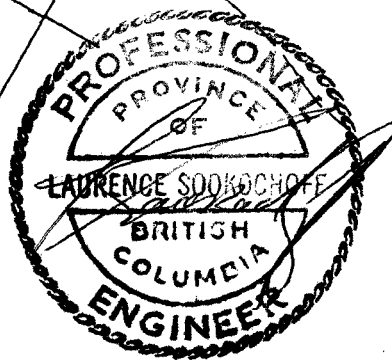
Percussion drill holes southward along Kearsly Creek resulted in negative results with the highest values of 250 ppb over five feet.

Conclusions derived by Harris (1984) from the exploration program was that rather than potential large low-grade gold values, individual narrow high-grade gold concentrations could be possible at the loci of mineralized cross-structures.



**LEGEND**

- Road
- Creek
- 55 Silts ppb Au (1981 SK Survey)
- 55 (H.M.) Heavy Metals ppb Au
- x .048 Rock Chip Sample oz/Au/ton
- o Soil Sample Sites
- //// IP Anomaly



<b>SOOKOCHOFF CONSULTANTS INC.</b>				
<b>GOLDEN SUN CLAIM GROUP</b>				
<b>NEW WESTMINSTER M.D.</b>				
<b><i>EXPLORATION RESULTS</i></b>				
SCALE 1:10,000	DATE June '87	N.T.S. 98G/87	DRAWN BY GEO-COMP	<b>FIGURE 3</b>

On the ground presently covered by the Oro 1-4 claims, Goldview mines completed a ground magnetometer survey in 1981. The results (Sheldrake 1981) indicated two specific features that have been interpreted that may be signposts to the localization of mineralization.

In July 1984, Asarco took 16 samples from the showings on the Spanar claim. The more significant results were as follows.

Base of shaft, wall: flat-dipping shear 10 cm wide 56,000 ppb Au (1.63 oz Au/ton). 2.4 m from portal, main shear, no visible qtz 2-3 cm wide 2060 ppb Au (.06 Au/ton).

The mercury values were all 5 ppb except for two samples which returned 10 ppb.

#### REGIONAL GEOLOGY

The geology of the area between Stave and Alouette Lakes and including the area of the Golden Sun claim group is mainly underlain by medium-grained quartz diorite of the Coast Plutonic rocks with scattered inliers of sedimentary rocks.

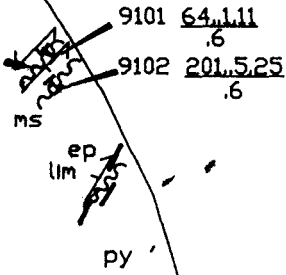
The Coast Plutonic rocks are comprised predominantly of two distinct phases. A quartz diorite phase to the north, contains a greater amount of hornblende than biotite and is the most abundant rock type in the area. A diorite phase which is characteristically porphyroblastic contains large porphyroblasts of plagioclase or less commonly of hornblende, is predominant to the south and east.

Throughout the area are numerous cappings of Mesozoic to Cenozoic sedimentary rocks, the majority of which are probably roof pendants. The lithologies range from sandstone, shale and/or conglomerate with minor tuffs.





The geology as described by Cohen 1980 includes that of the Golden Sun claim and enveloping area:

The area is mapped as rocks of Coast Plutonic Intrusives ranging in composition from granite to migmatite with inclusions of older sedimentary rocks and greenstone. The area has been subjected to faulting, shearing and rock movement with accompanying fracturing. Silicification is widened in areas of disturbance, as fissure filling by quartz veins and subsequent mineralization.

Kearsley Creek



LEGEND

-  Shear
-  Fractures
-  Quarts
-  Sample Site
- 9101 64.111 Sample No. ppm Cu ppm Ag ppb Au  
.6 Width in metres
- ep Epidote
- lim Limonite
- py Pyrite degree
- ms Massive Sulphides



SOOKOCHOFF CONSULTANTS INC.

GOLDEN SUN CLAIM GROUP

NEW WESTMINSTER M.D.

ASSAYS ZONE 1

SCALE  
1:500

DATE  
July '87

N.T.S.  
880/87

DRAWN BY  
GEO-COMP

FIGURE 4

A northeasterly-trending shear zone reportedly 8000 feet long and 100 metres wide trending along the western border of the Sun mineral claim reportedly contains massive veins of gray-blue quartz and significant gold values.

The vein on the adjoining Spanar property strikes at  $315^{\circ}$  and dips steeply at  $75^{\circ}$  to the west. The hanging wall of the vein is a calcium-magnesium-lime silicate and the footwall of a slickensided greenstone. In places the quartz is vuggy with the vein traced to the west for approximately 1000 feet at  $305^{\circ}$ .

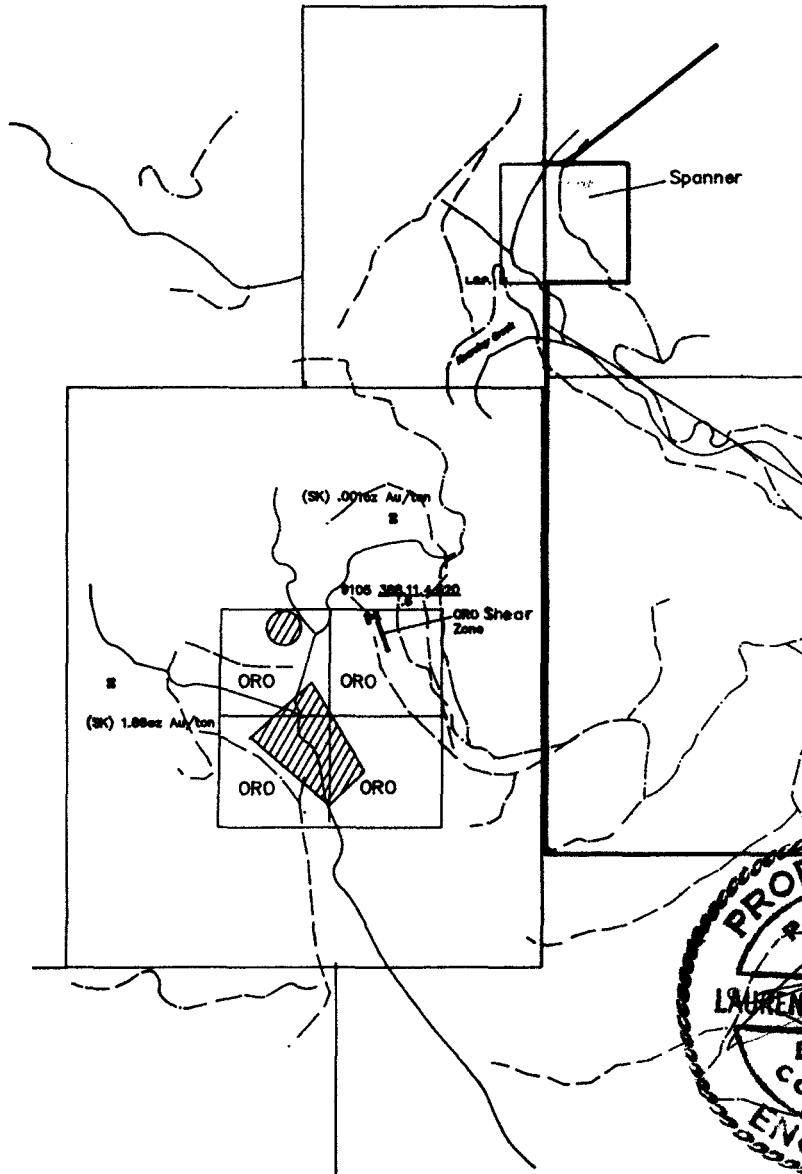
On the northeastern Oro claim of the Golden Sun claim group a shear zone trending at  $160^{\circ}$  and dipping at  $80^{\circ}$  east contains mineralized vuggy quartz veins up to .3 metres wide. The zone is exposed locally at the end of a logging road and has not been traced along strike.

Zone 1 occurring on Kearsly Creek at the northwestern most portion of the Sun mineral claim consist of a barren stockwork of quartz veinlets at  $10^{\circ}$  and  $50^{\circ}$  up to one cm wide hosted by a chloritic diorite. The zone contains general limonite on fracture surfaces with epidote on the major fracture surfaces at  $180^{\circ}$ ,  $230^{\circ}$  and  $270^{\circ}$ . A zone of quartz stringers 10 cm apart striking at  $230^{\circ}$  contain parallel epidote along fractures. Local blebs of pyrite are associated with the quartz and hat rock.


A zone of argillic alteration occurs within 10 meters north of the quartz zone.

An outcrop of quartz diorite 10 metres north of the argillic zone exposes a 20 cm wide shear zone trending at  $210^{\circ}$  which contains barren quartz stringers with a limonitic gouge and chloritic breccia zone.

