85-1198-14374

14,374

ASSESSMENT REPORT 12\86

GEOLOGICAL, GEOCHEMICAL & GEOPHYSICAL SURVEY

ON THE

ARCH GROUP OF CLAIMS

N.T.S. 82F/3W

NELSON MINING DIVISION

49° 09.5' Latitude   117°24' Longitude

Owner: Operator: Noranda Exploration Company, Limited

MINISTRY OF ENERGY, MINES
AND PETROLEUM RESOURCES
Rec'd APR 1 1986
SUBJECT
FILE
VANCOUVER, B.C.

Graham Gill, Geologist
Lyndon Bradish, Division Geophysicist

Noranda Exploration Company, Limited (no personal liability)

June 18, 1985 to October 5, 1985

TABLE OF CONTENTS

APPENDICES

DRAWINGS

1. INTRODUCTION

1. Location and Access

The Arch group of claims consists of 74 units in the Nelson Mining Division of N.T.S. Mapsheet 82F/3. The property is located approximately 10 km west of Salmo, B.C. It is situated in the Bonnington Range of the Selkirk Mountains.

Access to the property is obtained by travelling 9 km west along Highway 3 from Salmo and taking the Archibald Creek access road to the south. This road and the Mount Kelly fire lookout road situated 3 km south of Highway 3 provides excellent access to all claims within the group.

2. Topography and Physiography

The Arch group of claims lies on the north-trending ridge of Mount Kelly, along the eastern flanks of Mount Kelly and along the western facing slope to the east of Archibald Creek. The claim group is drained mainly by Archibald Creek and its tributaries and by Query Creek in the northwest portion of the claim group.

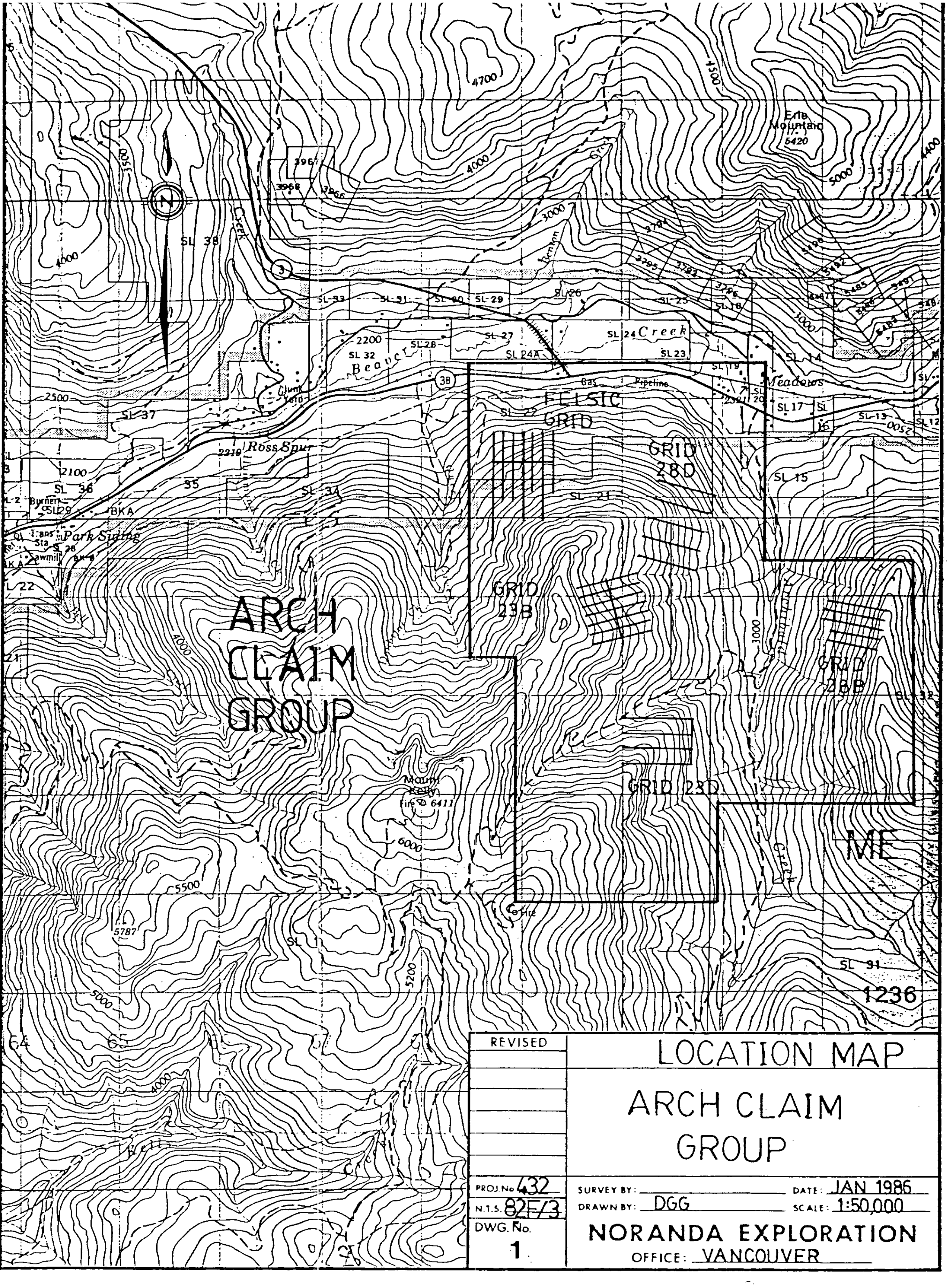
Mature to secondary growth covers all the steep slopes of the claim group although thinning of vegetation occurs along the flat ridge tops.

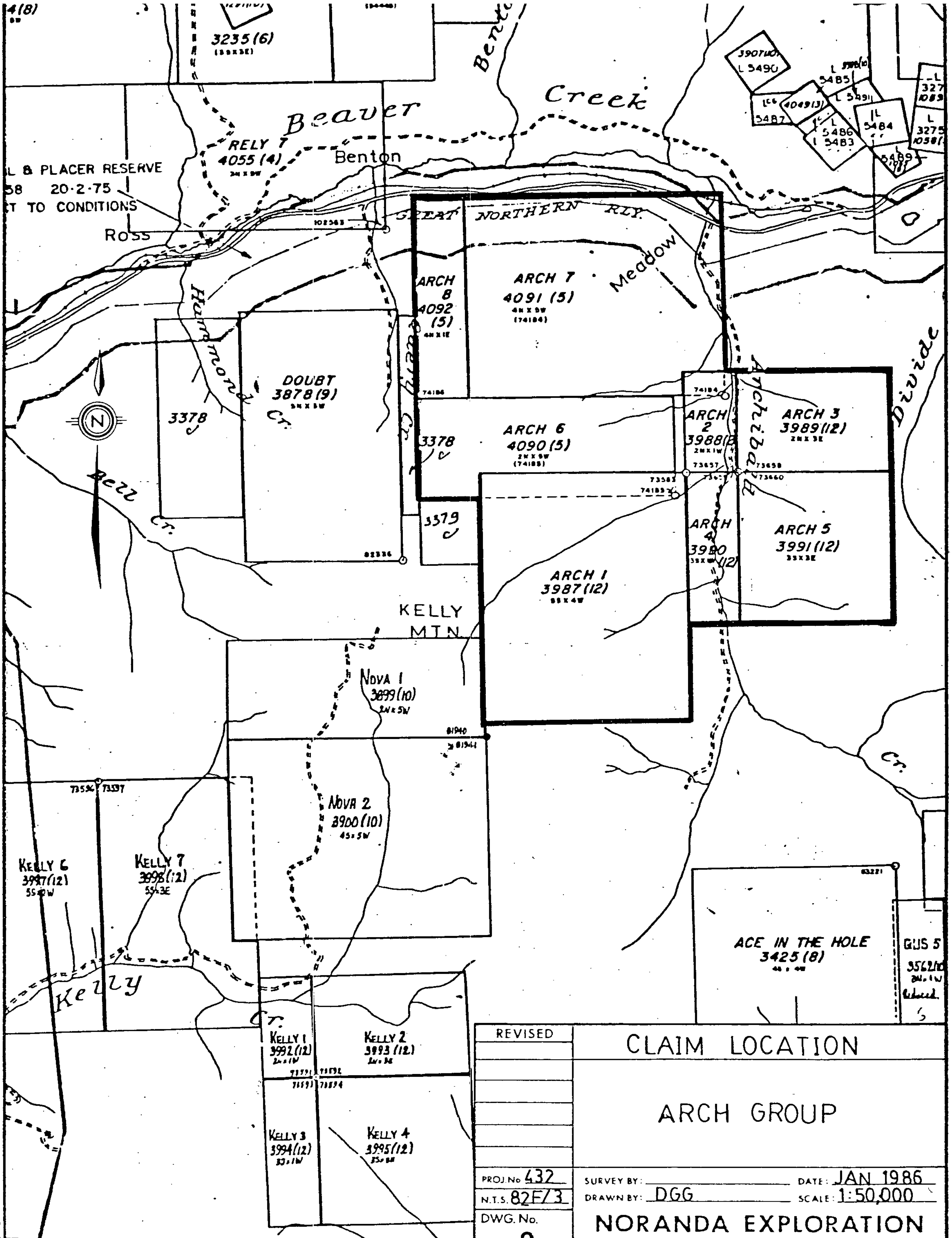
3. Previous Work

Minor amounts of old workings (pits) were discovered on these claims indicating previous work done by oldtime prospectors. No record of any work has been done by any mining company on these claims.

