

3371

Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 3371 MAP

Combined Geochemical
and
Geophysical Report
on the

Mil, Elm, Bru, Dou, Spine, Mine, Lu, Jo,
Star 1 & 2, Peter 1, Vern 8, Sunny Cave,
Sunny Cave 1-3, IV-X, 11-19, 21, 23-26, Mat 1, 4-8,
Van 15, 16, 19-22, 42, 43, 45, 46, 69-80, 89,90
Mineral Claims

50°05'N 123°08'W

B.O. Brynelsen, P.Eng.
J.D. Knauer
L.C. Reinertson

Noranda Exploration Company, Limited
Vancouver Mining Division

November 7, 1970 - August 7, 1971

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Combined Geochemical

and

Geophysical Report

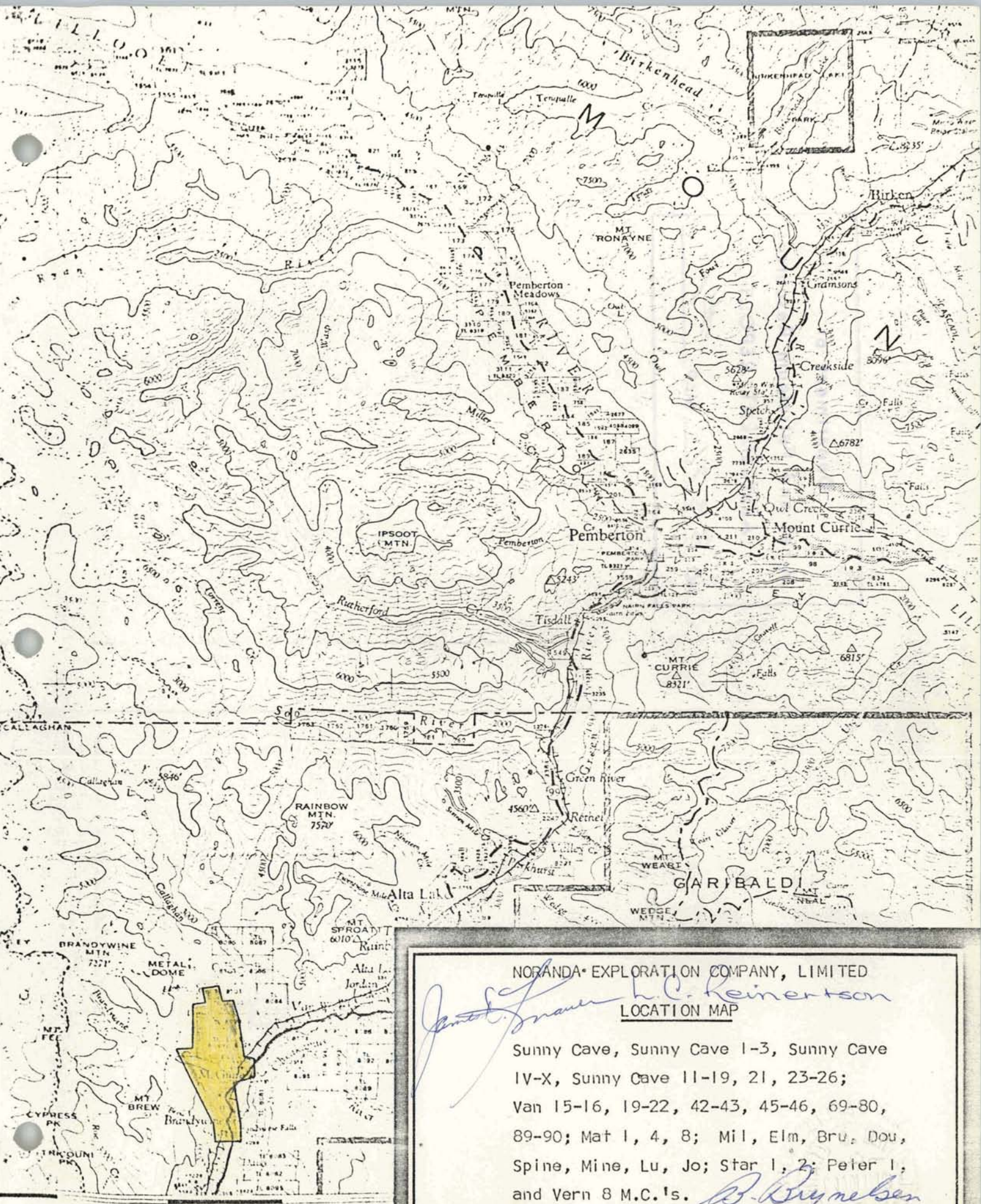
on the

Mil, Elm, Bru, Dou, Spine, Mine, Lu, Jo,
Star 1 & 2, Peter 1, Vern 8, Sunny Cave,
Sunny Cave 1-3, IV-X, 11-19, 21, 23-26, Mat 1, 4-8
Van 15, 16, 19-22, 42, 43, 45, 46, 69-80, 89-90
Mineral Claims
Noranda Exploration Company, Limited

INTRODUCTION:

The claims referred to in this report consist of the following:

<u>Name</u>	<u>Record Number</u>
Mil	4785
Elm	4787
Bru	4812
Dou	4813
Spine	8002
Mine	8427
Lu	11310
Jo	11311
Star 1 & 2	10593 & 10594
Peter 1	10595
Vern 8	9208
Sunny Cave	10557
Sunny Cave 1	10558
Sunny Cave 2	10459
Sunny Cave 3	10583
Sunny Cave IV-X inclusive	11179-11185 inclusive
Sunny Cave 11-19 inclusive	11235-11243 inclusive
Sunny Cave 21	11330
Sunny Cave 23-26 inclusive	11332-11335 inclusive
Mat 1	15638
Mat 4-8 inclusive	15641-15645 inclusive
Van 15 & 16	11769 & 11770
Van 19-22 inclusive	11787-11790 inclusive



NORANDA EXPLORATION COMPANY, LIMITED
James G. ... H.C. Reinertson
 LOCATION MAP
 Sunny Cave, Sunny Cave 1-3, Sunny Cave
 IV-X, Sunny Cave 11-19, 21, 23-26;
 Van 15-16, 19-22, 42-43, 45-46, 69-80,
 89-90; Mat 1, 4, 8; Mil, Elm, Bru, Dou,
 Spine, Mine, Lu, Jo; Star 1, 2; Peter 1,
 and Vern 8 M.C.'s. *B. Brynelsen*
 Vancouver Mining Division
 92 J/3 E
 1"=4 Miles
 FIG. A

<u>Name</u>	<u>Record Number</u>
Van 42 & 43	11810 & 11811
Van 45 & 46	11813 & 11814
Van 69-80 inclusive	11995-12007 inclusive
Van 89 & 90	15371 & 15372

These claims are held in the name of Noranda Exploration Company, Limited (No Personal Liability). The surveys described in this report were conducted within the boundaries of the above mentioned mineral claims, which are shown on Drawing No. 5.

The claims are located on the west side of the Cheakamus River at McGuire, B.C. The majority of the claims lie between Edna Creek to the north and Brandywine Creek to the south. Some of the claims are situated on the southwest side of Brandywine Creek where it swings to the south for its confluence with the Cheakamus River. The Pacific Great Eastern Railway and Highway No. 99, B.C. roughly parallel the Cheakamus River through the property on the eastern edge.

Between November 14, 1970 and August 7, 1971, geochemical and geophysical surveys were carried out after the necessary grid lines were prepared. The work was done under the direction of B.O. Brynelsen, P.Eng., with field supervision by J.D. Knauer (geochemical) and J.T. Walker (geophysical).

GENERAL GEOLOGY:

The claims described in this report are underlain mainly by granites and granodiorites of the coast range complex. Within these intrusive rocks are roof pendants of altered and sheared volcanics and sediments. A series of later felsite dykes cut through the property with a northerly trend. Most recent geological activity has been flows of basaltic lava seen on the east and south of the area.