Within one meter of the quartz stringers a zone of friable massive pyrite stringers occurs in a shear trending at  $220^{\circ}/80^{\circ}$ N.



**LEGEND**

 Magnetometry depression zones of potential mineralization (Sheidrake 1981)

(SK) Skyrocket sampling

9105 388.11.4.520 Sample No. ppm Cu ppm Ag ppb Au  
.6 Sample Width (metres)

**SOOKOCHOFF CONSULTANTS INC.**

**GOLDEN SUN CLAIM GROUP**

NEW WESTMINSTER B.C.

**MINERAL ZONE LOCATIONS**

(ORO CLAIMS)

SCALE  
1:30,000

DATE  
July '87

N.T.S.  
92G/87

DRAWN BY  
GEO-COMP

FIGURE 5

### MINERALIZATION

On the adjacent Spanar mineral claim to the northwest of the Sun claim group and in the area of the Lower and Upper adit showings (Figure 3), narrow quartz poor shears or fractures striking between 135° and 160° contained reported values from .02 oz Au/ton to 1.60 oz Au/ton.

Other samples and assays in that area are as follows:

- 1) Pyritized quartz diorite-grab .29 oz Au/ton
- 2) Gouge and quartz in shear-10cm .08 oz Au/ton
- 3) Chips across adit back-.7m .19 oz Au/ton
- 4) A sample from a cliff face-1/2 metre .535 oz Au/ton

Diamond drill hole samples (SK 1) ranged from five feet of .008 oz Au/ton to eight feet of .54 oz Au/ton.

On the Oro zone massive sulphides predominantly occur in association with the vuggy quartz within the shear zone.

On the Kearsley Creek showing disseminated pyrite occurs within a propylitized and/or argillitized quartz diorite that may contain relatively barren quartz stringers. Discontinuous zones of massive pyrite within shear zones also occur in the general area.

### EXPLORATION WORK COMPLETED ON THE GOLDEN SUN CLAIM GROUP

In April 1987 a test line IP survey was completed across Kearsley Creek on the Sun 4 mineral claim (Figure 3).

From a background of 4-6% PFE an anomalous value of 9.2% was obtained at a depth of 50 metres along the steep southwestern bank of the Kearsly Creek Valley.

In December 1986 a localized geophysical and geochemical survey was completed mainly over the Sun 1-4 mineral claims. Twelve soil samples, sixteen rock samples and five stream sediment samples and two heavy metal samples were taken. The anomalous results as shown in Figure 3 are sporadically located along Kearsley Creek indicating potential localized gold-bearing zones in this area.

In May 1987 the writer examined and sampled the ORO zone on the ORO 2 claim and the Kearsley Creek showing (described under Geology) located on the Sun 4 two-post claim.

The sample results were as follows:

<u>Sample No.</u>	<u>Description</u>	<u>Width</u> (m)	<u>Assay</u>		
			Cu ppm	Ag ppm	Au ppb
<u>Kearsley Creek Showing</u>					
9101	Shear zone wi qtz str + lim	0.6	64	.1	11
9102	Five cm massive py in sh. zone	0.6	201	.5	25
<u>ORO ZONE (FIG 5)</u>					
9103	Massive sulphide from sh. zone	Gr.	2097	22.4	2320
9104	Alt. diorite adj. to sh. zone	Gr.	188	8.1	1080
9105	Lenses and pockets of mass. sulphides in shear zone hosted by adiorite	0.6	388	11.4	520
9106	Road showing on Sun 6 sulphides in shear zone	Gr.	120	.9	460



CONCLUSIONS

The exploration results have indicated that the Golden Sun claim group envelops an area of favorable geological parameters to the containment of potentially economic gold bearing mesothermal mineralization.

The indications to gold-bearing zones are in the anomalous gold values contained in the soils-up to 575 ppb Au-in the silts,-up to 165 ppb Au-in the rock chip samples-up to 1200 ppb Au-in the heavy metals-up to 550 ppb-and in the known mineralization of the Kearsley Creek shear zone.

The 300 metre wide inferred northerly-trending shear zone common to the Sun 3-6 claims also presents a favorable structure for mineral localization comparable to the shear zones on the adjoining Spanar shear where values of up to .810 oz Au/ton are reported.

Zone I northwest of the shear zone on Sun 3 indicates from the exploration work to date favorable geological features to the location of potential economic mineralization. With the encouraging I.P. results in addition to the encouraging mineral values and structure on Zone I further exploration is warranted.

The ORO claims (Figure 5) present an equal potential as indicated in the known shear zone massive sulphide mineralization (up to 2320 ppb Au or .07 oz Au/ton), the magnetometre anomalous zones, and the 1.66 oz Au/ton reported 400 metres west of the claims.

Thus the property warrants an exploration program to test the two zones for economic viability.

RECOMMENDATIONS

It is recommended that the continuing exploration program be initially concentrated on Zone I located on Kearsely Creek and on the Sun 4 mineral claim. The zone should be tested by diamond drill holes to delineate the mineralization along strike and to depth and to determine the causative expression of the I.P. anomaly. The initial diamond drill hole should be spotted to intersect the I.P. anomaly 25 metres below surface and at a bearing of 270°. The following drill holes would be spotted at locations contingent on the initial drill hole results.

An exploration program designed to test the mineral zone on the ORO claims should also be initiated. An initial I.P. survey to trace the zone along strike followed by diamond drilling if warranted is proposed.

The estimated cost of the proposed exploration program is as follows:

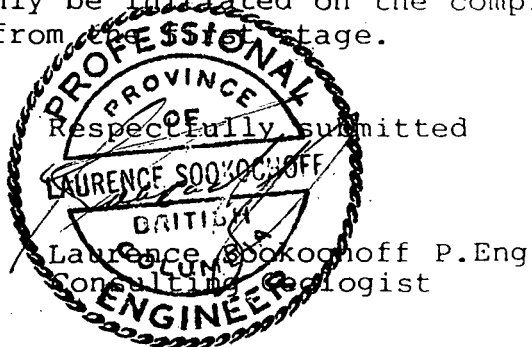
STAGE 1

Diamond drilling 2500 ft. @ \$20/ft	\$50,000
Support costs	5,000
I.P. survey	10,000
Engineering and supervision	7,500
Contingencies	<u>2,500</u>
	\$75,000
	=====

STAGE II

Diamond drilling 7500 ft. @ \$20/ft	\$150,000
Support costs	15,000
Engineering and supervision	<u>22,500</u>
	\$187,500
	=====

The second stage would only be initiated on the completion of and encouraging results from the first stage.



July 13, 1987  
Vancouver, B.C.

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- Giroux, G.H. - Report on the Spanar Claim on behalf of Frank Noel, June 24, 1977. Assessment Report No. 6325
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- Roddick, J.A. - Vancouver North, Coquitlam and Pitt Lake Map Areas, British Columbia. G.S.C. Memoir 335 1963.
- Ryback, Hardy V. - Geochemical and Geophysical Report on the Sky Mineral Claims for Skyrocket Exploration and Resources Inc., November 16, 1981. Assessment Report No. 10,040.
- Sheldrake, R.F. - Ground Magnetometer Survey on the K.D. Mineral Claims for Goldview Mines Inc., April 15, 1981. Assessment Report 9412.
- Sookochoff, L. - Geological Evaluation Report for Module Resources Inc. on the Treasure Mountain Claim, November 7, 1983. Assessment Report 1984 - Geochemical and Geophysical Surveys on the Treasure Mountain Claim for Module Resources Inc. October 2, 1984. Assessment Report 1985 on Geological and Geochemical Surveys on the Treasure Mountain Claim for Module Resources Inc., Jan 11, 1986.

CERTIFICATE

I, Laurence Sookchoff, of the city of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist with offices at 609-837 West Hastings St., Vancouver, V6C 1B6

I further certify that:

1. I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
2. I have been practising my profession for the past twenty years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. Information for this report was obtained from data as outlined under Bibliography, from previous exploration work the writer completed in the general area and from a personal property examination carried out on May 16, 1987.
5. I have no direct, indirect nor contingent interest in the property described herein, nor do I expect to receive any.



Laurence Sookchoff, P.Eng.  
Consulting Geologist

July 13, 1987  
Vancouver, B.C.