4. Owner - Operator

All of the 74 units comprising the Arch group of claims are owned by Noranda Exploration Company, Limited of 1050 Davie Street, Vancouver, B.C. Noranda is also sole operator of the claims.


ARCH CLAIM GROUP
FELSIC GRID
GRID 28D
GRID 23B
GRID 28B
GRID 23D
ME
1236
Erie Mountain
5420
Mount Kelly
6411
Ross Spur
Park Siding
Beaver Creek
Meadows
Gas Pipeline
Junk Yard
Sawmill
LOCATION MAP
ARCH CLAIM GROUP
REVISED
PROJ. No. 432
N.T.S. 82F/3
DWG. No. 1
SURVEY BY:
DRAWN BY: DGG
DATE: JAN 1986
SCALE: 1:50,000
NORANDA EXPLORATION
OFFICE: VANCOUVER



REVISED

CLAIM LOCATION

ARCH GROUP

PROJ. No. 432
N.T.S. 82F/3
DWG. No. 2

SURVEY BY:
DRAWN BY: DGG
DATE: JAN 1986
SCALE: 1:50,000

NORANDA EXPLORATION
OFFICE: VANCOUVER

The following is a list of the Arch group of claims to which assessment work is being filed.

CLAIM NAME	OWNER	RECORD NO.	UNITS	ANNIV. DATE
Arch 1	Noranda Exploration	3987	20	Dec. 31,1985
Arch 2	Company, Limited (no	3988	2	Dec. 31,1985
Arch 3	personal liability)	3989	6	Dec. 31,1985
Arch 4	" "	3990	3	Dec. 31,1985
Arch 5	" "	3991	9	Dec. 31,1985
Arch 6	" "	4090	10	May 17,1986
Arch 7	" "	4091	20	May 17,1986
Arch 8	" "	4092	4	May 17,1986

5. Economic Potential

The existence of felsic volcanics within the Rossland Formation plus the fact that several airborne geophysical anomalies lie within this claim group makes the economic potential for base metal mineralization quite good in this area. The airborne electromagnetic survey was flown between October 28 and November 8, 1984 by Questor Surveys Limited for Noranda.

II. SUMMARY OF WORK DONE

1. Geology, Geochemistry, Linecutting, Geophysics

Prospecting was done over various sections of the Arch group of claims prior to the establishment of any grids. Based upon this prospecting and from data already in hand from the airborne geophysical survey, 5 separate grids were subsequently cut and mapped at a scale of 1:2,500. Below is a list of the various grids and the work done on them between June 18 and October 5, 1985.

Felsic Grid

Geological mapping was conducted at a scale of 1:2,500 along 6.0 km of grid line covering an area of approximately 0.48 sq. km.

Geochemical surveying consisted only of collecting 11 rocks which were all analyzed for Cu, Pb, Zn, Ag and Au.

The 5.4 line km of winglines with a 0.6 km long baseline was cut and metrically chained to establish control for mapping and geophysical surveys.

4.7 km of electromagnetic surveying and 5.475 km of magnetometer surveying were conducted on this grid.

Grid 28D

Geological mapping was conducted at a scale of 1:2,500 along 3.0 km of grid line encompassing an area of 0.48 sq. km. The five, 0.6 km long lines spaced 200 m apart were cut in order to establish control for mapping and geophysical surveys.

Only two rocks were taken for geochemical analysis from this grid and tested for Cu, Pb, Zn, Ag and Au.

1.05 km and 1.975 km worth of electromagnetic and magnetometer surveys were conducted on this grid.

Grid 23B

Geological mapping was conducted along a grid consisting of 7, 0.6 km long winglines and a 0.6 km long baseline covering an area of 0.36 sq. km at a scale of 1:2,500. The grid was established for control in mapping and for geophysical and geochemical surveys.

The geochemical survey consisted of collecting 46 soils which were analyzed for Cu, Pb, Zn, Ag and Au.

Electromagnetic and magnetic surveys comprising 2.1 km and 2.4 km respectively were carried out on Grid 23B.

Grid 23D

Mapping at a scale of 1:2,500 was carried out over 4, 0.7 km long grid lines spaced 150 m apart and covering 0.315 sq. km. The grid was established for control in both mapping and geophysical surveys.

One rock was collected and analyzed for Cu, Pb, Zn, Ag and Au.

2.525 km of electromagnetics and 2.925 km of magnetics were done on this grid.

Grid 28B

Control for mapping and geophysical surveys were provided by the establishment of 4.275 line km of grid covering an area of 0.4275 sq. km.

Three rocks were analyzed for Cu, Pb, Zn, Ag and Au.

A total of 3.9 km and 2.25 km worth of electromagnetic and magnetic surveys respectively were conducted on Grid 28B.

III. DETAILED TECHNICAL DATA

1. Geology

i) Purpose

Prospecting and later detailed mapping at a scale of 1:2,500 was carried out between June 18, 1985 and October 5, 1985 in order to gain better understanding of the sources of the airborne geophysical anomalies. Assessment of the possible economic mineral potential associated with these targets was of prime concern.

ii) Regional Geology

The Arch group of claims is underlain by Lower Jurassic Sinemurian beds which are exposed in low lying areas (i.e. along valley bottoms) and which are in turn overlain by the Lower Jurassic Rossland Formation.

The former of these formations is comprised of argillite, shales, slates and minor flows and pyroclastic rocks. The latter contains andesites, basalts, augite porphyry flows, agglomerates and tuffs.

Small granite to granodiorite stocks from the Nelson Plutonic complex are also occasionally found intruding the sediments and volcanics.

See G.S.C. Map 1090A from Memoir #308 by H.W. Little for reference.

iii) Local Geology

Felsic Grid

Mapping at a scale of 1:2,500 produced a geological map (Drawing #5) that indicates a package of north to northeast trending, interbedded andesitic and dacitic flows and tuffs, flow breccias and argillites. This package has been intruded by a biotite granite stock in the eastern portion of the grid but no indication of skarning or significant contact metamorphism was observed.

Basically, the geology on the grid can be broken into 3 major sections. The first unit is described as an andesite-dacite flow breccia-agglomerate consisting of ash-sized matrix and clasts and fragments of andesite, siltstone, chert and augite porphyry up to 10 cm long. It is within this unit that a 2-3 m wide felsic to intermediate dyke was found which had leached the host rock to a rusty, white-tan colour and had deposited medium to coarse grained pyrite up to 10% within the breccia-agglomerate. Small slivers of mappable dacitic tuffs and flows were observed to the east of this major unit.

The second major unit mapped consists of a series of interbedded andesitic flows and tuffs, slate, argillite and cherty siltstone. Dips and strikes of the sediments vary greatly throughout the grid area suggesting a large degree of folding has taken place although no minor folds or crenulations were visible in outcrop.

The third major unit on the grid is the biotite granite stock to the east. Slight hornfelsing of the sediments was observed near the intrusive-sediment contact.

No other mineralization was seen on the grid except for the area around the dyke previously mentioned.

Grid 28D

A package of interbedded sediments and crystal-ash tuffs intruded by at least two sill-like monzodiorite bodies were mapped on this grid and are believed to be part of the Lower Jurassic Sinemurian beds (see Drawing #8). This unit of sediments and pyroclastic rocks trend north to northeast and dip moderately to steeply toward the west.

The sediments consist of fine grained, thinly laminated black mudstones and siltstones with disseminated pyrite and 1-2 cm wide bands of pyrrhotite found to the north of the grid. Small "S" type folding was also noted within these beds suggesting a closure to the northwest of a major structure assumed to be a large syncline mapped by the G.S.C. Associated with these argillaceous sediments are fine grained, dark grey to purple crystal to ash tuffs with blocky fracturing and disseminated pyrite and pyrrhotite. Less frequently seen within this package of rocks are beds of andesite tuffs up to 5 m wide.

The only intrusive mapped was of a porphyritic monzodiorite sill. Large boulders of biotite granite were also observed to the northwest of the grid presumably related to the granite stock mapped on the Felsic Grid.

Grid 23B

Thick brush and overburden hampered the attempt to produce a good geological picture of the underlying rocks on Grid 23B. Only a limited number of outcrops were observed on the ground with no information regarding structure being available. However, composition of the rocks seen (i.e. siliceous ash tuffs, andesitic flows, siltstones, sandstones and augite porphyry) suggests that the grid may overlay or be in close proximity to the contact between the underlying Lower Jurassic Sinemurian beds and the overlying volcanics of the Lower Jurassic Rossland Formation.

See Drawing #11 for geology.

Grid 23D

Geological mapping of this grid revealed the possible location of the contact between the Lower Jurassic Sinemurian beds and the Lower Jurassic Rossland volcanics as was speculated in the case of Grid 23B which lies less than 1 km to the north of this grid.

According to Drawing #16 it is evident that the augite porphyry and andesite flows of the Rossland Formation, which lie in the southeast corner of the grid, overly the north trending, steeply dipping sediments of the Sinemurian beds. These sediments consist of fine grained, dark grey, massive tuffs, sandstones, shales, slates and siltstones with associated fine grained, disseminated pyrite and pyrrhotite. Between L.230+50N and L.232N, lies a large outcrop of hornblende/pyroxene, feldspar porphyry dyke which crosscuts the sediments in an east-west direction.

No other mineralization was encountered besides the pyrite and pyrrhotite within the sediments but some areas within the shaley units were slightly graphitic.

