

86-961-15863
12/87

REPORT ON

MAGNETIC AND VLF-EM SURVEYS

ON SIR 2688 MINERAL CLAIM

OWNER: WESTRON VENTURE LTD.

OPERATOR: WESTRON VENTURE LTD.

AND

FILMED

**JUNE 1 370, JUNE 2 421, HAWK 673,
PAT 1 - 4 424 - 427 INCL, SKYE 1 - 3 401 - 403 INCL**

OWNER: DON AGUR AND PATRICIA MULLIN

OPERATOR: WESTRON VENTURE LTD.

IN

Similkameen M.D.

NTS 92H/16W and 92H/9W

Latitude 49° 44.7' Longitude 120° 20' W

Date of Work: October 15th to December 15th, 1986

Date of Report: January 25, 1987

AUTHOR: EGIL LIVGARD, P. ENG

CONTRACTOR: MINEQUEST EXPLORATION ASSOCIATES LTD.

CONSULTANT: R. SHELDRAKE GEOPHYSICIST

15,863

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**



LIVGARD CONSULTANTS LTD.

717 - 837 West Hastings, Vancouver, B.C. V6C 1B6 Ph. 669-2426

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INTRODUCTION

Livgard Consultants Ltd. was commissioned by Westron Venture Ltd. to carry out magnetic and VLF-Electromagnetic surveys on parts of their Siwash Creek mineral property. Livgard Consultants Ltd. picked the area which appeared most favourable and installed a grid system. The Scintrex IGS system was elected in consultation with Minequest Exploration Associates Ltd. and they were hired as contractor for surveys. Ronald Sheldrake, Geophysicist of Apex Airborn Surveys Ltd. was retained as consultant.

SUMMARY

VLF-Electromagnetic and magnetic surveys were conducted over part of the Siwash Silver property during October to December 1986 by Minequest Exploration Associates Ltd. on behalf of Westron Venture Ltd. The property consists of 74 claim units in a contiguous group located largely west of Siwash Creek 38 km northeast of Princeton B.C. The area has been explored intermittently since 1987. A major exploration program was carried out during 1979-81 by Brenda Mines Ltd. including mapping, soil survey, IP survey and 28 diamond drill holes. The focus of the Brenda work was a porphyry copper-molybdenum mineralizing system. During this work extensive peripheral silver-lead-zinc mineralization was located in breccias, fracture zones and veins.

The VLF-EM and magnetic surveys were intended to check the response of known mineralization and geology and to locate new potentially mineralized zones and areas.

A response was obtained over known mineralization and structures, these were extended and new potentially mineralized areas and structures were indicated. A total of nine anomalies were located.



CONCLUSIONS

The Siwash Silver property responded very favourably to VLF-EM and magnetic surveying and seven anomalies have been listed in priority sequence as warranting further work.

PROPERTY

The property is a contiguous group of claims which extend a maximum of about 5,000 metres north-south and 4,500 metres east-west. It consists of 20 mineral claims and fractions with a total of 74 units, 12 of which are two-post claims or fractions. The following is a list of the claims which comprise the property.

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Expiry Date</u>	<u>Registered Owner</u>
Skylab	692	12	August 13, 1988	Patricia Mullin 50% Don Agur 50%
Saskat 1	368	1	June 29, 1992	Don Agur
Saskat 2	369	1	June 29, 1992	Don Agur
Pat 1	424	1	September 14, 1990	Patrick Agur
Pat 2	425	1	September 14, 1990	Patrick Agur
Pat 3	426	1	September 14, 1990	Patrick Agur
Pat 4	427	1	September 14, 1990	Patrick Agur
SS #1 Fr.	1001	1	April 30, 1987	Don Agur
SS #2 Fr.	1002	1	April 30, 1987	Don Agur
SS #3 Fr.	1003	1	April 30, 1987	Don Agur
June #1	370	1	June 29, 1995	Don Agur
June #2	421	8	September 1, 1991	Don Agur
Bisbee	894	9	September 12, 1987	Don Agur
Hawk	673	6	June 26, 1987	Don Agur
Skye #1	401	1	August 15, 1987	Don Agur
Skye #2	402	1	August 15, 1987	Don Agur
Skye #3	403	1	August 15, 1987	Don Agur
Charlie	795	6	October 25, 1987	Don Agur
Herdel	694	4	August 13, 1987	Don Agur
Sir	2688	16	September 26, 1987	Westron Venture Ltd.

The above information was obtained from the Mining Recorder's office in Vancouver on December 1st, 1986.



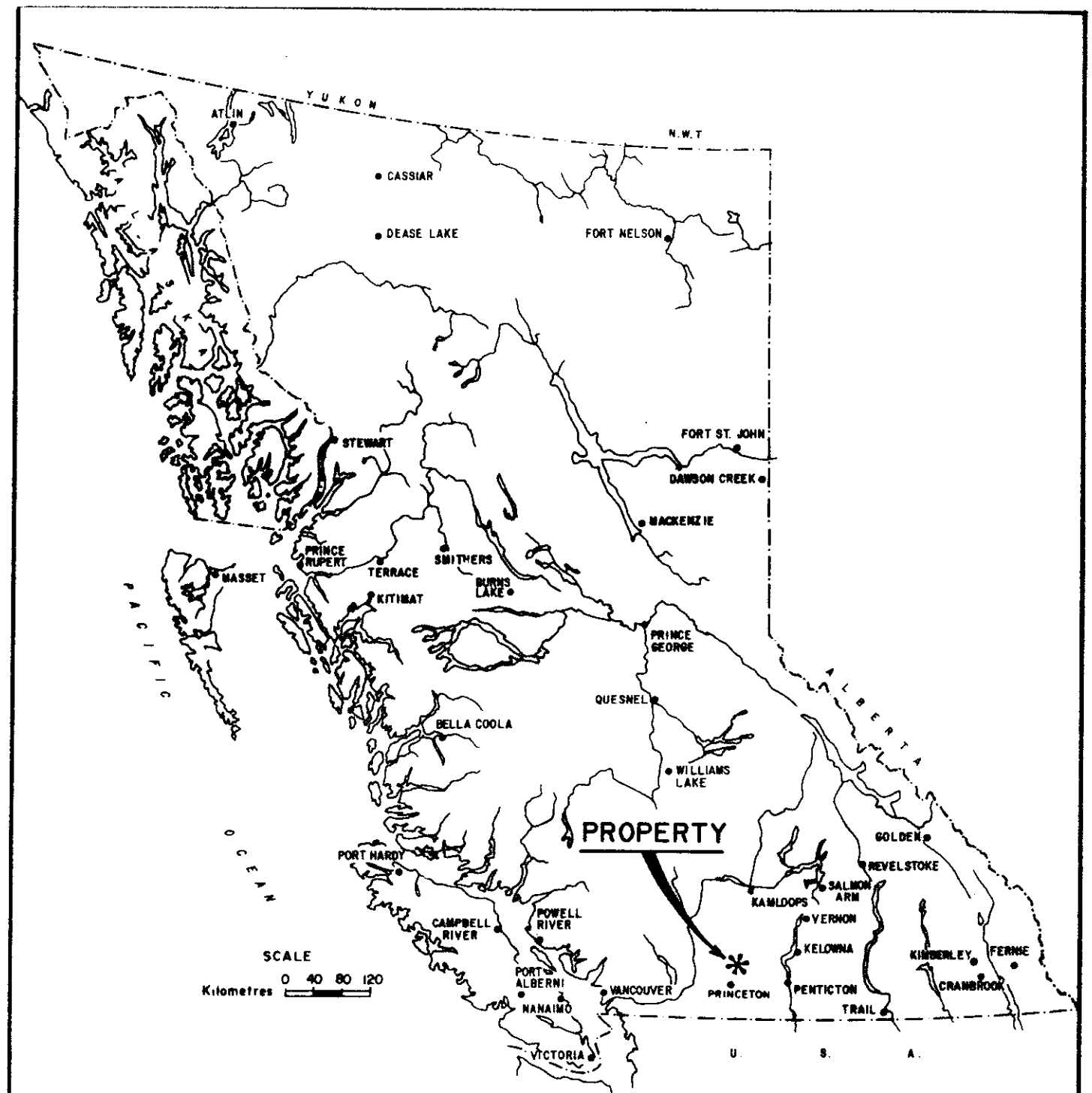


FIGURE I

WESTRON VENTURE LTD.	
SIWASH SILVER PROJECT SIMILKAMEEN MINING DIVISION, B.C.	
LOCATION MAP	
LIVGARD CONSULTANTS LTD.	
SCALE: 1: 8,000,000	DATE: NOVEMBER, 1986

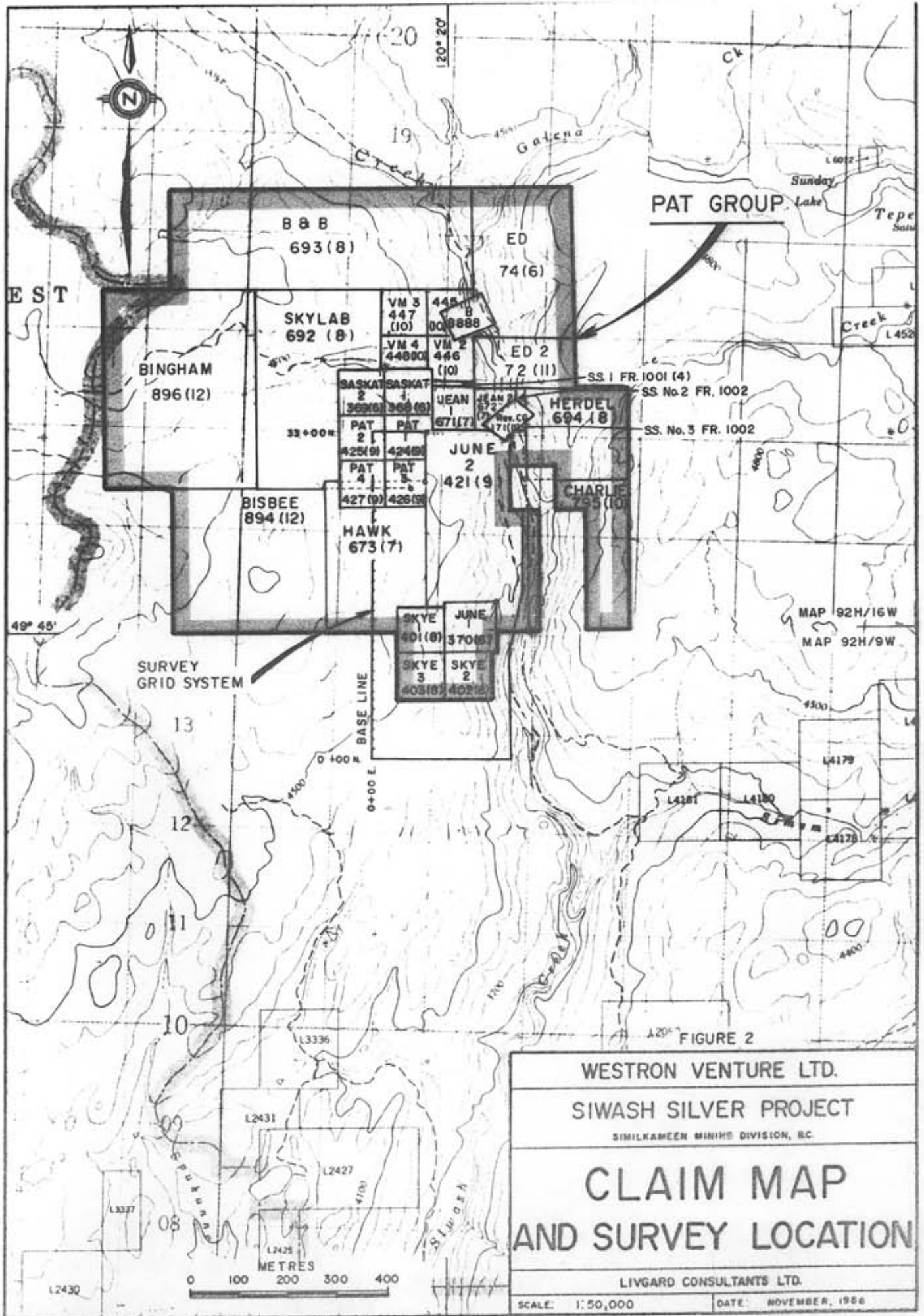
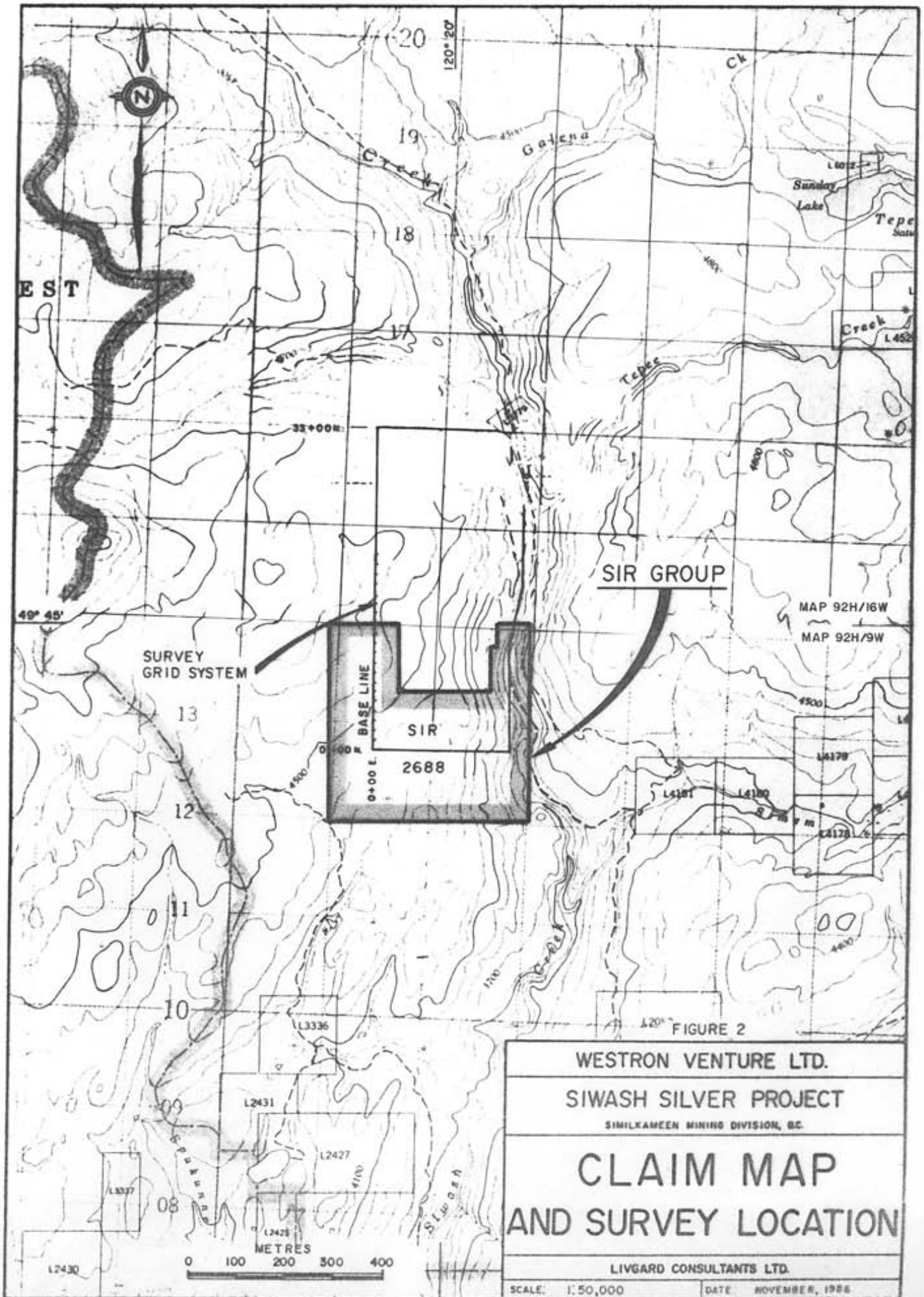