APPENDIX I

Assay Certificates

SPR 115  
STAR

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE 253-3158 DATA LINE 251-1011

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH JML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN, FE, CA, P, CR, Ni, B, AL, NA, K, W, SI, ZR, CE, SH, Y, Nb AND Ta. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: P1-2 ROCK P3-SOIL ANALYSIS BY FA-AA FROM 10 GRAM SAMPLE. Hg ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: JUNE 29 1984 DATE REPORT MAILED: July 9/84 ASSAYER: D. Toye DEAN TOYE, CERTIFIED P.C. ASSAYER

ASARCO EXPLORATION VAN FILE # 24-1047A PAGE 1

SAMPLE#	NO	CU	PB	ZN	AG	NI	CO	MN	FE	AS	U	AU	TH	SR	CE	SR	RI	V	CA	P	LA	CR	MG	BA	TI	B	AL	NA	K	W	SI	ZR	CE	SH	Y	Nb	Ta	MS				
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM				
arsley 0269 056259	34	15	12	36	1.1	12	12	404	4.33	2	2	ND	2	11	2	2	24	.78	.02	13	4	.67	24	.04	2	.94	.01	.09	2	110	5											
056260	4	16	7	20	1.1	2	2	259	1.44	2	2	ND	2	14	2	2	9	.55	.04	9	1	.34	15	.05	2	.82	.04	.07	2	50	5											
056261	5	872	12	37	1.5	2	10	148	3.57	2	2	3	2	12	2	4	21	.78	.05	14	2	.51	27	.07	2	.50	.07	.12	2	3700	5											
056262	2	22	5	21	1.1	2	1	245	1.56	2	2	ND	2	15	2	2	5	.75	.05	9	1	.76	27	.07	2	.71	.05	.07	2	45	5											
056263	2	72	2	22	1.1	5	2	290	1.14	2	2	ND	2	20	2	2	10	.57	.05	10	1	.35	17	.08	2	.87	.05	.05	2	25	10											
056264	5	558	13	724	11.9	15	23	1061	7.10	7	2	5	2	50	2	22	112	1.55	.05	14	25	1.46	45	.07	2	2.26	.25	.19	2	6800	5											
056265	2	104	17	42	1.1	24	18	542	3.93	2	2	ND	2	105	2	2	134	1.87	.07	9	55	1.27	49	.10	2	2.45	.41	.17	2	25	70											
056266	4	226	12	207	1.1	11	14	1377	4.61	2	2	ND	2	40	2	4	89	1.14	.05	12	15	1.51	46	.07	2	2.27	.05	.13	2	265	5											
056267	7	597	10	118	8.9	2	8	862	5.41	2	2	2	2	5	2	11	52	.12	.04	12	2	1.26	26	.05	2	2.02	.01	.12	2	3000	5											
056268	7	616	18	768	15.7	4	13	558	4.21	4	2	46	2	9	13	2	25	.85	.07	11	1	.16	40	.07	2	1.02	.02	.22	2	10400	5											
056269	4	47	9	44	1.1	1	4	352	2.78	3	2	ND	2	11	2	2	19	.27	.07	11	1	.67	40	.11	2	1.15	.04	.06	2	40	5											
056270	64	47	10	47	1.1	1	4	473	2.14	5	2	ND	2	24	2	2	15	.24	.05	9	1	.79	25	.11	2	1.15	.05	.05	2	17	5											

1102/t  
.262/t  
.092/t  
.302/t

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE 253-3158

DATA LINE 251-1011

**GEOCHEMICAL ICP ANALYSIS**

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 AG## AU## PT## PD## RH## BY FIRE ASSAY. SAMPLE TYPE: ROCK CHIPS

DATE RECEIVED: AUG 11 1986

DATE REPORT MAILED: *Aug 18/86*

ASSAYER: *R. Mitterer* DEAN TOYE, CERTIFIED B.C. ASSAYER.

R. MITTERER FILE # 86-1966

PAGE 1

SAMPLE#	Na	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Ag##	Au##	Pt##	Pd##	Rh##
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	OZ/T	OZ/T	OZ/T	OZ/T	OZ/T
SUN #1	1	18258	26	293	25.7	7	8	1600	6.38	6	5	2	1	16	6	2	2	87	.26	.059	2	2	1.90	29	.04	7	2.15	.03	.19	1	.74	.048	.001	.001	.001
SUN #3	29	251	7	27	.8	6	2	35	2.49	8	5	ND	1	1	1	2	3	1	.01	.001	2	2	.01	1	.01	4	.02	.01	.01	1	.02	.004	.001	.001	.001

## GEOCHEMICAL ICP ANALYSIS

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

DATE RECEIVED: MAY 20 1987 DATE REPORT MAILED: *May 25/87* ASSAYER: *D. Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER

SOOKOCHOFF CONSULTANT RUDY File # 87-1336

SAMPLE#	MO	CU	PB	ZN	AS	NI	CO	MN	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CA	P	LA	CR	MG	BA	TI	B	AL	NA	K	W	AU#
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	I	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	I	I	PPM	PPM	I	PPM	I	I	I	I	I	PPM	PPM
9101	3	64	2	32	.1	1	3	395	2.57	21	5	ND	1	55	1	2	2	21	1.14	.057	3	1	1.06	13	.05	2	2.11	.04	.03	1	11
9102	8	201	21	72	.5	6	22	608	26.28	238	6	ND	3	28	1	2	2	64	.25	.036	2	9	1.50	12	.13	2	1.77	.02	.06	1	25
9103	93	2097	8	26	22.4	1	11	156	15.47	37	5	2	2	3	1	2	316	12	.02	.046	4	2	.11	25	.03	3	.88	.01	.11	6	2320
9104	36	188	3	7	8.1	1	2	45	2.43	8	5	4	1	3	1	2	141	5	.02	.014	2	1	.04	28	.04	2	.34	.02	.12	1	1080
9105	28	388	4	16	11.4	1	8	156	5.89	10	5	ND	3	3	1	2	177	9	.02	.027	2	1	.15	28	.05	2	.51	.02	.12	1	520
9106	1	120	18	108	.9	1	26	692	25.53	10	5	ND	2	23	1	2	8	33	.44	.102	3	2	1.13	15	.08	2	1.46	.02	.11	1	460
STD C/AU-R	19	58	35	129	7.0	62	27	958	3.95	42	18	8	31	45	17	15	19	58	.49	.094	34	55	.86	169	.08	33	1.73	.06	.12	13	500



ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE 253-3158

DATA LINE 251-1011

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH DML 3-1-1 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN, FE, CA, P, CR, MG, BA, TI, S, AL, NA, K, W, BI, ZR, CE, SR, Y, NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: ROCK CHIPS AU+ ANALYSIS BY FA+AA FROM 10 GRAM SAMPLE. MG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: AUG 9 1984 DATE REPORT MAILED: *Aug 12/84* ASSAYER: *D. Toy* DEAN TOYE, CERTIFIED B.C. ASSAYER

ASARCO FILE # 84-2001

PAGE 1

*KEARSLEY  
CR. 9268*

SAMPLE#	MO	CU	PB	ZN	AG	NI	CO	MN	FE	AS	U	AU	TH	SR	CD	SE	BI	W	CA	P	LA	CR	MG	BA	TI	S	AL	NA	K	W	AU+ PPM	FFB	H6 PPM
097505	1	45	4	179	.2	5	16	1398	5.77	2	5	ND	2	35	1	2	10	93	3.35	.06	2	7	1.97	28	.06	8	2.19	.03	.11	2	23	5	
097506	1	15	1	153	.1	3	13	1741	5.98	2	5	ND	2	35	1	2	11	110	3.36	.06	2	6	2.09	41	.11	2	2.41	.04	.12	2	65	10	
097507	1	8	2	53	.1	2	6	399	2.07	2	13	ND	2	16	1	3	2	19	.41	.07	8	9	.67	17	.08	4	.79	.03	.04	2	5	5	
097508	1	204	1	122	.1	6	13	1169	5.44	2	5	ND	2	16	1	2	2	111	1.02	.11	4	8	1.91	27	.09	4	1.98	.04	.06	2	14	5	
097509	1	1440	1	175	1.0	10	15	1525	4.40	12	5	ND	2	57	1	3	2	65	.80	.10	4	24	1.54	46	.07	8	2.49	.03	.14	2	230	5	
097510	1	1298	1	637	3.3	14	12	2145	5.27	2	5	3	2	21	3	2	13	83	1.09	.10	5	31	2.53	42	.07	5	2.89	.02	.16	2	2930	5	
097511	3	1444	6	4775	4.4	13	21	1870	5.04	2	5	2	2	24	38	4	2	76	1.68	.11	4	25	1.81	28	.04	5	2.07	.02	.15	6	2060	5	
097512	1	130	7	305	.3	5	12	627	2.32	2	5	ND	2	8	2	6	2	14	.35	.07	6	6	.58	22	.02	19	.75	.02	.07	2	60	5	
097513	1	107	6	105	.6	2	11	961	3.11	2	5	ND	2	16	1	5	2	30	.64	.11	4	5	1.02	36	.05	8	1.38	.02	.12	2	255	5	
097514	1	114	4	176	.6	7	12	1655	4.42	2	5	ND	2	29	1	6	2	68	1.91	.09	2	15	1.91	22	.04	2	2.12	.02	.08	4	125	5	
097515	1	212	5	155	2.8	2	19	1488	4.72	2	5	2	2	34	1	6	4	42	2.19	.12	2	4	1.22	38	.03	2	1.60	.01	.17	2	1460	5	
097516	3	342	1	188	21.8	6	17	1896	6.62	4	5	24	2	31	1	4	18	55	2.20	.07	2	10	1.72	27	.02	2	2.10	.01	.11	2	26100	5	
097517	1	69	5	164	2.8	8	21	1734	6.54	2	5	ND	2	33	1	2	37	76	2.18	.08	2	19	2.27	39	.05	2	2.81	.02	.15	2	725	5	
097518	28	799	12	19	.9	33	21	111	7.95	2	5	ND	2	17	1	6	2	8	.33	.01	2	20	.27	14	.02	4	.38	.01	.01	2	195	10	
097519	1	33	7	36	.2	3	6	354	2.42	2	5	ND	2	20	1	9	2	13	.42	.11	7	3	.70	27	.08	5	1.02	.02	.06	2	22	5	
097520	1	38	4	54	.1	3	6	536	2.53	2	5	ND	2	14	1	5	2	23	.38	.10	8	5	1.00	23	.11	3	1.24	.03	.05	2	17	5	
STD 5-1/FA-AU	87	122	114	183	32.7	151	81	497	3.16	114	89	34	170	126	80	81	78	59	.56	.12	131	63	.58	122	.08	163	1.49	.22	.21	65	54	85	