Grid 28B

Mapping at a scale of 1:2,500 produced a geological map (Drawing #19) which reveals a package of interbedded shales, ash tuffs, augite and feldspar porphyry flows and andesitic flows. All major units on this grid strike north to northeast. Attitudes taken on the ash tuff unit which covers the mid-section of the grid, indicate moderate dips to the east while measurements taken on the shales to the east of the augite-feldspar porphyry flows show dips to the west.

An interesting quartz-eye rhyolite porphyry dyke crosscuts the stratigraphy in the east portion of the grid and runs for a strike length of at least 400 m from L.242N to 238N and beyond.

One small diabase dyke was also observed intruding the shales on the eastern end of L.242N.

No mineralization was observed on this grid.

2. Geochemistry

i) Purpose

A total of 17 rocks and 46 soils were collected on the Arch group of claims between June 18, 1985 and October 5, 1985 to determine the mineral potential of the area surrounding known airborne geophysical anomalies.

ii) Techniques

Soil sampling of the A & B soil horizons was completed along flagged and metrically cut grid lines over Anomaly 23B only. Select portions of this grid were sampled on the basis of proximity to the airborne geophysical targets. Samples were taken with the aid of a maddock to a depth of 15-20 cm and then placed in brown 3 1/2" x 6 1/8" open-ended Kraft envelopes for shipping and handling.

Rock specimens were collected on most grids as grab samples whenever mineralization, alteration or representative rock types were encountered. All samples were sent to Noranda's geochemical laboratory at 1050 Davie Street, Vancouver, B.C.

Appendix I is a flow sheet of analytical techniques used in the Noranda laboratory. Appendix II is a list of all samples with descriptions (where applicable) and their geochemical results.

iii) Discussion of Results

Geochemical results and descriptions of soils and rocks are listed in Appendix II. In cases of anomalous soil results the drawings have been contoured based on threshold and first and second order anomalies obtained by statistical means.

Felsic Grid

A total of 11 rocks were taken on this grid and analyzed for Cu, Pb, Zn, Ag and Au. Only one rock was slightly anomalous in copper returning a value of 218 ppm from an outcrop of pyritic, cherty siltstone.

Grid 28D

Only 2 rocks were collected from this grid and analyzed for Cu, Pb, Zn, Ag and Au. Neither of the 2 samples were anomalous in any element.

Grid 23B

The geochemical survey of this grid consisted of collecting 46 soil samples on lines suspected to be in close proximity to the airborne geophysical anomalies.

Gold

All the soil samples taken on Grid 23B were analyzed for gold. However, all samples but one, which returned a value of 110 ppb on L.244N/187+25E, came back with values of 10 ppb.

Copper

All soils collected were analyzed for copper. Threshold and first and second order anomalies were derived by statistics and were determined to be 73 ppm, 94 ppm and 115 ppm respectively. The results ranged between a low of 32 ppm and a high of 80 ppm. Only two spot anomalies were found on this grid; one on L.242N/188+25E and the other on L.243N/188E (see Drawing #12).

Zinc

All soils taken during this survey were analyzed for Zn. Threshold and first and second order anomalies were calculated to be 325 ppm, 438 ppm and 549 ppm respectively. These values are contoured on Drawing #12.

One main anomalous zone was detected by geochemistry. Open at both ends, this zone extends from L.242N/188+37E through L.243N/188+50E to 188+75E.

Lead

Threshold, first and second order anomalies for lead in soils were determined to be 26 ppm, 37 ppm and 47 ppm respectively. These values are contoured on Drawing #13.

Three spot anomalies were found on the grid and are listed below:

L.245N/185+75E	- 32 ppm
L.243N/188E	- 40 ppm
L.243N/188+50E to 188+75E	- 26 to 32 ppm

Silver

0.7 ppm, 0.9 ppm and 1.2 ppm were determined to be the threshold, first and second order anomalies by statistical methods.

Only two spot anomalies were revealed by this survey and are listed below:

L.243N/188E	- 1.0 ppm
L.242N/188+12E	- 0.8 ppm

Grid 23D

One rock was collected and analyzed for Cu, Pb, Zn, Ag and Au on this grid and did not return an anomalous result.

Grid 28B

A total of 3 rocks were collected on this grid and analyzed for Cu, Pb, Zn, Ag and Au. However, none of the samples returned any anomalous results.

3. Geophysics

i) Instrumentation

SE-88 E.M. System

The SE-88 unit differs from the normal HLEM systems such as the MaxMin 11 above in that it measures without regard to phase, the ratio of signal amplitude between two frequencies which are transmitted and received simultaneously. A low frequency of 112 Hz is used as a reference frequency. The signal difference is integrated or averaged over a period of time in order to improve the signal to noise ratio.

The survey parameters employed on the follow-up programme are as follows:

Coil separation	: 100 meters
Frequencies	: 3037, 1012, 337 Hz
Reference frequency	: 112 Hz
Integration period	: 16 seconds
Reading interval	: 25 meters
Measurement	: ratio of amplitude between reference and signal frequencies (%).

MP-3 Magnetometer Survey

Magnetometers manufactured by Gem Systems of Toronto, Ontario were employed for these surveys. The MP-3 Total Field Magnetometer System consists of one or more field units and a base station. Diurnal and day to day variations are automatically corrected at the end of the survey by the built in microprocessor giving the data a usable accuracy of 1 gamma.

ii) Discussion of Results

Grid Felsic

The Felsic Grid SE-88 survey failed to detect any source of bedrock conductivity. What this survey did define, however, was a contact between a low resistivity unit to the south and a high resistivity unit to the north.

Grid 28D

This grid was established over a group of low conductivity (11-18 Siemens) INPUT E.M. responses. A dip towards the west is inferred from the airborne profiles.

The ground E.M. survey located three zones of conductivity as seen on the SE-88 plan map. All three of these defined current axes have low conductivities and may be due in part to surface and/or subsurface resistivity changes. Unless encouragement is forthcoming from either geochemistry of geology these current axes are considered to be low priority.

Grid 23B

The INPUT E.M. survey detected two adjacent zones of conductivity having conductivities in the range of 13 to 19 Siemens.

The ground E.M. and magnetic surveys have identified several anomalous features. The most prominent E.M. anomaly is located in the central portion of the grid on Lines 24100N and 24200N near the baseline. This highly conductive (24 to 50 Siemens) zone has a complete magnetic signature. A significant width of 20 meters is interpreted on L.24200N whereas two zones are interpreted 100 meters to the south.

A second area of interest is defined on Line 24400N and two E.M. current axes are interpreted. There does not appear to be any significant magnetic response due to these conductors. The south ends of these axes extend to L.24300N as seen by the very high positive E.M. readings.

The major portion of the grid, particularly west of the eastern conductor axes is underlain by a low resistivity unit (surficial or otherwise). In particular a wide low resistivity unit is mapped on L.23900N as indicated and whose "nose" extends to Line 24000N.

The anomalous E.M. signatures recorded near the baseline on Lines 24100N and 24000N as discussed above warrant further investigation on a high priority basis. The combination of high conductivity and complex susceptibility make this zone an interesting target.

Grid 23D

This four line grid covered a group of moderate INPUT E.M. responses that have been interpreted as two parallel zones.

The ground E.M. survey defined a broad zone of bedrock conductivity on Line 22900N between stations 17050E and 17125E and whose tail extends to Line 22750N. A weak satellitic zone is evident 200 meters to the west, however, this may be due to a change in the underlying bedrock/surficial resistivity.

The wide bedrock anomaly on Line 22900N is associated with abrupt variations of the bedrock magnetic susceptibility. It is not readily apparent if the conductivity and magnetic sources are one and the same, however, the association does add interest to this anomaly.

Grid 28B

The INPUT E.M. survey recorded a response having an interpreted conductivity of 21 Siemens.

The ground geophysics has defined the contact between low and high resistivity units. The low resistivity unit, mapped on the east side of the grid would be sufficient to explain the INPUT conductivity and signal amplitude. No additional work is warranted.

IV. CONCLUSIONS AND RECOMMENDATIONS

Felsic Grid

Mapping of this area revealed an area of highly leached, pyritic volcanic breccia-agglomerate, previously thought to be an area of brecciated felsic volcanics, but was actually caused by the intrusion of a felsic-intermediate dyke.

The geochemical survey showed no positive results from this altered zone or any where else on the grid.

Ground geophysical surveys did not pick up the altered zone and only defined an area of low resistivity to the south (volcanic agglomerate-breccia) and an area of high resistivity to the north (interbedded andesite-sediment package).

No further work is recommended.

Grid 28D

Minor bands of massive pyrrhotite and lesser pyrite were observed within the black, folded shales and argillites of the Lower Jurassic Sinemurian beds.

No anomalous results were obtained from rock geochem over these areas.

Ground geophysics (E.M.) picked up 3 zones of similar striking, low conductive axes associated with the areas containing the pyrrhotite banding.

More rock geochem, prospecting and possible soil geochemistry is recommended to clearly define the conductive sources toward their open ends.

Grid 23B

Geological mapping of this grid did not provide any conclusive information regarding structure or stratigraphy, however, the ground electromagnetic survey did define a zone between Lines 241N and 242N with high conductivity and a complicated magnetic signature.

The geochemical survey conducted across this zone also shows a small, open zinc anomaly approximately 25 m downhill from the conductor. Spot anomalies of Cu, Pb and Ag are also found in this area.

Another zone consisting of 2 axes of high conductivity and an associated geochemical spot anomaly in Pb appears on Line 244N.

