2877

REPORT ON
INDUCED POLARIZATION
AND RESISTIVITY SURVEY
ON THE
SAM GOOSLY AREA
OMINECA MINING DIVISION, B.C.
FOR
SILVER STANDARD MINES LIMITED

93L/1E

BY

ROBERT A. BELL, Ph.D.

AND

DAVID K. FOUNTAIN, P.Eng.

NAME AND LOCATION OF PROPERTY

SAM GOOSLY AREA

OMINECA MINING DIVISION, B.C. 54°N, 126°W - SE

DATE STARTED: AUGUST 12, 1970

DATE FINISHED: OCTOBER 31, 1970

TABLE OF CONTENTS

McPHAR GEOPHYSICS LIMITED

REPORT ON
INDUCED POLARIZATION
AND RESISTIVITY SURVEY
ON THE
SAM GOOSLY AREA
OMINECA MINING DIVISION, B.C.
FOR
SILVER STANDARD MINES LIMITED

1. INTRODUCTION

At the request of Silver Standard Mines Limited, we have carried out a combined induced polarization and resistivity survey of a portion of the Goosly South Central and Southeast Claim Group. The property is situated in the Omineca Mining Division of British Columbia, in the southeast quadrant of the one degree quadrilateral whose southeast corner is at 54°N latitude and 126°W longitude.

The property is underlain, at least in part, by a sequence of mineralised volcanics and the purpose of the IP survey was to outline any areas of concentrated mineralization that might contain copper in economic amounts. Field work was carried out in August, September and October of 1970 using a McPhar variable frequency IP system operating at 0.3 and 5.0 Hz. A 300-foot dipole-dipole electrode array was employed, with three receiver readings from each transmitter location (i.e. n = 1, 2 and 3).

The survey was carried out on the following claims, all situated in the Omineca Mining Division, and all believed to be owned or held under option by Silver Standard Mines Limited. List of claims covered by IP survey:

NWB 60	-	NWB 71	(inclusive)
NWB 80	-	NWB 93	(inclusive)
NWB 180	-	NWB 183	(inclusive)
RAY 1 FR	-	RAY 4 FR	(inclusive)

2. PRESENTATION OF RESULTS

The induced polarization and resistivity results are shown on the following data plots in the manner described in the notes preceding this report.

Line 17N	300 foot spreads	Dwg. IP 5578-1
Line 22N	300 foot spreads	Dwg. IP 5578-2
Line 27N	300 foot spreads	Dwg. IP 5578-3
Line 32N	300 foot spreads	Dwg. IP 5578-4
Line 37N	300 foot spreads	Dwg. IP 5578-5
Line 42N	300 foot spreads	Dwg. IP 5578-6

Enclosed with this report is Dwg. I. P. P. 4682, a plan map of the grid at a scale of 1" = 400'. The definite and possible induced polarization anomalies are indicated by solid and broken bars respectively on this plan map as well as the data plots. These bars represent the surface projection of the anomalous zones as interpreted from the location of the transmitter and receiver electrodes when the anomalous values were measured.

Since the induced polarization measurement is essentially an averaging process, as are all potential methods, it is frequently difficult to exactly pinpoint the source of an anomaly. Certainly, no anomaly can be located with more accuracy than the spread length; i.e. when using 300' spreads the position of a narrow sulphide body can only be determined to lie between two stations 300' apart. In order to locate sources at some depth, larger spreads must be used, with a corresponding increase in the uncertainties of location. Therefore, while the centre of the indicated anomaly probably corresponds fairly well with source, the length of the indicated anomaly along the line should not be taken to represent the exact edges of the anomalous material.

3. DISCUSSION OF RESULTS

The IP results from this grid are characterized by low to moderate resistivities and low background IP effects. Minor variations in the background occur at several places and have been shown as possible or probable anomalies; in general these are thought to be unimportant and attention has been concentrated on the few definite anomalies.