FIGURE 2

WESTRON VENTURE LTD.
SIWASH SILVER PROJECT
 SIMILKAMEEN MINING DIVISION, B.C.

**CLAIM MAP
 AND SURVEY LOCATION**

LIVGARD CONSULTANTS LTD.
 SCALE: 1:50,000 DATE: NOVEMBER, 1986



The writer has been informed by Westron Venture Ltd. that the company has optioned the above claims, and had staked the last mentioned claim. The legal corner post of June #1, June #2 and Sir and the southwest corner post of Charlie and the #1 post of Skye #3 were examined. Based on this the claims, as far as was examined, appear to have been staked according to regulations and appear to be located approximately as shown on the accompanying map. The surveys covered all of June #1, Skye #1-3 and Pat #3, most of June #2 and part of Sir, Hawk and Pat #1, 2, 4 mineral claims.

LOCATION AND ACCESS

The Siwash Silver property is located 38 air kilometres northeast of Princeton, B.C. The claims are situated along Siwash Creek, west of Tepee Lakes and east of Missezula Lake. There are presently three access roads to the property. Two are 8 to 12 kilometre forestry access roads which branches off from the Summerland - Princeton road, north of Osprey Lake. Another road branches off from the Trout Creek logging road, 60 kilometres west of Peachland, B.C. Several logging roads cross the property.

TOPOGRAPHY AND VEGETATION

The property occupies the deep, narrow, terraced Siwash Creek valley and its surrounding plateau lands. Major tributaries include Tepee, Galena and Gavin Creeks flowing into the main valley from the east and Saskat Creek entering from the west. All of these creeks occupy the base of very steep, but shallow valleys. Vegetation consists generally of well spaced stands of jackpine, fir and spruce with a lush, grassy undergrowth. Some of the more immature forests consist of tight growth of scrawny jackpine. Taigalders flourish in swampy areas within the plateau and along steep valley sides. Extensive areas on the claim ground have recently been logged.



HISTORY

The Siwash Creek area has been prospected since the early 1900's. The first reference is found in B.C. Minister of Mines reports 1917. Considerable activity took place in the 1920's. Several adits (8?) were driven on quartz - silver veins and a minor shipment was made from properties just north of the present claim ground. Further work was done on these workings in the 1950's and "ore" was stockpiled but apparently never shipped. During the following 20 years, various claim groups in the areas were mapped and surveyed magnetically. Some of this work was filed as assessment reports and the results are available. In the early 1970's a few short diamond drill holes were drilled in what is now part of the South Silver showings. During 1979 to 1981, Brenda Mines Ltd. carried out an extensive exploration program in the area, approximately one-third of which was on the present claim ground. The work they carried out was completely oriented toward finding a porphyry type copper - molybdenum deposit. The work consisted of mapping, soil surveying, induced polarization surveying, magnetic surveying (off the present claims), trenching, diamond drilling and sampling. In 1986 Westron Venture carried out exploration work which consisted of trenching, EM-VLF and magnetic surveys, (herein described) mapping and sampling.



GEOLOGY

Rock Types

The Siwash Silver mineral property is underlain largely by granite related to the Otter Intrusions of Upper Cretaceous - Early Tertiary age. On the northern border of the granite and largely outside the property is found quartz-eye porphyry and quartz - feldspar porphyry, generally with gradational contacts, also related to the Otter Intrusions. This body has intruded granodiorites of the Coast Intrusions of Jurassic age.

The granite is pinkish-red, coarse grained, light coloured. The principal visible minerals are pink and white orthoclase or microcline, generally intergrown with quartz and small flecks of black biotite.

Structure

A large number of faults have been interpreted to occur on the property. The predominant strike appears to be north-northeast. The most evident fault zone lies partly along Siwash Creek, extending from "South Silver" trenches and north at least to the "Camp Showings". Recent EM-VLF surveying has indicated a strong southward extension.

It is marked by gouge zones, breccia zones and alteration. Two or three parallel zones may be found on the property west of Siwash Creek. Other faults have been interpreted by the EM-VLF and magnetic surveys as striking northwesterly.

Other structures extend northeasterly and east-west with steep dips. These are either quartz veins or silicified shear zones. At the South Silver showings dense north striking silicified fractures dipping east (10° - 50°) have been observed.

Breccia zones or pebble dykes are frequently associated with the structures. They consist of granite "pebbles" set in a fine grained matrix. "Pebble" size may range from 1 cm to 30 cm in size and are sub-rounded. The nature and size of the



breccia is not known. Fragments at the South Silver Showings show disseminated sulphides and contain silver values.

Satellite photo interpretation indicates that this may be an area of intersecting buried structures.

Alteration

Extensive and intensive alteration of the granite has taken place: Argillic and prophylic alteration has taken place irregularly. Insufficient exposures prevent outlining its extent or any possible zoning. Chloritic alteration may be more closely associated with the north striking structures. Several areas of silicification have been exposed by trenching.

The silicification is either very fine grained and dense or crystalline vein quartz with vugs and comb structure. The silicification and quartz veins are usually accompanied by sulphides.

Mineralization

In order of abundance the minerals found on the property are as follows:

Pyrite occurs both disseminated and in massive veins. The largest concentrations is along the northern part of the claims. The strongest I.P. survey response is thought to be due to pyrite.

Specular Hematite is found disseminated as fracture filling and in small veinlets. The "Camp Showing" and the "Western Trenches" have most abundant showings.

Sphalerite is found mainly associated with galena in quartz veins and fractures. It is also found very widely disseminated in very low concentrations. Concentrations are found on the north part of the property and at the "Monty Showing".



Galena is primarily in quartz veining or in silicified fractures, but specimens showing finely disseminated galena in granite and granite breccia have been found at the "South Silver" trenches.

Chalcopyrite is found in quartz veins, with silicification and small concentrations have been noted with carbonate stringers. Copper also occurs as bornite very occasionally.

Tetrahedrite is found associated with galena and chalcopyrite. It has been identified disseminated in a granite breccia.

Other minerals noted in the field or in references cited are: argentite, vuggy quartz, opaline silica, chlorite, fluorite, arsenopyrite and carbonate.

Silver values are associated with tetrahedrite, chalcopyrite and galena. Samples running as high as 9245 grammes per tonne have been obtained in the area in the past.

Gold values are associated with the mineralization. Assay values have ranged from trace to 10 grammes per tonne, but the mineralization appears to be erratic and no particular association has been noted.

Porphyry Deposit

The overall geology, both structural and lithological, and the various types of mineralization strongly suggest similarities to porphyry deposits of the Canadian Cordillera.

Some of the common characteristics are:

1. The presence of one or more porphyritic intrusive units.
2. An intrusive complex of comparable age to known economic deposits of the Western Cordillera.



3. The apparent close spatial relationship to what may be major fault structures.
4. Strongly altered zones, i.e.: chloritization, kaolinization, sericitization, and silicification.
5. Veinlet and fracture coating type mineralization associated with alteration zones.
6. Large zones of disseminated pyrite, typical of the "pyrite halo" of many porphyry deposits.
7. High grade quartz and siliceous veining, hosting Pb, Zn and Ag mineralization, generally associated with the peripheral areas of a porphyry system.
8. Presence of pebble dykes (breccia pipes) often associated with porphyry systems (i.e. Highmont and Bethlehem).

ECONOMIC GEOLOGY

The mineralization on the Siwash property can be divided into two categories:

- A. A copper porphyry deposit (which was the focus of Brenda Mines Exploration, 1979-81);
- B. Peripheral mineralization **focusing on silver - gold values.**

The peripheral mineralization is primarily of three types:

1. granite breccia with disseminated pyrite, chalcopyrite, galena, sphalerite and tetrahedrite;



2. silicified fracture zones - predominant fracturing north-south with a moderate to flat dip - mineralization consisting of pyrite, chalcopyrite, sphalerite, galena and tetrahedrite;
3. quartz veins with vugs and comb structure or silicified shear zones with pyrite, sphalerite, galena, chalcopyrite, tetrahedrite and possibly argentite.

