84-1373-13393
10/95

A&M exploration ltd. GEOLOGY · GEOPHYSICS MINING ENGINEERING

Suite 214-850 WEST HASTINGS STREET, VANCOUVER, B.C.
TELEPHONE (604) 681-0191 V6C 1E1

GEOPHYSICAL REPORT
on
VLF & HORIZONTAL LOOP EM SURVEYS
on the
WALL CLAIMS
Nelson Mining Division - British Columbia
Lat. 49° 11' N Long. 116° 58' W
N.T.S. 82 F/2W

for
NUGGET MINES LTD.

by
Douglas R. MacQuarrie B.Sc.
and
S. Endersby P. Eng. (B.C.)

January 31, 1985 Vancouver, B.C.

TABLE OF CONTENTS

ILLUSTRATIONS

APPENDICES

INTRODUCTION

At the request of Mr. S. A. Endersby, horizontal loop electromagnetic and VLF-EM surveys were carried out on the WALL 1-6 claims. The work was carried out intermittently between the 5th and the 28th of August, 1984. The field-work was supervised by Mr. S. Travis of A & M Exploration Ltd., and by Mr. S. Endersby P. Eng. (B.C.) of Nugget Mines Ltd.

SUMMARY AND CONCLUSIONS

The VLF electromagnetic survey delineated the main mineralized vein on the Wall and Spokane claims. The anomalous responses occur to the south of the surface projection of the 'main vein' trace and therefore confirm its' southerly dip. Several other anomalous VLF-EM responses were noted, that will require further follow-up work.

One possibly anomalous response was noted with the horizontal loop EM system, which appears to correlate with extension of the 'lower vein' into an overburden covered area.

LOCATION, ACCESS, PHYSIOGRAPHY

The WALL claims are situated 20 kilometres east of Salmo, B.C. They lie between elevations 5300 and 6800 feet on the southerly slope of Wall Mountain at the head of Next Creek (Figure 1).

Access is possible via the Salmo-Creston highway and by logging roads up Blazed Creek.

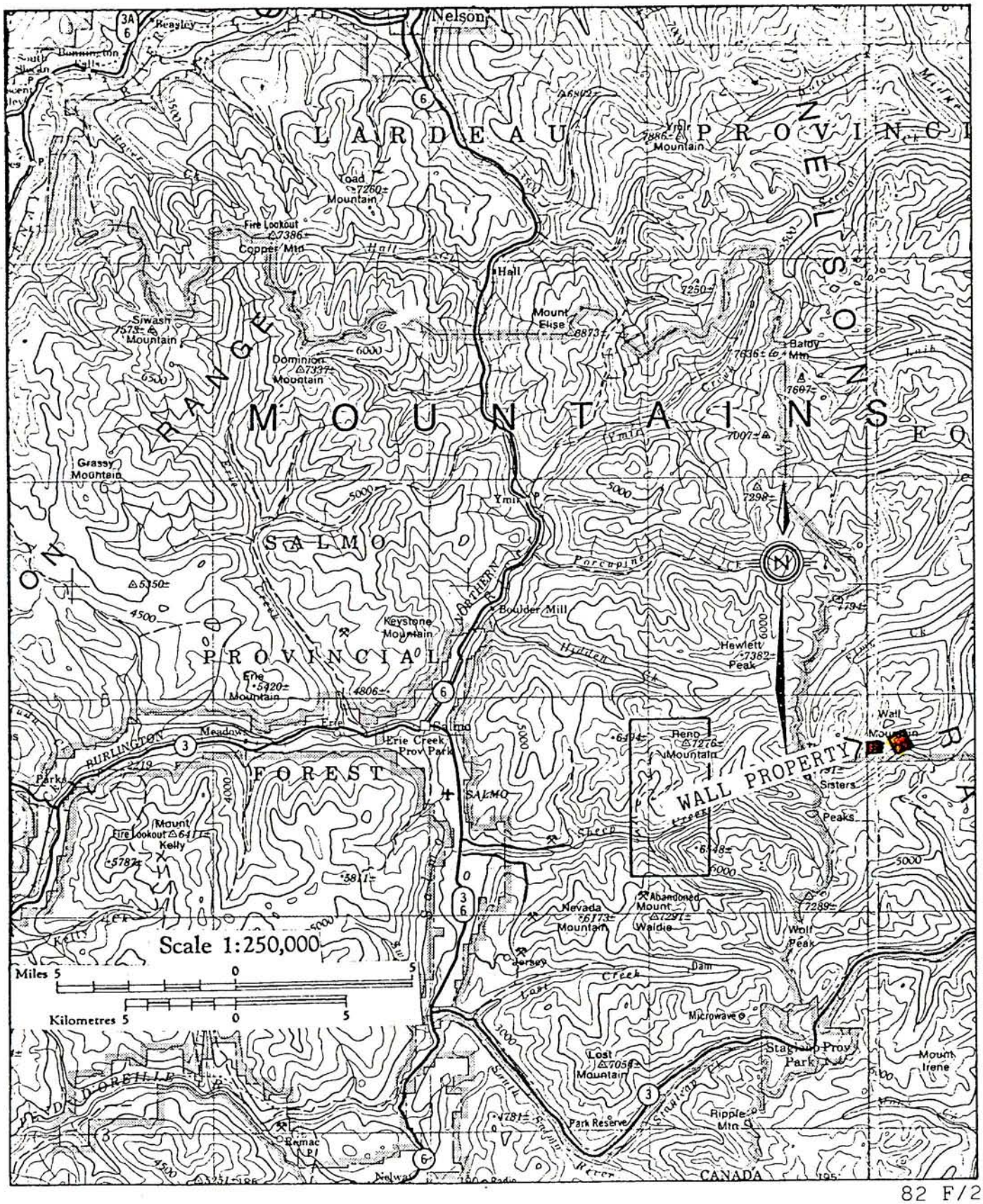
Slopes are moderately steep and are covered with a mature growth of larch and fir. Extensive slide areas contain thick growths of slide alder.

CLAIM DATA

The property consists of six 2-post claims, WALL 1-6, record numbers are 1268 to 1271 and the anniversary date is October 1. They are owned by Nugget Mines Ltd. The Wall 1 and 2 claims lie west of, and the Wall 3-6 lie east of the Spokane claims (Figure 2).