The western portion of the grid is underlain by a zone of low resistivity which is probably an expression of the underlying volcanics of the Rossland Formation as opposed to the zone of higher resistivity in the east portion of the grid which presumably indicates underlying sediments.

A thorough geological survey should be conducted over this grid with a geochemical survey run over the newly found conductor axes.

Grid 23D

Mapping of this grid revealed a large zone of thinly bedded sediments and interbedded pyroclastics containing fine grained, disseminated pyrite and pyrrhotite. This area is overlain to the southwest by a capping of augite porphyry flows.

The ground E.M. survey had delineated the contact between the volcanic cap and the underlying sediments on L.227+50N/168+75E which correlates well with the geological survey.

The large conductive zone on L.229N may be due to a high pyrrhotite content within the sediments and pyroclastics. Rock geochemistry and more detailed mapping of this area and ground to the immediate south is recommended.

Grid 28B

The geological survey has revealed an interbedded section of andesite tuffs and flows, shales and ash tuffs.

Ground geophysics has defined a contact between low and high resistivity units. The low resistivity unit on the east side of the grid probably indicates that the majority of that area is underlain by volcanics whereas the high resistivity west side is underlain by sediments.

No further work is recommended.

REFERENCES

Little, H.W., (1960) G.S.C. Memoir #308 Nelson Map Area, West Half, British Columbia (82F/W 1/2).

APPENDIX I

ANALYTICAL TECHNIQUES

ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

The methods listed are presently applied to analyse geological materials by the Noranda Geochemical Laboratory at Vancouver.

Preparation of Samples

Sediments and soils are dried at approximately 80°C and sieved with a 80 mesh nylon screen. The -80 mesh (0.18 mm) fraction is used for geochemical analysis.

Rock specimens are pulverized to -120 mesh (0.13 mm). Heavy mineral fractions (panned samples * from constant volume), are analysed in its entirety, when it is to be determined for gold without further sample preparation.

Analysis of Samples

Decomposition of a 0.200 g sample is done with concentrated perchloric and nitric acid (3:1), digested for 5 hours at reflux temperature. Pulps of rock or core are weighed out at 0.4 g and chemical quantities are doubled relative to the above noted method for digestion.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn can be determined directly from the digest (dissolution) with a conventional atomic absorption spectrometric procedure. A Varian-Techtron, Model AA-5 or Model AA-475 is used to measure elemental concentrations.

Elements Requiring Specific Decomposition Method:

Antimony - Sb: 0.2 g sample is attacked with 3.3 ml of 6% tartaric acid, 1.5 ml conc. hydrochloric acid and 0.5 ml of conc. nitric acid, then heated in a water bath for 3 hours at 95°C. Sb is determined directly from the dissolution with an AA-475 equipped with electrodeless discharge lamp (EDL).

Arsenic - As: 0.2 - 0.3 g sample is digested with 1.5 ml of perchloric 70% and 0.5 ml of conc. nitric acid. A Varian AA-475 equipped with an As-EDL is used to measure arsenic content in the digest.

Barium - Ba: 0.1 g sample digested overnight with conc. perchloric, nitric and hydrofluoric acid; Potassium chloride added to prevent ionization. Atomic absorption using a nitrous oxide-acetylene flame determines Ba from the aqueous solution.

Bismuth - Bi: 0.2 g - 0.3 g is digested with 2.0 ml of perchloric 70% and 1.0 ml of conc. nitric acid. Bismuth is determined directly from the digest with an AA-475 complete with EDL.

Gold - Au: 10.0 g sample is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with MIBK from the aqueous solution. AA is used to determine Au.

Magnesium - Mg: 0.05 - 0.10 g sample is digested with 4 ml perchloric/nitric acid (3:1). An aliquot is taken to reduce the concentration to within the range of atomic absorption. The AA-475 with the use of a nitrous oxide flame determines Mg from the aqueous solution.

Tungsten - W: 1.0 g sample sintered with a carbonate flux and thereafter leached with water. The leachate is treated with potassium thiocyanate. The yellow tungsten thiocyanate is extracted into tri-n-butyl phosphate. This permits colourimetric comparison with standards to measure tungsten concentration.

Uranium - U: An aliquot from a perchloric-nitric decomposition, usually from the multi-element digestion, is buffered. The aqueous solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

* N.B. If additional elemental determinations are required on panned samples, state this at the time of sample submission. Requests after gold determinations would be futile.

LOWEST VALUES REPORTED IN PPM

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.01
Cd - 0.2	Mo - 1	Sb - 1	W - 2
Co - 1	Ni - 1	As - 1	U - 0.1
Cu - 1	Pb - 1	Ba - 10	
Fe - 100	V - 10	Bi - 1	

EJvL/ie
March 14, 1984

APPENDIX II

GEOCHEM RESULTS

8510-042

ROSSBACHER LABORATORY LTD.

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

CERTIFICATE OF ANALYSIS

TO : NORANDA EXPLORATION CO. LTD.
1050 DAVIE STREET
VANCOUVER B.C.

PROJECT: 432 8510-042
TYPE OF ANALYSIS: GEOCHEMICAL Saline (JK)

CERTIFICATE#: 85438
INVOICE#: 6049
DATE ENTERED: 85-10-23
FILE NAME: NOR85438
PAGE # : 1

PREFIX	SAMPLE NAME	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au
A	58892	94	0.4	48	4	10
A	58893	86	0.2	60	6	10
A	83111	74	0.2	96	4	10
A	83112	102	0.2	80	10	10
A	83113	218	0.2	100	6	10
A	83114	176	0.2	72	6	10
A	83115	54	0.2	102	6	10
A	83116	30	0.2	88	4	10
A	83117	28	0.2	22	10	10
A	83118	28	0.2	38	6	10
A	83119	114	0.2	42	4	10
A	83120	6	0.2	76	6	10
A	83121	26	0.2	72	4	10
A	85125	34	0.2	68	6	10
A	85154	28	0.2	102	8	10
A	85156	32	0.2	106	6	10
A	85157	50	0.2	106	14	10
A	85161	160	0.2	100	2	10
A	85162	86	0.2	90	2	10
A	85163	116	0.2	86	6	10
A	85164	128	0.2	72	6	10
A	85165	66	0.2	80	8	10
A	85166	2	0.2	24	24	10
A	85167	4	0.2	54	10	10
A	85168	2	0.2	18	6	10
A	95251	142	0.2	96	6	10
A	95252	18	0.2	86	6	10
A	95253	54	0.2	112	4	10
A	95254	58	0.2	96	6	10
A	95255	50	0.4	72	8	10
A	95256	64	0.2	120	26	10
A	95257	2	0.2	78	8	10
A	95258	98	0.2	52	6	10
A	95259	78	0.2	92	2	10
A	95260	74	0.2	98	6	10
A	95261	82	0.2	88	2	10
A	95262	80	0.2	54	2	10
A	95263	82	0.2	78	4	10
A	95264	102	0.2	78	6	10
A	95265	84	0.2	78	6	10

28/10/85 JK DB WM DP

CERTIFIED BY : P. Rossbacher

46Rx

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. 82F/3

PROPERTY Felsic Grid 4-32

DATE Sept. 23/85

SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	TYPE	WIDTH	~~ASSAYS~~ geochem							SAMPLED BY
83111	along overgrown road enroute to grid. Fg, blue-grey, pyritic dacitic flow?	grab		Cu	Pb	Zn	Au	Ag			DGG.
83112	Same location as above. Bleached, white-tan, fg chert siltstone. Rusty + pyritic	grab		Cu	Pb	Zn	Au	Ag			DGG.
83113	Same location as above. Cherty, pyritic siltstones	grab		Cu	Pb	Zn	Au	Ag			DGG.
83114	L 180E @ 256+75N Massive andesite flow. Pyritic	grab		Cu	Pb	Zn	Au	Ag			DGG.
83115	L176E @ 254+75N. Fg, dacitic flow or possible ash flow tuff with fg, diss pyrite. Leached white in spots. Rusty weathering.	grab		Cu	Pb	Zn	Au	Ag			DGG.
83116	256+25N, 177+50E. Dark grey, brecciated andesitic tuff breccia	grab		Cu	Pb	Zn	Au	Ag			DGG
83117	257+85N, 180+50E. Fg, rusty biotite granite near granite-sed contact	grab		Cu	Pb	Zn	Au	Ag			DGG.
83118	259+25N, 181+15E. Rusty, well broken, hornfelsed, silicified seds + tuffs near granite intrusion.	grab		Cu	Pb	Zn	Au	Ag			DGG.
83119	258+60N, 179+80E Fg-mg, light grey-blue dacitic tuff + minor fg diss py	grab		Cu	Pb	Zn	Au	Ag			DGG.

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. 82 F/3

PROPERTY FELSIC GRID – ARCH GROUP

DATE Sept 25/85

SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	TYPE	WIDTH	~~ASSAYS~~ GEOCHEM							SAMPLE BY
83120	L179E, 258+30N - intermediate dyke crosscutting andesitic tuff-breccia - acid. leaching.	grab.		Cu	Pb	Zn	Ag	Au			DGG
83121	L176E, 259+45N - rusty, pyritic dacitic agglomerate.	grab		Cu	Pb	Zn	Ag	Au.			DGG

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. 82F/13

PROPERTY AIRBORNE ANOMALY 28D

DATE Sept 30/85

SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	TYPE	WIDTH	~~ASSAYS~~ geochem							SAMPLED BY
095256	252+30N, 194+87E, Black, rusty finegrained argillite.	grab		Cu	Pb	ZN	Au	Ag			DGG.
095257	252+50N; 194+50E. Porphyritic monzodiorite with feldspar and amphibole phenocrysts.	grab		Cu	Pb	ZN	Au	Ag			DGG.