LOG NO: 1208	RD. 2
ACTION: Date report received back from amendments.	
FILE NO: 87-489-16404	

APPENDIX 2

SUB-RECORDER  
RECEIVED  
AUG 14 1987  
M.R. # \_\_\_\_\_ \$ \_\_\_\_\_  
VANCOUVER, B.C.

MEMORANDUM REPORT  
KEARSLEY CREEK PROJECT  
GOLDEN UNIVERSE CLAIM GROUP  
N.T.S. 92G/8

New Westminster Mining Division

Author: E. Trent Pezzot, B.Sc., Geophysicist

TO: Mr R. Mitterer

RE: INDUCED POLARIZATION TEST - April 11, 1987

On April 11, 1987, a test line of frequency domain induced polarization survey was run across the property. The survey was conducted by the author with the assistance of yourself, your partner J. Burri and two other associates.

Previous reports suggest the best guide to gold mineralization on these properties may be related to sulphide enriched zones of silicification. It was the intention of this survey to determine whether any evidence of disseminated sulfide mineralization could be observed in the Kearsley Creek valley. The location of the test line was based upon your personal knowledge of the property and its' mineral exploration history.

Evidence of a survey grid, established by compass and hip chain in October, 1986, was observed however it was not sufficiently intact to be reused. A new line was flagged, intending to parallel this previous grid, running northeast-southwest between lines 5 E and 6 E. The test line was labelled Line 6 N and from the main access road extended 275 metres southwest and 225 metres northeast. This line intersected line 6 E near Kearsley Creek as illustrated on figure 1.

A frequency domain induced polarization system, utilizing a dipole-dipole array with an "a" spacing of 50 metres and n values of 1 and 2 was run across 425 metres of test line. Apparent resistivity and Percent Frequency Effect (PFE) pseudo-sections of the data are presented on figure 2. With this technique, disseminated sulphide zones appear as PFE highs. Faults and shear zones are normally observed as apparent resistivity lows and silicified zones are reflected by apparent resistivity highs.

Heavy, wet snow fell during the entire course of the survey. This allowed for good current penetration into the ground but made surveying on the slash covered, steep slopes difficult and slow. Cut and well cleared survey lines are strongly recommended for any future exploration in this area.

The PFE values observed across the bulk of the line lie between 4% and 6%. The apparent resistivity values in this same area range from 2745 to 4599 ohm-metres. These PFE values are typical of those normally associated with the quartz diorite rocks that were observed across most of this area and indicate a relatively homogeneous host environment. The apparent resistivities are slightly higher than expected but not significantly anomalous. A general increase in apparent resistivity with depth is observed, probably a result of a layer of glacial overburden.

An abrupt increase in the PFE was noted from stations 100E to 150E. This zone is centred along the steep southwestern bank of the creek valley and reached a peak of 9.2% at a depth of 50 metres below station 100E. A zone containing 3% - 5% by volume of disseminated sulphides could produce a response of this amplitude. One anomalously high apparent resistivity value, observed at station 125 E at a depth of 75 metres is associated with this zone. Immediately northeast of this anomalous zone, significantly lower apparent resistivity values were recorded. These responses are likely related to a fault or fault gouge zone

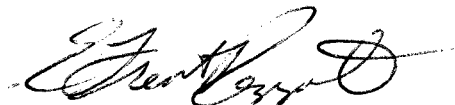
centred on Kearsley Creek.

The westernmost end of the test line exhibits substantially lower PFE readings than are observed to east. These lower PFE readings are directly associated with an increase in the apparent resistivity and suggest a lithological change in this area. A contact in the vicinity of station 175 W is expected.

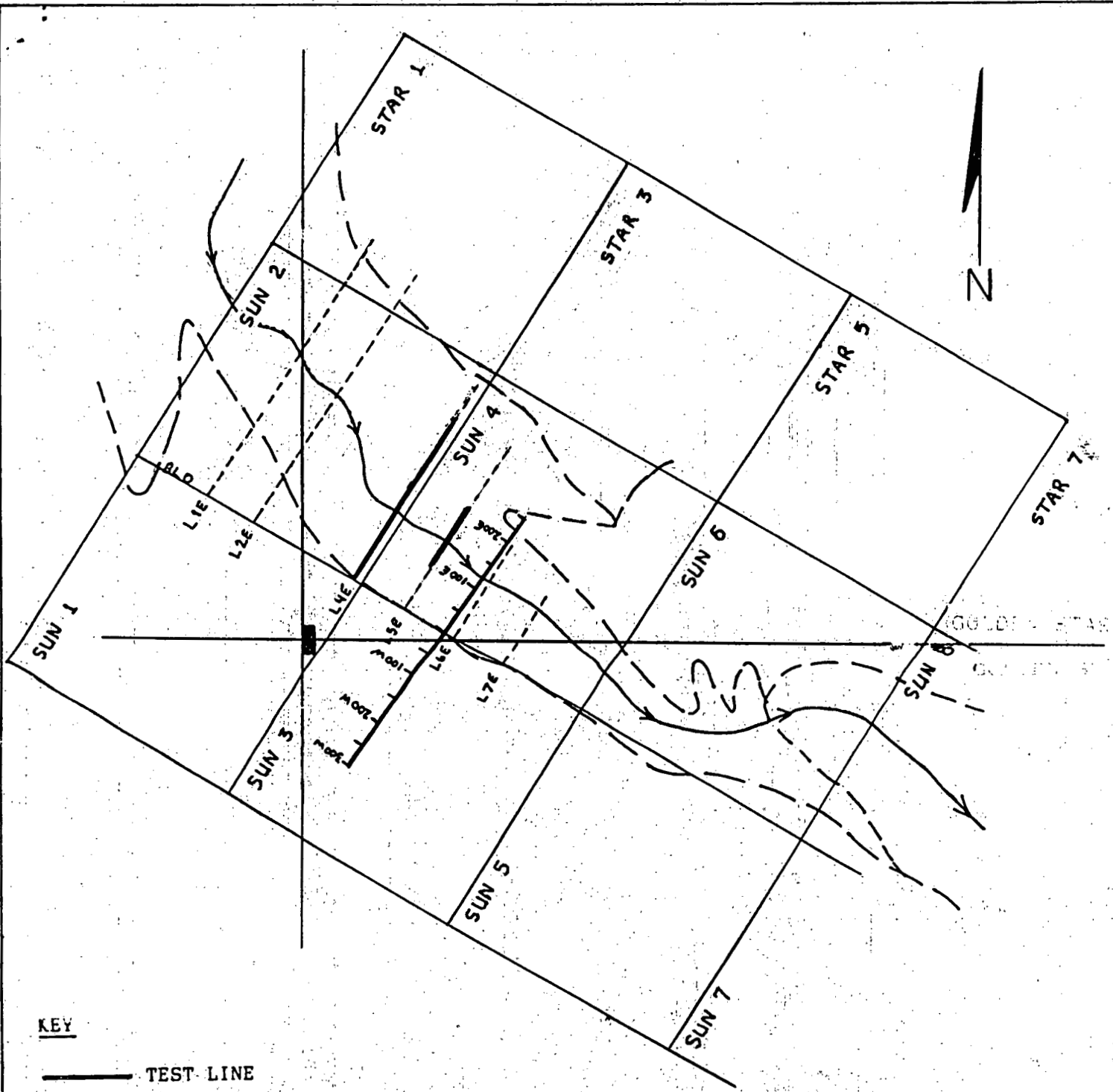
The intention of this survey was to determine whether any evidence of disseminated sulphide zones could be detected, to support the gold and sulphide enriched silicified zone geological model proposed for this area. The Percent Frequency Effect response suggests such a zone is present, no deeper than 50 metres below the surface along the southwestern slope of the Kearsley Creek valley.