Line 17N

On this line there is a low magnitude, but fairly definite, anomaly between stations 0 and 9W. The pattern could represent either a single shallow source centred between 3W and 6W or two separate sources, one between 0 and 3W and the other between 6W and 9W. Surveying with shorter electrode intervals (i.e. 200-foot) would be required to resolve this ambiguity.

Several probable and possible anomalies are shown on the data plot but these are too weak to be of interest at this time.

Line 22N

Several weak anomalies were also found on this traverse, but again they do not appear to be important.

Line 27N

There are low magnitude, definite anomalies at the east and west ends of the traverse. The feature at 58W to 61W correlates with stronger anomalies to the north to form Zone A; there are no anomalies on the adjacent lines comparable to the feature at 50E to 53E, but there are several possible and probable anomalies that have been correlated to form Zone B.

Line 32N

On this line there is a broad anomaly of moderate strength extending from about 50W to 62W, including a fairly strong section at 55W to 59W; this feature has been identified on the accompanying plan, Dwg. I.P.P. 4682, as Zone A.

Line 37N

Zone A is stronger on Line 37N, with the main section at 55W to 58W. The western edge of the zone is quite sharp and is located between stations 61W and 64W; the eastern edge is very broad and gradual and may extend as far as 40W.

Line 42N

Zone A is stronger again on this line, with the best section at 51W. There may be some depth to the top of the source (i.e. 100' - 200') or an increase in sulphide content at depth, as the maximum IP effects were measured for n = 2 and 3.

4. SUMMARY AND RECOMMENDATIONS

The IP survey of the Goosly South Central and Southeast Claims has indicated the presence of a north-south trending zone of moderate to large magnitude. The source of these anomalies appears to be very broad (i.e. over 1000 feet wide) and, for the most part, shallow relative to the 300-foot electrode interval. Within this broad zone there is a narrow (i.e. less than 300 feet) more concentrated section.

A drill test is definitely warranted in our opinion to evaluate this feature. This should consist of a section of two or three inclined holes or a fence of vertical holes across the zone on either Line 42N or Line 37N.

Several weak anomalies occur throughout the grid but these do not appear to be of prime importance. They probably would not warrant drilling unless there is other information available that would increase their potential (i.e. surface showings, gossan or anomalous geochemical samples).

McPHAR GEOPHYSICS LIMITED

Robert A. Bell

Robert A. Bell,
Geologist.

David K. Fountain

David K. Fountain,
Geophysicist.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. K. FOUNTAIN

Expiry Date: April 25, 1971

Dated: October 30, 1970

Line A - Dwg. IP 5578-7, 300' spreads and Dwg. 5578-8, 200' spreads.

Subsequently, a fill-in line was surveyed between two of the original traverses which had diverged a considerable amount. The exact location has not been confirmed but we believe it to be about midway between Line 37N and Line 42N. The results using 300-foot dipoles were similar to those obtained on Line 37N and Line 42N, and the anomaly is slightly stronger. Detailing with 200-foot spreads showed a strong shallow source at 54W to 56W within a broad irregular zone extending from 60W to 46W.

McPHAR GEOPHYSICS LIMITED

Robert A. Bell

Robert A. Bell,
Geologist.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. K. FOUNTAIN

David K. Fountain

David K. Fountain,
Geophysicist.

Expiry Date: April 25, 1971

Dated: January 13, 1971

ASSESSMENT DETAILS

PROPERTY: Goosly South Central and Southeast Claim Group		MINING DIVISION: Omineca
SPONSOR: Silver Standard Mines Ltd.		PROVINCE: British Columbia
LOCATION: Sam Goosly Area		
TYPE OF SURVEY: Induced Polarization		
OPERATING MAN DAYS:	106	DATE STARTED: August 12, 1970
EQUIVALENT 8 HR. MAN DAYS:	159	DATE FINISHED: October 31, 1970
CONSULTING MAN DAYS:	3	NUMBER OF STATIONS: 267
DRAUGHTING MAN DAYS:	12	NUMBER OF READINGS: 2178
TOTAL MAN DAYS:	174	MILES OF LINE SURVEYED: 14.5

CONSULTANTS:
Robert A. Bell, 50 Hemford Crescent, Don Mills, Ontario.
David K. Fountain, 44 Highgate Road, Toronto 18, Ontario.