GRID PREPARATION:

In order to carry out the detailed geochemical and geophysical surveys over the claims, a large grid was needed. This was prepared in the following manner.

A north-south base line, 11,400 feet in length, was put in by transit survey. This was cut off to the south by Brandywine Creek and so an additional 4,500 feet of north-south base line was put in at offset positions in order to extend the grid further south. Grid lines were put in by compass and chain at 400-foot intervals with some additional lines at 200-foot intervals over areas of prime interest. The base lines were cut out with power saw, horizontally chained, and picketed every 200 feet. The grid lines were blazed, flagged, horizontally chained and picketed every 100 feet. In addition to this, 4.7 miles of grid line was cut with power saw in order to facilitate the Induced Polarization and Resistivity surveys.

The base lines amounted to 2.98 miles and the grid lines totalled 45.8 miles. Noranda crews were responsible for laying out the base lines and 4.5 miles of the grid lines. The majority of the work (41.3 miles) was contracted out to Amex Exploration Services, Limited. This work was carried out in stages between November 7, 1970 and July 3, 1971, with a five month layoff in between due to heavy snow conditions.

GEOCHEMICAL SOIL SURVEY:

All soil samples were analyzed for copper, zinc and silver in the Noranda Exploration Company, Limited Laboratory located at 1050 Davie Street, Vancouver 5, B.C., analyst Evert vanLeeuwen.

Sampling Method:

Samples were obtained by digging holes with a shovel and steel bar, to a depth at which the visible C horizon or sub-outcrop was encountered. The C horizon was sampled and the lower part of the B horizon, where visible, was also sampled. The samples were placed in "Hi Wet Strength Kraft 3 1/2" x 6 1/8" Open End" envelopes and the grid station was marked on the envelopes with indelible felt pens. Soil samples were taken at 200-foot intervals and in certain areas of the grid at 100-foot intervals along the grid lines.

Laboratory Determination Method:

The samples are first hung in a drying cabinet for a period of 24 to 48 hours. The sampled material is then screened and sifted to obtain a -80 mesh fraction.

The determination procedure for total silver, copper and zinc is as follows: 1.0 grams of the -80 mesh material is digested in 3.0 ml. of HClO_4 and 1.0 ml. of HNO_3 for approximately four hours. Following digestion each sample is diluted to 10.0 ml. with demineralized H_2O . A Varian Techtron Model AA-5 Atomic Absorption Spectrophotometer was used to determine the parts per million silver, copper and zinc content in each sample.

The theory of Atomic Absorption Spectrophotometry is fully described in the literature and will not be described in this report.

Presentation of Results:

Results of this survey are presented in Drawings No. 1, No. 2 and No. 3 of this report; plan maps (scale: 1 inch equals 400 feet) showing silver, copper and zinc determinations in parts per million. Silver values greater than 2.9 p.p.m., copper values greater than 155 p.p.m. and zinc values greater than 290 p.p.m. are outlined by solid lines.

Discussion of Results:

Silver determination values range from a background of less than 2.2 p.p.m. to anomalous values ranging from 3.0 to 50.0 p.p.m. Copper values range from a background of less than 70 p.p.m. to anomalous values greater than 155 p.p.m. Zinc values have a background of less than 120 p.p.m. and anomalous values 300 p.p.m. and greater. The main areas of interest with respect to silver, copper and zinc determinations appear to occur in the southeastern and northern portions of the grid. Only scattered, higher than background values occur between these two main areas. The southeastern area lies east of the 200E base line and south from 140N to 88N. Silver and zinc show the best correlation. Although copper is not as wide spread it does, however, back up silver and zinc to some extent. In the northern area, mainly north of line 200N, zinc appears to be the dominant element with copper and silver back-up in a few cases. Known mineralization in an area west of the 200E base line was covered by a detailed grid between 128N and 148N. Only scattered values in silver, copper and zinc were indicated. An increase in overburden and possible depth, and narrowness of the mineralized zone were factors which may have contributed to only a few high values in this area.

Soil development varies over the entire grid area from those which have good development, but may vary from transported to residual material in a very short distance, to little or no development on the very steep slopes. This is very important in the interpretation of the results and their association to mineralized areas. In the southeast area mentioned previously, many of the samples were taken in residual material.

VLF - ELECTROMAGNETIC SURVEY:

The Electromagnetic survey was carried out utilizing a Radem E.M. receiver manufactured by Crone Geophysics Limited, 3607 Wolfedale Road, Mississauga, Ontario.

The operation and theory of the VLF - Electromagnetic method is described fully in the literature. Only a brief outline of the method will be discussed here.

The VLF - EM method employs V.L.F. radio signals in the 15 - 25 KHz range as a primary field source. The normal field from these V.L.F. stations is horizontal. This normally horizontal electromagnetic field can be locally distorted by many factors, one of which is the presence of an electrical conductor either in or above the ground. The distortion by a conductor will cause the normally horizontal field to tilt. This tilt of the field can be observed by measuring the angle of null (minimum signal) in a vertical plane, tangential to the wave front of the primary field.

For this survey, the tilt angle of null was recorded at each 100-foot station utilizing the V.L.F. signal from a transmitter near Seattle, Washington (frequency 18.6 KHz). A total of 47.4 line miles of survey were conducted.

Field Procedure:

- (1) With the V.L.F. receiver held horizontally (receiver coil axis horizontal), rotate the instrument in a horizontal plane until a null is observed. In this null position, the coil axis points in the direction of the transmitter. The vertical plane perpendicular to the coil axis direction is now known. This vertical plane is tangential to the wave front of the primary field. The operator is now facing the transmitter.

- (2) The receiver is now held upright in this vertical plane (receiver coil axis vertical) and rotated until a signal null or minimum is observed. While the receiver is held in this null position the dip angle of the null is read on the receiver inclinometer and recorded as percent slope. A positive or negative sign is given each reading using the following convention.

Top of coil axis tilted to right of operator - sign positive.

Top of coil axis tilted to left of operator - sign negative.

At each station, the operator records dip angle of null in % slope, the grid line and station coordinates.

Presentation of Results:

The results of the survey are plotted on two plan maps, each at a scale of 1 inch equals 400 feet. Drawing No. 4 shows a plot of the recorded dip angle readings. These readings are profiled along each line using a vertical scale of 1 inch = 40%. Drawing No. 5 shows a plot of the filtered dip angle readings. Negative values are indicated by the negative sign (-) only. Positive values are plotted and contoured.

The filtering technique was developed by D.C. Fraser and published in Geophysics, Vol. 34 No. 6 (December 1969) Pp. 958-967. The following functions are performed by the filtering procedure.

- (1) The dip angle profiles are phase shifted by 90° (Anomalous profile cross-overs and inflections are now indicated by positive values.).
- (2) High frequency noise is attenuated.
- (3) The D.C. component is removed (This component is caused in part by topography.).

Since the anomalous cross-overs and inflections of the profiled data are converted into positive values by the filtering, only these positive values are plotted and contoured. These positive contoured areas clearly define the conductive zones within the surveyed area.

Discussion of Results:

The relatively high frequency used for this survey (18.6 KHz), and the nature of the radiated signal produces a primary ground current distributed

across large areas of the earth. The magnitude of this ground current is altered by changes in the conductivity of the earth, producing measurable changes in the vertical component of the electromagnetic field. The direction of the current flow, in line between the survey zone and the transmitter, appears to emphasize conductive zones oriented generally in line with this current flow.

The filtered data, presented in contoured form on Drawing No. 5 provides a very clear picture of the conductive zones of the grid area. Some of these may be caused by topographic effect which wasn't removed by filtering and would coincide with ridges or abrupt changes in slope. It would be dangerous to attempt to remove this effect and so all anomalies should be considered conductive. Comparison of these zones with geological, and geochemical data should prove very useful in delimiting prime interest areas and selecting diamond drill targets.