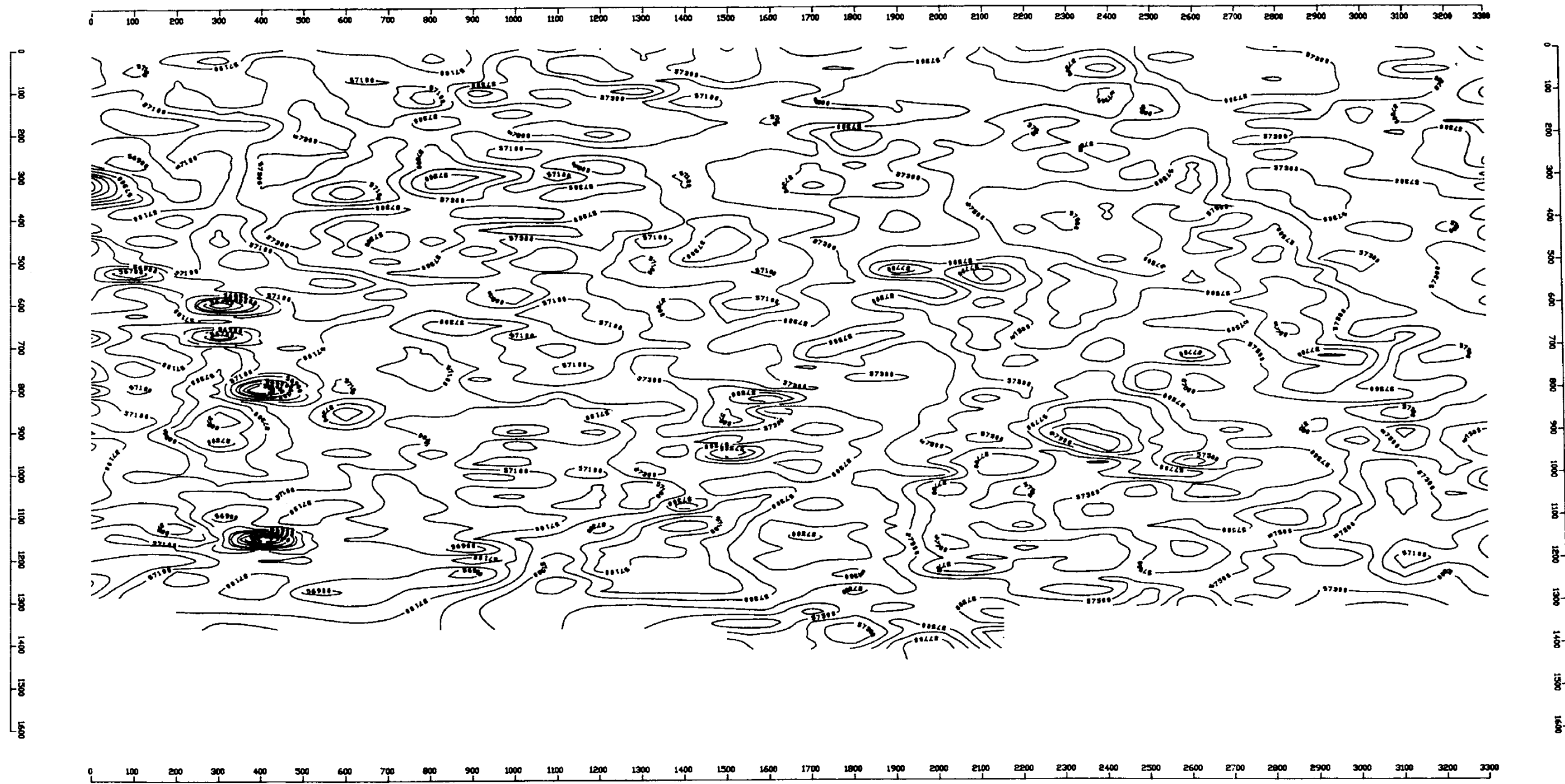
It appears, based on geology, geophysics and geochemistry, that the centre of the hydrothermal mineralizing activity and the potential centre of a porphyry copper deposit lies immediately north of the present claim group. No direct evidence, in spite of considerable diamond drilling, of such deposit was found by Brenda Mines Ltd.

Work on the Siwash Silver property has exposed peripheral type mineralization. The northern part of the claims tends to show pyrite - sphalerite while the southern part shows more galena with silver values. Exploration on the property should be directed toward the three types of mineralization as listed above. The first two types of targets, breccia and fracture zones, are advantageous in that they hold the potential for larger size. These targets are thus of economic interest even at quite low grade due to the potential for lower cost extraction.

SOIL SURVEYING

Past soil surveying has outlined several silver, lead zinc and copper anomalies on the claims. The most extensive of these anomalies has been numbered #1. It is a silver anomaly which extends from grid line 10+00N to 32+00N over a variable width of about 100 metres and strikes north northeast (parallel to the Camp structure.)





WESTRON VENTURE LTD.			
SIWASH CREEK PROJECT			
MAGNETOMETER CONTOUR MAP			
100 GAMMA CONTOUR INTERVAL			
PLAN No.	DRAWN BY:	DATE	FIGURE
-	GEO-COMP	DEC '86	
Originator: RVL		N.T.S.	
MINEQUEST EXPLORATION ASSOCIATES LTD.			

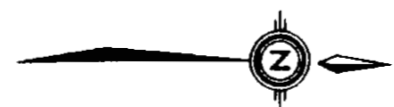
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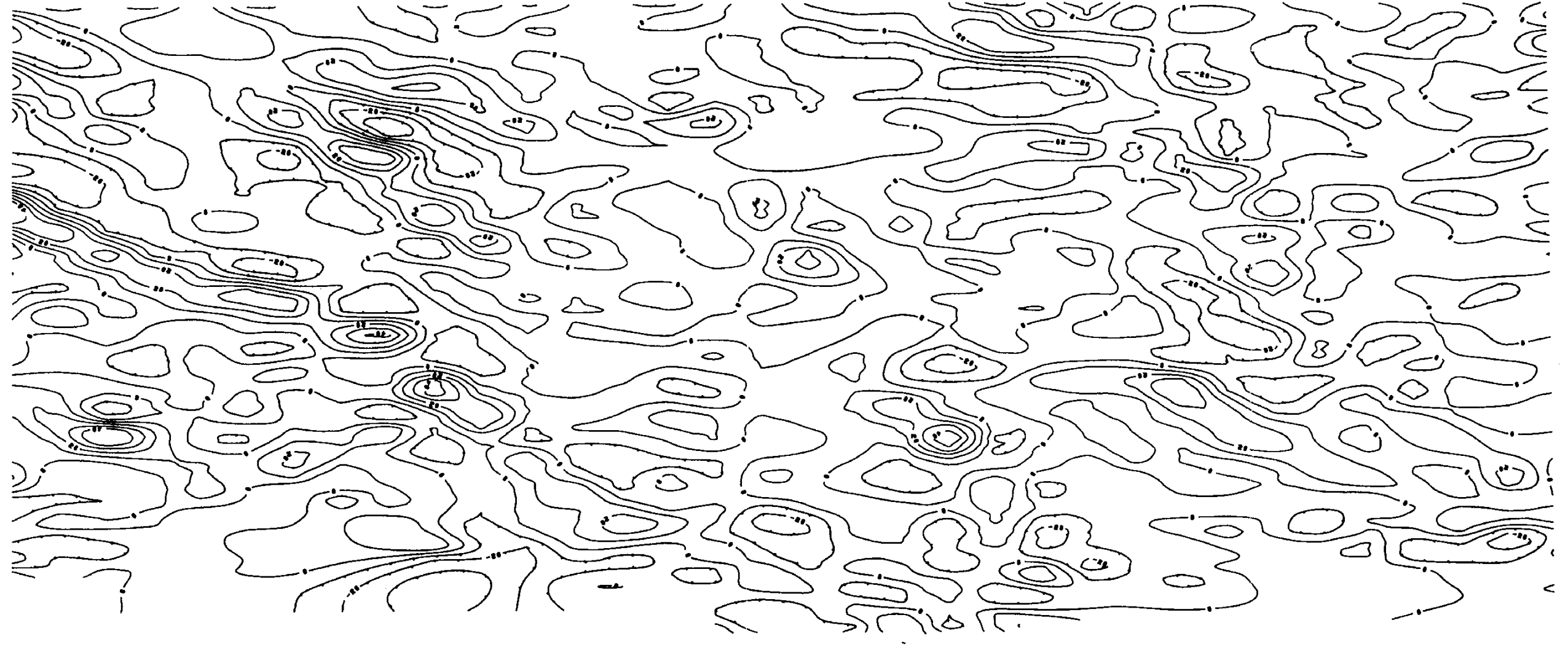
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WESTRON VENTURE LTD.			
SIWASH CREEK PROJECT			
TILT ANGLE CONTOUR MAP			
PLAN No. 110	DRAWN BY: -	DATE Dec. '86	FIGURE 1
Originator: RL		N.T.S.	
MINEQUEST EXPLORATION ASSOCIATES LTD.			

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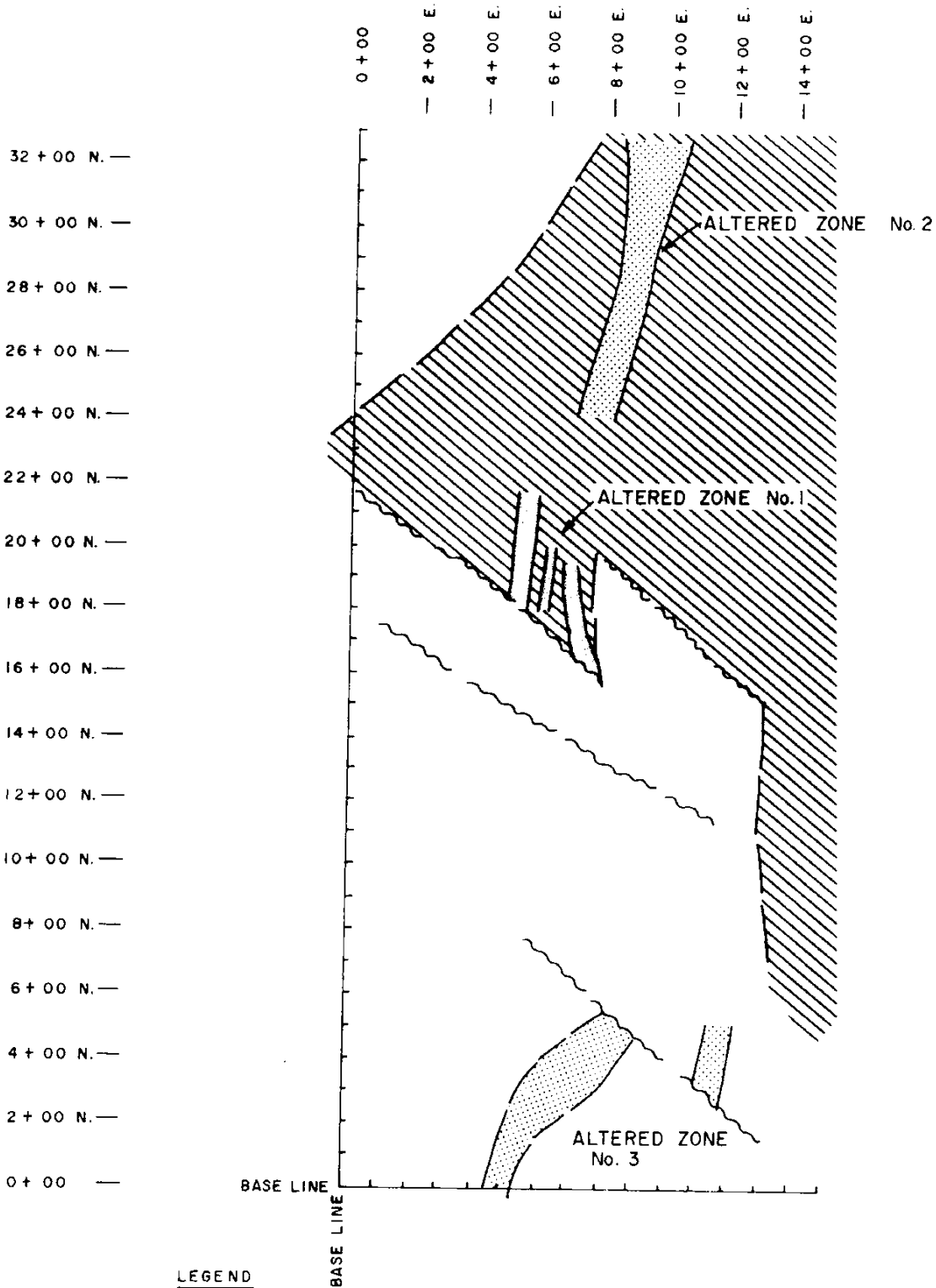
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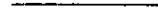

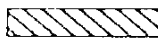
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WESTRON VENTURE LTD.			
SIWASH CREEK PROJECT			
FRASER FILTER EM CONTOUR MAP			
PLAN No. -	DRAWN BY: GEO-COMP	DATE DEC '86	FIGURE .
Originator: RVL		N.T.S.	
MINEQUEST EXPLORATION ASSOCIATES LTD.			