FIELD TECHNICIANS:
J. Hollenberg, 5634 S.E. Marine Drive, Burnaby 1, B.C.
R. Olsen, 1408 West 58th Avenue, Vancouver, B.C.
D. Broswick, c/o McPhar Geophysics Ltd. Suite 811, 837 W. Hastings Street, Vancouver, B.C.

Plus Helpers:
D. Merkley, Box 453, Houston, B.C.
R. Cabot, General Delivery, Houston, B.C.
D. Tontas, General Delivery, Houston, B.C.
L. Teves, Box 225, Houston, B.C.
V. Johnson, Box 312, Houston, B.C.
C. Low, General Delivery, Houston, B.C.
H. Seinen, Box 24, Houston, B.C.

DRAUGHTSMEN:
B. Marr, 19 Kenewen Court, Toronto 16, Ontario.
V. Young, 703 Cortez Avenue, Bay Ridges, Ontario.

McPHAR GEOPHYSICS LIMITED

Robert A. Bell

Robert A. Bell,
Geologist.

Dated: January 22, 1971

AMENDED STATEMENT OF COST

Silver Standard Mines Limited
Goosly South Central & Southeast Grids

Crew (2 men) - August 12 - 24, J. Hollenberg & R. Olsen
(1 man) - August 25 - Sept. 15, J. Hollenberg
(1 man) - Sept. 16 - Oct. 31, D. Broswick

6 days	Operating	@ $265.00/day (2 men)	1,590.00
14 days	Operating	@ $240.00/day (1 man)	3,360.00
1-1/4 days	Operating	@ $225.00/day (1 man-2nd 20 day rate)	281.25
Less 1 day	Operating	@ $225.00 (Credit)	(225.00)
20-1/4 days	Breakdown		N.C.
1½ days	Travel)		
4 days	Prep.) 14	@ $100.00/day	1,400.00
3 days	Standby) days		
5½ days	Bad Weather)		
Less 4 days @ standby rate $100.00/day (Credit)			(400.00)
			6,006.25

Total expenses for South Central, Southeast, East and Northeast Grids

Air Fare	39.00	
Bus Fare	3.00	
Taxi	1.00	
Vehicle Expense	287.24	
Meals & Accommodation	1,348.87	
Telephone & Telegraph	48.15	
Supplies	105.89	
Mileage allowance	332.30	
Freight and Brokerage	5.00	
Rented Vehicles	1,161.78	
Miscellaneous	4.89	
Rental (Power Saw)	56.00	
	3,393.12	
Plus 10%	339.31	
	3,732.43	
Less Credit re above expenses (Invoice #G10671)	(1,111.78)	
	2,620.65	
Prorated portion of expenses for South Central and Southeast Grids 20-1/4 / 32-3/4 x $2,620.65		1,620.41
Extra Labour	1,460.00	
Plus 20%	292.00	
		1,752.00
		$9,378.66

McPHAR GEOPHYSICS LIMITED

Robert A. Bell.

Robert A. Bell,
Geologist.

Dated: January 22, 1971

CERTIFICATE

I, Robert Alan Bell, of the City of Toronto, Province of Ontario, do hereby certify that:

1. I am a geologist residing at 50 Hemford Crescent, Don Mills, (Toronto) Ontario.

2. I am a graduate of the University of Toronto in Physics and Geology with the degree of Bachelor of Arts (1949); and a graduate of the University of Wisconsin in Economic Geology with the degree of Ph. D. (1953).

3. I am a member of the Society of Economic Geologists and a fellow of the Geological Association of Canada.

4. I have been practising my profession for over fifteen years.

5. I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly, in the property or securities of Silver Standard Mines Limited or any affiliate.

6. The statements made in this report are based on a study of published geological literature and unpublished private reports.

7. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Toronto

This 30th day of October 1970

Robert A. Bell

Robert A. Bell, Ph. D.