GEOLOGY

The claim area is underlain by biotite granodiorite of the Nelson plutonic suite (Wall stock). The contact with sedimentary rocks of the Horsethief Creek series presumably lies in the drift-filled lower slopes of the



82 F/2

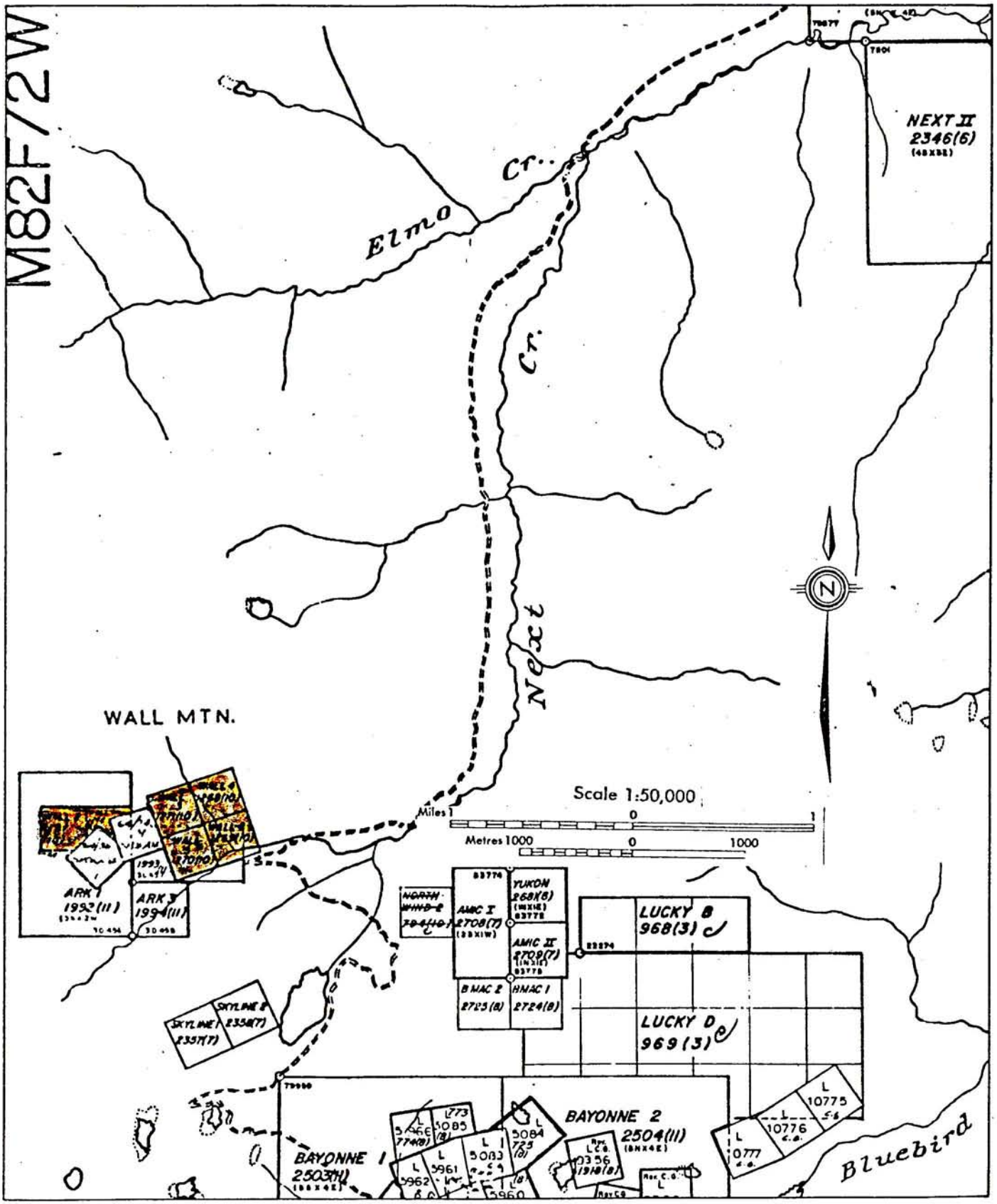
LOCATION MAP

WALL PROPERTY

Nelson Mining Division - British Columbia

exploration ltd.

Figure 1



CLAIM MAP

WALL PROPERTY

Nelson Mining Division - British Columbia

A&M exploration ltd.

Figure 2

Next Creek valley. The granodiorite is massive, medium-grained and has a fresh appearance except adjacent to the Spokane vein.

MINERALIZATION

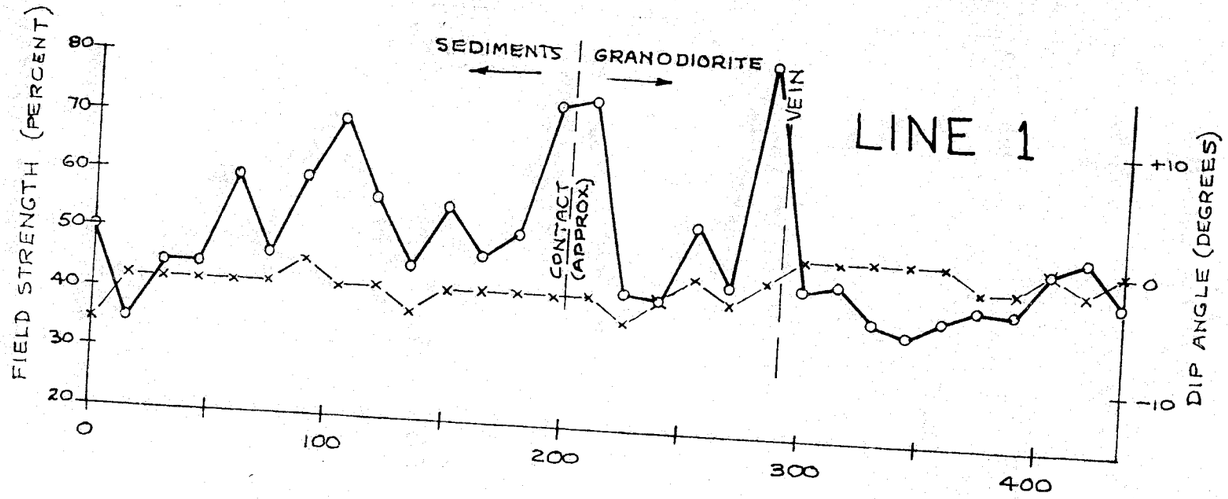
No mineralization has yet been recognized on the Wall claims. Overburden is extensive - a talus slide covers the extension of the Spokane vein to the west and glacial till and talus covers the extension to the east. Several barren quartz boulders were observed in the talus on the Wall 1 claim.

The Spokane vein was described by Cartmel (1916), Langley (1918), Sargent (1937) and Rice (1941). It is a fissure-type quartz vein containing high-grade shoots of galena, pyrite, sphalerite and chalcopyrite with significant gold and silver values. The vein varies in width from 0.1 to 0.9 metres, trends east-west and dips steeply to the South. It has been developed by five adits and a number of open cuts. A lower vein 0.07 to 0.15 metres wide parallels the main vein about 110 metres to the south. Production from 1915 to 1956 totalled 1733 tonnes containing 29,639 grams gold, 570,988 grams silver, 304,046 kilograms lead and 12,943 kilograms zinc.