Based on the results of this and other surveys conducted in the area, this property warrants continued exploration for gold enriched silicified zones. Detailed geological mapping of the area is recommended as the next exploration phase. Contingent upon encouraging results from these efforts, future exploration will likely include an extension of the induced polarization survey to map the limits of the zone of sulfide enrichment. Trenching and/or diamond drilling of the more favorable areas will be required in the advanced exploration stages.

Respectfully submitted,

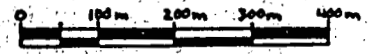
A handwritten signature in cursive script, appearing to read 'E. Trent Pezzot', written in dark ink.

E. Trent Pezzot, B.Sc.  
Geophysicist



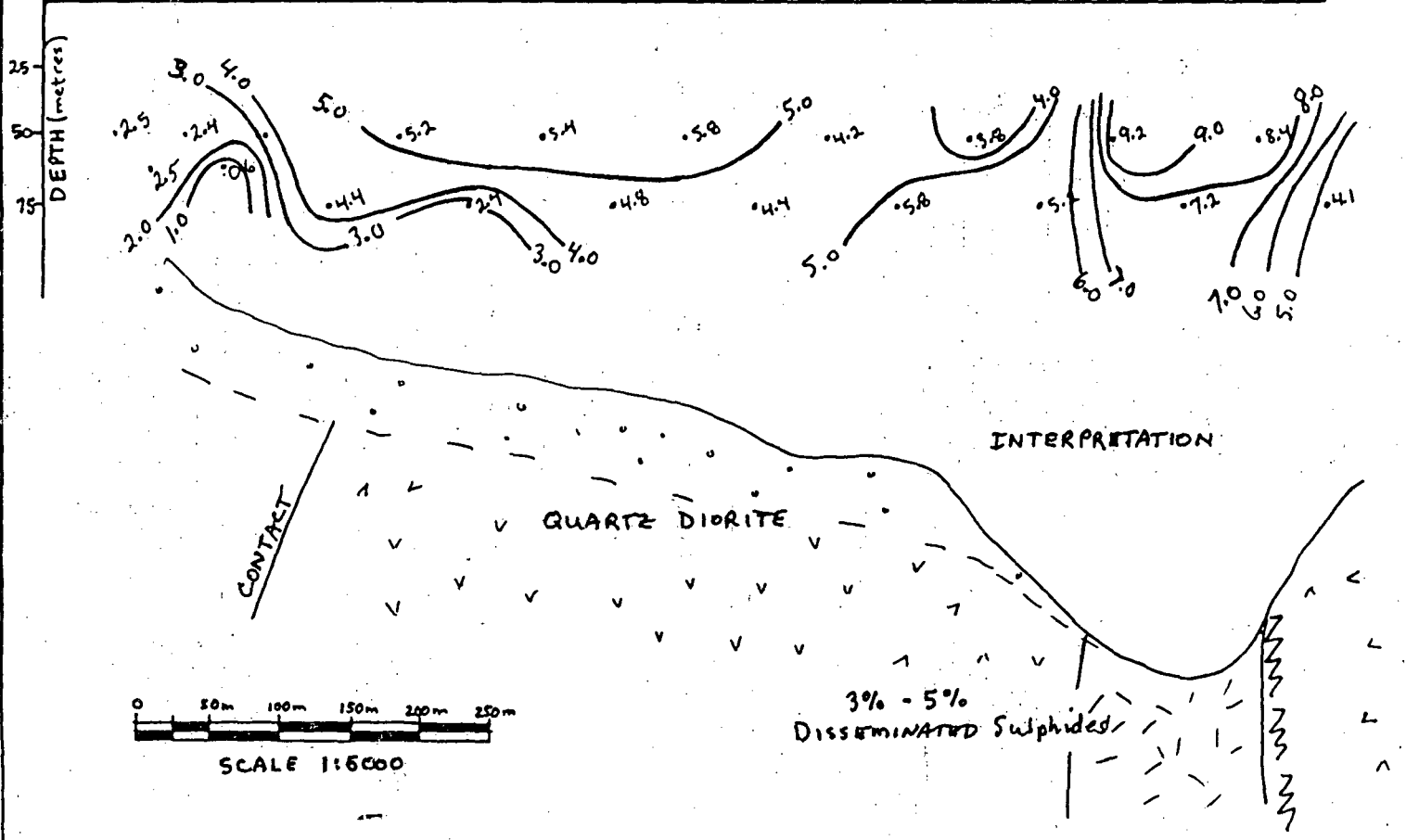
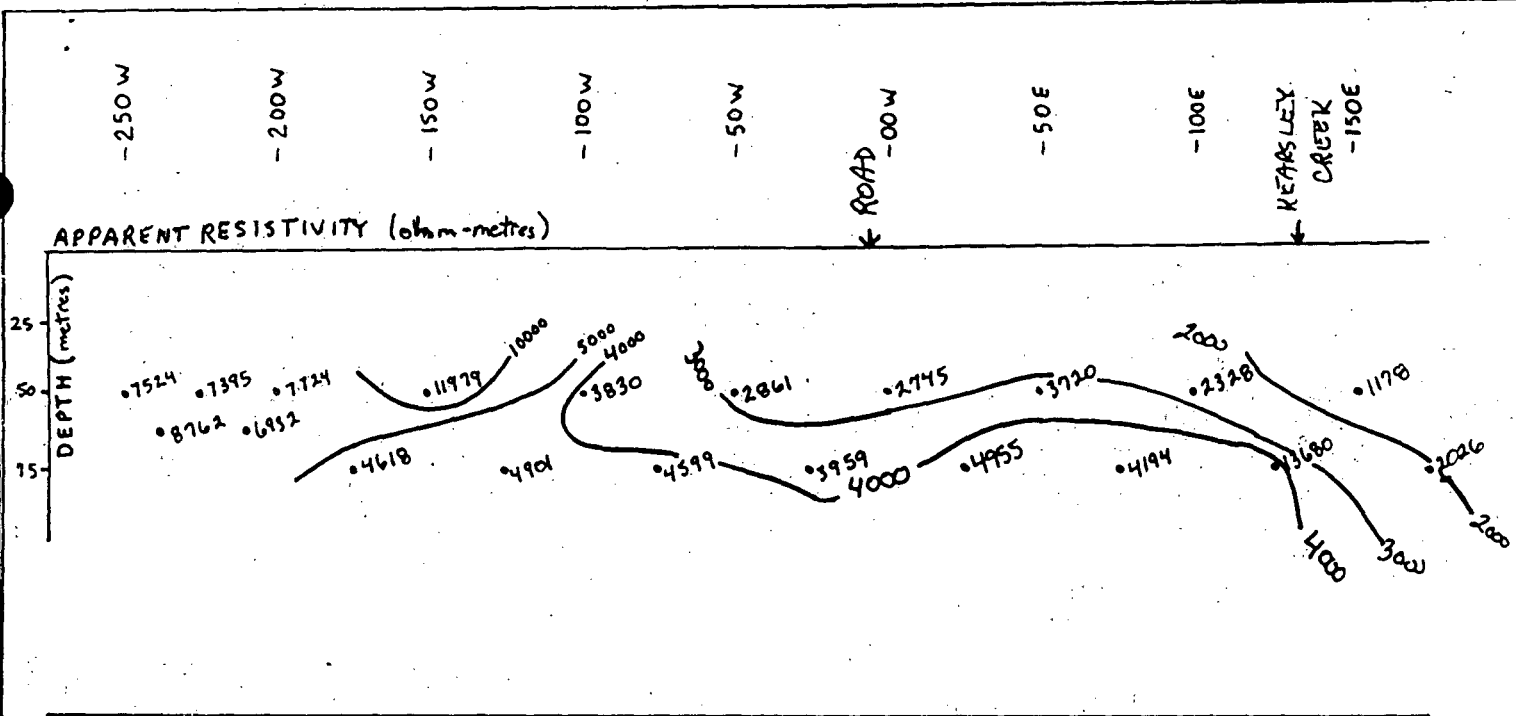
**KEY**

- TEST LINE
- - - - - PREVIOUS GRID
- ROAD
- CREEK
- CLAIM BOUNDARY



SCALE 1:10000

GOLDEN UNIVERSE CLAIM GROUP  
 KEARSLEY CREEK PROJECT  
 LOCATION AND CLAIMS MAP



**INSTRUMENT :** Sabre Frequency Domain  
 Induced Polarization  
 System  
**CONFIGURATION:** Dipole-Dipole  
 a = 50 metres  
 n = 1,2  
**HIGH FREQUENCY:** 10 cps

GOLDEN UNIVERSE CLAIM GROUP
KEARSLEY CREEK PROJECT
INDUCED POLARIZATION SURVEY
TEST LINE 6N
FIG. 2

E.T. Pezzot,  
3740 Lockhart Rd.,  
Richmond, B.C. V7C 1M3

Mr. R. Mitterer,  
590 - East 17<sup>th</sup> Ave.,  
Vancouver, B.C.