ELECTROMAGNETIC SURVEY (JEM):

Method:

The electromagnetic survey, carried out on this property, utilized J.E.M. transceivers owned by Noranda Exploration Company, Limited and manufactured by Crone Geophysics Ltd., Mississauga, Ontario. The In Line "shootback" method was employed throughout the survey.

The theory of the method and operation of the equipment is described by Duncan Crone in Mining Geophysics, Volume 1, Society of Exploration Geophysicists, Pp. 151-155. The method is patented. A brief description of the equipment and operating method is given here. The equipment consists of two identical units, each unit consisting of a tuned coil with attached inclinometer, connected by cable to a transmitter-receiver amplifier box, earphones are connected to the receiver circuit of the amplifier. The unit is powered by a 12 volt dry battery.

Two operators, each carrying a unit, are required to conduct a survey. They are designated "chief" and "helper". While surveying, the operators travel in line along a single grid line maintaining a constant separation of 200 feet. To take a reading the chief orients his coil in a plane 15° off vertical and aimed coaxially along the line toward the helper. Maintaining this coil orientation

the chief's transmitter is turned on. The helper with his unit on receive determines the horizontal direction of the transmitted signal. The receiver coil is then held in a horizontal plane and tilted about a horizontal axis perpendicular to the direction of the transmitted signal. The coil is tilted until a signal null is observed in the earphones. The tilt angle of the coil at the null position is read on the inclinometer and is recorded as the helper reading in degrees positive or negative. To obtain the chief reading, the above procedure is repeated with the helper transmitting and the chief receiving. The algebraic sum of the chief and helper readings is calculated and recorded as the resultant reading. This resultant reading is plotted at the station midway between the operators.

Throughout this survey readings were taken at 100-foot intervals along the grid lines with a constant coil separation of 200 feet. The survey was carried out using a frequency of 1800 Hz and covered a total of 65,400 feet of line.

Presentation of Results:

Results of the survey are plotted on Drawing No. 6 of this report; a plan map at a scale of 1 inch equals 400 feet. The resultant dip angle of null in degrees is plotted at each station. The readings on each grid line are profiled using a vertical scale of 1 inch equals 40 degrees.

Discussion of Results:

The results of this survey show a small conductive zone over two 200-foot spaced grid lines, but is cut off on both ends by the next lines. The maximum dip angle of null over this zone is minus 12 degrees. No other conductive zones were indicated.

ELECTROMAGNETIC SURVEY (C.E.M.):

Method:

Part of the electromagnetic survey carried out on this property utilized C.E.M. transceivers owned by Noranda Exploration Company, Limited, and manufactured by Crone Geophysics Limited, Mississauga, Ontario. The In Line "shootback" method was employed throughout the survey.

The theory of the method and operation of the C.E.M. is identical to that of the J.E.M. except that the coils are held in a horizontal position when transmitting. A brief description of the equipment is given here because it has some physical variations and refinements from the J.E.M.

Each of the two identical units consists of a tuned coil with an attached inclinometer and field strength meter. The amplifier is contained within the coil housing and earphones are eliminated by employing the field strength meter to obtain a visual null (minimum field strength). Each unit is powered by 18 volts supplied by three 6 volt batteries mounted in an aluminum case on a light-weight packboard and connected to the coil by cable. When not in use the coil is easily fastened onto the packboard for ease of travelling and packing.

A total of 25,000 feet of C.E.M. was run.

Presentation of Results:

Results of the C.E.M. survey are plotted on the same drawing as the J.E.M. survey results and are presented in the same manner. Scale of the plan map is 1 inch equals 400 feet and the vertical scale for the resultant dip angle of null in degrees is 1 inch equals 40 degrees.

Discussion of Results:

By employing the horizontal shootback method along with a frequency of 5000 Hz we will obtain an amplitude of about 2X what would be obtained by a J.E.M. survey of the same ground. Considering this, the results of the C.E.M. survey indicate no recognizable conductive trends.

Some of the results of the C.E.M. survey have been plotted but not profiled, because the validity of the readings is suspect. The reason for this was the use of inexperienced operators.

INDUCED POLARIZATION AND RESISTIVITY SURVEY:

The Induced Polarization and Resistivity Survey was carried out utilizing Variable Frequency I.P. equipment owned by Noranda Exploration Company, Limited. The theory of Variable Frequency Induced Polarization is fully described in the literature and will not be discussed in this report.

Method:

Throughout this I.P. and Resistivity Survey the following field procedure was carried out for the recorded readings at each 200 foot station along the prepared grid lines. A dipole-dipole electrode configuration ($C_2 C_1 P_1 P_2$) was employed with an electrode separation of 200 feet. Current is injected into the earth between electrodes C_1 and C_2 . The Induced voltage developed between the porous pot electrodes P_1 and P_2 is measured. The four man field crew, one man stationed at each electrode, carried out the survey transporting electrodes and instruments station to station along the survey grid lines.

The following data are recorded at each station:

- Grid location of current electrodes C_1 and C_2 .
- Grid location of potential electrodes P_1 and P_2 .

In addition the following electrical measurements are made and recorded:

- (1) Transmitter current on-Frequency 10 Hz (Current recorded in Milliampers).
- (2) Receiver measures developed voltage (recorded in millivolts).
- (3) Current maintained constant frequency changed to 0.3 Hz.
- (4) Receiver measures percent change in voltage caused solely by the change in frequency of current.
(Percent change of voltage recorded as Percent Frequency Effect).

Note on Reading No. 4:

By definition Percent Frequency Effect is the percent change in Resistivity when the Resistivity is calculated for two frequencies. Resistivity is directly proportional to the voltage and inversely proportional to the current. Provided the current is constant for each frequency, the percent change in voltage equals percent change in resistivity and the voltage change in percent is read directly as Percent Frequency Effect.

The Resistivity for each electrode set up is calculated from the recorded voltage and current measurements and electrode separation in feet.

For this survey, a total of 4.7 miles of Induced Polarization and Resistivity was run.

Presentation of Results:

The results of the Induced Polarization and Resistivity surveys are presented on plan maps with a scale of 1 inch equals 400 feet. The Induced Polarization response, measured in Percent Frequency Effect are plotted on Drawing No. 7. Apparent Resistivity in values of ohm feet is plotted on Drawing No. 8. Readings for each survey are plotted at midpoint between grid locations of C_1 and P_1 .

Discussion of Results:

Because of the terrain and weather conditions, the Induced Polarization and Resistivity survey was very slow. This work was therefore confined to areas of interest so that results of other surveys covering the entire grid could be more easily interpreted. Little effort was made to contour the results because of the large distance separating the lines covered by the survey.

The I.P. response ranged from a low of 0.7 percent to a high of 19.2 percent. Resistivity values ranged from a low of 52.0 ohm feet to a high of 5360 ohm feet.

CONCLUSIONS AND RECOMMENDATIONS:

The results of the surveys discussed in this report have indicated one main anomalous zone on the southeastern portion of the grid. This shows anomalous values of copper, zinc and silver in soils as well as Induced Polarization Frequency Effects. Filtered results of the VLF - EM survey indicate this area to be conductive as well as showing structural features on other parts of the grid. These surveys indicate a possibility that the zone extends both north and south of the existing lines. The VLF - EM survey results indicate a conductive zone coinciding with a mineralized outcrop in the area between 128N and 148N, on the western side of the grid. The geochemical survey shows only a few scattered high values in that area.

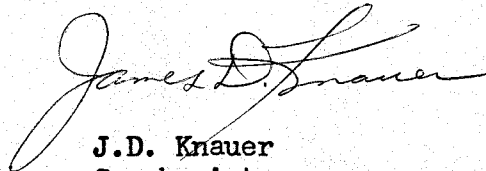
On the northern portion of the grid, a zone of anomalous zinc values coincides with a north-south trending VLF - EM zone. A few high copper and silver values occur to the east of this zone but do not lend themselves to any trend. A weak zone of Induced Polarization Frequency Effects occurs immediately south of this area, but because of the limited amount of the survey conducted no correlation is possible.