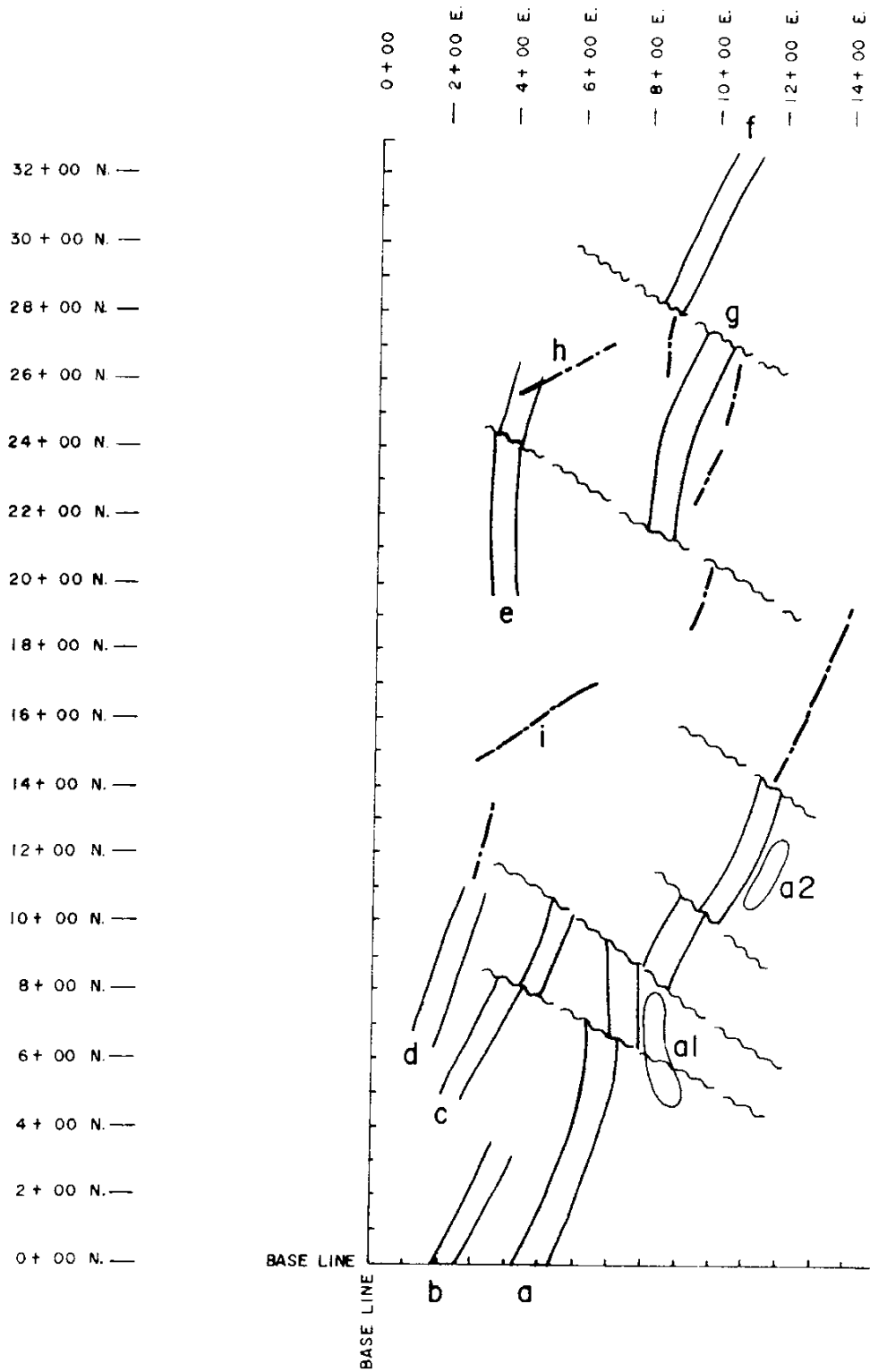
LEGEND

INTERPRETATION BY R. SHELDRAKE, GEOPHYSICIST


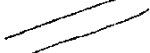


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-  LOW MAGNETIC ZONE
-  MAGNETIC HIGH ANOMALIES
-  INTRUSIVE CONTACTS
-  SEPARATE INTRUSIVE PHASE

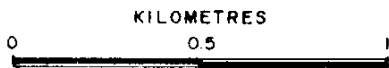
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WESTRON VENTURE LTD.	
SIWASH SILVER PROJECT	
SIMILKAMEEN MINING DIVISION, B.C.	
MAGNETIC ANOMALIES	
LIVGARD CONSULTANTS LTD.	
SCALE: 1:20,000	DATE: NOVEMBER, 1986



LEGEND

-  POSSIBLE FAULTS
 -  POSSIBLE GOUGE ZONES OR MINERALIZED ZONES.
 -  CONDUCTIVE ZONES INTERPRETATION BY WRITER
 -  KNOWN MINERALIZATION
- } INTERPRETATION BY
R. SHELDRAKE,
GEOPHYSICIST



WESTRON VENTURE LTD.	
SIWASH SILVER PROJECT	
SIMILKAMEEN MINING DIVISION, B.C.	
VLF-EM ANOMALIES	
FRASER FILTERED	
LIVGARD CONSULTANTS LTD.	
SCALE: 1:20,000	DATE: NOVEMBER, 1986

GEOPHYSICAL SURVEYS

The writer commissioned Minequest Exploration Associates Ltd. to carry out VLF-EM and magnetic surveys on the claim group in the fall of 1986. The instrumentation used was Scintrex IGS which consists of EM-VLF and proton magnetometer with memory. The survey results were subsequently computer treated and produced on maps. The results were interpreted by Ronald F. Sheldrake, Apex Airborn Surveys Ltd., who outlined possible faults, geological contacts, conductive zones and magnetic variations.

The writer did some further interpretation and correlation with known information such as soil anomalies, with the generous help of David Mark of Geotronics Surveys Ltd.

The purpose of the surveys was to attempt to locate or outline directly or indirectly mineralization under overburden cover and to try to arrive at a further understanding of geological features such as alteration and faulting. It was thought that the above features might respond as follows:

- moderate to strong anomalous linear conductive features caused by mineralized veins, faults and shear zones.
- Low to moderate anomalous linear conductive features caused by known mineralized faults and shear zones.
- Low anomalous conductive areas caused by mineralized Breccia and fracture zones.
- Low magnetic response by altered, mineralized sulphide or non mineralized areas.
- High magnetic response by magnetic mineralization.

In consultation with Westron Venture Ltd. regarding funds available the writer selected a survey area based on the available information.



Grid System

A baseline was put in on the west side of the selected survey area using tape and compass. It extended 3,300 metres due north. Stations were established every 100 metres along the baseline. Survey lines were established using topochain and compass, running from the baseline and east for 1,300 metres, 100 metres apart. A few survey lines were extended 1,350 and 1,400 metres east. Stations were established along the survey lines every 25 metres.

Surveying

A stationary magnetometer was established at the base camp and connected to a computer. It recorded and stored the daily magnetic variations. Survey readings, VLF-EM, magnetic, station and time, were taken at each 25 metre station along the survey lines, using the Seattle Station. This information was stored in an instrument memory and transferred to the computer memory at the base each evening. It was correlated with the results from the stationary magnetometer, and thus automatically adjusted for Diurnal variations and drift.

Following the survey the adjusted magnetic response was computer contoured and printed as a magnetometer contour map with contours at 100 gamma interval. The VLF-EM results were first printed out as tilt angle contour map with contours at zero and -20 degrees. The results were also automatically Fraser filtered and printed as a Fraser filter EM contour map with contours 10 degree interval from -30 to +40 degrees.

ANOMALOUS CONDITIONS

The survey was designed to cover known mineralization and structures and other features such as silver soil anomalies and IP anomalies. The results of the survey were highly satisfactory.

The one well known structure on the property, the Camp structure, was clearly indicated. The southern extension of the structure, previously unsurveyed, is by far its most conductive and also shows an outstanding, wide low magnetic response.



These anomalies have been designated "a". The known mineralized areas associated with the structure appear, as expected, to show subtle conductive response, i.e. South Silver Showings designated "a1" and the mineralized spud trench area designated "a2".

Several other conductive zones parallel to the Camp structure are designated "b", "c", "d", "f" and "g". Other conductive zones are designated "e", "h" and "i".

Anomaly "d" is partly coincident with the southern end of Silver Soil Anomaly #1. Anomaly "e" is coincident with part of the northern end of this soil anomaly.

Anomaly "f" is a coincident high conductivity and low magnetic response. There are no coincident soil anomalies.

Anomaly "i" to the southwest is coincident with a wide part of soil Anomaly #1. It is a low grade northeast striking anomaly which to the northeast ends in an area of high magnetics at intersections of interpreted faults and contacts between intrusive rock phases.

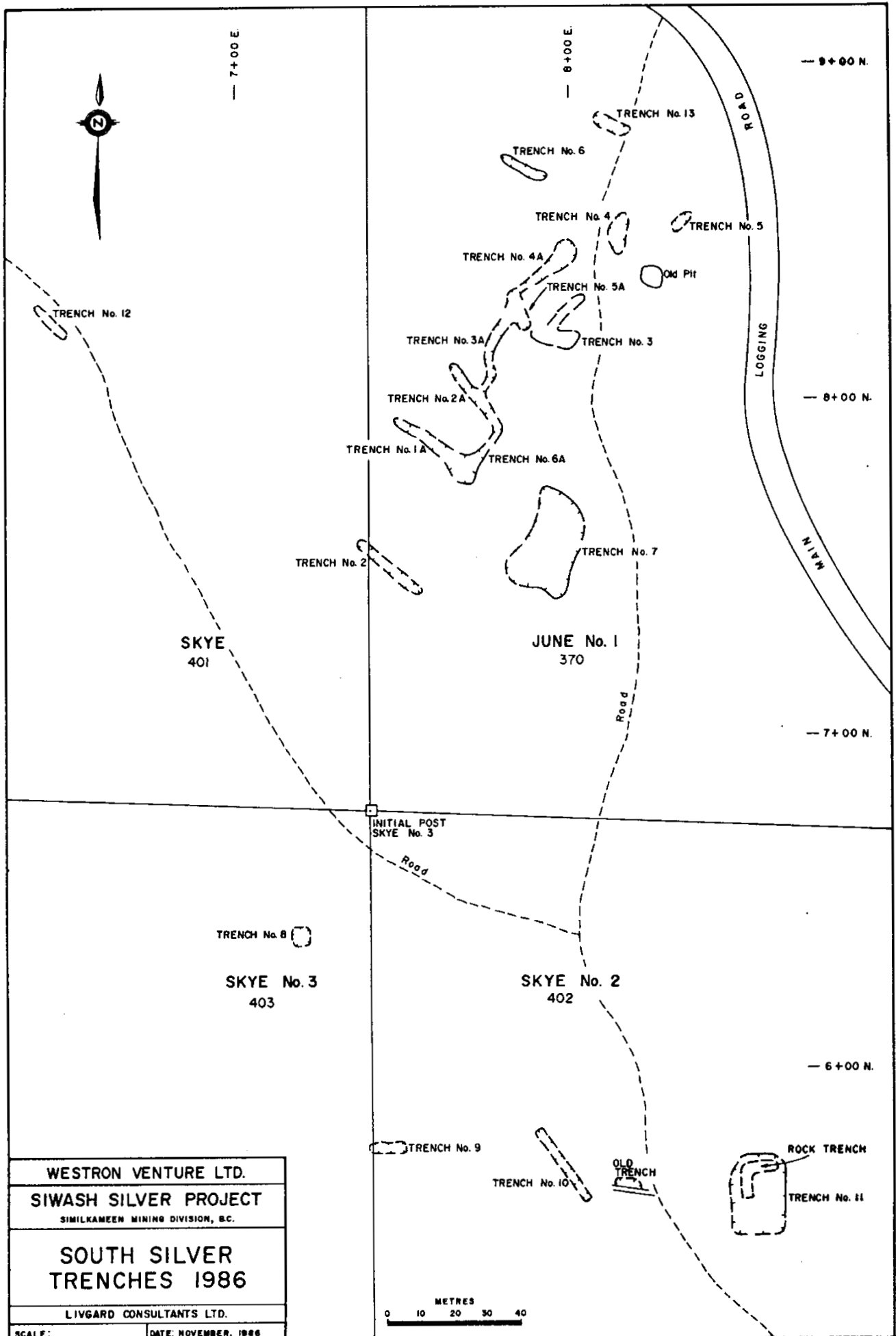
Anomaly "h" also strikes northeasterly and appears to be coincident with a biotite feldspar porphyry.

The majority of anomalies lie in areas without outcrops and indeed there appears at times to be an alignment of outcrops on either side of an anomaly (i.e. Anomaly "i") suggesting altered softer ground in between.

The writer has graded the anomalies as follows:

- Anomaly "a(1)" South Silver showing and its extension to the south.
- Anomaly "a(2)" Spud Trenches extending northwest of present trenches.
- Anomaly "j" (No road access.)
- Anomaly "d" North end (no road access).
- Anomaly "g" (No road access.)
- Anomaly "f" (No road access.)
- Anomaly "h" (No road access.)





WESTRON VENTURE LTD.	
SIWASH SILVER PROJECT	
SIMILKAMEEN MINING DIVISION, B.C.	
SOUTH SILVER TRENCHES 1986	
LIVGARD CONSULTANTS LTD.	
SCALE:	DATE: NOVEMBER, 1986

The survey is considered to have been very successful and the above anomalies should be further explored.