May 20, 1987

Invoice # 87-01

Re: Induced Polarization test - Kearsley Creek Project - April 11, 1987

COST SUMMARY

Geophysicist .....	\$250.00
Equipment .....	\$250.00
Memorandum Report .....	<u>\$100.00</u>
Total .....	\$600.00
 Total Amount Invoiced .....	 \$600.00
Less: Mobilization Deposit .....	\$ 00.00
Payments Received .....	<u>\$600.00</u> ✓
Balance Due .....	\$ 00.00
 Amount of this Invoice .....	 \$ 00.00

87-489

MEMORANDUM REPORT

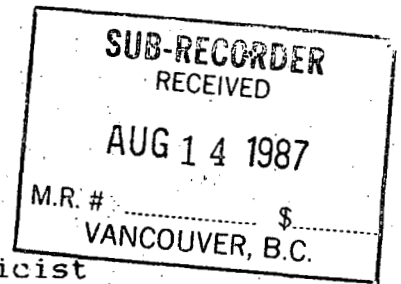
KEARSLEY CREEK PROJECT

GOLDEN UNIVERSE CLAIM GROUP

N.T.S. 92G/8

New Westminster Mining Division

Author: E. Trent Pezzot, B.Sc., Geophysicist



TO: Mr R. Mitterer

RE: INDUCED POLARIZATION TEST - May 2, 1987

On May 2, 1987, two lines of frequency domain induced polarization survey were run across Kearsley Creek on the Golden Star claim to complement the information gathered on April 11, 1987. Lines 4E and 5E of the survey grid established in October, 1986 were reflagged and surveyed at this time. The results of this survey are described below and illustrated, along with an interpretation sketch, on figures 1 and 2.

Line 4E was surveyed with a dipole-dipole array using an "a" spacing of 50 metres and "n" values of 2 and 3. Data was gathered from stations 00 (at the main access road) to 350N. Kearsley Creek crosses this line near station 150N. An apparent resistivity low was mapped from station 125N to 225N. This zone is flanked by pantleg resistivity highs, indicating a near vertical anomalous zone, centred on Kearsley Creek and extending to significant depth. This response is most likely the reflection of a fault zone. No significant Percent Frequency Effect (PFE) values were observed to be associated with this zone. A minor, but distinct, increase in the PFE values is mapped to



the northeast of the interpreted fault zone, reaching a high of 6.0% at station 300N.

Line 5E was surveyed with the dipole-dipole array and an "a" spacing of 25 metres and "n" values of 1 and 2. Readings were taken from station 75N to 200N. Low apparent resistivity values were observed from station 125N to 162.5N, across Kearsley Creek. A minor PFE high of 4.5% above background values of 2.8% - 3.5% is mapped at station 150N at a depth of 50 metres.

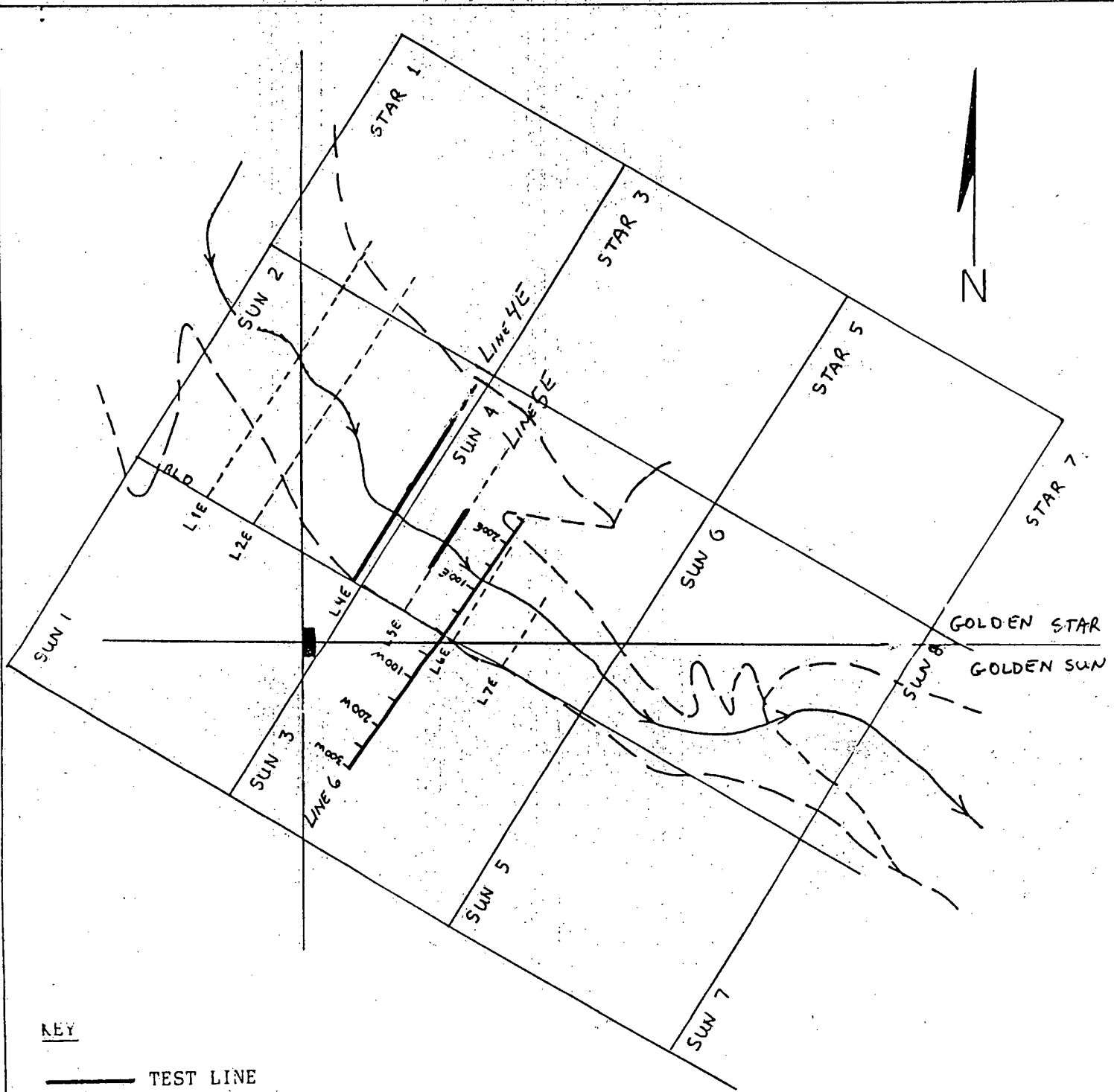
Comparing these results with the previous test on Line 6, it is apparent that a fault zone closely parallels Kearsley Creek in this area and that it can be effectively mapped as an apparent resistivity low. Either induced polarization or moderate to deep penetrating electromagnetic techniques can be used to map this structure. The highest PFE value recorded to date is 9.2% on Line 6 near Kearsley Creek. A minor amount of disseminated sulphides could be the source of this anomaly. No geophysical indications of sulphides were observed on Lines 4 and 5.

Respectfully submitted,



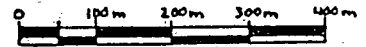
E. Trent Pezzot, B.Sc.