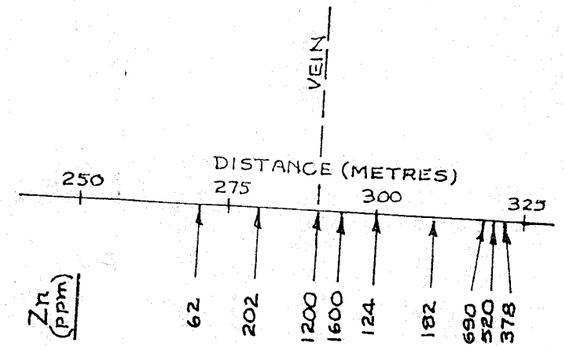
VLF-EM SURVEY RESULTS AND INTERPRETATION

A total of 1.13 line/kilometres of VLF-EM surveys were completed on the property. Stations were spaced at 15 metre intervals along lines spaced from 400 to 700 metres apart. A Sabre model 27 receiver tuned to Seattle, Washington was used for all observations. Dip angle and relative horizontal field strength were recorded at each station. The data is presented in profile form on Figure 4 at a scale of 1:2500.

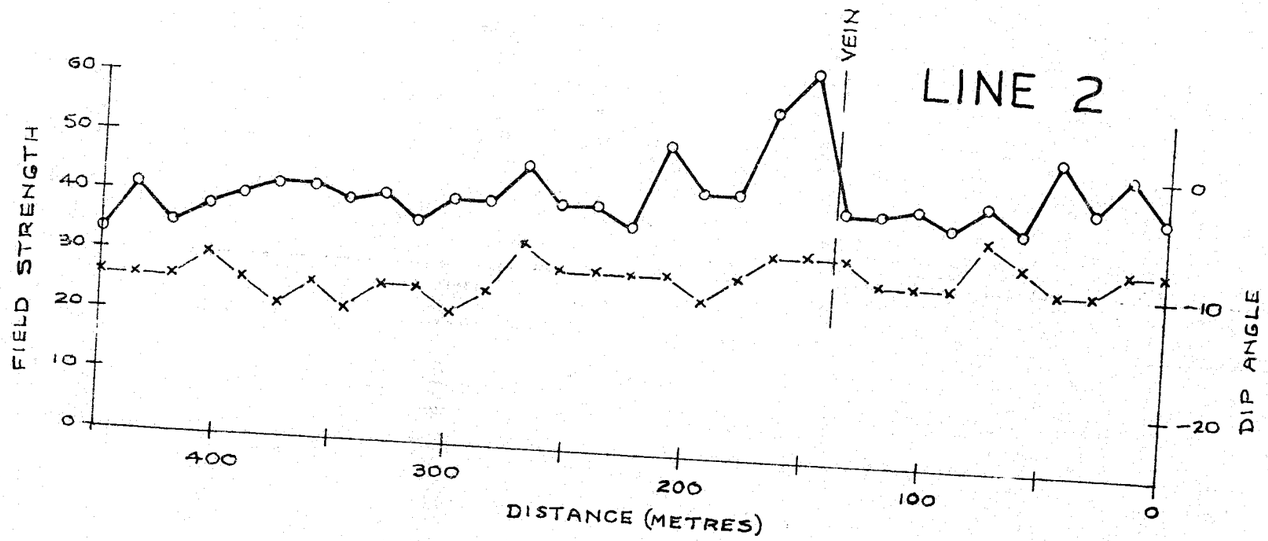
The largest amplitude anomalies were noted at stations 2+85 on Line 1 and at 1+50 on Line 2, with relative field strength highs of 38 and 22% respectively. These responses occur within ten metres south of the approximate 'main vein' projection and are likely caused by the down dip unoxidized portion of the vein (Figure 3). Several other anomalous relative field strength highs occur on the Wall 2 claim on Line 2 at station 2+00 and at station 1+05 (20%). The causative source of the latter anomalies is unknown at this time, however, the responses are of similar magnitude to the responses obtained over the known mineralized veins. Further VLF-EM surveying on lines spaced 50-100 metres apart, with follow-up soil geochemical sampling and trenching or diamond drilling of anomalous areas, is recommended.

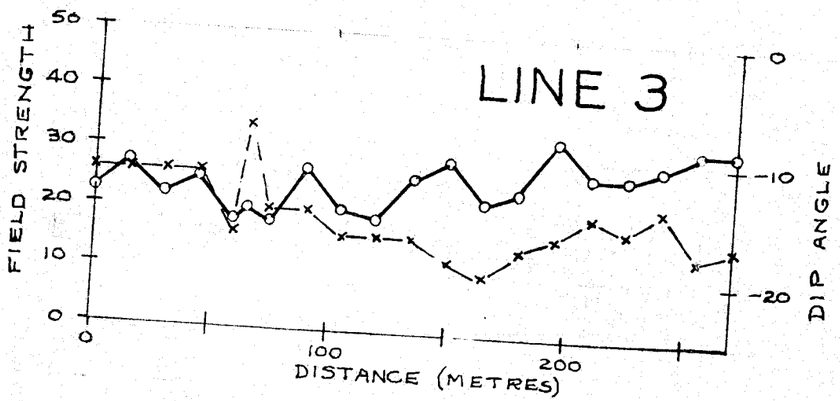


LINE 1



	Zn (ppm)	Pb (ppm)	Ag (ppm)	Au (ppb)
	62	64	0.4	10
	202	114	0.4	10
	1200	700	2.2	70
	1600	980	4.2	360
	124	206	0.4	10
	182	94	0.2	10
	690	9200	3.4	10
	520	10600	6.8	10
	378	2750	1.4	10





FIELD STRENGTH (PERCENT)

DIP ANGLE (DEGREES)

SURVEY DATE : AUG. 28, 1984
STATION : SEATTLE, WASH.
OPERATOR FACING WEST.

NUGGET MINES LTD.
WALL CLAIMS

VLF-EM PROFILES

SCALE 1 : 2500

100 0 100 METRES
300 0 300 FEET

A·M exploration ltd.