TRENCHING

The following physical work was carried out using a hoe excavator H20 series 4 by Don Agur of Summerland. It consisted of eleven (11) trenches in overburden and one (1) rock trench as listed below:

<u>Trench number</u>	<u>Length in m</u>	<u>Width in m</u>	<u>Depth in m</u>	<u>Volume in m³</u>	<u>% of Excavated trench filed here in m³</u>
#1A	25	3.1	2.5	193.76	50% or 96.88
#2	21	2.5	3.2	168.0	100% or 168.0
#4	10	3.5	0.4	14.0	100% or 14.0
#5	7	3.0	0.6	12.6	100% or 12.6
#6	14	2.0	1.0	28.0	100% or 28.0
#7	30	14.0	0.8	336.0	40% or 134.4
#8	4	2.0	4.2	33.6	100% or 33.6
#9	8	2.0	4.0	64.0	100% or 64.0
#10	26	2.0	3.0	156.0	100% or 156.0
#11	22	12.0	1.1	290.4	75% or 217.8
#13	20	2.0	2.5	100.0	100% or 100.0

Total trenching applied here

1025.28 m³

Plus

Rock

Trench #11 12.0 3.0 0.4 14.4 m³

Respectfully submitted,



E. Livgard, P.Eng.
Livgard Consultants Ltd.



LIVGARD CONSULTANTS LTD.

717 - 837 West Hastings, Vancouver, B.C. V6C 1B6 Ph. 669-2426

APPENDIX



PERSONNEL

Livgard Consultants Ltd.

Grid System:

Bryan Livgard

Eight Summer Seasons Experience with Livgard Consultants Ltd. in mineral exploration.

Nathan Lemmon

Three Summer Seasons Experience with Livgard Consultants Ltd in mineral exploration .

Grid System was emplaced from October 8th to 20th 1986 under the supervision of E. Livgard P. Eng.

Minequest Exploration Associates Ltd.

Richard Gosse	October 24, 26 & 26
Allan Zuk	October 25 & 26
Kelly Bilquist	October 30 - November 1 November 11 - November 17
Ron Bilquist	October 30 - Nov 1 November 11 - November 17

Egil Livgard, P.Eng.

Supervision of grid and survey, Livgard Consultants Ltd.

Ronald Sheldrake Geophysicist

Apex Airborn Surveys Ltd.

Consultant



DECLARATION OF COST OF SURVEYS

Re: Contractor Minequest Exploration Association Ltd.

Personnel

Richard Gosse, 3 days @ \$285	\$ 855.00	
Allan Zuk, 2 days @ \$185	370.00	
R.V. Long, 1 hr @ \$80	80.00	
Ron Bilquist, 10 days @ \$185	1,850.00	
Kelly Bilquist, 10 days @ \$120	1,200.00	
Casual Staff	<u>6.00</u>	
		\$ 4,361.00

Expenses

Rental Vehicle	670.00	
Fuel	225.74	
Fares	61.00	
Groceries	302.35	
Food and Accomodation	258.39	
General Supplies - Phone	44.52	
Maps and Publications	209.19	
Equipment Rental	<u>1,863.75</u>	
	3,637.94	
	<u>363.79</u>	<u>4,001.73</u>

Field Equipment 200.00

Sub-total 8,562.73

Apex Airborn Surveys Ltd - R. Sheldrake 800.00

cont'd



Expenses Continued

Livgard Consultants Ltd.

Personnel Grid:

Bryan Livgard, 11 days @ \$150	1,650.00	
Nathan Lemmon, 11 days @ \$125	1,375.00	

Personnel - Supervision Grid and Survey:

E. Livgard, P. Eng., 6 days @ 300	<u>1,800.00</u>	4,825.00
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Expenses:

Vehicle Rental	664.97	
Supplies	273.13	
Gas	200.00	
Groceries	<u>169.93</u>	

1,308.03

Disbursements 10%	<u>130,80</u>	1,438.83
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Report:

Fee, 2 days @ \$300	600.00	
Maps	190.00	
Typing	<u>70.00</u>	<u>860.00</u>

TOTAL COST OF GRID SURVEY AND REPORT **\$16,486.56**

Physical Work (Trenching) 12,800.00

\$29,286.56

Survey - 44.2 kilometres @ \$373/km

Apportioned: Sir Mc 13.0 km x \$373 = \$4,849.00
Pat Group 31.2 km x \$373 = \$11,637.60
Pat Group Trenching = \$12,800.00



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INSTRUMENTS

Scintrex - IGS (Integrated Portable Geophysical System)

Consisting of:

Proton Magnetometer MP-4:

- 0.1 gamma resolution over 20K to look gamma range
- total field and vertical gradient measurement
- keyboard selectable automatic or manual tuning
- automatic diurnal correction.

VLF:

- measures both VLF-magnetic and VLF-electric fields
- values are normalized by the horizontal vector amplitude
- calculates resistivity and phase angle
- digital tuning
- automatic tilt compensation
- signal vs. noise enhancement
- automatic gain adjustment

The data, station coordinates, measurements and data filing, can be recorded at each station with as few as two keys.

The IGS is operated via a keypad and has a display of 32 characters. It has a memory (16K RAM) which can hold one or more days of readings. It records the reading, actual grid coordinates, time, ancillary data and it permits revision of data. The information is stored (daily?) in any commonly available microcomputer (can also be printed or tape recorded). The data can be organized by grid, line and station number regardless of the order in which the data was taken. Diurnal corrections are made by comparing data from portable and base station magnetometers. Tilt angle and fraser filter EM date are produced. Data lists and/or contour plots can be printed on a digital printer.



REFERENCES

Brenda Mines Ltd. Exploration Group:

Diamond Drill Hole Report on Siwash Silver Mineral Property D.D.H. #1, #2 and #3, Del W. Ferguson, March 1980; and D.D.H. #4 to #15, Del W. Ferguson, December 1980.

Report on Geological Survey Magnetometer Survey and Road Building (1982) on Siwash Silver Mineral Property, Del W. Ferguson, November 1980.

Trenching, Road Building and Rock Geochemistry on Siwash Mineral Property, Del W. Ferguson, February 1980.

Geochemical Soil Report (1979) on Siwash Silver Mineral Property, Del W. Ferguson, February 1980.

Geology Report (1979), Siwash Silver Mineral Property, Del W. Ferguson, February 1980.

Hallof, Philip G., Ph.D., P.Eng., Phoenix Geophysics Ltd.:

Report on Further Reconnaissance Induced Polarization and Resistivity Survey at the Siwash Silver Property for Brenda Mines Ltd.; Report I dated February 29th, 1980; Report II dated January 6th, 1981.

Lewis, T.D., B.C. Dept. of Mines:

June #1, Skye #1, #2, #3, Claim Group, Geology, Geochemistry, Diamond Drilling, November 1st, 1978.

Minequest Exploration Associates Ltd.:

EM-VLF and Magnetic Surveys on Siwash Silver Property, November 1986.

Rice, H.M.A. (1947):

Geology and Mineral Deposits of the Princeton Map Area, B.C., GSC Memoir 243.

Assessment Reports:

- | | |
|-------|--|
| 1800 | Quality Exploration Corporation Magnetic Survey, Siwash Creek by Alrae Engineering, Rae Jury, P.Eng., March 26th, 1967. |
| 2005 | Quality Exploration Corporation Magnetic Survey, Siwash Creek by Alrae Engineering, Rae Jury, P.Eng., September 12th 1969. |
| 02389 | Report on Induced Polarization and Resistivity Survey, Quality Exploration Copr. by R.A. Bell, Ph.D., David Fountain, P.Eng., November 21st, 1969. |
| 2390 | Geochemical Soil Survey of Dillard and Mabel Area for Cyprus Exploration Corp. by Barringer Research Ltd., October 1969. |



- 02798 Report on Amanda-Amie Claim Group, Siwash Creek for Diana Explorations Ltd. by Donald W. Tully, P.Eng., December 18th, 1970.
- 3282 Report on Geochemical Surey Amanda-Amie and Paco Claims by Donald W. Tully, P.Eng., September 27th, 1971.
- 4969 Report on Amanda-Amie and Paco claims by Donald W. Tully, P.Eng., March 26th, 1974.
Magnetic Survey by Strata Geological Ltd.

B.C. Department of Mines:

June/Skye Claims

Paco Claims

GEM 1970 p. 389, 1971 p. 276, 1972 p. 141, 1973 p. 160.
Exploration in B.C. 1978 - E153.

Mabel Showing (Camp Show)

Annual Report 1927 p. 247-248, GEM 1969 p. 280.

Dillard Showing

Annual Report 1968 p. 203, GEM 1969 p. 280, 1972 p. 141.

Amanda Claims

GEM 1970 p. 389, 1971 p. 276, 1972 p. 141, 1973 p. 160,
1974 p. 120.

Fissure Maiden

Annual Report 1927 p. 247, GEM 1969 p. 280.

Clairmont (Argenite) (Fix) (Top)

Annual Report 1917 p. 206, 1927 p. 248, 1968 p. 203
GEM 1969 p. 208.

Snowstorm - Renfrew - Amie - Lucky Strike

Annual Report 1925 p. 210, 1927 p. 247, 1928 p. 264,
1929 p. 277, 1951 p. 130, 1952 p. 277.
GEM 1970 p. 389, 1971 p. 276, 1972 p. 141, 1973 p. 160,
1974 p. 120.



LISTING - SIWASH CREEK VLF-EM DATA - APEX AIRBORNE SURVEYS LTD.

FFSTATN	VLF STATN	LINE NO.	IP	QP	FF
37.5	0	0	-21	-2	4
62.5	25	0	-31	-2	-24
87.5	50	0	-32	0	-34
112.5	75	0	-24	1	-29
137.5	100	0	-15	4	-13
162.5	125	0	-7	5	10
187.5	150	0	-3	8	26
212.5	175	0	-6	6	18
237.5	200	0	-14	2	-12
262.5	225	0	-21	-1	-26
287.5	250	0	-17	-2	-17
312.5	275	0	-6	2	-13
337.5	300	0	-6	-2	-17
362.5	325	0	0	-1	-28
387.5	350	0	1	-2	-34
412.5	375	0	10	-2	-17
437.5	400	0	19	-1	24
462.5	425	0	26	0	59
487.5	450	0	20	-2	50
512.5	475	0	1	-5	15
537.5	500	0	-14	-2	-10
562.5	525	0	-15	0	-13
587.5	550	0	-13	2	-2
612.5	575	0	-6	6	0
637.5	600	0	-9	3	-9
662.5	625	0	-8	3	-12
687.5	650	0	-7	1	-4
712.5	675	0	-1	3	1
737.5	700	0	-2	1	4
762.5	725	0	-2	1	10
787.5	750	0	-2	0	3
812.5	775	0	-6	-1	-2
837.5	800	0	-8	-3	9
862.5	825	0	-3	0	18
887.5	850	0	-9	-2	17
912.5	875	0	-11	-1	7
937.5	900	0	-19	-4	2
962.5	925	0	-18	0	1
987.5	950	0	-19	0	3
1012.5	975	0	-20	1	15
1037.5	1000	0	-18	2	21
1062.5	1025	0	-24	1	5
1087.5	1050	0	-29	-1	-18
1112.5	1075	0	-34	-4	-18
1137.5	1100	0	-24	0	-7
1162.5	1125	0	-21	0	-6
1187.5	1150	0	-19	0	-16
1212.5	1175	0	-19	-1	-27
1237.5	1200	0	-15	0	0
1262.5	1225	0	-7	5	-99984
1287.5	1250	0	0	5	-100002

1312.5	1275	0	-22	-5	100020
37.5	0	100	-19	-1	12
62.5	25	100	-24	0	3
87.5	50	100	-27	2	-10
112.5	75	100	-28	3	-24
137.5	100	100	-26	2	-30
162.5	125	100	-19	3	-22
187.5	150	100	-11	5	-6
212.5	175	100	-4	9	6
237.5	200	100	-4	8	18
262.5	225	100	-5	8	19
287.5	250	100	-9	5	3
312.5	275	100	-18	0	-5
337.5	300	100	-15	3	-11
362.5	325	100	-15	0	-22
387.5	350	100	-13	5	-26
412.5	375	100	-6	0	-27
437.5	400	100	0	-2	-25
462.5	425	100	7	0	-15
487.5	450	100	14	-1	16
512.5	475	100	18	0	47
537.5	500	100	18	0	29
562.5	525	100	-2	-3	1
587.5	550	100	-9	0	0
612.5	575	100	-4	5	-7
637.5	600	100	-8	4	-13
662.5	625	100	-5	5	5
687.5	650	100	0	7	24
712.5	675	100	0	6	14
737.5	700	100	-10	2	-7
762.5	725	100	-14	-4	-13
787.5	750	100	-10	-1	-8
812.5	775	100	-7	0	0
837.5	800	100	-4	0	6
862.5	825	100	-5	1	11
887.5	850	100	-6	0	18
912.5	875	100	-9	-1	27
937.5	900	100	-13	0	24
962.5	925	100	-20	0	12
987.5	950	100	-29	-1	5
1012.5	975	100	-28	-2	-6
1037.5	1000	100	-33	-5	-11
1062.5	1025	100	-29	-4	-9
1087.5	1050	100	-26	-3	-12
1112.5	1075	100	-25	-4	0
1137.5	1100	100	-21	-2	7
1162.5	1125	100	-18	-1	-13
1187.5	1150	100	-28	-1	-16
1212.5	1175	100	-18	-2	-7
1237.5	1200	100	-15	-1	-10
1262.5	1225	100	-15	-1	-10016
1287.5	1250	100	-11	0	-10002
1312.5	1275	100	-9	2	10026
37.5	0	200	-17	-2	5
62.5	25	200	-19	-3	6