No further geochemical or geophysical work is warranted on the existing grid. Any additional work should consist of detailed geology and diamond drilling of the main anomalous zones. Depending on the results of this work a decision could be made as to whether the grid should be extended in the areas of importance.

Respectfully submitted,



B.O. Brynelsen, P.Eng.



J.D. Knauer
Geochemist



L.C. Reinertson
Geophysical Coordinator

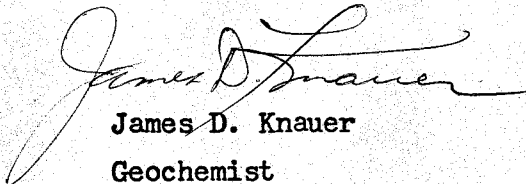
October 20, 1971

Statement of Qualifications

I, James D. Knauer of the City of Vancouver, Province of British Columbia do certify that:

1. I have been an employee of Noranda Exploration Company, Limited since August 1964.
2. I am a graduate of the University of New Mexico with a Bachelor of Science Degree in Geology
3. I am a member of the Geochemical Society.
4. I have held the position of Geochemist for Noranda Exploration Company, Limited, British Columbia since June 1965.
5. I am a member of the Canadian Institute of Mining and Metallurgy.

Dated at Vancouver
this 20th day of October 1971



James D. Knauer

James D. Knauer

Geochemist

Noranda Exploration Company, Limited

(No Personal Liability)

Statement of Qualifications

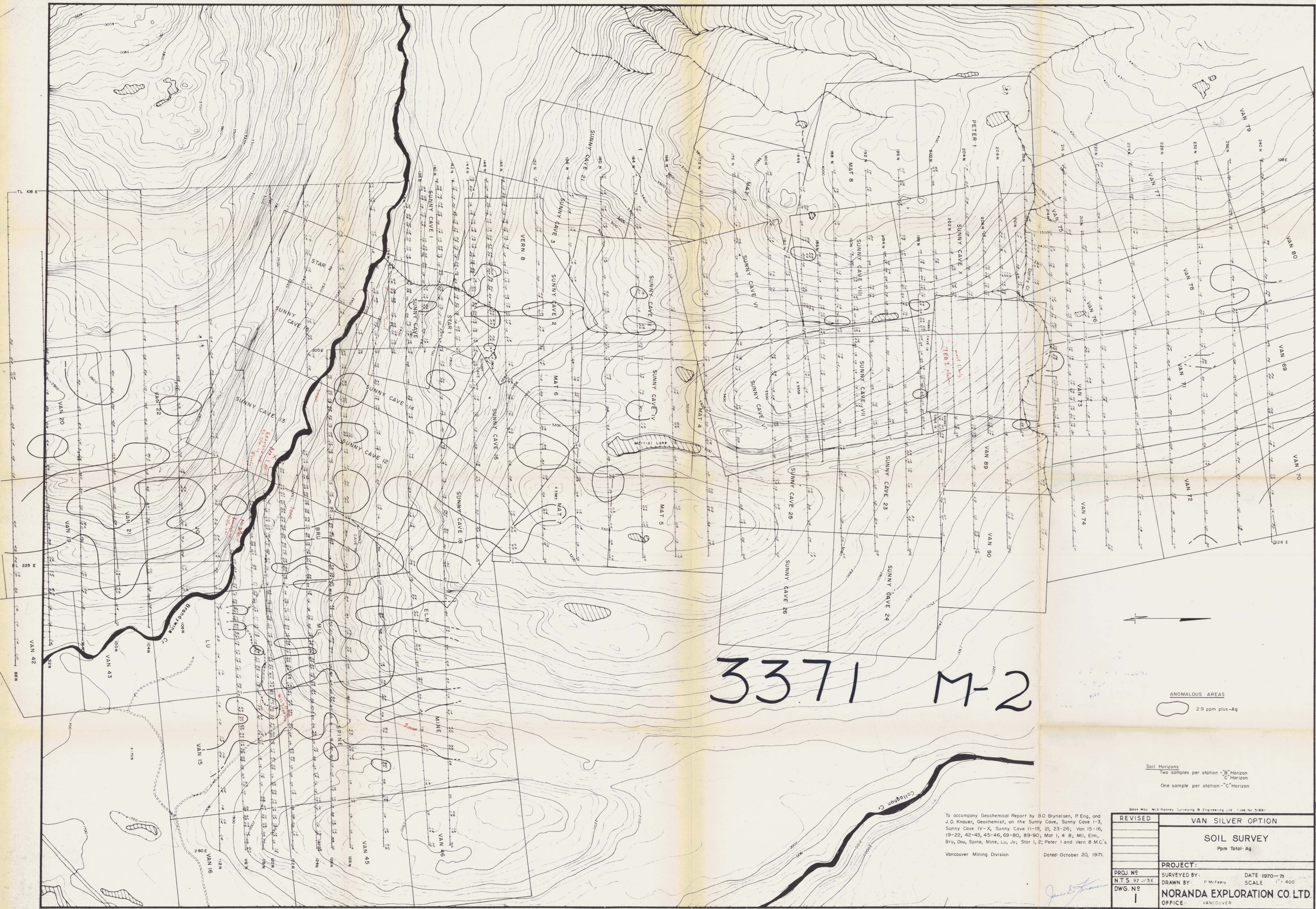
I, Lawrence C. Reinertson of the City of Vancouver, Province of British Columbia, do certify that:

1. I have been an employee of Noranda Exploration Company, Limited, continuously since May 1970, and intermittently since January 1966.
2. I am a graduate of the British Columbia Institute of Technology with a Diploma of Technology in Mining.
3. I am a member of the Canadian Institute of Mining and Metallurgy.
4. I have held the position of Geophysical Coordinator for Noranda Exploration Company, Limited, British Columbia since August 1971.

Dated at Vancouver
this 20th day of October 1971

Lawrence C. Reinertson

Lawrence C. Reinertson
Geophysical Coordinator
Noranda Exploration Company, Limited
(No Personal Liability)