CERTIFICATE

I, David Kirkman Fountain, of the City of Toronto, Province of Ontario, do certify that:

1. I am a geophysicist residing at 44 Highgate Road, Toronto 18, Ontario.

2. I am a graduate of the University of Toronto with a Bachelor of Applied Science Degree in Engineering Physics (Geophysics).

3. I am a member of the Society of Exploration Geophysicists, the European Association of Exploration Geophysicists and the Canadian Institute of Mining and Metallurgy.

4. I am a Registered Professional Engineer in the Provinces of British Columbia, Manitoba and Ontario, a Registered Professional Geophysicist in the Province of Alberta and a Registered Professional Geologist in the State of California, and have been practising my profession for nine years.

5. The statements made in this report are based on a study of published geological literature and unpublished private reports.

6. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Toronto

This 30th day of October 1970

David Kirkman Fountain, B.A.Sc., P.Eng.

PROFESSIONAL ENGINEER
PROVINCE OF
D. K. FOUNTAIN
BRITISH COLUMBIA

Expiry Date: April 25, 1971

McPHAR GEOPHYSICS

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

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

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

The blocking action or induced polarization mentioned above, which depends upon the chemical energies necessary to allow the ions to give up or receive electrons from the metallic surface, increases with the time that a d. c. current is allowed to flow through the rock; i. e. as ions pile up against the metallic interface the resistance to current flow increases. Eventually, there is enough polarization in the form of excess ions at the interfaces, to appreciably reduce the amount of current flow through the metallic particle. This polarization takes place at each of the infinite number of solution-metal interfaces in a mineralized rock.

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

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

The values of the per cent frequency effect or F. E. are a measurement of the polarization in the rock mass. However, since the measurement of the degree of polarization is related to the apparent resistivity of the rock mass it is found that the metal factor values or M. F. are the most useful values in determining the amount of polarization present in the rock mass. The MF values are obtained by normalizing the F. E. values for varying resistivities.

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

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

In normal field applications the IP method does not differentiate between the economically important metallic minerals such as chalcopyrite, chalcocite, molybdenite, galena, etc., and the other metallic minerals such as pyrite. The induced polarization effect is due to the total of all electronic conducting minerals in the rock mass. Other electronic conducting materials which can produce an IP response are magnetite, pyrolusite, graphite, and some forms of hematite.

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

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

In plotting the results, the values of the apparent resistivity, apparent per cent frequency effect, and the apparent metal factor measured for each set of electrode positions are plotted at the intersection of grid lines, one from the center point of the current electrodes and the other from the center point of the potential electrodes. (See Figure A.) The resistivity values are plotted above the line as a mirror image of the metal factor values below. On a second line, below the metal factor values, are plotted the values of the per cent frequency effect. In some cases the values of per cent frequency effect are plotted as superscripts of the metal factor value. In this second case the frequency effect values are not contoured. The lateral displacement of a given value is determined by the location along the survey line of the center point between the current and potential electrodes. The distance of the value from the line is determined by the distance (nX) between the current and potential electrodes when the measurement was made.

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

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

The diagram in Figure A demonstrates the method used in plotting the results. Each value of the apparent resistivity, apparent metal factor, and apparent per cent frequency effect is plotted and identified by the position of the four electrodes when the measurement was made. It can be seen that the values measured for the larger values of (n) are plotted farther from the line indicating that the thickness of the layer of the earth that is being tested is greater than for the smaller values of (n); i. e. the depth of the measurement is increased. When the F. E. values are plotted as superscripts to the MF values the third section of data values is not presented and the F. E. values are not contoured.

The actual data plots included with the report are prepared utilizing an IBM 360/75 Computer and a Calcomp 770/763 Incremental Plotting System. The data values are calculated, plotted, and contoured according to a programme developed by McPhar Geophysics. Certain symbols have been incorporated into the programme to explain various situations in recording the data in the field.