87.5	50	200	-20	0	6
112.5	75	200	-21	2	-2
137.5	100	200	-24	3	-12
162.5	125	200	-23	3	-14
187.5	150	200	-20	4	-8
212.5	175	200	-15	4	-9
237.5	200	200	-14	6	-19
262.5	225	200	-13	7	-13
287.5	250	200	-7	5	11
312.5	275	200	-1	9	19
337.5	300	200	-6	6	6
362.5	325	200	-13	2	-6
387.5	350	200	-13	3	-15
412.5	375	200	-12	0	-20
437.5	400	200	-8	0	-18
462.5	425	200	-2	1	-18
487.5	450	200	2	2	-19
512.5	475	200	6	1	-11
537.5	500	200	12	2	17
562.5	525	200	15	2	42
587.5	550	200	14	4	25
612.5	575	200	-4	1	4
637.5	600	200	-9	1	3
662.5	625	200	-6	9	-4
687.5	650	200	-11	6	-5
712.5	675	200	-7	9	6
737.5	700	200	-6	8	10
762.5	725	200	-7	6	-1
787.5	750	200	-12	3	-10
812.5	775	200	-11	1	-4
837.5	800	200	-7	3	3
862.5	825	200	-6	2	-2
887.5	850	200	-8	1	-22
912.5	875	200	-8	-3	-4
937.5	900	200	-4	1	52
962.5	925	200	10	0	53
987.5	950	200	-18	-1	15
1012.5	975	200	-28	-3	-4
1037.5	1000	200	-33	-3	-4
1062.5	1025	200	-28	-3	-5
1087.5	1050	200	-29	-7	-10
1112.5	1075	200	-28	-6	-6
1137.5	1100	200	-24	-3	1
1162.5	1125	200	-23	-3	-4
1187.5	1150	200	-23	-4	-16
1212.5	1175	200	-25	-2	-11
1237.5	1200	200	-17	-1	3
1262.5	1225	200	-15	0	7
1287.5	1250	200	-16	-1	6
1312.5	1275	200	-19	-2	6
1337.5	1300	200	-19	-3	-10018
1362.5	1325	200	-22	-10	-10030
1387.5	1350	200	-22	-8	10000
37.5	0	300	-13	-2	-2
62.5	25	300	-10	-1	12

87.5	50	300	-9	0	19
112.5	75	300	-12	0	15
137.5	100	300	-19	0	9
162.5	125	300	-21	0	-1
187.5	150	300	-25	0	-10
212.5	175	300	-24	1	-10
237.5	200	300	-21	2	-8
262.5	225	300	-18	1	-9
287.5	250	300	-17	2	-8
312.5	275	300	-14	3	-2
337.5	300	300	-12	3	6
362.5	325	300	-11	2	8
387.5	350	300	-13	1	5
412.5	375	300	-16	0	4
437.5	400	300	-16	0	-2
462.5	425	300	-18	-1	-12
487.5	450	300	-18	-2	-17
512.5	475	300	-14	-1	-16
537.5	500	300	-10	-2	-13
562.5	525	300	-5	-2	-5
587.5	550	300	-3	-2	19
612.5	575	300	1	0	33
637.5	600	300	-4	3	19
662.5	625	300	-17	6	8
687.5	650	300	-19	9	5
712.5	675	300	-21	8	0
737.5	700	300	-23	8	-7
762.5	725	300	-22	8	-15
787.5	750	300	-22	7	-21
812.5	775	300	-16	6	-18
837.5	800	300	-13	7	-3
862.5	825	300	-4	8	5
887.5	850	300	-7	5	1
912.5	875	300	-7	5	6
937.5	900	300	-9	3	19
962.5	925	300	-6	4	20
987.5	950	300	-16	-3	14
1012.5	975	300	-18	-3	6
1037.5	1000	300	-24	-7	-4
1062.5	1025	300	-24	-6	-9
1087.5	1050	300	-24	-7	-4
1112.5	1075	300	-20	-2	3
1137.5	1100	300	-19	0	1
1162.5	1125	300	-21	-2	-4
1187.5	1150	300	-21	-3	-5
1212.5	1175	300	-20	-2	-3
1237.5	1200	300	-18	-2	-4
1262.5	1225	300	-18	-3	-8
1287.5	1250	300	-17	-4	-10
1312.5	1275	300	-15	-3	-9
1337.5	1300	300	-12	-1	-100013
1362.5	1325	300	-10	0	-100020
1387.5	1350	300	-8	5	99983
37.5	0	400	3	1	17
62.5	25	400	5	1	21

87.5	50	400	-2	0	19
112.5	75	400	-7	-1	15
137.5	100	400	-11	-1	10
162.5	125	400	-17	-2	8
187.5	150	400	-16	-3	1
212.5	175	400	-22	-3	-4
237.5	200	400	-19	0	-5
262.5	225	400	-20	1	-6
287.5	250	400	-17	2	-8
312.5	275	400	-17	2	-9
337.5	300	400	-14	1	-6
362.5	325	400	-12	0	-4
387.5	350	400	-10	0	-4
412.5	375	400	-10	-1	-5
437.5	400	400	-8	-2	-6
462.5	425	400	-8	-3	-2
487.5	450	400	-5	-4	4
512.5	475	400	-5	-4	0
537.5	500	400	-6	-4	-10
562.5	525	400	-8	-5	-8
587.5	550	400	-3	-5	1
612.5	575	400	-1	-5	9
637.5	600	400	-2	-5	22
662.5	625	400	-3	-3	25
687.5	650	400	-9	0	8
712.5	675	400	-18	3	-6
737.5	700	400	-19	6	-5
762.5	725	400	-16	8	4
787.5	750	400	-15	8	12
812.5	775	400	-15	8	6
837.5	800	400	-20	5	-5
862.5	825	400	-22	5	-6
887.5	850	400	-19	6	-2
912.5	875	400	-18	6	-1
937.5	900	400	-17	5	-5
962.5	925	400	-18	2	-6
987.5	950	400	-16	3	5
1012.5	975	400	-14	3	12
1037.5	1000	400	-14	2	13
1062.5	1025	400	-21	-1	19
1087.5	1050	400	-19	-3	9
1112.5	1075	400	-29	-8	-6
1137.5	1100	400	-30	-8	-7
1162.5	1125	400	-27	-6	-6
1187.5	1150	400	-26	-3	-8
1212.5	1175	400	-24	-1	-10
1237.5	1200	400	-23	-1	-7
1262.5	1225	400	-19	0	-6
1287.5	1250	400	-18	0	-4
1312.5	1275	400	-17	0	-100013
1337.5	1300	400	-14	1	-100027
1212.5	1175	500	-17	1	99984
37.5	0	500	-3	1	-10
62.5	25	500	1	2	5
87.5	50	500	4	2	18

112.5	75	500	4	1	17
137.5	100	500	-4	0	13
162.5	125	500	-6	-1	7
187.5	150	500	-11	-2	6
212.5	175	500	-12	-2	12
237.5	200	500	-12	-2	14
262.5	225	500	-17	-1	11
287.5	250	500	-19	-1	1
312.5	275	500	-24	-1	-8
337.5	300	500	-23	0	-14
362.5	325	500	-21	-1	-16
387.5	350	500	-18	0	-12
412.5	375	500	-12	1	-11
437.5	400	500	-11	0	-11
462.5	425	500	-7	0	-4
487.5	450	500	-5	-1	2
512.5	475	500	-2	-1	0
537.5	500	500	-6	-5	-3
562.5	525	500	-3	-4	-17
587.5	550	500	-5	-7	-29
612.5	575	500	-1	-7	-5
637.5	600	500	10	-3	31
662.5	625	500	13	-2	34
687.5	650	500	1	-4	16
712.5	675	500	-9	-2	7
737.5	700	500	-11	0	-1
762.5	725	500	-13	2	-13
787.5	750	500	-14	2	-9
812.5	775	500	-9	4	6
837.5	800	500	-5	6	10
862.5	825	500	-9	4	15
887.5	850	500	-11	4	21
912.5	875	500	-13	4	9
937.5	900	500	-22	0	-8
962.5	925	500	-23	0	-11
987.5	950	500	-21	2	0
1012.5	975	500	-16	5	5
1037.5	1000	500	-17	2	1
1062.5	1025	500	-20	0	0
1087.5	1050	500	-18	0	-2
1112.5	1075	500	-20	0	-6
1137.5	1100	500	-18	1	-3
1162.5	1125	500	-18	0	5
1187.5	1150	500	-14	1	7
1237.5	1200	500	-19	-1	3
1262.5	1225	500	-18	0	-4
1287.5	1250	500	-22	0	-10021
1312.5	1275	500	-18	0	-10025
1337.5	1300	500	-18	0	9997
37.5	0	600	-10	-1	-7
62.5	25	600	-6	0	-6
87.5	50	600	-6	0	-2
112.5	75	600	-3	2	4
137.5	100	600	-3	2	8
162.5	125	600	-4	2	11

187.5	150	600	-6	1	6
212.5	175	600	-9	0	-3
237.5	200	600	-12	-1	5
262.5	225	600	-9	-2	25
287.5	250	600	-9	-1	27
312.5	275	600	-17	-2	6
337.5	300	600	-26	-2	-17
362.5	325	600	-27	-1	-27
387.5	350	600	-22	0	-20
412.5	375	600	-14	3	-6
437.5	400	600	-8	4	-1
462.5	425	600	-8	1	-5
487.5	450	600	-8	0	-7
512.5	475	600	-7	-1	-4
537.5	500	600	-4	-2	0
562.5	525	600	-4	-3	-5
587.5	550	600	-3	-3	-19
612.5	575	600	-5	-7	-21
637.5	600	600	3	-3	5
662.5	625	600	8	-2	35
687.5	650	600	11	-1	30
712.5	675	600	-5	-3	9
737.5	700	600	-11	-1	-4
762.5	725	600	-13	0	-11
787.5	750	600	-12	0	1
812.5	775	600	-8	3	17
837.5	800	600	-6	4	7
862.5	825	600	-15	0	-10
887.5	850	600	-16	-1	-10
912.5	875	600	-12	1	-4
937.5	900	600	-9	2	1
962.5	925	600	-9	2	11
987.5	950	600	-8	3	23
1012.5	975	600	-11	1	25
1037.5	1000	600	-17	-1	12
1062.5	1025	600	-25	-4	-6
1087.5	1050	600	-28	-3	-11
1112.5	1075	600	-26	-2	-4
1137.5	1100	600	-21	1	0
1162.5	1125	600	-22	1	0
1187.5	1150	600	-21	1	-10021
1212.5	1175	600	-22	0	-10037
1237.5	1200	600	-21	-1	9985
37.5	0	700	-5	-3	-6
62.5	25	700	-2	-3	-4
87.5	50	700	-1	-3	-4
112.5	75	700	0	-3	4
137.5	100	700	1	-3	17
162.5	125	700	2	0	26
187.5	150	700	-5	-1	29
212.5	175	700	-9	0	11
237.5	200	700	-20	-5	-13
262.5	225	700	-23	-8	-22
287.5	250	700	-17	-6	-12
312.5	275	700	-13	-6	17

337.5	300	700	-5	0	34
362.5	325	700	-13	-4	23
387.5	350	700	-22	-6	1
412.5	375	700	-30	-9	-11
437.5	400	700	-28	-7	-16
462.5	425	700	-25	-5	-20
487.5	450	700	-22	-2	-14
512.5	475	700	-15	0	-9
537.5	500	700	-12	1	-10
562.5	525	700	-11	0	-8
587.5	550	700	-7	1	-5
612.5	575	700	-6	0	2
637.5	600	700	-4	1	1
662.5	625	700	-4	-1	-13
687.5	650	700	-8	-4	-10
712.5	675	700	-1	-3	14
737.5	700	700	2	-1	28
762.5	725	700	-1	-2	17
787.5	750	700	-12	-4	-2
812.5	775	700	-15	-1	-8
837.5	800	700	-15	1	4
862.5	825	700	-10	4	10
887.5	850	700	-12	4	-1
912.5	875	700	-17	0	-6
937.5	900	700	-15	0	-2
962.5	925	700	-13	0	7
987.5	950	700	-13	1	11
1012.5	975	700	-13	0	-1
1037.5	1000	700	-20	-4	-14
1062.5	1025	700	-17	-2	-3
1087.5	1050	700	-15	-2	21
1112.5	1075	700	-8	2	-10005
1137.5	1100	700	-21	-2	-10032
1162.5	1125	700	-23	-2	9996
37.5	0	800	-11	-2	-14
62.5	25	800	-9	-2	-15
87.5	50	800	-6	-3	-9
112.5	75	800	0	0	-3
137.5	100	800	0	0	1
162.5	125	800	3	0	2
187.5	150	800	0	0	16
212.5	175	800	2	5	30
237.5	200	800	-1	3	13
262.5	225	800	-13	-3	-18
287.5	250	800	-16	-8	-41
312.5	275	800	-11	-7	-35
337.5	300	800	0	-3	13
362.5	325	800	14	5	42
387.5	350	800	10	0	22
412.5	375	800	-9	-8	12
437.5	400	800	-9	-6	15
462.5	425	800	-12	-5	3
487.5	450	800	-18	-6	-9
512.5	475	800	-18	-5	-10
537.5	500	800	-15	-1	-6