3371 M-2

ANOMALOUS AREAS
 ○ 2.9 ppm plus-Ag

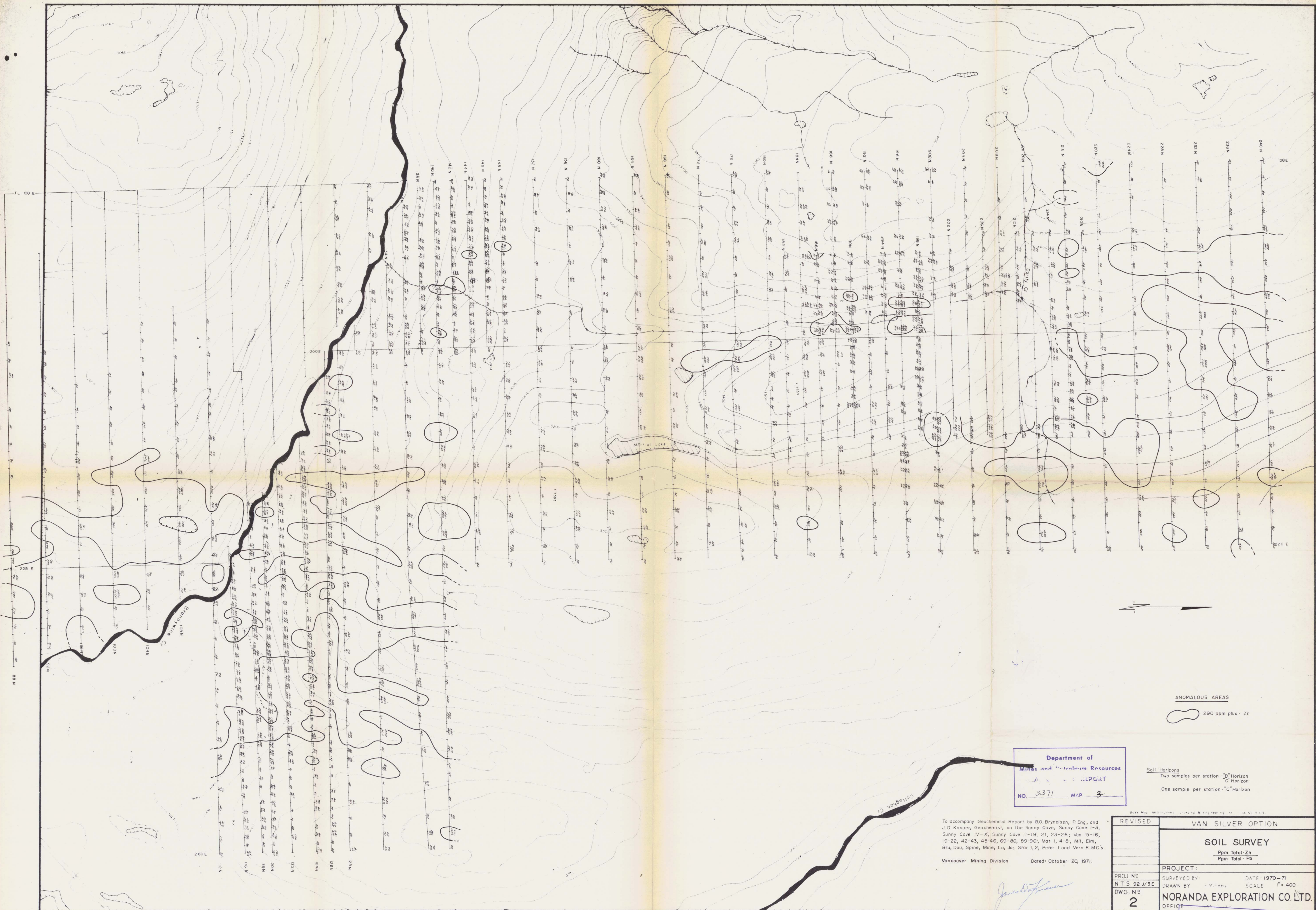
Soil Horizons
 Two samples per station - "B" Horizon
 "C" Horizon
 One sample per station - "C" Horizon

To accompany Geochemical Report by B.O. Brynlesen, P.Eng., and J.D. Knauer, Geochimist, on the Sunny Cave, Sunny Cave I-3, Sunny Cave 11-15, Sunny Cave 11-15, 21, 23-25; Van 15-16, 19-22, 42-43, 45-46, 69-80, 89-90; Mat 1, 4, 8, Mill, Elm, Bru, Dou, Spine, Mine, Lu, Jo, Star 1, 2; Peter I and Vern 8 M.C.'s.
 Vancouver Mining Division
 Dated October 20, 1971.

REVISED	VAN SILVER OPTION	
	SOIL SURVEY	
	Ppm Total Ag	
PROJECT:		
PROJ. NO.	SURVEYED BY:	DATE: 1970-71
N.T.S. 92 J/3 E	DRAWN BY: P. McFeely	SCALE: 1" = 400'
DWG. NO. 1	NORANDA EXPLORATION CO. LTD.	
	OFFICE: VANCOUVER	

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3371
 M/P #2

B. Brynlesen



ANOMALOUS AREAS
 290 ppm plus - Zn

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3371 MAP 3

Soil Horizons
 Two samples per station - "B" Horizon
 "C" Horizon
 One sample per station - "C" Horizon

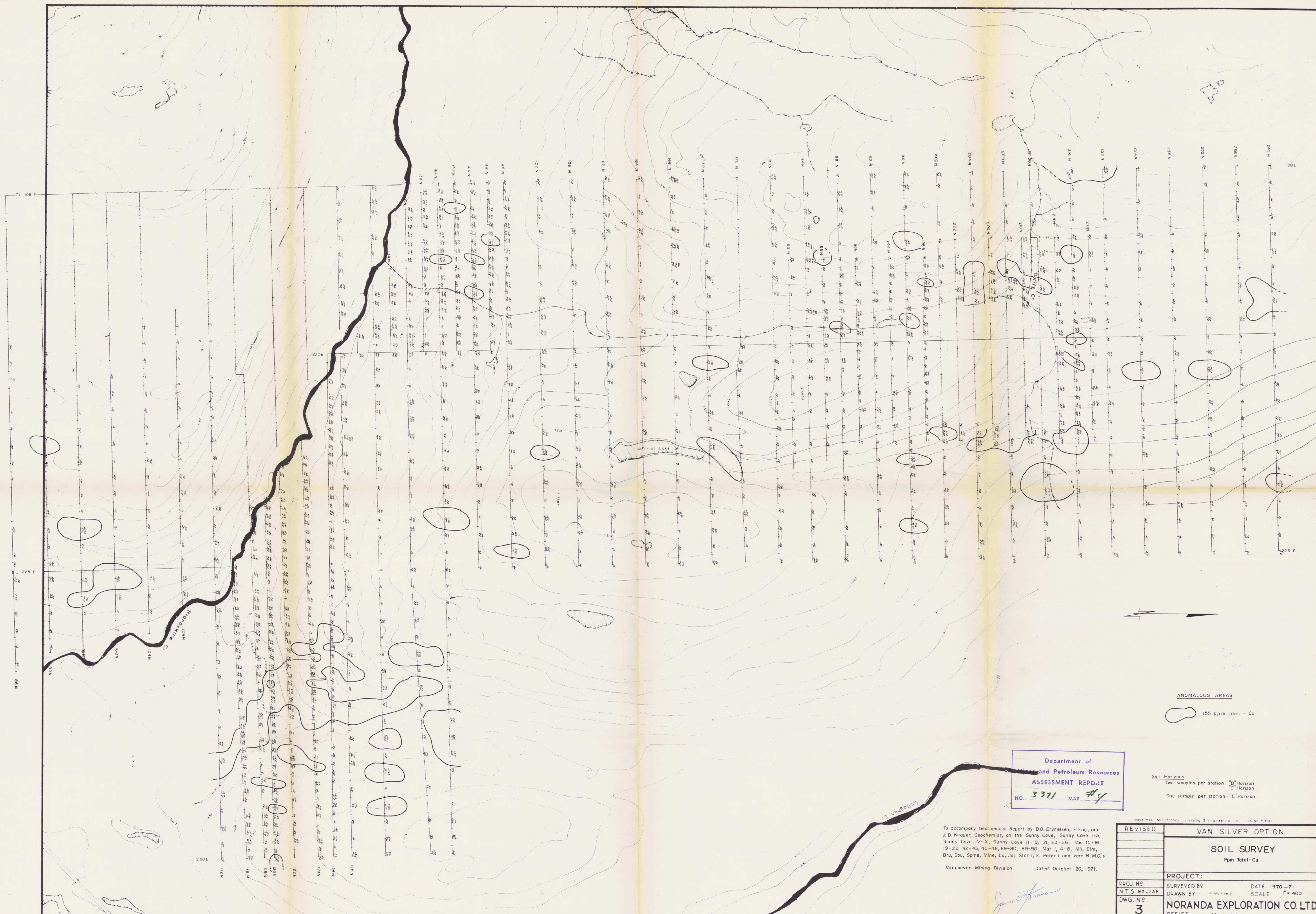
To accompany Geochemical Report by B.O. Brynelsen, P. Eng. and
 J.D. Knauer, Geochemist, on the Sunny Cove, Sunny Cove I-3,
 Sunny Cove IV-X, Sunny Cove II-19, 21, 23-25; Van 15-16,
 19-22, 42-43, 45-46, 69-80, 89-90; Mar. I, 4-8; Mill, Elm,
 Bru, Dou, Spine, Mine, Lu, Jo, Star I, 2, Peter I and Vern B MC's.
 Vancouver Mining Division Dated: October 20, 1971.