NORANDA VANCOUVER LABORATORY
****

PROPERTY/LOCATION:SALMO CODE :8510-016

Project No. :432 Sheet:1 of 3 Date rec'd:SEP.30
Material :SOIL & SILT Geol.:J.K. Date compl:NOV.20
Remarks :

Values in PPM, except where noted.

T.T. No.	SAMPLE No.	Cu	Zn	Pb	Ag	PPB Au	GCI
14	117N-18125E	48	160	12	0.4	10	52653
15	18150.0	50	140	28	0.4	10	
16	18175.0	48	160	16	0.6	10	
17	18187.5	40	140	20	0.4	10	
18	18200.0	38	130	14	0.4	10	
19	18212.5	40	88	8	0.4	10	
20	18225.0	34	140	8	0.4	10	
21	18237.5	34	120	10	0.4	10	
22	18250.0	38	94	6	0.4	10	
23	18262.5	36	140	14	0.4	10	
24	18275.0	34	120	10	0.4	10	
25	18300.0	40	160	16	0.6	10	
26	117N-18325E	40	160	14	0.6	10	
27	118N-18075E	36	200	10	0.6	10	
28	18100.0	48	200	16	0.6	10	
29	18125.0	74	300	80	1.4	10	
30	18137.5	100	300	22	1.6	10	
31	18150.0	72	260	22	1.2	10	
32	18162.5	60	230	16	0.6	10	
33	18175.0	44	180	10	0.2	10	
34	18187.5	32	180	12	0.2	10	
35	18200.0	36	160	14	0.2	10	
36	18212.5	40	200	12	0.2	10	
37	18225.0	34	140	10	0.2	10	
38	18237.5	34	120	10	0.2	10	
39	18250.0	30	120	6	0.2	10	
40	18262.5	30	160	6	0.2	10	
41	18275.0	34	150	12	0.4	10	
42	18300.0	34	130	12	0.2	10	
43	118N-18325E	34	140	12	0.2	10	
44	119N-18050E	54	160	10	0.4	10	
45	18075.0	42	180	20	0.4	40	
46	18100.0	70	140	22	0.6	10	
47	18112.5	34	190	10	0.4	10	
48	18125.0	34	140	10	0.2	10	
49	18137.5	34	130	8	0.2	10	
50	18150.0	36	160	18	0.4	10	
51	18162.5	38	150	10	0.2	10	
52	18175.0	42	160	10	0.2	10	
53	18200.0	52	120	12	0.2	10	
54	18212.5	48	110	12	0.2	10	
55	18225.0	42	110	12	0.2	10	
56	18250.0	42	140	14	0.2	10	
57	18275.0	42	120	10	0.4	10	
58	119N-18287.5E	40	120	12	0.2	10	
59	242N-18725E	32	230	14	0.4	10	52658
60	18750.0	40	220	14	0.2	10	
61	18762.5	42	180	8	0.2	10	

11/85 K DB WM DP

T.T. No.	SAMPLE No.	Cu	Zn	Pb	Ag	PPB Au	GCI
62	18775.0	44	210	10	0.6	10	
63	18787.5	38	230	8	0.2	10	
64	18800.0	42	270	12	0.2	10	
65	18812.5	58	270	10	0.8	10	
66	18825.0	78	300	10	0.4	10	
67	18837.5	56	380	18	0.2	10	
68	18850.0	68	210	8	0.2	10	
69	18875.0	56	200	8	0.2	10	
70	242N-18900E	60	170	12	0.2	10	
71	243E-18725E	50	160	24	0.4	10	
72	18750.0	34	140	24	0.4	10	
73	18775.0	38	170	8	0.2	10	
74	18787.5	70	150	4	0.4	10	
75	18800.0	80	260	40	1.0	10	
76	18812.5	60	210	8	0.6	10	
77	18825.0	62	230	12	0.4	10	
78	18837.5	54	310	22	0.2	10	
79	18850.0	64	460	26	0.6	10	
80	18875.0	54	320	32	0.2	10	
81	243N-18900E	62	180	10	0.4	10	
82	244N-18575E	58	180	18	0.2	10	
83	18600.0	58	160	10	0.4	10	
84	18625.0	64	160	12	0.6	10	
85	18650.0	52	170	22	0.2	10	
86	18675.0	54	140	14	0.8	10	
87	18700.0	44	200	12	0.4	10	
88	18725.0	46	230	10	0.6	110	
89	244N-18775E	46	190	16	0.6	10	
90	245N-18525E	36	280	18	0.6	10	
91	18550.0	42	310	20	0.2	10	
92	18575.0	66	220	32	0.2	10	
93	18587.5	70	290	16	0.2	10	
94	18600.0	54	200	8	0.2	10	
95	18612.5	46	200	18	0.2	10	
96	18625.0	42	190	8	0.4	10	
97	18650.0	40	210	12	0.6	10	
98	18675.0	36	230	18	0.4	10	
99	18687.5	36	200	18	0.2	10	
100	~~CHECK NL-5~~	~~28~~	~~70~~	~~76~~	~~1.2~~	~~10~~	
101	18700.0	40	180	8	0.2	10	
102	18712.5	40	140	8	0.2	10	
103	18725.0	54	150	16	0.4	10	
104	18750.0	60	160	8	0.2	10	
105	245N-18775E	60	200	10	0.2	10	
106	83093.0	54	140	26	0.2	10	
107	83094.0	66	100	24	0.2	10	
108	83095.0	80	86	14	0.2	120	
109	83096.0	62	130	14	0.2	10	
110	83097.0	74	90	8	0.2	20	
111	83098.0	50	130	24	0.4	10	
112	83099.0	60	100	10	0.2	10	
113	83100.0	42	100	18	0.2	10	
114	83051.0	46	130	20	0.4	10	
115	83026.0 SILT	58	120	12	0.2	10	52653
116	83027.0	56	92	10	0.2	10	
117	83028.0	52	92	12	0.2	10	
118	83029.0	54	110	14	0.2	10	

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. 82 F/3

PROPERTY GRID 28B

DATE OCT 5/85

SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	TYPE	WIDTH	GEOCHEM							SAMPLED BY
83161	L-238N; 212+33E. SLIGHTLY PYRITIC FELSIC CRYSTAL TUFF.	GRAB		Cu	Pb	Zn	Au	Ag			IGM
83162	L-238N; 212+77E. SLIGHTLY PYRITIC FELSIC FLOW.	GRAB		Cu	Pb	Zn	Au	Ag			IGM
83163	L-239; 212+73E. AUGITE PORPHYRY DACITE WITH ASHFALL CLASTS AND ≈2% SULPHIDES.	GRAB		Cu	Pb	Zn	Au	Ag			IGM

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. 82F/3

PROPERTY AIRBORNE ANOMALY ~~34B.~~ 23D

DATE Oct.5/85

SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	TYPE	WIDTH	~~ASSAYS~~ Geochem. Cu	Pb	Zn	Au	Ag.			SAMPL BY
095263	L227+50N @ 168+25E	grab.									DGG.
	Rusty, epidotized andesitic flow										
	with calcite amygdals + pyrite +										
	pyrrhotite.										

APPENDIX III

STATEMENT OF COSTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

PROJECT: ARCH GROUP DATE

TYPE OF REPORT: GEOLOGY, GEOCHEM + GEOPHYSICS

a) Wages:

No. of Days 62

Rate per Day $ 109.09

Dates From: June - October, 1985

Total Wages 62 x $ 128.22 $ 6,763.58

b) Food and Accomodation:

No of days 62

Rate per day $ 48.00

Dates From: June - October, 1985

Total Cost 62 x $ 45.00 $ 2,976.00

c) Transportation:

No of days 62

Rate per day $ 50.00

Dates From: June - October, 1985

Total Cost 62 X $ 50 $3,100.00

d) Instrument Rental:

Type of Instrument

No of days

Rate per day $

Dates From:

Total Cost X $

Type of Instrument

No of days

Rate per day $

Dates From:

Total Cost X $

f) Analysis (See attached schedule)	$ 434.70
g) Cost of preparation of Report	
Author	$ 218.18
Drafting	$ 545.45
Typing	$ 109.09
h) Other: Contractor	$ 1,200.00
Total Cost	$ 15,347.00

e) Unit costs for GEOLOGY

No of days 19

No of units 19 mandays

Unit costs $240.00 / day

Total Cost 19 × $240.00 — $ 4,560.00

f) Unit costs for GEOCHEM

No of days 4 mandays

No of units 63 samples

Unit costs $ 20.00 / day

Total Cost 63 X $20.00 — $ 1,260.00

g) Unit costs for GEOPHYSICS

No of days 23 mandays

No of units 29.3 line km.

Unit costs $284.20 / day

Total Costs 29.3 X $ 284.20 — $ 8,327.00

h) Unit costs for CONTRACTING

No. of units 5.0 km

Unit costs $ 240.00 / km

Total Costs	5 X $ 240.00	$ 1,200.00
Grand Total		$ 15,347.00

APPENDIX IV

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

****

I, D. Graham Gill of the City of Vancouver, Province of British Columbia, hereby certify that:

I am a geologist residing at 1271 - 52nd. Street, Delta, B.C.