Geophysicist



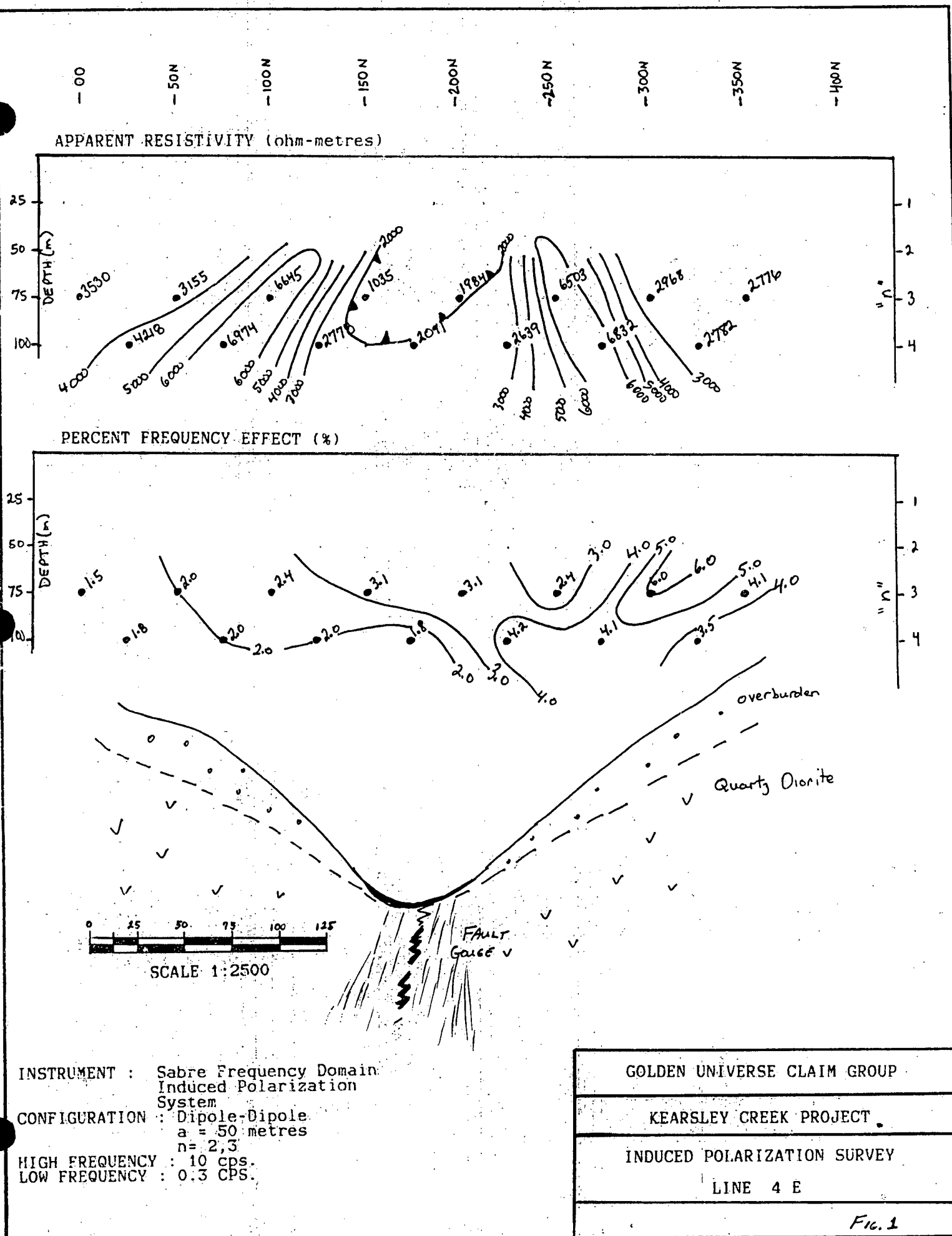
KEY

- TEST LINE
- - - PREVIOUS GRID
- - - ROAD
- CREEK
- ┌ CLAIM BOUNDARY

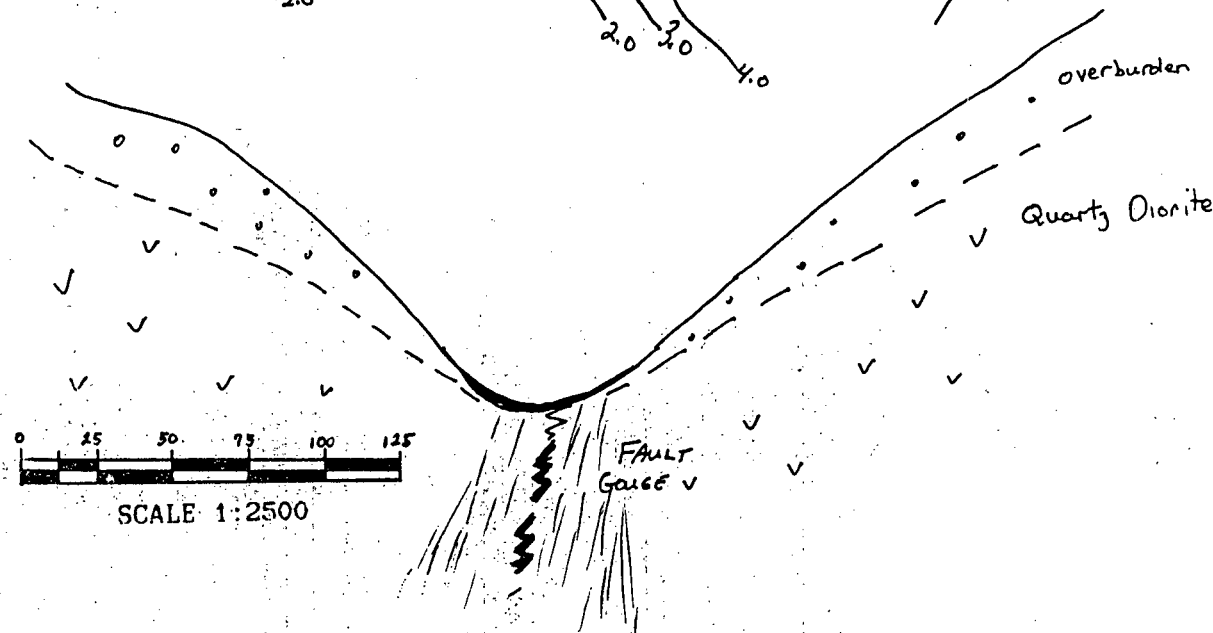
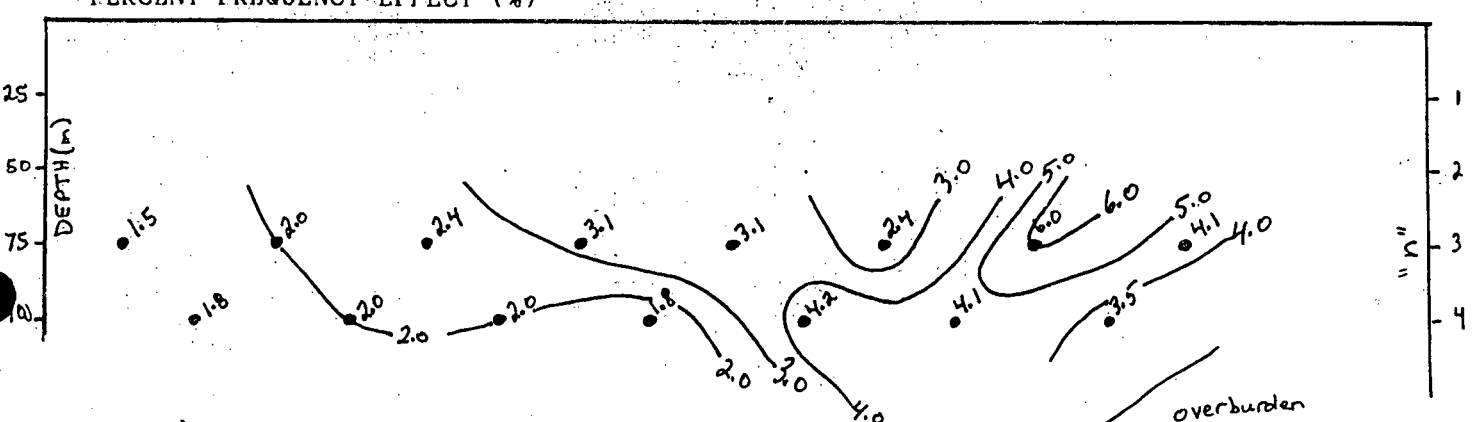
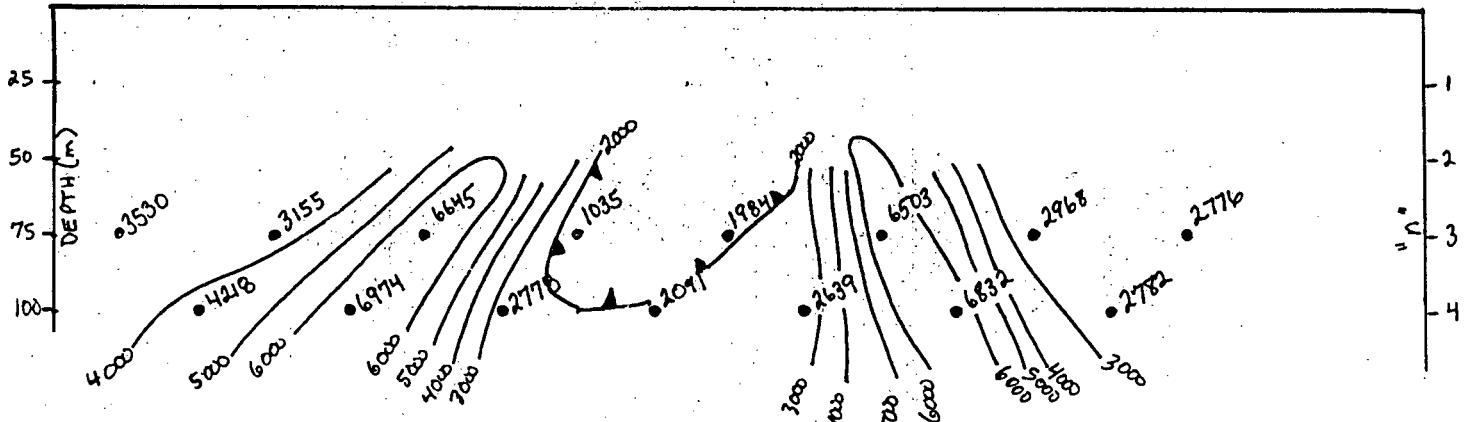