James D. Knauer

REVISED	VAN SILVER OPTION	
	SOIL SURVEY	
	Ppm Total Zn	
	Ppm Total Pb	
PROJECT:		
PROJ. NO.	SURVEYED BY	DATE 1970-71
NTS 92 1/3 E	DRAWN BY	SCALE 1" = 400'
DWG. NO. 2	NORANDA EXPLORATION CO. LTD.	
	OFFICE	

Department of
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 ASSESSMENT REPORT
 NO. 3371 MAP #3

B.O. Brynelsen



ANOMALOUS AREAS
 155 ppm plus - Cu

Department of
 Mining and Petroleum Resources
ASSESSMENT REPORT
 NO. 3371 MAP #4

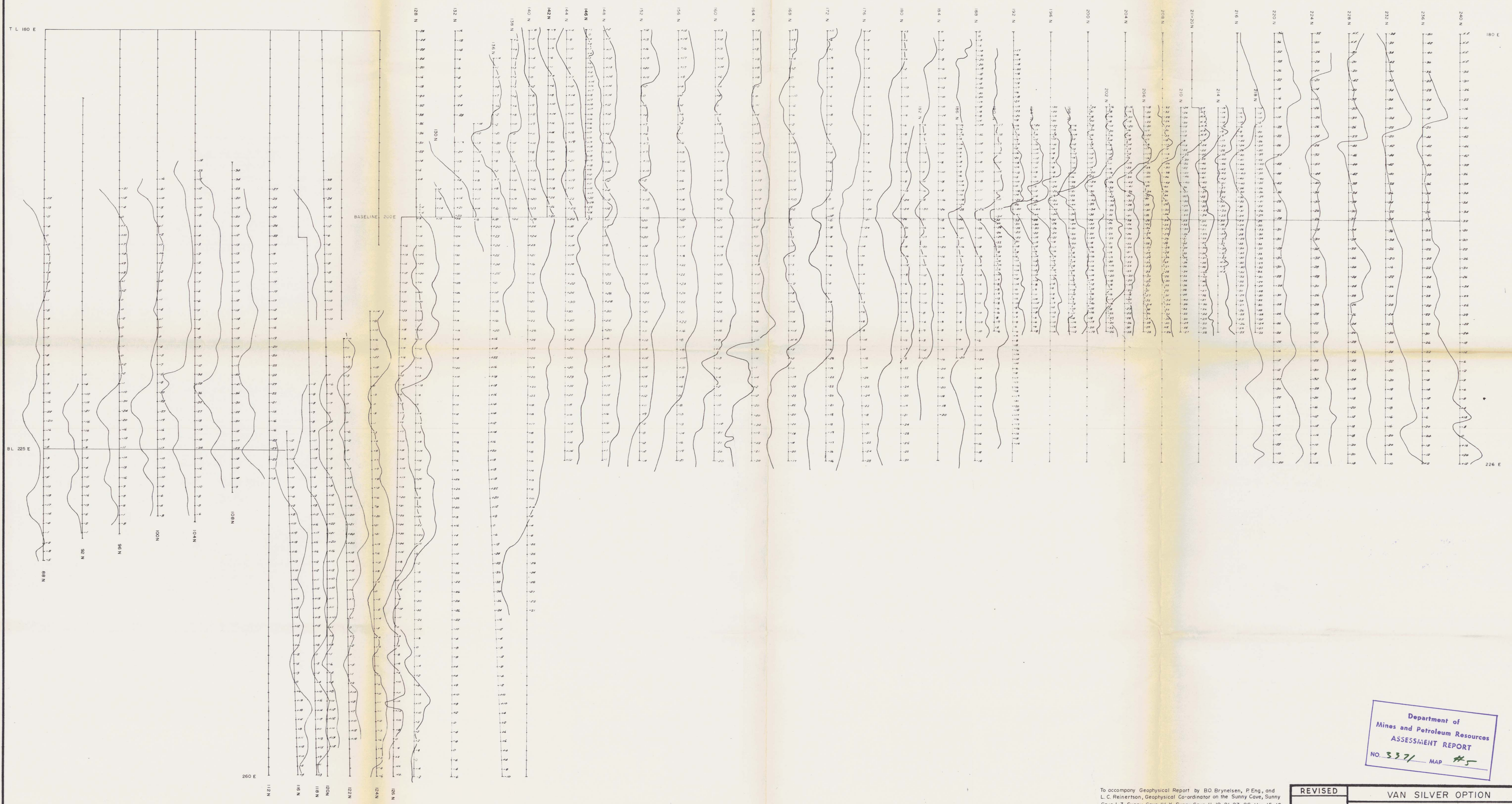
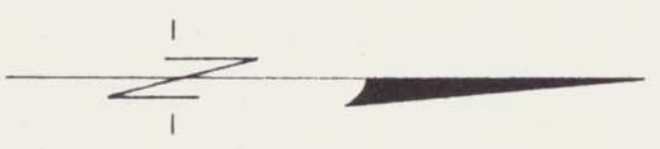
Soil Horizons
 Two samples per station - "B" Horizon
 "C" Horizon
 One sample per station - "C" Horizon

To accompany Geochemical Report by B.O. Brynelsen, P. Eng., and J.D. Knauer, Geochemist, on the Sunny Cave, Sunny Cave I-3, Sunny Cave IV-X, Sunny Cave II-15, 21, 23-26, Van 15-16, 19-22, 42-43, 45-46, 69-80, 89-90, Mar 1, 4-8, Mill, Elm, Bra, Dou, Spine, Mine, Lu, Jo, Star 1, 2, Peter 1 and Vern & M.C.'s.
 Vancouver Mining Division Dated: October 20, 1971.

REVISED	VAN SILVER OPTION	
	SOIL SURVEY	
	Ppm Total - Cu	
PROJECT:		
PROJ. NO.	SURVEYED BY:	DATE 1970-71
NTS 92/3E	DRAWN BY: F. McCreary	SCALE 1" = 400'
DWG. NO. 3	NORANDA EXPLORATION CO. LTD.	
	OFFICE VAN COV	

John D. Knauer

B. Brynelsen

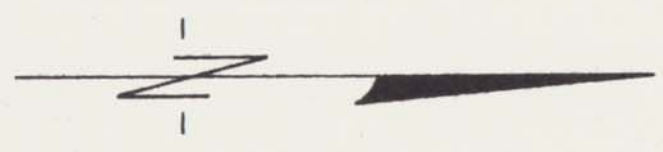


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
No. 3371 MAP #5

To accompany Geophysical Report by BO Brynnesen, P Eng, and
L.C. Reinertson, Geophysical Co-ordinator on the Sunny Cove, Sunny
Cave I-3, Sunny Cave IV-X, Sunny Cave II-19, 21, 23-26; Van 15-16,
19-22, 42-43, 45-46, 69-80, 89-90; Mat 1, 4-8; Mil, Elm,
Bru, Dou, Spine, Mine, Lu, Jo, Star 1, 2, Peter 1 and Vern 8 MC's.
Vancouver Mining Division Date: October 20, 1971.