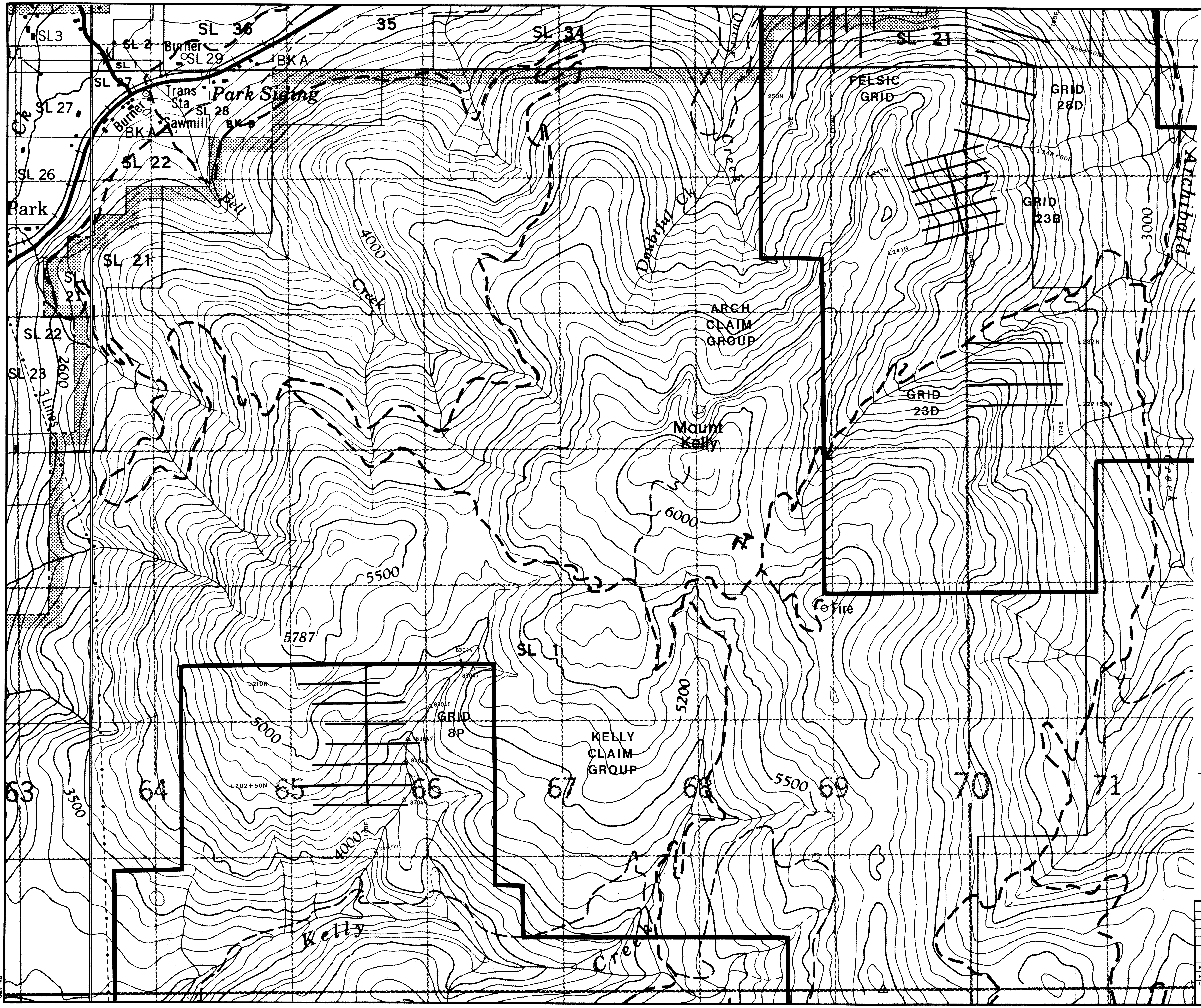
I have graduated from the University of British Columbia in 1983 with a B.Sc in geology.

I have worked in mineral exploration since 1979.

I have been employed by Noranda Exploration Company, Limited since May, 1983.

D. Graham Gill

D. Graham Gill



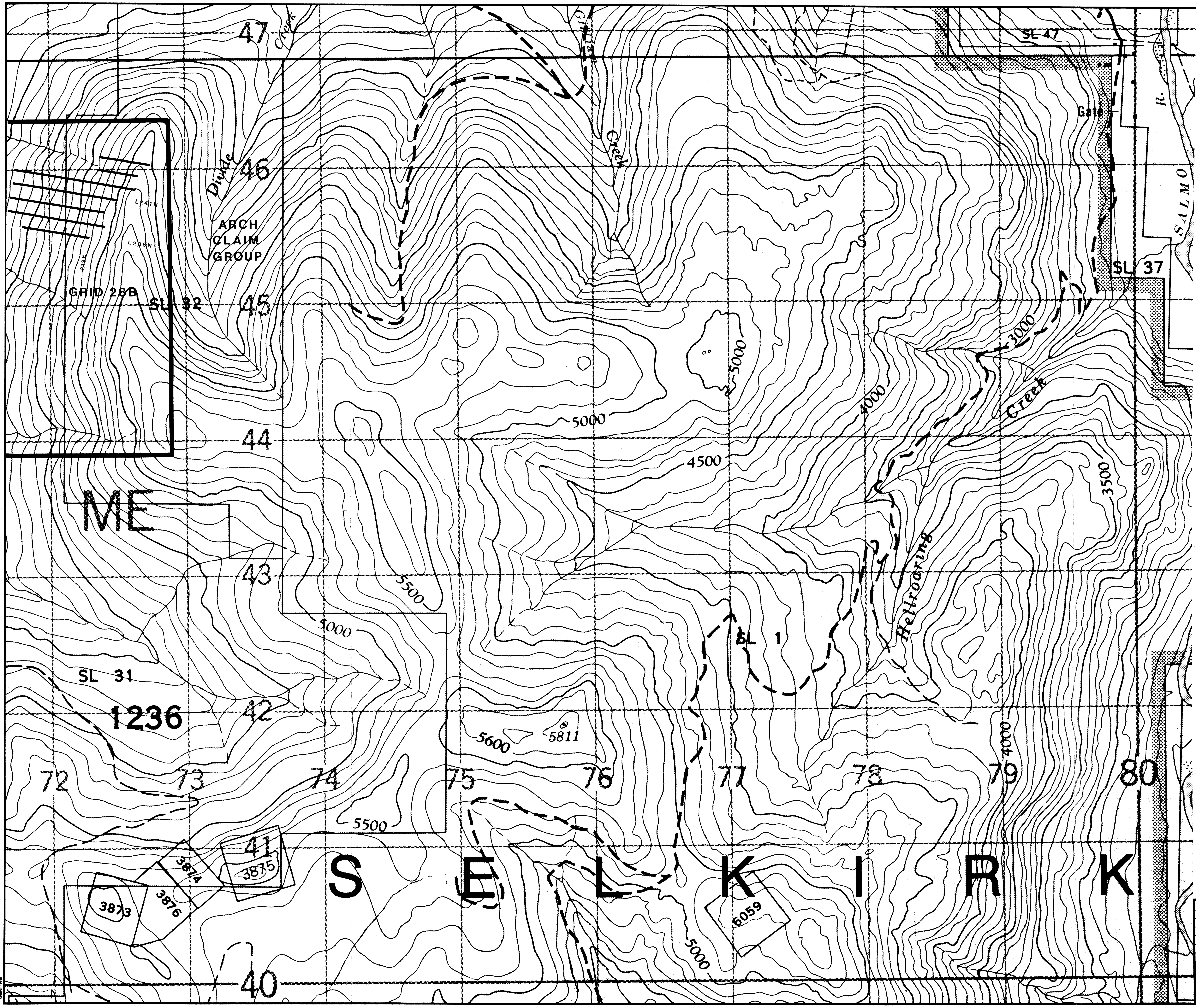
GEOLOGICAL BRANCH
ASSESSMENT REPORT

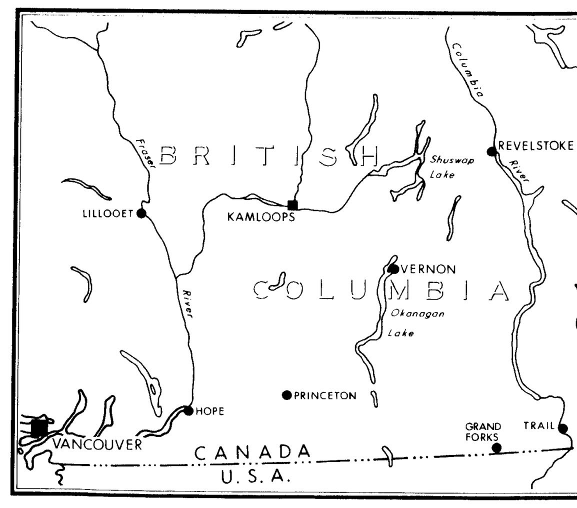
14,374

SCALE
1cm=100m

metres 200 100 0 100 200 300 400 600 800 1000 metres

REVISED	SALMO AIRBORNE
	CLAIM AND GRID LOCATION
PROJ. No. 32	SURVEY BY: J.K. DATE:
N.T.S. 82 F 3,4	DRAWN BY: sks Lillie SCALE: 1:10000
DWG. No. 3	NORANDA EXPLORATION
	OFFICE: Vancouver