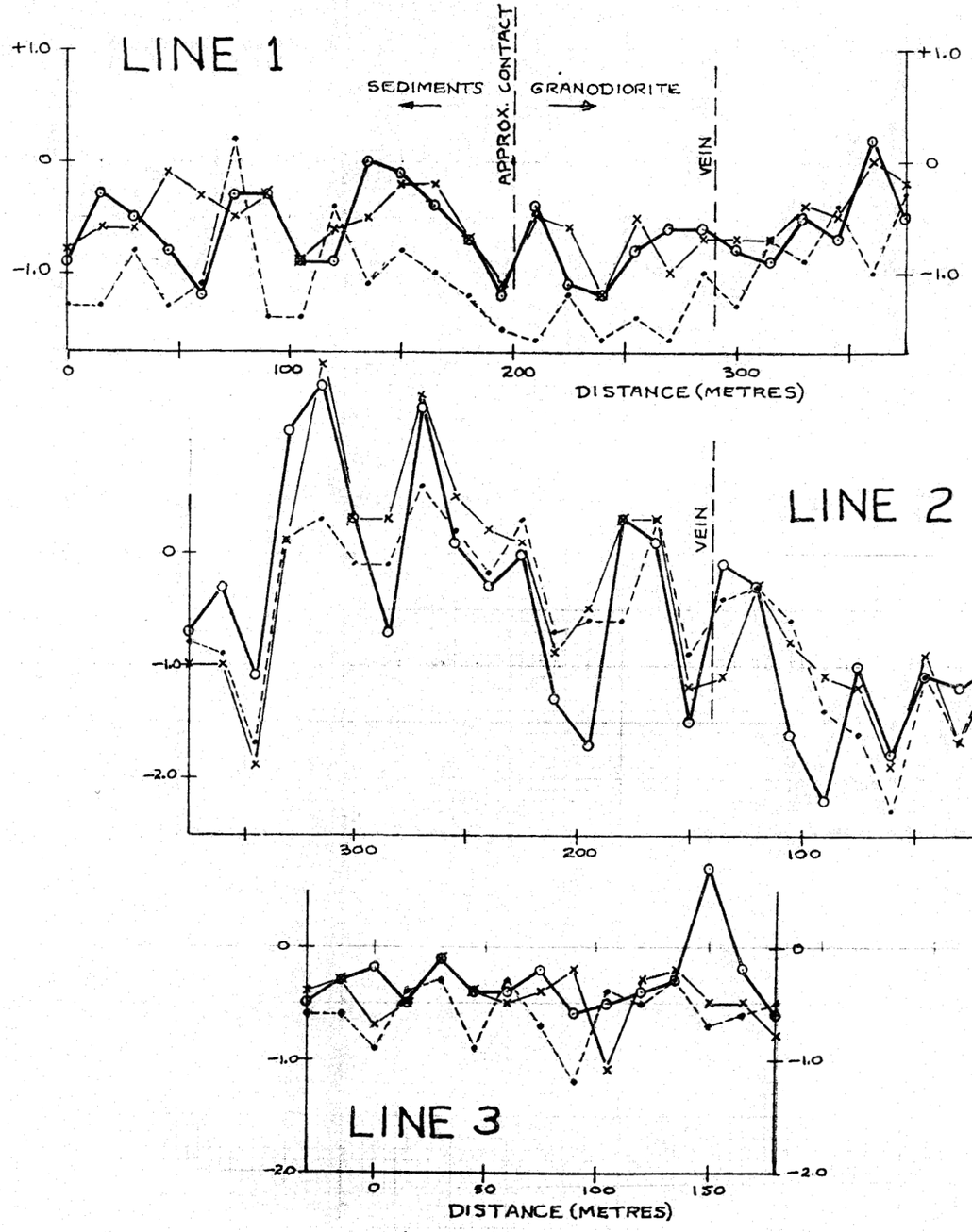
JAN. 29, 1985

FIGURE 4

HORIZONTAL LOOP EM SURVEY RESULTS AND INTERPRETATION

In order to further define the anomalous VLF responses, a multifrequency horizontal loop electromagnetic survey was completed over the VLF-EM survey grid. A Scintrex SE-88 'Genie' system was used for the survey. Three frequency pairs with a station interval of fifteen metres and a loop separation of 60 metres were used throughout the survey. The data is presented in profile form on Figure 5. The complete instrument specifications, operating procedure and theory are presented in Appendix II.

No significant conductive zones were detected by the survey. All measurements of ratio % were less than 2.5% in amplitude. Measured noise level is approximately ± 0.5%. One possibly conductive zone was detected at station 3+60 on Line 2, correlating with the surface projection of the 'lower vein' (Figure 3). Here the data set is incomplete and too noisy for further interpretation of the conductor dip, conductivity, width or depth of burial. Further SE-88 work is recommended only to define the strongest VLF-EM or soil geochemical high zones outlined by further work programs. Based on a comparison of the VLF to the SE-88 electromagnetic responses where measured, it appears that the 'main vein' sulfide mineralization is lensoid and discontinous over distances of tens of metres. However,



LOOP SEPARATION = 60 METRES
STATIONS = 15 METRES

FREQUENCY PAIRS

- ·---·--· 112/337
- x—x—x 112/1012
- o—o—o 112/3037

SURVEY DATE : AUG. 28, 1984

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,393

NUGGET MINES LTD.
WALL CLAIMS

GENIE SE:88 HORIZONTAL LOOP EM PROFILES

SCALE 100 0 100 METRES
300 0 300 FEET
1 : 2500

A·M exploration ltd.

JAN. 29, 1985

FIGURE 5

the structure hosting the vein appears to be quite continuous over distances of hundreds of metres.

GEOCHEMICAL SURVEY RESULTS

One short line of soil sampling (9 samples) was carried out on Line 1 as it crossed the known vein in the Wall 2 claim. This was done to determine how far the strongly anomalous area extended on each side of the vein, which runs westerly straight up the hill. The results of this are shown on Figure 4 which indicates the values are quite localized near the vein. Initially seven samples were taken, but the most northerly of these, which is about 30 metres north of the vein, showed strong values of 6.8 ppm Ag and 10,600 ppm Pb. This location was checked again by two more samples which gave values of 3.4 ppm Ag and 9200 ppm Pb and 1.4 ppm Ag and 2750 ppm Pb, indicating the possibility of another mineralized structure north of the known vein. A vein exposure about 300 metres to the west has a parallel zone of vein fractures about 30 metres north of it.

A previous geochem line done in 1983 had also shown anomalous lead and zinc values to the southeast and the few samples taken in 1984 which are described in this report are only preliminary to more extensive soil sampling at a later date.

The soil material sampled consisted mainly of talus fines taken at depths of 10 to 20 centimetres. Material was placed in Kraft paper bags and shipped to Rossbacher Laboratory for geochemical analysis by standard atomic absorption techniques for 4 elements (Au, Ag, Pb, Zn). Sample results are presented in Appendix I and their location on Line 1 is plotted on Figure 4.

REFERENCES

Cartmel, T., (1916). Spokane Group in B.C. Min. Mines Ann. Rept. 1916, p. K173-174.

Langley, A.G., (1918). Spokane Group in B.C. Min. Mines Ann. Rept. 1918, p. F 165-167.