SCALE 1:10000

GOLDEN UNIVERSE CLAIM GROUP  
 KEARSLEY CREEK PROJECT  
 LOCATION AND CLAIMS MAP



00 50N 100N 150N 200N 250N 300N 350N 400N



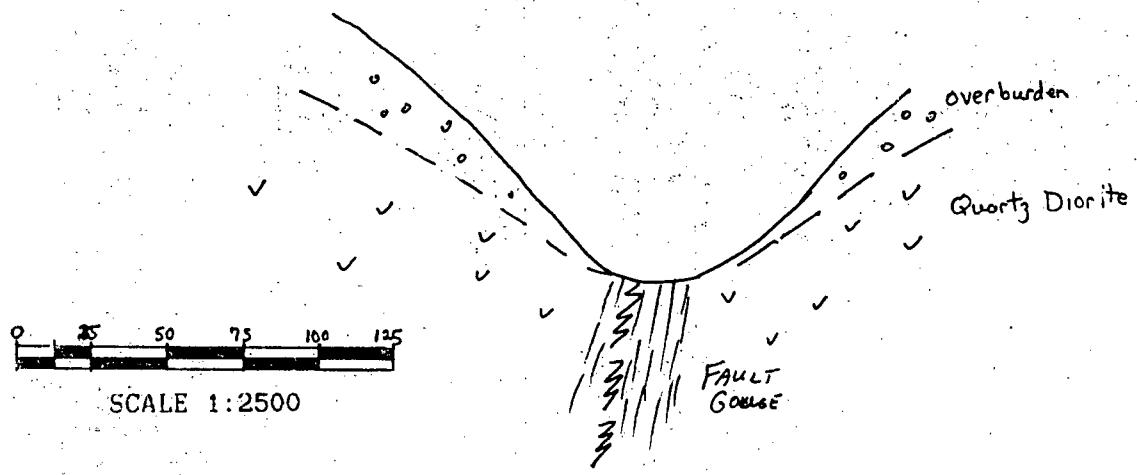
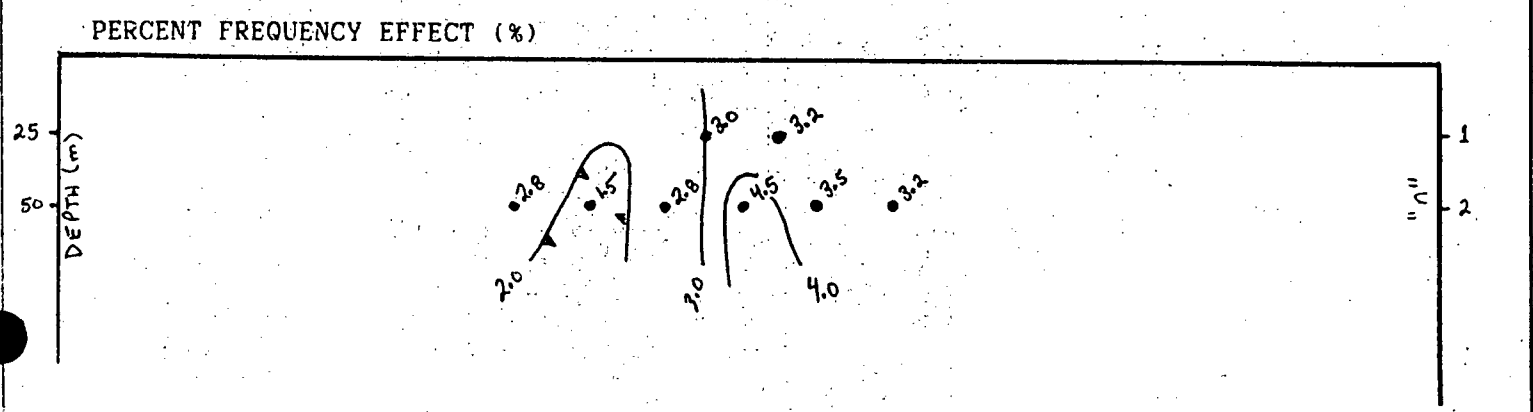
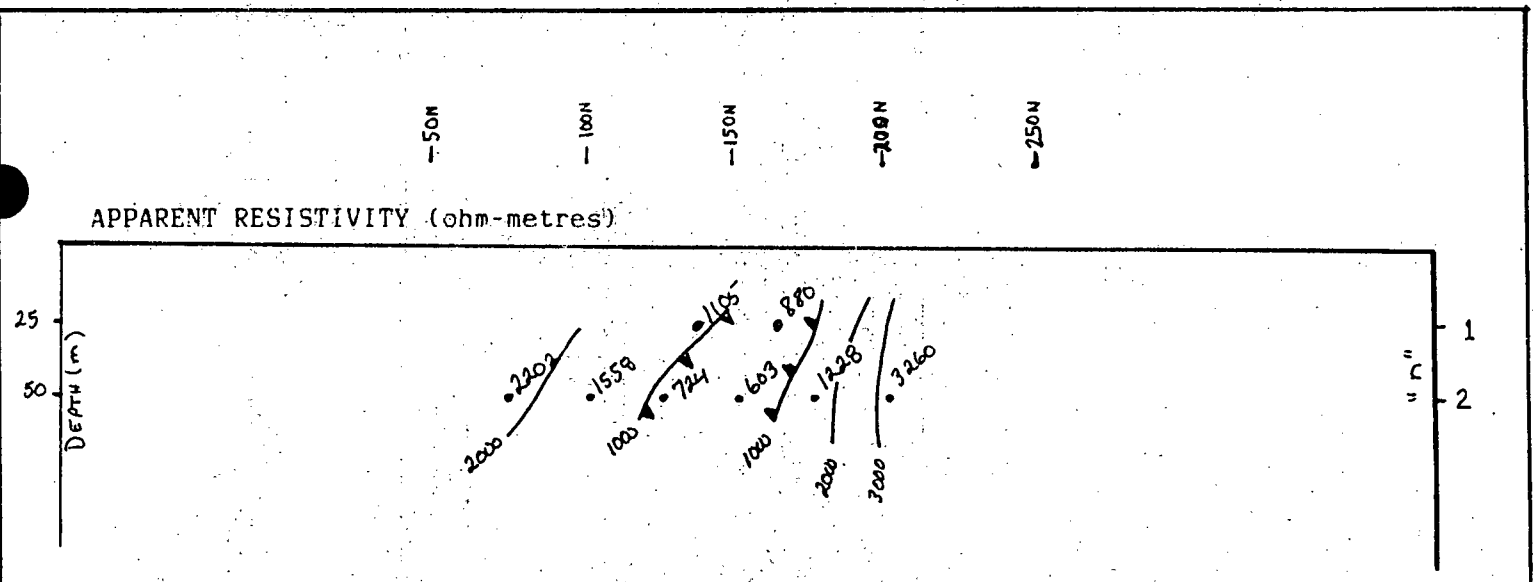
GOLDEN UNIVERSE CLAIM GROUP

KEARSLEY CREEK PROJECT

INDUCED POLARIZATION SURVEY

LINE 4 E

Fig. 1



INSTRUMENT : Sabre Frequency Domain  
Induced Polarization  
System

CONFIGURATION : Dipole-Dipole  
a = 25 metres  
n = 1,2

HIGH FREQUENCY : 10 cps.

LOW FREQUENCY : 0.3 CPS.

GOLDEN UNIVERSE CLAIM GROUP
KEARSLEY CREEK PROJECT
INDUCED POLARIZATION SURVEY
LINE 5 E
Fig. 2

E.T. Pezzot,  
3740 Lockhart Rd.,  
Richmond, B.C. V7C 1M3

Mr. R. Mitterer,  
590 - East 17<sup>th</sup> Ave.,  
Vancouver, B.C.

May 20, 1987

Invoice # 87-02

Re: Induced Polarization test - Kearsley Creek Project - May 2, 1987

COST SUMMARY

Geophysicist .....	\$250.00
Field Geophysicists 2 @ \$200.00 .....	\$400.00
Field Helpers 3 @ \$150.00 .....	\$450.00
Vehicle 1 day @ \$70.00/day.....	\$ 70.00
300 Km. @ \$00.25/Km.....	\$ 75.00
gas & oil .....	\$ 55.00
Equipment .....	\$250.00
Meals .....	\$ 55.00
Memorandum Report .....	<u>\$100.00</u>

Total .....\$1705.00 ✓

Total Amount Invoiced .....\$1705.00

Less: Mobilization Deposit ..... \$ 00.00  
Payments Received ..... \$1705.00

Balance Due ..... \$ 00.00

Amount of this Invoice ..... \$ 00.00