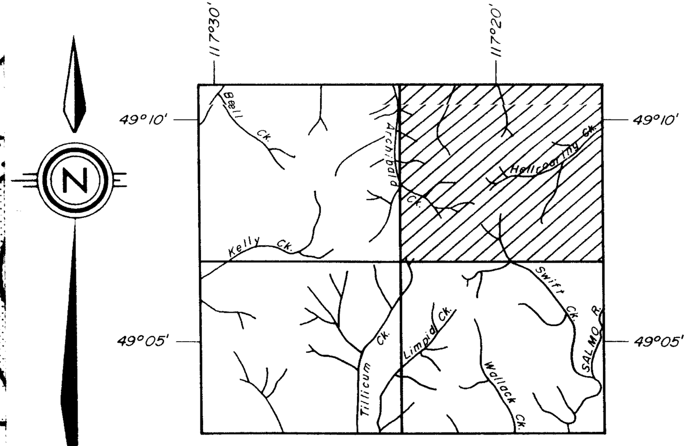


LOCATION MAP

SCALE

GEOLOGICAL BRANCH
ASSESSMENT REPORT

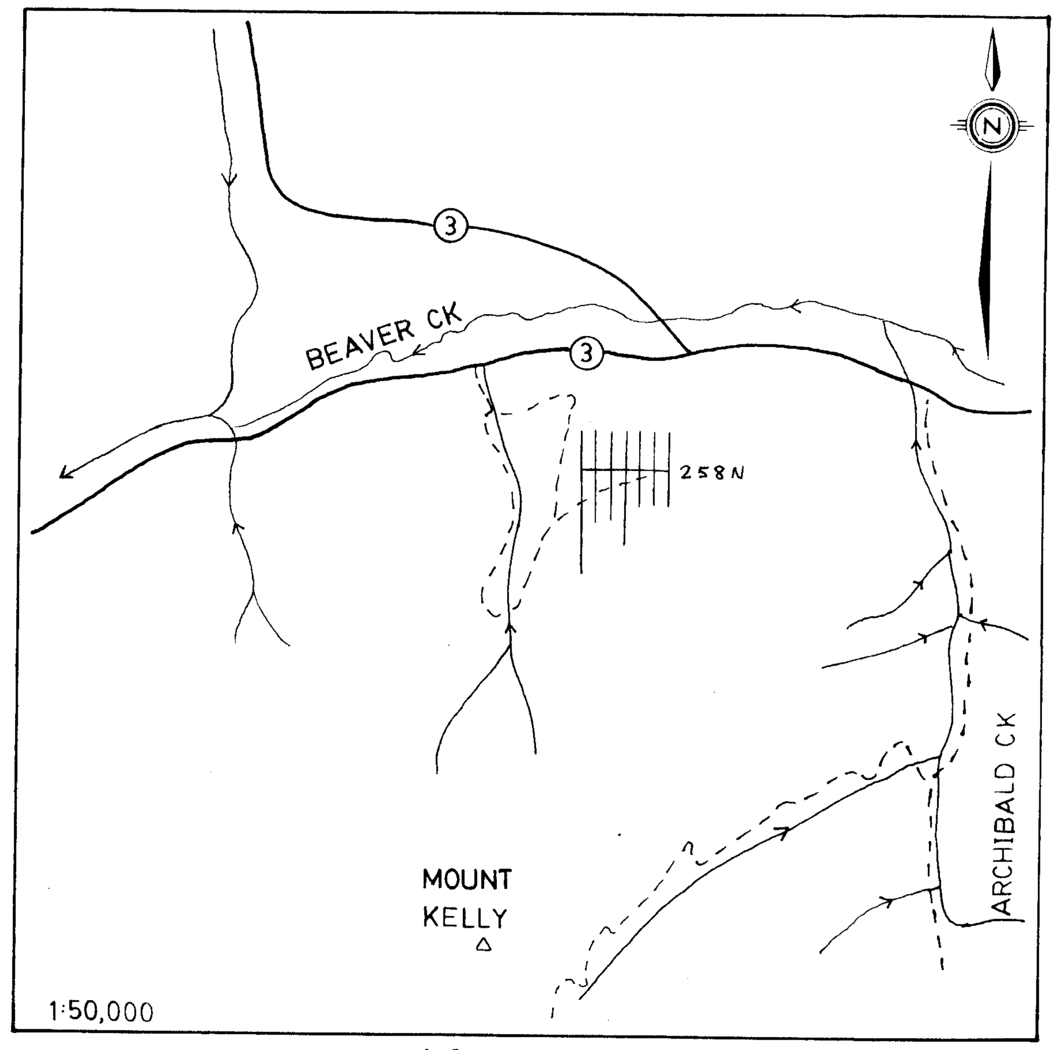
14,374



SCALE
1cm=100m

metres 200 100 0 100 200 300 400 600 800 1000 metres

REVISED	SALMO AIRBORNE
	CLAIM AND GRID LOCATION
PROJ. No. 32	SURVEY BY: J.K. DATE:
N.T.S. 82 F 3,4	DRAWN BY: sksLillie SCALE: 1:10000
DWG. No. 4	NORANDA EXPLORATION OFFICE: Vancouver



LOCATION MAP

LEGEND

INTRUSIVE ROCKS

A	BIOTITE GRANITE – Fine to medium grained
B	DYKE – FELSIC TO INTERMEDIATE COMPOSITION
4i	INTERBEDDED ANDESITIC FLOWS + TUFFS
4ii	SLATE , ARGILLITE AND
4iii	CHERTY SILTSTONE

(i) Fine – medium green – darkgreen massive andesitic flows + tuffs

(ii) Fine grained , fissile to hornfelsed (near granite intrusive) , thinly laminated black to dark grey sediments

(iii) Fine grained , tan , light grey , crem colored siliceous siltstone . Locally interbedded with fine grained dacitic tuffs

3	DACITC FLOWS – Fine to medium grained light grey – blue – white dacite flow
2	DACITIC TUFF – Fine to medium grained , light grey – blue to white dacitic xtal tuff
1	ANDESITE – DACITE FLOW BRECCIA – AGGLOMERATE Medium to coarse grained , light green – grey mottled weathered surface . Dark grey (dacitic) – green – light green (andesitic) . Rock consists of ash – tuff sized matrix and up to 10 cm long clasts of andesite , siltstone , chert and augite porphyry .