Sargent, H., (1937). Spokane Group in B.C. Min. Mines Ann. Rept. 1937, p. E 17-22.

Rice, H., (1941). Nelson Map area, East Half. B.C. Geol. Survey. Canada, Memoir 229.

CERTIFICATE

I, Douglas R. MacQuarrie, of the City of Surrey in the Province of British Columbia, do hereby certify that:

1. I am a Consulting Geophysicist of A & M Exploration Ltd., with offices at #214 - 850 West Hastings St., Vancouver, British Columbia.

2. I am a graduate of the University of British Columbia with a degree in Geology and Geophysics (B.Sc., 1975).

3. I have been practising my profession since 1975 and have been active in the mining industry since 1971.

4. I am an active member of the Canadian Institute of Mining and Metallurgy and a member of the British Columbia Geophysical Society.

5. This report is based on fieldwork carried out by S. Travis of A & M Exploration Ltd., and Mr. S. Endersby, P. Eng. (B.C.), of Nugget Mines Ltd., during August 1984, and on information listed under References.

6. I hold no interest, nor do I expect to receive any, in the WALL claims or in Nugget Mines Ltd.

January 31, 1985
Vancouver, B.C.

D.R. MacQuarrie,
B. Sc.

APPENDIX I

ANALYTICAL RESULTS

ROSSBACHER LABORATORY LTD.

2225 SOUTH SPRINGER AVENUE
BURNABY, B.C. V5B 3N1
TEL: (604) 299-6910

CERTIFICATE OF ANALYSIS

TO: NUGGET MINES LTD.
1124 LEE STREET
WHITE ROCK B.C.

CERTIFICATE NO. :84314 - 1

INVOICE NO. :4317

PROJECT: NONE

DATE ANALYSED :AUGUST 15 1984

	SAMPLE#	PPM Ag	PPM Zn	PPM Pb	PPB Au	
S	L 1 - 536 - 20S	0.4	62	64	10	WALL CLAIMS.
S	10S	0.4	202	114	10	
S	0	2.2	1200	700	70	
S	4N	4.2	1600	980	360	
S	10N	0.4	124	206	10	
S	20N	0.2	182	94	10	
S	L 1 - 536 - 30N	6.8	520	10600	10	
S	L 3 - 0	0.6	200	48	30	
S	L 3 - 1 - 28S	0.2	172	30	10	
S	L 3 - 2 - 57S	0.4	192	28	10	
S	L 3 - 3 - 86S	0.6	186	22	10	
S	L 3 - 4 -114S	0.2	116	14	130	
S	L 3 - 5 -144S	0.2	148	18	10	
S	L 3 - 6 -176S	1.0	184	18	10	
S	L 3 - 7 -204S	0.2	158	18	30	
S	L 3 - 8 -236S	0.6	142	18	20	
S	L 3 - 9 -265S	0.8	172	18	20	
L	L 3 - 10 -278S	0.6	220	28	10	
S	L 3 - 11 -290S	0.6	500	30	30	
L	L 3 - 12 -400X	0.2	134	18	10	
S	LA 34W - 2L	1.2	168	22	10	
S	2R	1.0	184	24	10	
S	5R	1.4	202	28	10	
S	10R	1.6	286	26	10	
S	17R	1.0	178	24	10	
S	20R	1.2	220	30	10	
S	LA 34W - 21R	2.2	174	36	20	
S	26R	1.0	220	32	10	
S	30R	1.0	254	28	10	
S	35R	0.6	250	30	10	
S	39R	0.6	218	26	10	
S	45R	0.6	252	34	10	
S	LA 34W - 50R	1.0	352	50	40	
S	LA 125W - 8L	0.6	194	30	10	
S	0	0.4	180	52	20	
S	5R	0.6	166	30	10	
S	10R	0.4	170	32	10	
S	14R	0.4	150	26	10	
S	18R	0.6	182	24	10	
S	25R	0.6	174	70	10	

CERTIFIED BY : F. Rossbach

ROSSBACHER LABORATORY LTD.

2225 SOUTH SPRINGER AVENUE
BURNABY, B.C. V5B 3N1
TEL: (604) 299-6910

CERTIFICATE OF ANALYSIS

TO: Nugget Mines Ltd.
1124 Lee Street
White Rock B.C.

CERTIFICATE NO. :84314.- 1

INVOICE NO. :4318

PROJECT: NONE

DATE ANALYSED :August 17 1984

	SAMPLE#	oz/t Au	oz/t Ag	% Pb	% Zn	
A	64351	0.290				
A	64352	0.020				
A	64353	0.002				
A	64354	0.001	0.02	0.02	0.02	
A	64355	0.720	2.58	1.54	0.12	WALL CLAIMS
A	64356	1.44	12.6	2.26	0.42	WALL CLAIMS
A	64357	0.108	23.2	21.8	0.30	WALL CLAIMS
A	64358	0.144	4.28	1.78	0.28	WALL CLAIMS
A	64359	0.138	8.80	8.56	0.16	WALL CLAIMS
A	64360	0.016	17.6	15.1	0.14	WALL CLAIMS
A	64361	0.018	0.42	0.28	0.26	WALL CLAIMS
A	64362	0.070	2.00	0.70	0.16	

CERTIFIED BY : F. Rossbacher

ROSSBACHER LABORATORY LTD.

2225 S. SPRINGER AVENUE
BURNABY, B.C. V5B 3N1
TEL : (604) 299 - 6910

CERTIFICATE OF ANALYSIS

TO : NUGGET MINES LTD.
1124 LEE STREET
WHITE ROCK. B.C.
PROJECT No.:

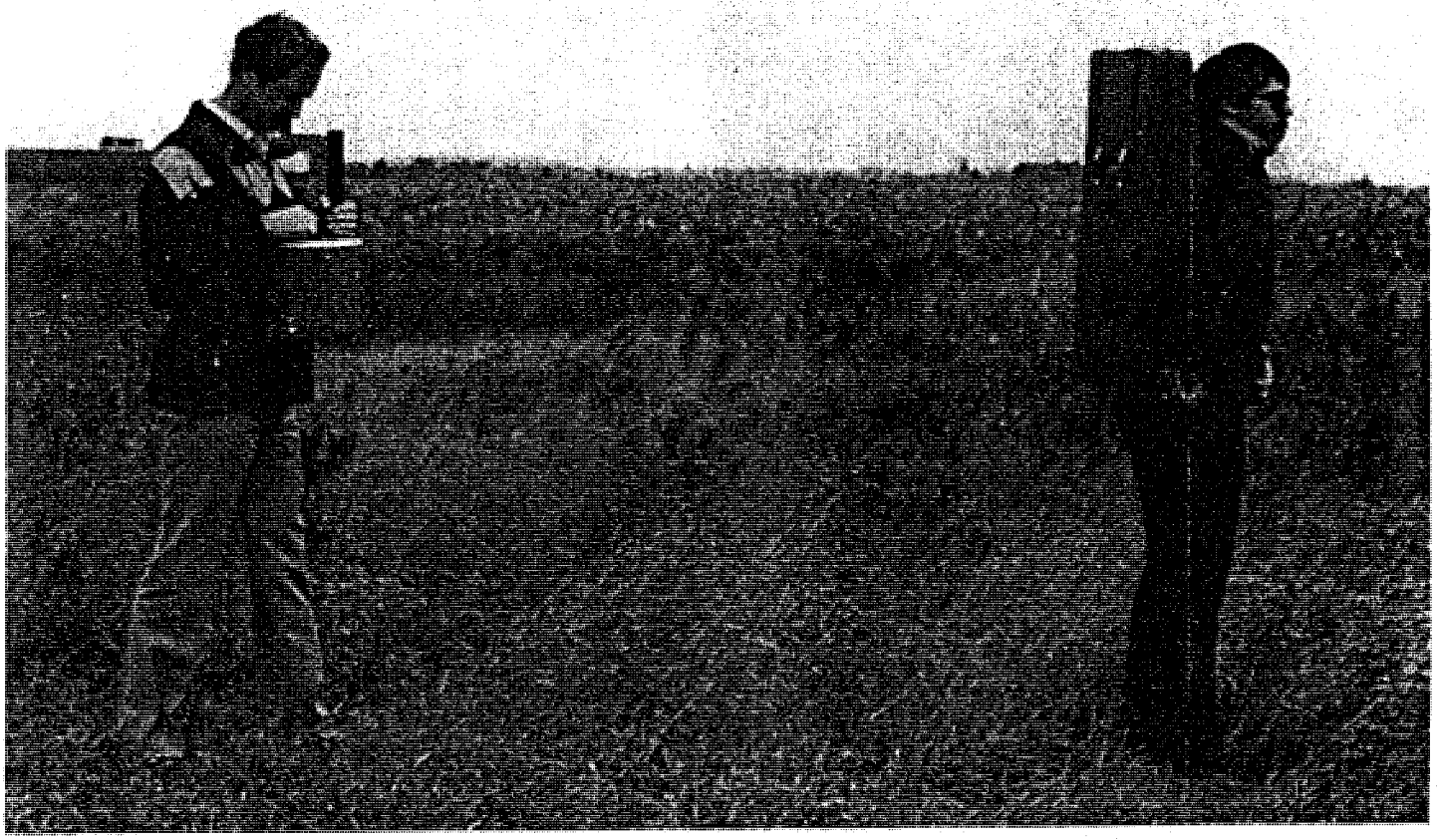
CERTIFICATE No.: 84405 - 1
INVOICE No.: 4453
DATE ANALYSED: SEPT.17.1984
FILE NAME: NUG405

PREFIX	SAMPLE NAME	PPM Ag	PPM Pb	PPM Zn	PPB Au	
S	L1 - 319N	3.4	9200	690	10	} WALL CLAIMS
S	320N	1.4	2750	378	10	
S	L2 - 0	0.8	48	162	10	
S	L3 - 90S	0.8	8	206	10	
S	95S	1.0	18	144	10	
S	100S	0.8	24	112	10	
S	105S	1.0	18	172	10	
S	110S	0.4	16	138	10	
S	115S	0.6	12	110	10	
S	120S	0.6	16	158	10	
S	125S	0.8	20	112	10	
S	130S	1.2	16	122	10	
S	L4 - 0	1.0	12	138	10	
S	15N	0.8	14	206	10	
S	30N	1.2	14	130	10	
S	45N	0.8	14	128	10	
S	60N	1.0	16	170	10	
S	75N	0.4	12	114	10	
S	90N	0.8	22	368	10	
S	105N	2.0	18	348	10	
S	120N	0.6	8	94	10	
S	135N	0.6	20	132	10	
S	150N	1.0	16	134	10	
S	165N	2.6	20	242	10	
S	180N	1.6	12	80	10	
S	195N	1.2	10	58	10	
S	L5 - 60	0.4	20	106	10	
S	75	0.8	12	124	10	
S	90	0.4	10	94	10	
S	105	0.4	8	100	10	
S	120	1.0	18	126	10	
S	135	0.6	14	146	10	
S	150	0.6	14	136	10	
S	165	1.4	14	264	10	
S	180	1.0	16	126	10	
S	195	0.6	24	150	10	
S	210	0.4	8	82	10	
S	225	0.6	28	142	10	
S	240	0.4	10	172	10	
S	L6 - 30W - 20S	0.8	24	126	10	

CERTIFIED BY : F. Rossbacher

APPENDIX II

GENIE SE-88 INSTRUMENT SPECIFICATIONS



Scintrex' Brand New Genie

The fastest, most accurate, portable EM system yet devised.

Working with the pragmatic explorationists of Esso Minerals Canada Limited, Scintrex' engineers set out to design the SE-88 GENIE with more benefits than you may have considered possible in a moving source electromagnetic system. The GENIE guarantees you fast, acurate results due to the orientation and distance insensitive measurement, the lack of an interconnecting cable, its automatic signal averaging and many other outstanding features.

Because of the special arrangement between Esso and Scintrex, GENIE is probably the most rigorously field-proven geophysical instrument every introduced to the mineral exploration market.

SE-88 Genie Portable Electromagnetic System

Function

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

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

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

Test surveys have been conducted with this system over known subsurface conductors in a variety of geological environments and climatic conditions. Compared with other portable electromagnetic systems, similar anomaly amplitudes have been observed in all cases, but the noise levels are invariably lower in the GENIE profiles, resulting in an enhanced signal-to-noise ratio. The time required to measure a low noise profile with the new system is significantly less than with standard horizontal loop (Slingram) equipment. The presence of known bedrock conductors beneath as much as 85 m of overburden has been clearly indicated by the GENIE.

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

Further information about the SE-88 is available in a 1981 SEG paper entitled "A Novel Geometry Invariant Portable Ground Electromagnetic Reconnaissance System" by Doborzynski, Rentsch, Rudniski, Brcic and LaFleche.

Features

No interconnecting cable. Unlike Slingram equipment, the GENIE has no cable connecting the transmitter and receiver to add weight and generally inhibit your movement through brush or rough topography. Also, you are finally free of lost time due to broken cables.

Minimal geometric errors. Since it measures a ratio of amplitudes, the GENIE minimizes errors due to improper coil orientation or separation. In fact, over nonconductive earth, there are no such errors at all. Under field conditions, the only time appreciable geometric errors occur is when either the transmitter or receiver is extremely close to a confined conductor. This insensitivity to geometric errors speeds up production of high quality data. Signal to noise ratios are invariably better with the GENIE than with Slingram equipment, offering increased depth of penetration. An added advantage is that there is really no need to cut and chain survey lines.