L.C. Reinertson
B. Brynnesen

REVISED	VAN SILVER OPTION	
	VLF-E.M. SURVEY	
	PROFILE OF NULL ANGLE IN % SLOPE	
	INSTRUMENT-RADEM	
	Transmitter - Seattle, Wash.	
PROJECT:		
PROJ. NO 1041	SURVEYED BY:	DATE: JULY, 1971
N.T.S. 921/3E	DRAWN BY: J.P.	SCALE: 1" = 400'
DWG. NO 4	NORANDA EXPLORATION CO. LTD.	
	OFFICE: VANCOUVER	

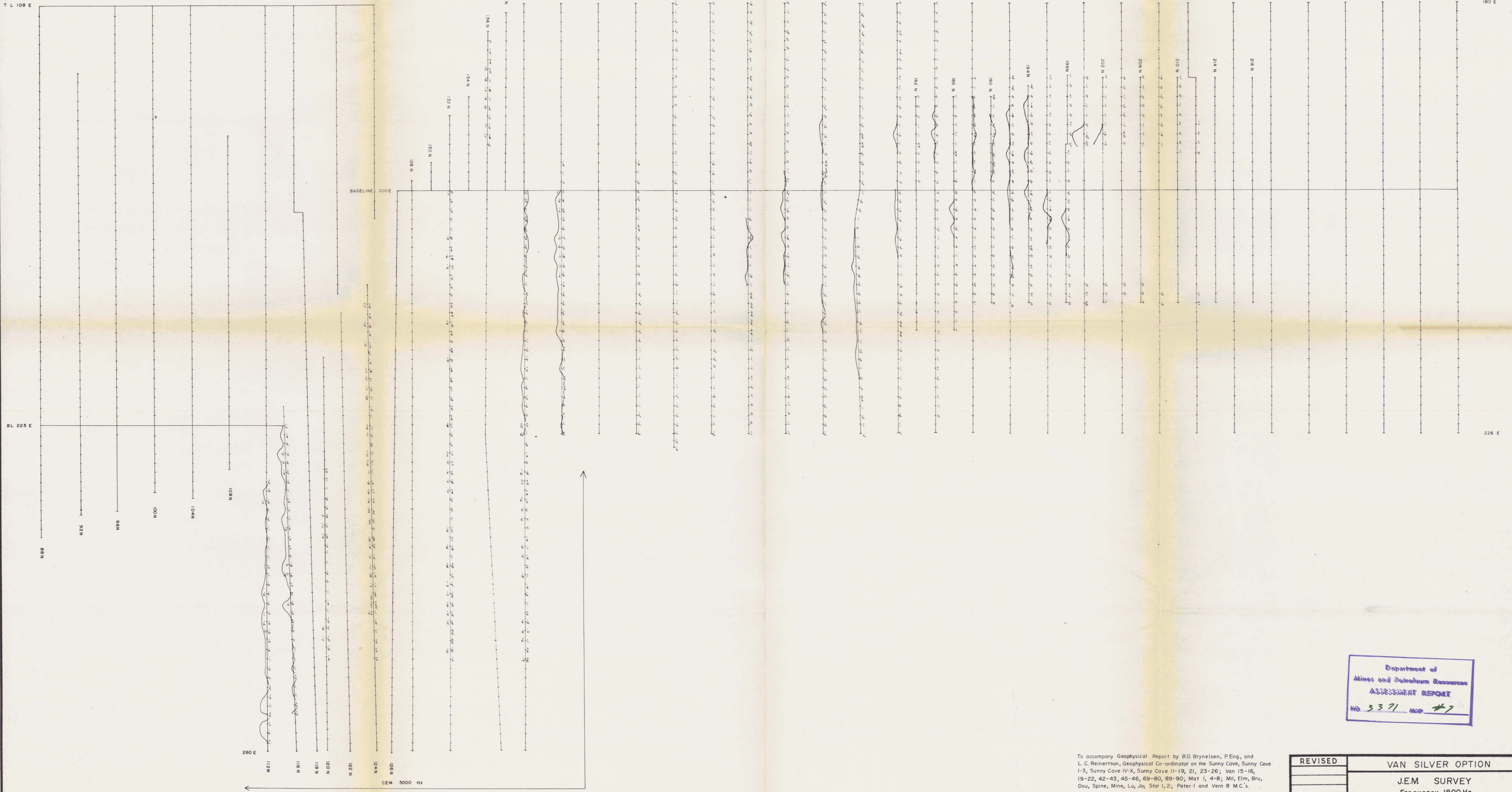


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3371 MAP #6

To accompany Geophysical Report by B.O. Brynelsen, P.Eng. and
L.C. Reinertson, Geophysical Co-ordinator on the Sunny Cave, Sunny
Cave I-3, Sunny Cave IV-X, Sunny Cave II-19, 21, 23-26; Van 15-16,
19-22, 42-43, 45-46, 69-80, 89-90; Mat I, 4-8; Mil, Elm,
Bru, Dou, Spine, Mine, Lu, Jo, Star I, 2, Peter I and Vern 8 M.C.'s.
Vancouver Mining Division Dated October 20, 1971.

L.C. Reinertson
B. Brynelsen

REVISED	VAN SILVER OPTION	
	VLF - EM SURVEY	
	CONTOUR MAP DATA FILTERED	
	Fraser Method Transmitter - Seattle, Wash.	
PROJECT:		
PROJ. NO. 1041	SURVEYED BY:	DATE: JULY, 1971
N.T.S. 924/3E	DRAWN BY:	SCALE: 1" = 400'
DWG. NO. 5	NORANDA EXPLORATION CO. LTD.	
	OFFICE: VANCOUVER	

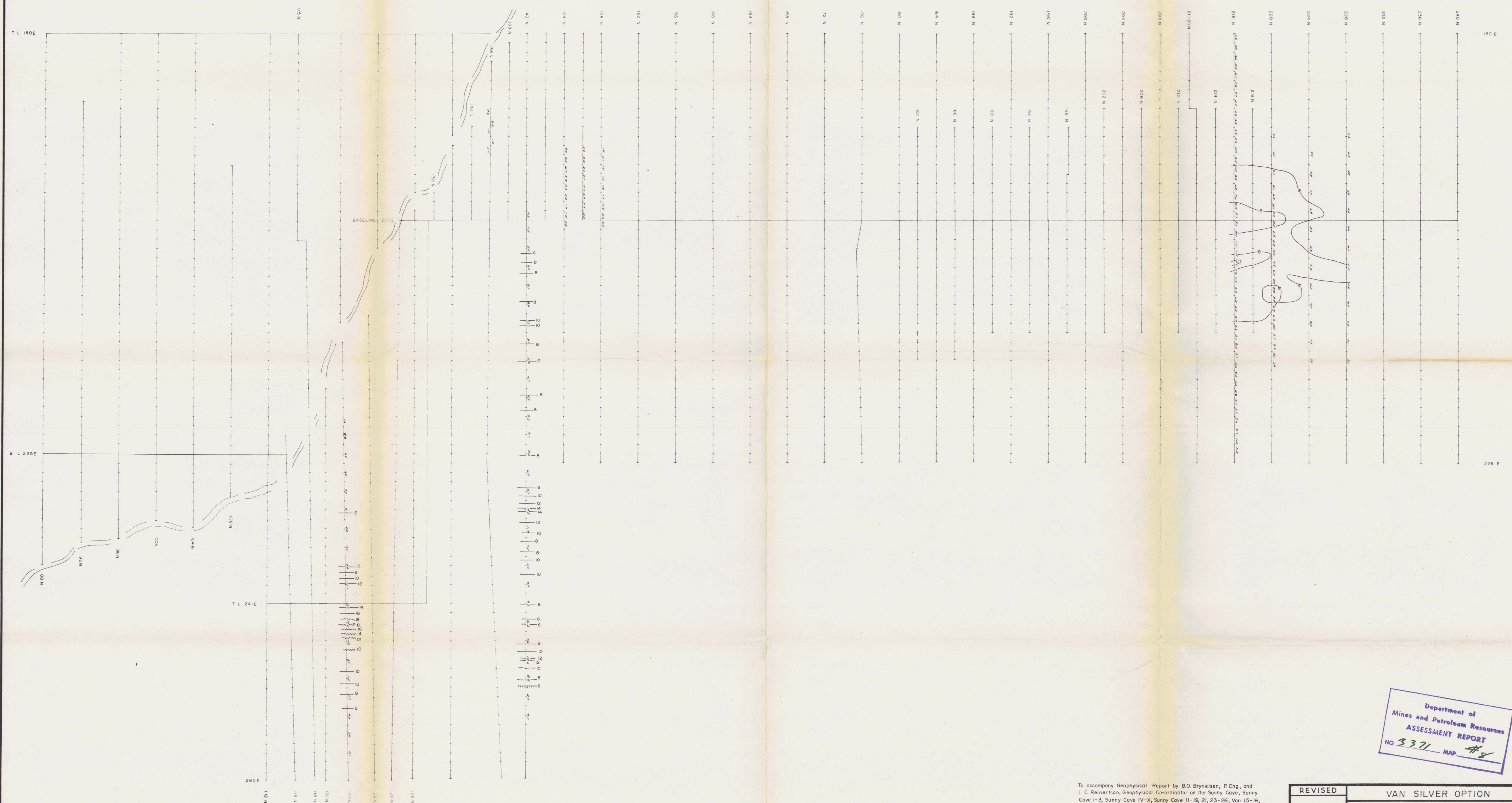


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
No. 3371 Map #7

To accompany Geophysical Report by B.O. Brynelsen, P.Eng., and
L.C. Reinertson, Geophysical Co-ordinator on the Sunny Cove, Sunny Cove
1-3, Sunny Cove 1V-X, Sunny Cove 1I-19, 21, 23-26; Van 15-16,
19-22, 42-43, 45-46, 69-80, 89-90; Mat 1, 4-8; MII, Elm, Bru,
Dou, Spine, Mine, Lu, Jay, Star 1, 2; Peter I and Vern 8 M.C.'s.
Vancouver Mining Division Dated: October 20, 1971.