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

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

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

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

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

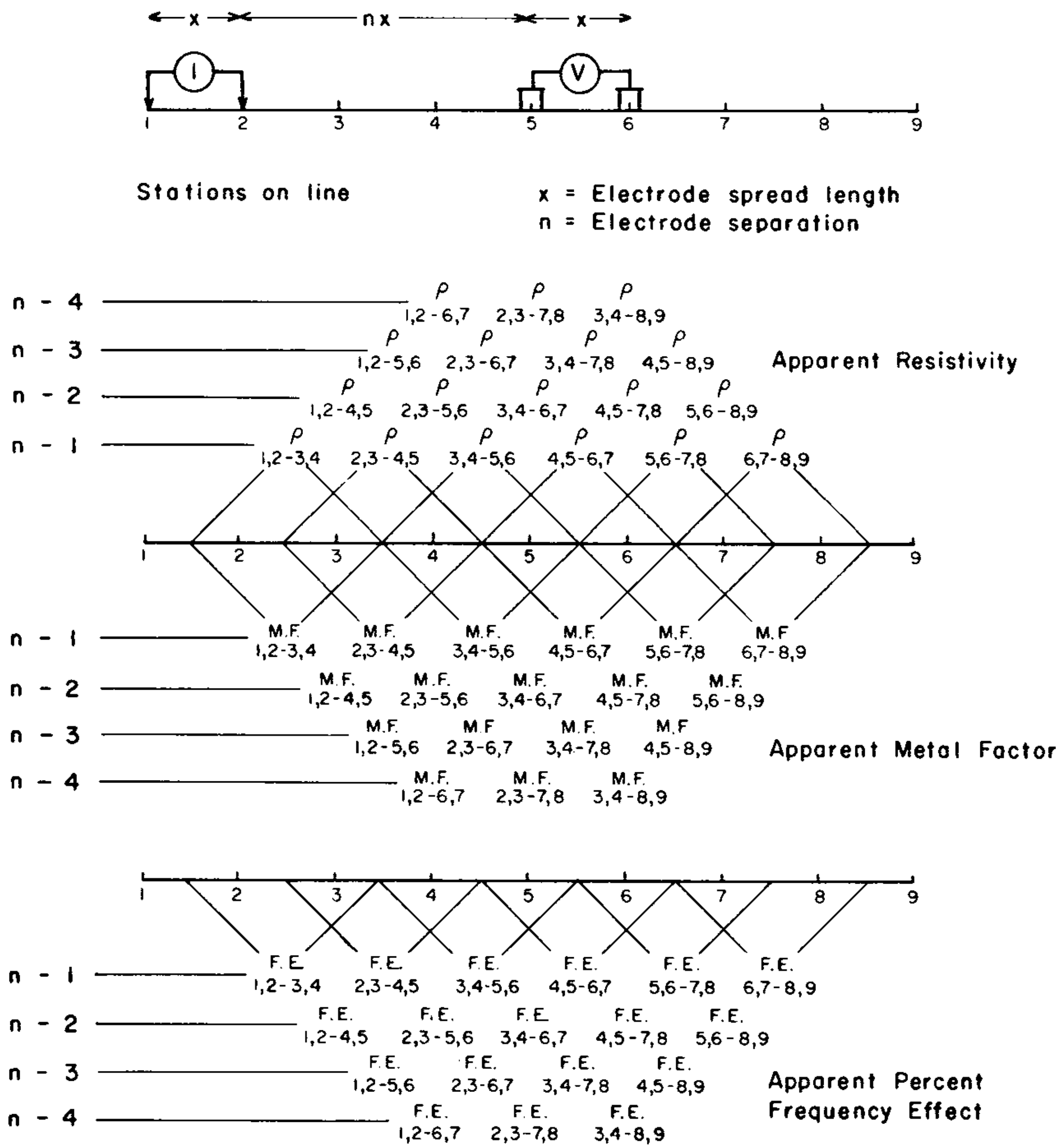


Fig. A

2877

DWG. NO.- I.P.- 5578-1

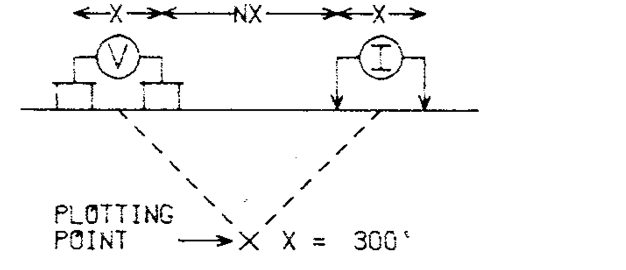
SILVER STANDARD MINES LTD.