562.5	525	800	-12	0	1
587.5	550	800	-11	1	5
612.5	575	800	-10	1	-7
637.5	600	800	-14	-1	-18
662.5	625	800	-12	-2	-18
687.5	650	800	-5	-2	-13
712.5	675	800	-3	-3	19
737.5	700	800	4	-1	44
762.5	725	800	1	0	21
787.5	750	800	-19	-7	-1
812.5	775	800	-20	-2	-5
837.5	800	800	-19	-1	-5
862.5	825	800	-19	0	4
887.5	850	800	-15	0	-15
912.5	875	800	-18	1	-17
937.5	900	800	-20	0	23
962.5	925	800	2	8	15
987.5	950	800	-23	-2	-1
1012.5	975	800	-18	0	10
1037.5	1000	800	-18	1	8
1062.5	1025	800	-22	-3	-2
1087.5	1050	800	-24	-3	-9
1112.5	1075	800	-24	-2	3
1137.5	1100	800	-20	-1	23
1162.5	1125	800	-19	-2	17
912.5	875	900	-28	-7	-5
937.5	900	900	-34	-1	-14
962.5	925	900	-30	-2	-18
987.5	950	900	-27	0	-19
1012.5	975	900	-23	1	-7
1037.5	1000	900	-16	1	4
1062.5	1025	900	-15	2	9
1087.5	1050	900	-17	-2	9
1112.5	1075	900	-18	-3	3
1137.5	1100	900	-23	-2	4
1162.5	1125	900	-21	-3	11
1187.5	1150	900	-23	1	19
1212.5	1175	900	-25	0	-18
1237.5	1200	900	-30	-2	-67
1262.5	1225	900	-37	-9	-37

LISTING - SIWASH CREEK MAGNETIC DATA - APEX AIRBORNE SURVEYS LTD.

MAG	STATN	LN NO.	GAMMAS	DX	DZ
0		0	57161.3	9999.9	-3.2
25		0	57231.9	70.6	3
50		0	57250.3	18.4	1.2
75		0	57269.4	19.1	4.1
100		0	57124.0	-145.4	-2.8
125		0	57050.1	-73.9	-24.3
150		0	57083.5	33.4	-2.5
175		0	57018.7	-64.8	-12.8
200		0	57018.1	-0.6	-2.4
225		0	56995.7	-22.4	-13.6
250		0	56989.3	-6.4	-25.1
275		0	57069.7	80.4	-15.5
300		0	57994.0	924.3	168.5
325		0	58196.8	202.8	113.8
350		0	57513.3	-683.5	-35.3
375		0	57185.3	-328	-29.5
400		0	57165.3	-20	-21.3
425		0	57255.4	90.1	20.3
450		0	56842.9	-412.5	-31.3
475		0	56873.7	30.8	-13
500		0	56946.3	72.6	-8.3
525		0	56937.8	-8.5	10.5
550		0	56925.4	-12.4	-22
575		0	56979.3	53.9	-10.1
600		0	57033.4	54.1	-7.8
625		0	57120.3	86.9	-15.2
650		0	57108.0	-12.3	0
675		0	57405.9	297.9	23.9
700		0	57156.9	-249	-5.2
725		0	57121.2	-35.7	-24.5
750		0	56967.4	-153.8	-47
775		0	57009.6	42.2	-27.6
800		0	57409.1	399.5	75.6
825		0	57010.3	-398.8	-28.3
850		0	56961.9	-48.4	-15.1
875		0	57098.1	136.2	21.7
900		0	57215.4	117.3	27.9
925		0	56978.6	-236.8	-6.9
950		0	57034.5	55.9	-10
975		0	57019.3	-15.2	-30
1000		0	57036.7	17.4	-7.3
1025		0	57031.0	-5.7	-15.3
1050		0	57052.1	21.1	-5.7
1075		0	57148.2	96.1	0.5
1100		0	57359.7	211.5	37.7
1125		0	57188.5	-171.2	-9.6
1150		0	57110.5	-78	-31.1
1175		0	57130.3	19.8	-43.1
1200		0	57199.1	68.8	-26.4

1225	0	57266.2	67.1	-7
1250	0	57420.7	154.5	-3.6
1275	0	57336.1	-84.6	-24.9
0	100	57167.6	99999.9	3.4
25	100	57116.8	-50.8	-6.5
50	100	57055.1	-61.7	-26.6
75	100	57120.4	65.3	-13.3
100	100	57058.4	-62	-38.4
125	100	57055.0	-3.4	-23.7
150	10	56982.0	-73	-9.3
175	100	56975.8	-6.2	-22.3
200	100	57003.5	27.7	-16.8
225	100	56939.8	-63.7	-21.4
250	100	56886.8	-53	-21
275	100	56792.5	-94.3	-98.7
300	100	57059.7	267.2	-13.3
325	100	57116.2	56.5	1.9
350	100	57303.1	186.9	13.8
375	100	57030.1	-273	-25.1
400	100	57103.0	72.9	-33.4
425	100	57093.7	-9.3	-25.1
450	100	57287.6	193.9	19.8
475	100	57056.9	-230.7	-27.9
500	100	57074.5	17.6	-13.9
525	100	56482.8	-591.7	-441.1
550	100	57067.2	584.4	-19
575	100	57195.2	128	-0.7
600	100	56983.6	-211.6	74
625	100	57242.3	258.7	-5.6
650	100	57056.7	-185.6	-21.9
675	100	57089.0	32.3	-7
700	100	56967.1	-121.9	-29.7
725	100	57175.6	208.5	-9.8
750	100	57334.6	159	-25.5
775	100	57175.9	-158.7	-19.2
800	100	57055.5	-120.4	-29.5
825	100	57174.1	118.6	-22.1
850	100	57156.7	-17.4	-6.1
875	100	56955.3	-201.4	160.4
900	100	57117.3	162	-5.3
925	100	57119.0	1.7	-17.8
950	100	57167.2	48.2	-94.6
975	100	57163.9	-3.3	-29.1
1000	100	57258.0	94.1	-33.4
1025	100	57185.0	-73	-9.1
1050	100	57140.4	-44.6	-33
1075	100	57265.1	124.7	10.1
1100	100	57228.7	-36.4	6.1
1125	100	57119.5	-109.2	-1.7
1150	100	57085.1	-34.4	-5.8
1175	100	57150.0	64.9	8.4
1200	100	57252.4	102.4	-0.6
1225	100	57265.9	13.5	-11.3
1250	100	57155.6	-110.3	-24.4
1275	100	57031.7	-123.9	-33.9

0	200	57137.3	9999.9	-15
25	200	57076.4	-60.9	-37.3
50	200	57204.0	127.6	-3.7
75	200	57207.1	3.1	2.9
100	200	57245.6	38.5	1
125	200	57266.3	20.7	14.6
150	200	57080.9	-185.4	-13.5
175	200	56896.2	-184.7	-19.1
200	200	57053.5	157.3	4.3
225	200	57100.3	46.8	-5.4
250	200	57182.1	9999.9	11.6
275	200	57103.0	-79.1	-7.5
300	200	57009.0	-94	-7.9
325	200	56957.7	-51.3	-23.1
350	200	56944.7	-13	-24.2
375	200	57111.1	166.4	-25.6
400	200	57324.1	213	0.8
425	200	57180.9	-143.2	-1.5
450	200	57204.1	23.2	-11.7
475	200	57156.8	-47.3	-11.1
500	200	57195.4	38.6	-20.9
525	200	57119.0	-76.4	29.9
550	200	56885.9	-233.1	-8.2
575	200	57042.8	156.9	-10.3
600	200	57176.2	133.4	-14.9
625	200	57113.8	-62.4	-23
650	200	57076.9	-36.9	-2.2
675	200	57148.4	71.5	20.3
700	200	57140.6	-7.8	16.7
725	200	56945.9	-194.7	-34.7
750	200	57082.1	136.2	-9
775	200	57117.7	35.6	-14.2
800	200	57231.6	113.9	6.1
825	200	57137.3	-94.3	-14.2
850	200	57192.7	55.4	-21.6
875	200	57245.8	53.1	-23.9
900	200	57449.9	204.1	14
925	200	57245.2	-204.7	-14.6
950	200	57133.6	-111.6	-29.1
975	200	57110.5	-23.1	-21.1
1000	200	57201.8	91.3	-13.5
1025	200	57120.9	-80.9	-19.5
1050	200	57104.4	-16.5	-28
1075	200	57214.4	110	-42.9
1100	200	57216.8	2.4	-46.4
1125	200	57475.8	259	28.9
1150	200	57129.1	-346.7	-27.1
1175	200	57098.3	-30.8	-46.4
1200	200	57334.6	236.3	57
1225	200	56997.6	-337	-32.3
1250	200	56939.8	-57.8	-19.9
1275	200	57075.0	135.2	-1.8
1300	200	57007.6	-67.4	-22.1
1325	200	57121.5	113.9	-16.9
1350	200	57120.6	-0.9	-6.7

0	300	57121.4	9999	-25.7
25	300	56912.4	-209	-26
50	300	57165.8	253.4	-11.4
75	300	57124.9	-40.9	-14.3
100	300	57155.4	30.5	-20.5
125	300	57185.0	29.6	-27.8
150	300	57203.6	18.6	-8.1
175	300	57055.5	-148.1	-111.6
200	300	57220.1	164.6	-12.1
225	300	57131.0	-89.1	-10.1
250	300	57004.4	-126.6	-36.7
275	300	57019.0	14.6	-29.7
300	300	57032.4	13.4	-46.7
325	300	57074.9	42.5	-18.2
350	300	57116.2	41.3	-2.4
375	300	57114.4	-1.8	-17.2
400	300	57039.4	-75	-30.9
425	300	56982.7	-56.7	-36.8
450	300	56944.8	-37.9	-42
475	300	57022.3	77.5	0.3
500	300	56989.7	-32.6	-59.7
525	300	57015.7	26	-82.1
550	300	56977.1	-38.6	-18.7
575	300	56939.1	-38	-25.4
600	300	55875.8	-1063.3	-34.1
625	300	57043.5	1167.7	-15.9
650	300	57025.2	-18.3	-35.5
675	300	56409.1	-616.1	496.9
700	300	57235.7	826.6	-6.4
725	300	57310.0	74.3	-6.7
750	300	57308.9	-1.1	-2.2
775	300	57402.3	93.4	-3.8
800	300	57348.9	-53.4	-19.6
825	300	57378.5	29.6	-3
850	300	57502.5	124	-12.1
875	300	57619.2	116.7	19.6
900	300	57411.9	-207.3	-35.1
925	300	57608.8	196.9	20.2
950	300	57368.6	-240.2	-29.7
975	300	57416.2	47.6	-9.1
1000	300	57221.0	-195.2	-52.2
1025	300	57202.7	-18.3	-6.8
1050	300	56982.3	-220.4	-20.2
1075	300	57009.7	27.4	-29.2
1100	300	56821.0	-188.7	-35.4
1125	300	56957.5	136.5	-44.6
1150	300	57141.3	183.8	2.3
1175	300	56962.3	-179	-44
1200	300	57101.8	139.5	-8.4
1225	300	57071.5	-30.3	-14.2
1250	300	57028.2	-43.3	-20.5
1275	300	57102.0	73.8	-26.1
1300	300	57022.4	-79.6	-33
1325	300	57114.8	92.4	-22.6
1350	300	57214.9	100.1	-1.6