Measures distance electronically. Another reason that cut and chained survey lines are not necessary is that the GENIE is inherently a distance measuring device. The lowest transmitted frequency is relatively unaffected by earth conductivity. The amplitude of this frequency is displayed on an analogue meter at the receiver so that the operator can adjust his position with respect to the transmitter, within better than 2 percent, by simply moving until the meter needle is centred. The receiver can be adjusted by switch selection for 21 separations between 6.25 and 200 m. It is possible to select greater distances, but in practice, atmospheric noise usually makes measurements at more than 200 m difficult or impossible.

To use the GENIE without cut and chained lines, the transmitter operator stands at the first station and turns on the transmitter. The receiver operator adjusts the Separation Distance Switches for the distance required and walks away until his meter needle is centred. He then takes the observation and marks or flags his position for the transmitter operator to occupy for the next reading.

Large separations for deep penetration. The GENIE will work reliably under nearly all conditions to separations up to 200 m for deep penetration. Alternatively, shorter separations can be selected for faster or more detailed surveying.

Choice of frequencies. In order to allow selection of the optimum signal to noise response parameter for a given survey, the SE-88 offers five different frequency pair settings. If multifrequency data are desired to improve the interpretation possibilities, then readings can be taken with up to five settings at each survey station. The frequency range spanned by the system is 112.5 to 3037.5 Hz.

Simple controls. The transmitter controls consist of an On/Off Switch and a Frequency Pair Selector which are within easy reach for the operator. When a survey is carried out using only one frequency pair, all the transmitter operator must do is turn the unit on and off at the appropriate times.

Operation of the receiver is not much more difficult. The Separation Distance, Frequency Pair and Signal Averaging Time Switches are not often changed during a routine survey. The operator simply moves a toggle switch and single or repetitive readings are taken depending on the chosen mode of operation. At the end of each measurement an alarm is heard. In the repetitive mode, the instrument will continue to take readings automatically so that the operator can monitor variations from reading to reading if he desires. In this mode, the alarm is useful to indicate the end of a reading since the digital display may not change.

Powerline filtering. The SE-88 has an efficient built-in filter for the fundamental and third harmonic of powerline frequencies. The filter can be changed from 50 to 60 Hz by an internal switch. Most importantly, the amount of powerline noise which is received before filtering can be measured quantitatively on one of the analogue meters. This allows the operator to make a record of the level of powerline noise so this may be taken into consideration when the data are interpreted.

Signal/noise enhancement. By switch selection, the receiver operator can average the amplitude ratio over 2, 4, 8 or 16 seconds. The shorter times allow faster operation when atmospheric noise is not a problem, while the longer times permit quality data to be taken in noisy conditions. To further enhance the signal to noise ratio, the operator can make several measurements in the repetitive mode and record them for later analysis. As for powerline noise, the operator can quantitatively monitor atmospheric noise on an analogue meter.

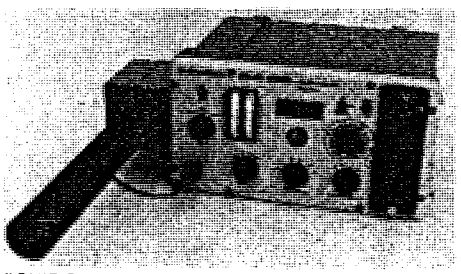
Signal Monitor. On each of two analogue meters the receiver operator can monitor the amplitude of the two transmitted frequencies. This gives him confidence that the equipment is functioning properly and permits calibration since the amplitudes should be equal over nonconductive ground.

Digital display. The low power consumption liquid crystal digital display reads out the amplitude ratio to 0.1 percent resolution. It is easy to read and, compared to analogue meters, gives an unambiguous result which can be accurately noted by the operator. A heater is built-in to the display so that the SE-88 can be used in sub zero temperatures.

Drift free electronic design. The GENIE is factory set for free space conditions. No field calibration is required. The transmitter design includes a crystal controlled oscillator and feedback loops to ensure accurate frequency and moment tuning, better than 0.1 percent. The receiver is also crystal controlled. This, as well as the fact that a single coil is used to receive both frequencies, ensure no drift and no tuning for ease of use, reliability and accuracy.

Trouble free battery operation. Both the transmitter and receiver employ nickel-cadmium rechargeable batteries which can be unplugged for charging. This means that one set of batteries can be charged while another is at work in the field, so that no time is lost. Two sets of batteries are available for the transmitter. The heavy duty battery, weighing 2 kg more than the normal battery, ensures a full day's operation even in sub zero weather. The condition of the receiver battery is seen on a meter while the transmitter emits an audible low battery signal. These features warn the operators in advance of the batteries becoming so low that it is not possible to work, avoiding lost time.

Convenient, robust design. The receiver is carried strapped to the chest while the transmitter is mounted on a back pack. This leaves both operators' hands free for climbing in rough terrain or for clearing branches, speeding up the work. The transmitter, which is only 16 kg with the heavy duty batteries, has its weight comfortably distributed for carrying and comes with padded shoulder straps. The cases of both units are made of a strong molded plastic, proven to stand up well under field conditions.



GENIE Receiver

Transmitter	
Transmitting Element	Iron-cored coil for each frequency
Transmitting Frequency Pairs	Five pairs. 112.5 Hz reference with one of 337.5, 1012.5 or 3037.5 Hz; or 337.5 Hz reference with one of 1012.5 or 3037.5 Hz.
Transmitting Moments	150 Am at 112.5 Hz, 100 Am at 337.5 Hz, 50 Am at 1012.5 Hz, 25 Am at 3037.5 Hz.
Relative Amplitude Stability	Better than 0.1%
Power Supply	Rechargeable Nickel-Cadmium batteries; 2 options available, Normal and Heavy Duty
Power Supply Endurance	Normal duty pack: 4 hours continuous at 20°C Heavy duty pack: 7 hours continuous at 20°C
Operating Temperature Range	-30°C to +50°C
Total Weight with Batteries	Normal duty configuration: 14 kg Heavy duty configuration: 16 kg
Dimensions	Height: 800 mm; Width: 380 mm; Depth: 180 mm
Receiver	
Receiving Element	Iron-cored coil
Receiving Frequency Pairs	Same as transmitter