GOOSLY SOUTH CENTRAL AND SOUTH EAST CLAIM GROUP

OMINECA M.D., B.C.

LINE NO.- 17N

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: AUG 1970

APPROVED: David K. Fountain

DATE: Oct. 30/70

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/65 COMPUTER AND A CALCOMP PLOTTER

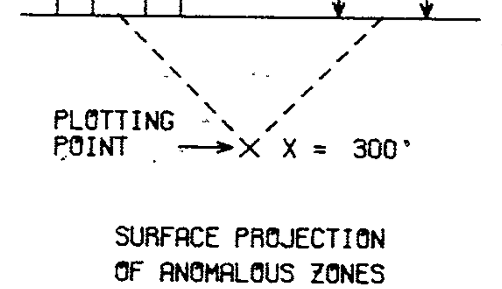
DWG. NO.- I.P.- 5578 - 2

SILVER STANDARD MINES LTD.

GOOSLY SOUTH CENTRAL AND SOUTH EAST CLAIM GROUP
OMINECA M.D., B.C.

LINE NO.- 22N

ELECTRODE CONFIGURATION



SURFACE PROJECTION
OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: AUG 1970

APPROVED: David K. Fountain

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE: Oct. 30/70

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/65 COMPUTER AND A CALCOMP PLOTTER

DWG. NO.- I.P.- 5578-3

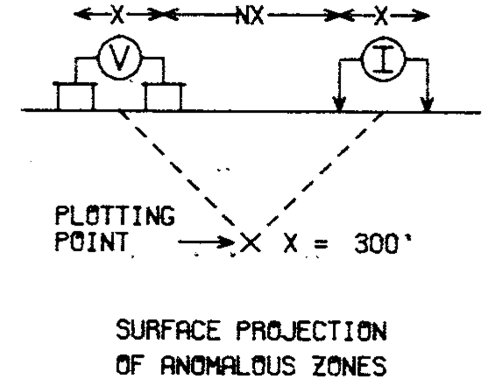
SILVER STANDARD MINES LTD.

GOOSLY SOUTH CENTRAL AND SOUTH EAST CLAIM GROUP

OMINECA M.D., B.C.

LINE NO.- 27N

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: SEPT '70

APPROVED: David K. Fountain

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE: Oct. 30/70

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/65 COMPUTER AND A CALCOMP PLOTTER

DWG. NO.- I.P.- 5578-4

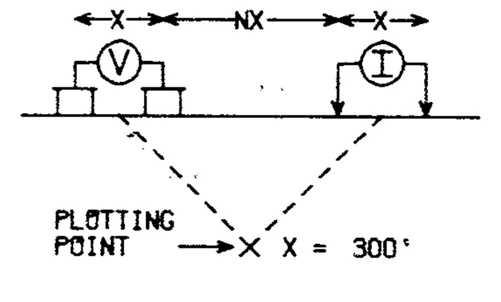
SILVER STANDARD MINES LTD.

GOOSLY SOUTH CENTRAL AND SOUTH EAST CLAIM GROUP

OMINECA M.D., B.C.

LINE NO.- 32N

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: SEPT '70

APPROVED: David K. Fountain

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE: Oct. 30/70

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/65 COMPUTER AND A CALCOMP PLOTTER

DWG. NO.- I.P.- 5578-5

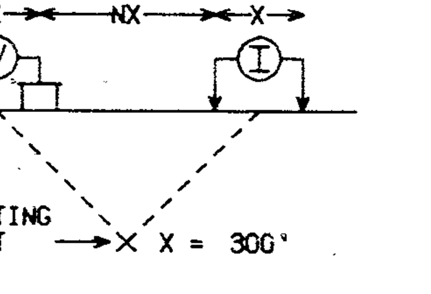
SILVER STANDARD MINES LTD.