0	400	57055.5	9999.9	-23.1
25	400	57281.8	226.3	-17.8
50	400	57250.3	-31.5	-24.4
75	400	57182.0	-68.3	-42.4
100	400	57188.3	6.3	-28.2
125	400	57196.1	7.8	-11.3
150	400	57223.4	27.3	-13
175	400	57022.9	-200.5	-28.4
200	400	57143.6	120.7	-4.3
225	400	57229.2	85.6	-22.2
250	400	57338.6	109.4	-12.7
275	400	57307.9	-30.7	-0.4
300	400	57331.9	24	-7.1
325	400	57302.2	-29.7	-12.6
350	400	57297.9	-4.3	2.6
375	400	57217.0	-80.9	-19.9
400	400	57152.8	-64.2	-35.1
425	400	57293.3	140.5	-14.8
450	400	57230.4	-62.9	12.8
475	400	56998.3	-232.1	-21.4
500	400	56944.3	-54	-33.3
525	400	57073.0	128.7	-12.1
550	400	57088.4	15.4	-39.2
575	400	57109.0	20.6	-17.4
600	400	56722.6	-386.4	-310.7
625	400	57013.6	291	-14.2
650	400	57048.1	34.5	-18
675	400	57035.4	-12.7	-29
700	400	57034.1	-1.3	-23.4
725	400	57039.1	5	-39.5
750	400	57071.2	32.1	-38.4
775	400	56643.6	-427.6	-404.7
800	400	55641.8	-1001.8	782.7
825	400	57085.0	1443.2	-7.4
850	400	57222.5	137.5	-25.8
875	400	57347.3	124.8	-12.1
900	400	57321.1	-26.2	0.1
925	400	57307.4	-13.7	-22.5
950	400	57218.6	-88.8	-35.3
975	400	57247.3	28.7	-20.2
1000	400	57326.3	79	9
1025	400	57089.9	-236.4	-29
1050	400	57152.5	62.6	-6.7
1075	400	56970.8	-181.7	3
1100	400	57010.1	39.3	-15.2
1125	400	56944.9	-65.2	-11
1150	400	55226.7	-1718.2	-488.9
1175	400	57025.1	1798.4	-13.8
1200	400	56989.5	-35.6	-31.7
1225	400	57091.0	101.5	-27.5
1250	400	57172.2	81.2	-13.2
1275	400	57217.5	45.3	0.8
1300	400	57059.8	-157.7	-39.7
1175	500	56981.9	9999.9	-26.8
0	500	57127.5	145.6	-45.8

25	500	57214.4	86.9	-24.7
50	500	57229.9	15.5	-23.9
75	500	57282.2	52.3	-19.8
100	500	57301.2	19	-35.3
125	500	57327.9	26.7	-14.3
150	500	57348.8	20.9	-8
175	500	57322.1	-26.7	-26.1
200	500	57361.9	39.8	-6.4
225	500	57194.8	-167.1	-204.9
250	500	57305.4	110.6	-48.9
275	500	57331.3	25.9	-17
300	500	57311.5	-19.8	-23.4
325	500	57185.5	-126	-25.2
350	500	57152.3	-33.2	-70.9
375	500	57283.2	130.9	-20.1
400	500	57456.4	173.2	8
425	500	57342.0	-114.4	-23.1
450	500	57430.0	88	5
475	500	57279.5	-150.5	-6.5
500	500	57244.9	-34.6	-1.9
525	500	57043.3	-201.6	-24.8
550	500	57016.7	-26.6	-8.1
575	500	57127.3	110.6	-52
600	500	57174.0	46.7	-11.4
625	500	57135.3	-38.7	-16.7
650	500	57077.9	-57.4	-36.3
675	500	57068.2	-9.7	-24.8
700	500	56973.3	-94.9	-139.2
725	500	57113.4	140.1	-7.3
750	500	57099.2	-14.2	-15.6
775	500	57063.9	-35.3	-40.4
800	500	57063.6	-0.3	-27.8
825	500	57003.8	-59.8	-42.6
850	500	57119.6	115.8	-22.9
875	500	57134.6	15	-12.7
900	500	57146.6	12	-30.8
925	500	57181.1	34.5	-8.3
950	500	57187.2	6.1	-14.3
975	500	57213.1	25.9	-1.2
1000	500	57213.0	-0.1	3.2
1025	500	57125.9	-87.1	-13.5
1050	500	57051.3	-74.6	-3.9
1075	500	57127.3	76	5
1100	500	57146.7	19.4	10.6
1125	500	57073.8	-72.9	-26.7
1150	500	56958.4	-115.4	-37.5
1200	500	56968.8	10.4	-23.9
1225	500	57057.5	88.7	-3.4
1250	500	57055.3	-2.2	-19
1275	500	56881.6	-173.7	-44.2
1300	500	57052.0	170.4	-3.8
0	600	57033.2	9999.9	-56.6
25	600	57149.1	115.9	6.2
50	600	57107.2	-41.9	-3.1
75	600	57096.4	-10.8	-11.9

100	600	57131.4	35	-19.5
125	600	57202.6	71.2	-16.9
150	600	57192.3	-10.3	-43.5
175	600	57280.7	88.4	-20
200	600	57341.7	61	-6
225	600	57322.4	-19.3	-39.6
250	600	57318.0	-4.4	3.6
275	600	57196.4	-121.6	9.3
300	600	57157.4	-39	-3.5
325	600	56952.3	-205.1	-21.9
350	600	56964.2	11.9	-34.7
375	600	57319.0	354.8	1.8
400	600	57204.9	-114.1	31.2
425	600	57030.6	-174.3	-106.9
450	600	57187.4	156.8	-21.3
475	600	57120.9	-66.5	-43.4
500	600	57268.4	147.5	-7.7
525	600	57116.1	-152.3	-34
550	600	56922.4	-193.7	-51.3
575	600	57126.5	204.1	-26.3
600	600	57181.8	55.3	-4.7
625	600	57086.8	-95	-28.2
650	600	57112.1	25.3	-21.5
675	600	57157.8	45.7	-27.1
700	600	57221.3	63.5	-14.8
725	600	57187.4	-33.9	-19.5
750	600	57154.8	-32.6	-11.4
775	600	57092.5	-62.3	-21.8
800	600	57043.0	-49.5	-45
825	600	57269.8	226.8	-6.8
850	600	57538.1	268.3	46.7
875	600	57391.1	-147	-4.2
900	600	57147.7	-243.4	9.5
925	600	57173.0	25.3	14
950	600	57235.2	62.2	1.6
975	600	57070.2	-165	-11
1000	600	57115.9	45.7	-11.8
1025	600	57133.5	17.6	-10.4
1050	600	57065.9	-67.6	-4.3
1075	600	57205.0	139.1	0
1100	600	56990.4	-214.6	-30.3
1125	600	57095.7	105.3	-2.2
1150	600	56978.4	-117.3	-42.8
1175	600	57089.3	110.9	-10
1200	600	57102.5	13.2	-8.4
0	700	57077.7	9999	-58.4
25	700	57135.4	57.7	-124.8
50	700	57194.9	59.5	-27.6
75	700	57097.2	-97.7	-46.9
100	700	57170.7	73.5	-31.2
125	700	57147.0	-23.7	-34.8
150	700	57157.5	10.5	-39.5
175	700	57170.7	13.2	-29.9
200	700	57211.6	40.9	-23.4
225	700	57087.1	-124.5	-40.1

250	700	57165.0	77.9	-32.1
275	700	57090.9	-74.1	-25.8
300	700	57201.2	110.3	-21.3
325	700	57176.1	-25.1	-26.9
350	700	57140.0	-36.1	-29.7
375	700	57356.3	216.3	-55.4
400	700	57233.2	-123.1	-34.8
425	700	57296.2	63	-50.7
450	700	57486.4	190.2	21.8
475	700	57319.8	-166.6	-2.2
500	700	57154.5	-165.3	-30.1
525	700	57323.6	169.1	-5.4
550	700	57144.5	-179.1	-27.1
575	700	57326.7	182.2	22.9
600	700	57087.2	-239.5	-26.9
625	700	57100.7	13.5	-18.2
650	700	57197.7	97	-25.9
675	700	57134.1	-63.6	-7.4
700	700	57115.4	-18.7	-43.5
725	700	57168.5	53.1	-17.1
750	700	57056.9	-111.6	-40.2
775	700	57218.2	161.3	-33.3
800	700	57225.1	6.9	-18.7
825	700	57138.6	-86.5	-21.1
850	700	57168.6	30	-29.4
875	700	57056.0	-112.6	-53.8
900	700	57165.8	109.8	-31.3
925	700	57134.7	-31.1	7.6
950	700	57159.5	24.8	-19.1
975	700	57227.4	67.9	1
1000	700	56953.8	-273.6	-31.4
1025	700	56937.8	-16	-16.7
1050	700	56984.6	46.8	-4.5
1075	700	56970.4	-14.2	-3.4
1100	700	56921.7	-48.7	-27.3
1125	700	57000.6	78.9	-24.5
0	800	57009.4	99.9	-29.3
25	800	56966.3	-43.1	-103.3
50	800	57089.7	123.4	-26.8
75	800	57187.3	97.6	-23.4
100	800	56938.4	-248.9	-36.7
125	800	56950.1	11.7	-33.3
150	800	57256.9	306.8	-17.9
175	800	57423.5	166.6	2.1
200	800	57248.1	-175.4	-26.5
225	800	57330.4	82.3	-21.8
250	800	57396.8	66.4	-37
275	800	57363.4	-33.4	-29.9
300	800	57535.2	171.8	-2.6
325	800	57538.9	3.7	-11.3
350	800	57292.1	-246.8	-49.9
375	800	57263.4	-28.7	-28.3
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425	800	57260.0	42.6	0.3
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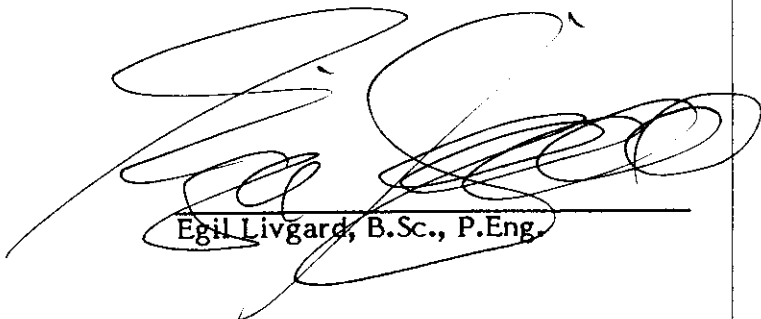
475	800	57242.7	141.9	-25.4
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525	800	57336.0	53.2	5.7
550	800	57209.6	-126.4	-0.9
575	800	57074.9	-134.7	-10.1
600	800	57174.6	99.7	-0.7
625	800	57272.4	97.8	-6.3
650	800	57333.7	61.3	2.7
675	800	57245.5	-88.2	-8.3
700	800	57104.6	-140.9	-27.7
725	800	57070.9	-33.7	-18
750	800	57012.0	-58.9	-25.9
775	800	56928.6	-83.4	-45.8
800	800	57086.8	158.2	-21.5
825	800	57157.0	70.2	-23.2
850	800	57141.0	-16	-13
875	800	57084.8	-56.2	-30.1
900	800	57065.3	-19.5	-21.3
925	800	57103.5	38.2	0.6
950	800	56928.6	-174.9	-44.8
975	800	57047.2	118.6	-24.5
1000	800	57121.6	74.4	0
1025	800	57046.8	-74.8	-7.6
1050	800	57007.7	-39.1	-36.3
1075	800	56914.7	-93	-45.1
1100	800	57037.8	123.1	-41.5
1125	800	56917.0	-120.8	-24.8
875	900	57093.2	999.9	-15.1
900	900	57101.2	8	-22.9
925	900	57055.2	-46	-12.1
950	900	57106.9	51.7	-12.9
975	900	57206.3	99.4	5.8
1000	900	56905.7	-300.6	13.3
1025	900	57099.4	193.7	-27.9
1050	900	57173.4	74	-19
1075	900	57097.8	-75.6	-12
1100	900	57070.6	-27.2	-11.1
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1150	900	57099.0	98.1	-27
1175	900	56529.7	-569.3	-203.6
1200	900	57239.8	710.1	-8.7
1225	900	57142.0	-97.8	-36.9

CERTIFICATE

I, EGIL LIVGARD, of 1990 King Albert Avenue, Coquitlam, B.C., DO HEREBY CERTIFY:

1. I am a Consulting Geological Engineer, practicing from #717 - 837 West Hastings Street, Vancouver, B.C.
2. I am a graduate of the University of British Columbia, with a B.Sc., 1960 in Geological Sciences.
3. I am a registered member in good standing of the Association of Professional Engineers of the Province of British Columbia.
4. I have practised my profession for over 25 years.
5. I have no direct, indirect or contingent interest in the Siwash Silver Property, which is held by Westron Venture Ltd., in the securities of Westron Venture Ltd., nor do I intend to receive any such interest.
6. This report dated January 25, 1987 is based on an examinations of the property on September 16th, October 2nd - 4th, 8th - 10th, 23rd - 25th, November 1st, 10th - 12th, 1986 and on references as listed.

DATED AT VANCOUVER, BRITISH COLUMBIA THIS 25TH OF JANUARY, 1987.



Egil Livgard, B.Sc., P.Eng.