Technical Description of SE-88 Portable Genie Electromagnetic System

GENIE Transmitter

Transmitter-Receiver	Primary selector: 6.25 m, 12.5 m, 25 m, 50 m, 100m, 200 m plus Multiplier: x 1, x 1.25, x 1.5, x 1.75
Maximum Transmitter-Receiver Separation	200 m under most conditions. Greater separations may be possible depending on atmospheric and powerline noise.
Power Line Filtering	Internally switch selectable at 60 or 50 Hz and 3rd harmonic
Signal Averaging Time	Switch selectable at 2, 4, 8, or 16 seconds
Resolution of Ratio Display	0.1%
Power Supply	Rechargeable Nickel-Cadmium batteries
Power Supply Endurance	20 hours continuous at 20°C
Operating Temperature Range	-30°C to +50°C
Total Weight	6 kg
Console Dimensions	Length: 280 mm; Height: 230 mm; Depth: 150 mm
Coil Dimensions	Length: 500 mm; Diameter: 45 mm
Battery Charger	
Power Requirement	120 V or 240 V, 50 Hz or 60 Hz, 50 VA
Charging Time	7 hours for completely discharged batteries, subsequent automatic trickle charging. Transmitter and receiver batteries can be charged simultaneously.
Weight	4 kg
Dimensions	Length: 290 mm; Height: 150 mm; Depth: 130 mm

SCINTREX

222 Snidercroft Road
Concord Ontario Canada
L4K 1B5

Telephone: (416) 669-2280
Cable: Geoscint Toronto
Telex: 06-964570

Geophysical and Geochemical
Instrumentation and Services

APPENDIX III

AFFIDAVIT OF EXPENSES

AFFIDAVIT OF EXPENSES

This will certify that the work covered by this report was carried out during August, 1984 on the WALL 1-6 mineral claims, in the Next Creek area, Nelson Mining Division, British Columbia, to the value of the following:

Fieldwork

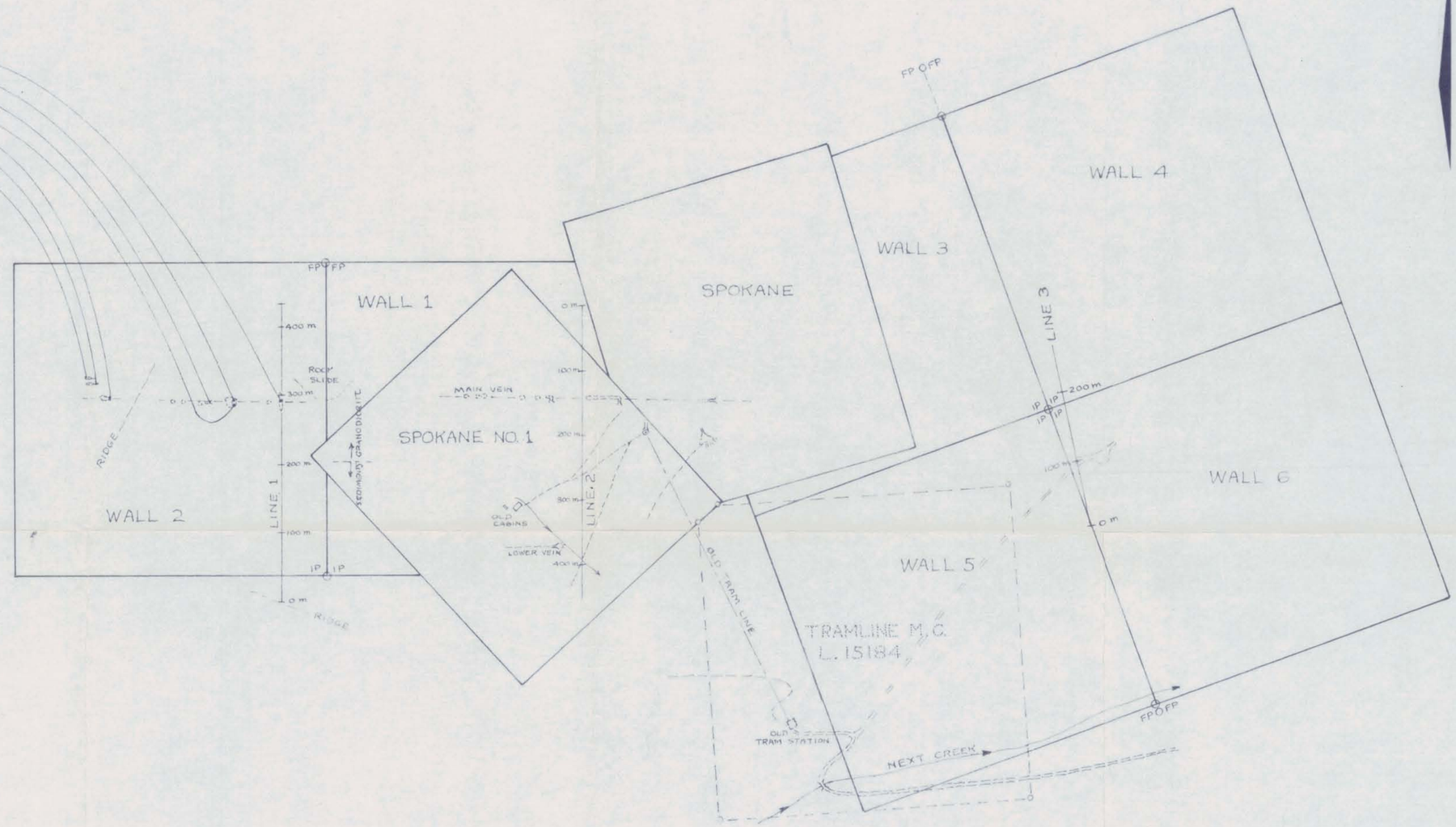
Salaries	
S. Travis	$ 375.00
S. Endersby	600.00
D.J. Endersby	225.00
A.C. Endersby	225.00
Vehicle Expense	337.00
Board	60.00
Geochemical Analysis and Assaying	211.45
Instrument rental VLF-EM, Scintrex SE-88	175.00

Report

Salaries D. MacQuarrie, S. Endersby	875.00
Drafting, typing and compilation	300.00
Map reproduction and photocopying	55.00
	$3,438.45

D.R. MacQuarrie,
B. Sc.

SAMPLE	WIDTH	AU oz/TON	Ag oz/TON	Pb %	Zn %
64355		0.720	2.58	1.54	0.12
64356		1.44	12.6	2.26	0.42
64357		0.108	23.2	21.8	0.30
64358		0.144	4.28	1.78	0.28
64359		0.138	8.80	8.56	0.16
64360		0.016	17.6	15.1	0.14
64361		0.018	0.42	0.28	0.26



GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,393

NUGGET MINES LTD
WALL CLAIMS

SURVEY GRID AND CLAIMS

SCALE 150 0 150 METRES
500 0 500 FEET
1 : 5,000

A·M exploration ltd.

JAN. 29, 1985

FIGURE 3