GOOSLY SOUTH CENTRAL AND SOUTH EAST CLAIM GROUP

OMINECA M.D., B.C.

LINE NO.- 37N

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: SEPT '70

APPROVED: David K. Fountain

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE: Oct. 30/70

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/65 COMPUTER AND A CALCOMP PLOTTER

DWG. NO.- I.P.- 5578 - 6

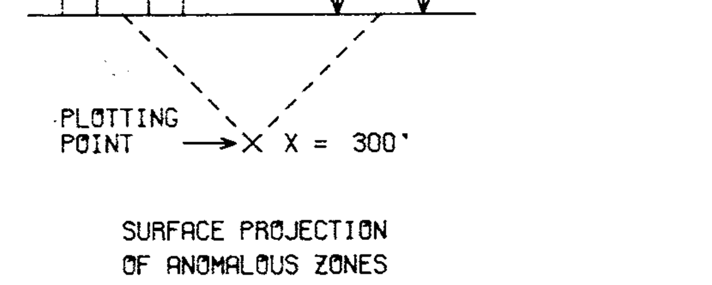
SILVER STANDARD MINES LTD.

GOOSLY SOUTH CENTRAL AND SOUTH EAST CLAIM GROUP

OMINECA M.D., B.C.

LINE NO.- 42N

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1970

APPROVED: David K. Fountain

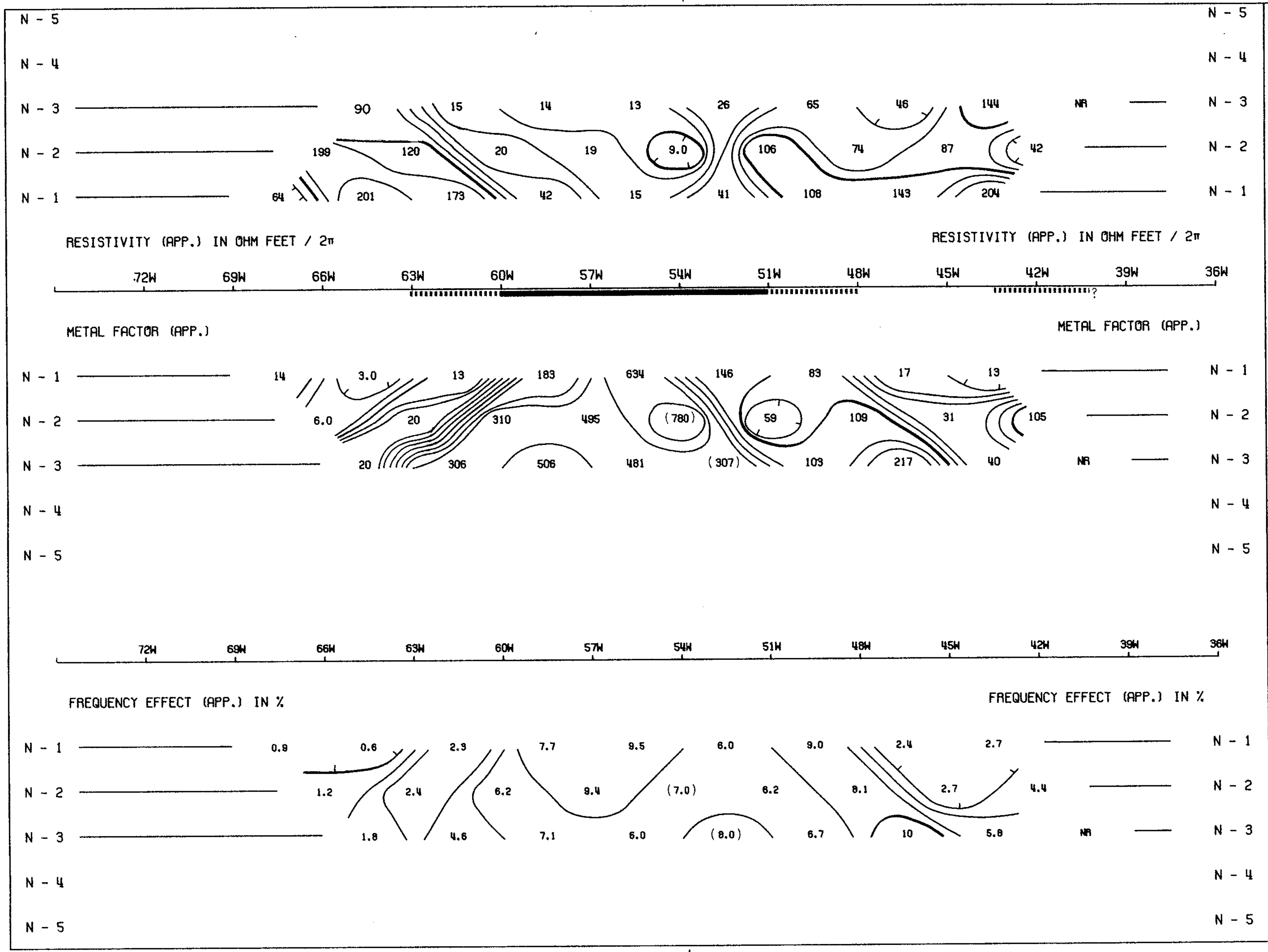
NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE: Oct. 30/70