L.C. Reinertson
B. Brynelsen

REVISED	VAN SILVER OPTION	
	J.E.M. SURVEY	
	Frequency 1800 Hz	
	Coil Spacing 200ft.	
PROJECT:	PROJECT:	
PROJ. NO. 1041	SURVEYED BY:	DATE: JULY, 1971
N.T.S. 92 J/3 E	DRAWN BY:	SCALE: 1" = 400'
DWG. NO. 6	NORANDA EXPLORATION CO. LTD.	
	OFFICE: VANCOUVER	

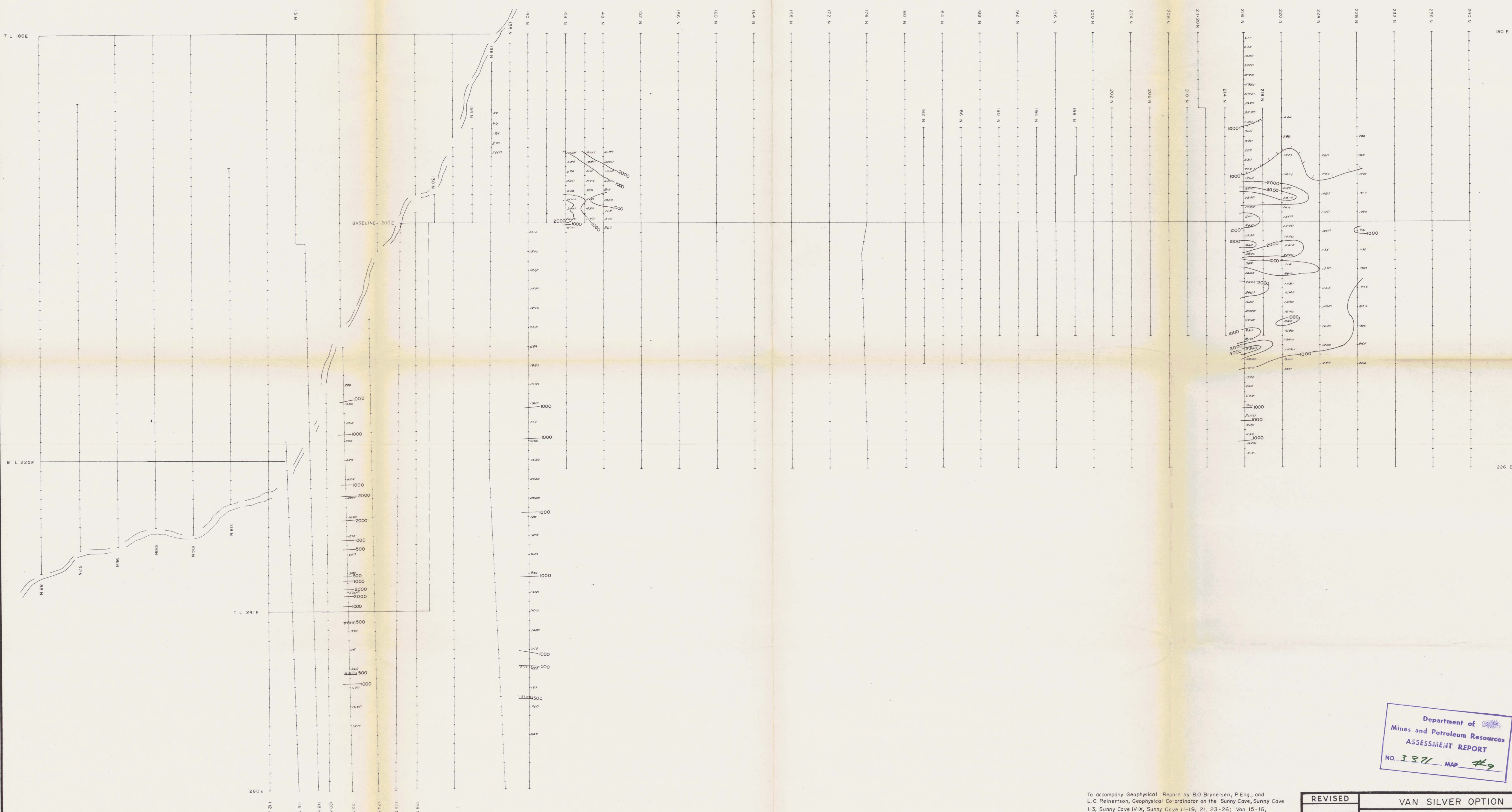


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3371 MAP #8

To accompany Geophysical Report by B.O. Brynelsen, P. Eng. and
L.C. Reinertson, Geophysical Co-ordinator on the Sunny Cave, Sunny
Cave I-3, Sunny Cave IV-X, Sunny Cave II-19, 21, 23-26; Van 15-16,
19-22, 42-43, 45-46, 69-80, 89-90, Mat 1, 4-8; Mil, Elm,
Bru, Dou, Spine, Mine, Lu, Jo, Star 1, 2, Peter 1 and Vern B M.C.'s.
Vancouver Mining Division Dated: October 20, 1971.

L.C. Reinertson
B.O. Brynelsen

REVISED	VAN SILVER OPTION	
	I.P. SURVEY FE % CONTOUR MAP X=200'@400', FREQ=10 Hz; 8 03 Hz, n=1 DIPOLE-DIPOLE ARRAY	
PROJECT:	NORANDA EXPLORATION CO. LTD.	
PROJ. NO 1041	SURVEYED BY:	DATE: JULY, 1971
N.T.S. 323/35	DRAWN BY:	SCALE: 1" = 400'
DWG. NO 7	OFFICE: VANCOUVER	



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3371 MAP #9

To accompany Geophysical Report by B.O. Brynelsen, P.Eng., and L.C. Reinertson, Geophysical Co-ordinator on the Sunny Cove, Sunny Cove 1-3, Sunny Cove IV-X, Sunny Cove II-18, 21, 23-26; Van 15-16, 19-22, 42-43, 45-46, 69-80, 89-90; Mer 1, 4-8; Mil 1, Elm, Bru, Dou, Spine, Mine, Lu, Jo; Star 1, 2; Peter I and Vern B M.C.'s
Vancouver Mining Division Dated: October 20, 1971

L.C. Reinertson
B. Brynelsen

REVISED	VAN SILVER OPTION	
	I.P. SURVEY RESISTIVITY CONTOUR MAP $\frac{ca}{2\pi}$ in ohm feet X=200, 400 n=1 DIPOLE-DIPOLE ARRAY	
PROJECT:	NORANDA EXPLORATION CO. LTD.	
PROJ. NO. 1041	SURVEYED BY:	DATE: July 1971
N.T.S. 321/3E	DRAWN BY:	SCALE: 1" = 400'
DWG. NO. 8	OFFICE: VANCOUVER	