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/65 COMPUTER AND A CALCOMP PLOTTER



DWG. NO.- I.P.- 5578-7

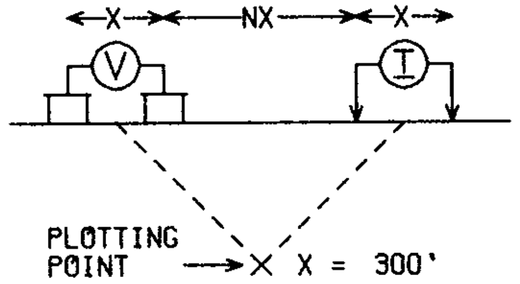
SILVER STANDARD MINES LTD.

GOOSLY SOUTH CENTRAL AND SOUTH EAST CLAIM GROUP

OMINECA M.D., B.C.

LINE NO.- A

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1970

APPROVED: David K. Fountain

DATE: Jan 13/71

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/65 COMPUTER AND A CALCOMP PLOTTER

2877

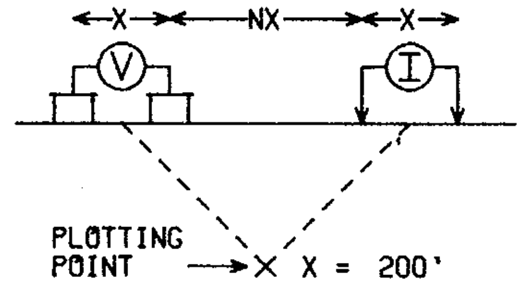
DWG. NO.- I.P.-5578-8

SILVER STANDARD MINES LTD.

GOOSLY SOUTH CENTRAL AND SOUTH EAST CLAIM GROUP

OMINECA M.D., B.C.

LINE NO.- A



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1970

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

APPROVED: David K. Fountain

DATE: Jan 13/71

PROFESSIONAL ENGINEER BRITISH COLUMBIA

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/65 COMPUTER AND A CALCOMP PLOTTER

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PLAN MAP

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

Number at the end of anomaly indicates spread used.

SILVER STANDARD MINES LTD.,

GOOSLY SOUTH CENTRAL AND SOUTH EAST CLAIM GROUP,

OMINECA M.D., B.C.

SCALE

ONE INCH EQUALS FOUR HUNDRED FEET

DRAWN: B.L.M.
DATE: JAN. 1971
APPROVED: David K. Fountain
DATE: Jan 13/71

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. K. FOUNTAIN

DRAWN: B.L.M.
DATE: OCT. 1970
APPROVED: David K. Fountain
DATE: Oct. 30/1970

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. K. FOUNTAIN

DWG. I.P.P.-4682

DWG. I.P.P.-4682