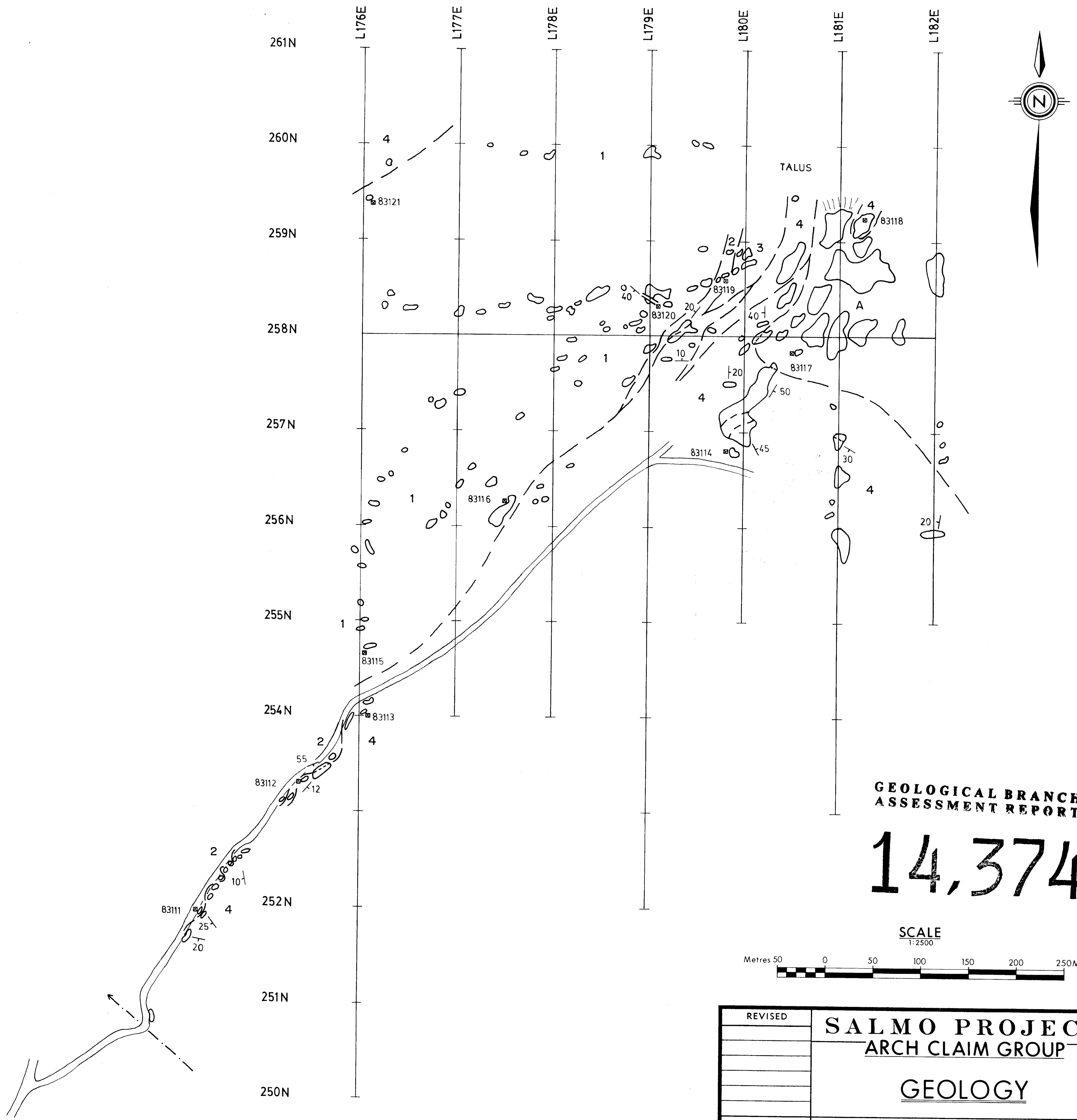
⊠ 83116 ROCK SAMPLE

GEOLOGICAL CONTACT

ROAD OR CATTRACK

20 BEDDING

STREAM



GEOLOGICAL BRANCH
ASSESSMENT REPORT

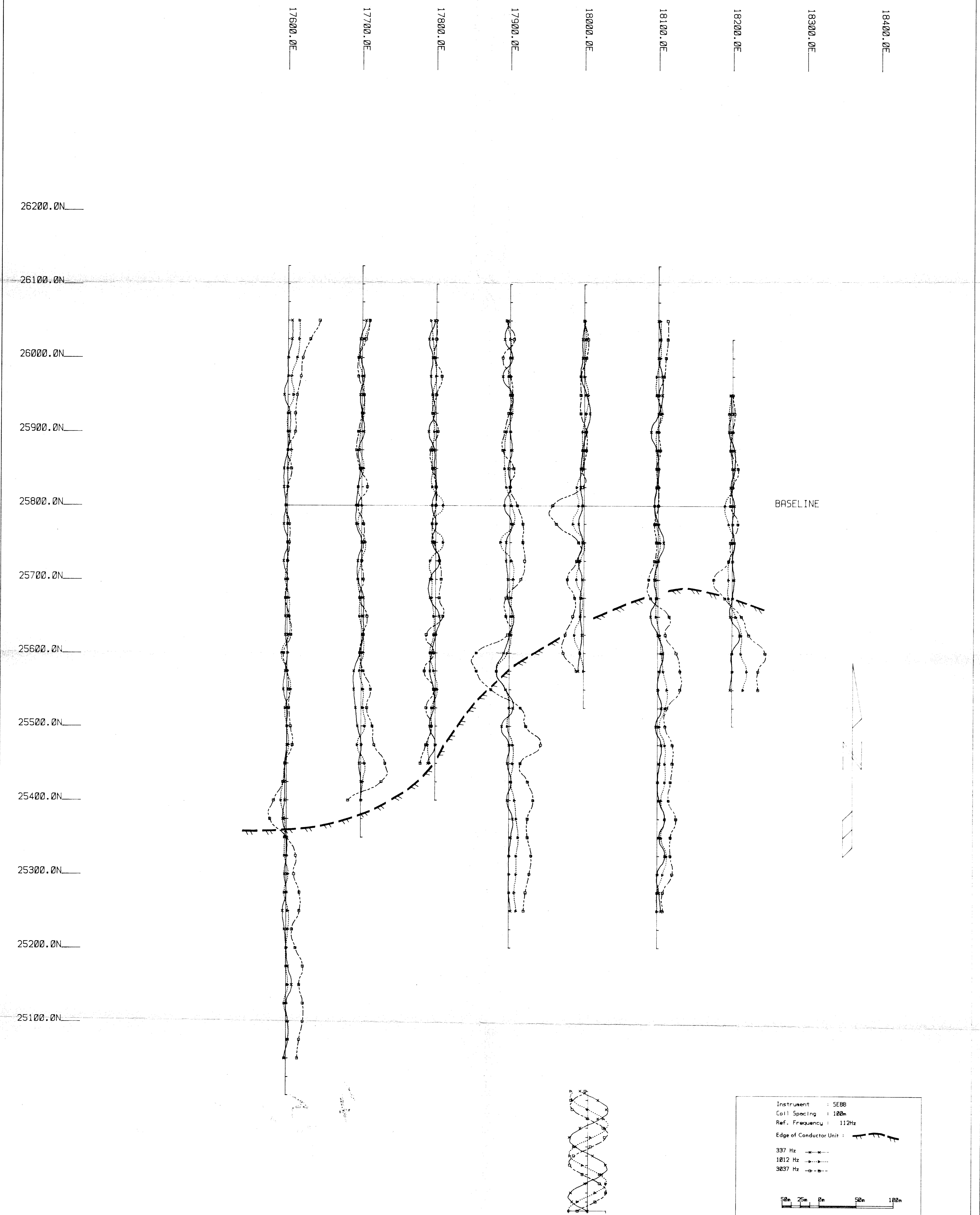
14,374

SCALE
1:2500

Metres 50 0 50 100 150 200 250 Metres

REVISED	
	SALMO PROJECT
	ARCH CLAIM GROUP
	GEOLOGY
PROJ. No. 432	SURVEY BY: DGG DATE: JAN 1986
N.T.S. 82F/3	DRAWN BY: DGG, PJA, JS. SCALE: 1:2500
DWG. No. 5	NORANDA EXPLORATION
	OFFICE: VANCOUVER

NO-780



GEOLOGICAL BRANCH
ASSESSMENT REPORT

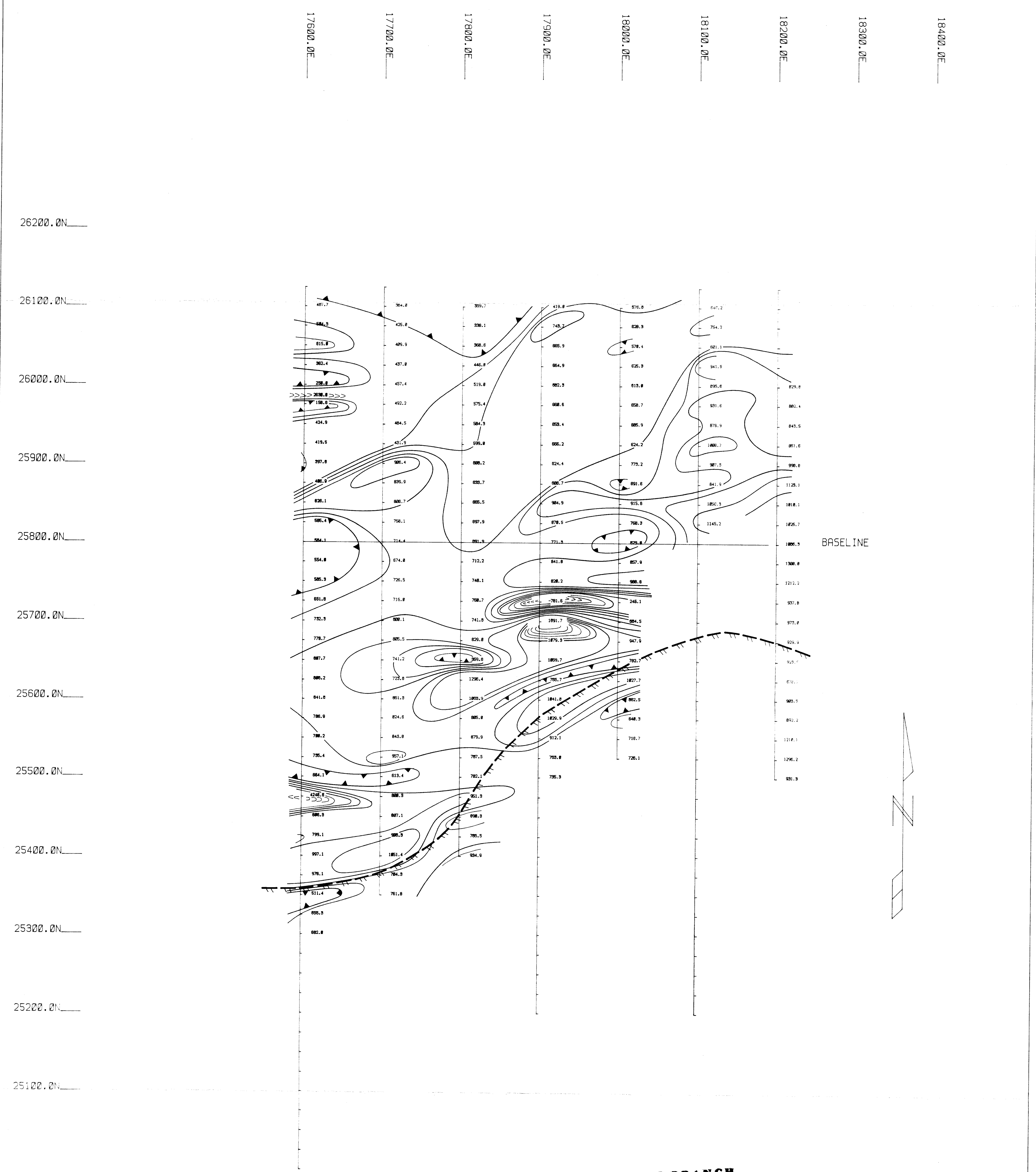
14,374

FELSIC

SE-88 SURVEY

PROJECT: SALMO PROJECT # : 32
BASELINE AZIMUTH : 360 Deg.

SCALE = 1: 2500 DATE : 1/ 7/85
SURVEY BY: TL/TK NTS :
6
FILE: SE8832.Zat
NORANDA EXPLORATION



Instrument : MP-3

Datum Plane : 57000.0

Edge of Conductor Unit :

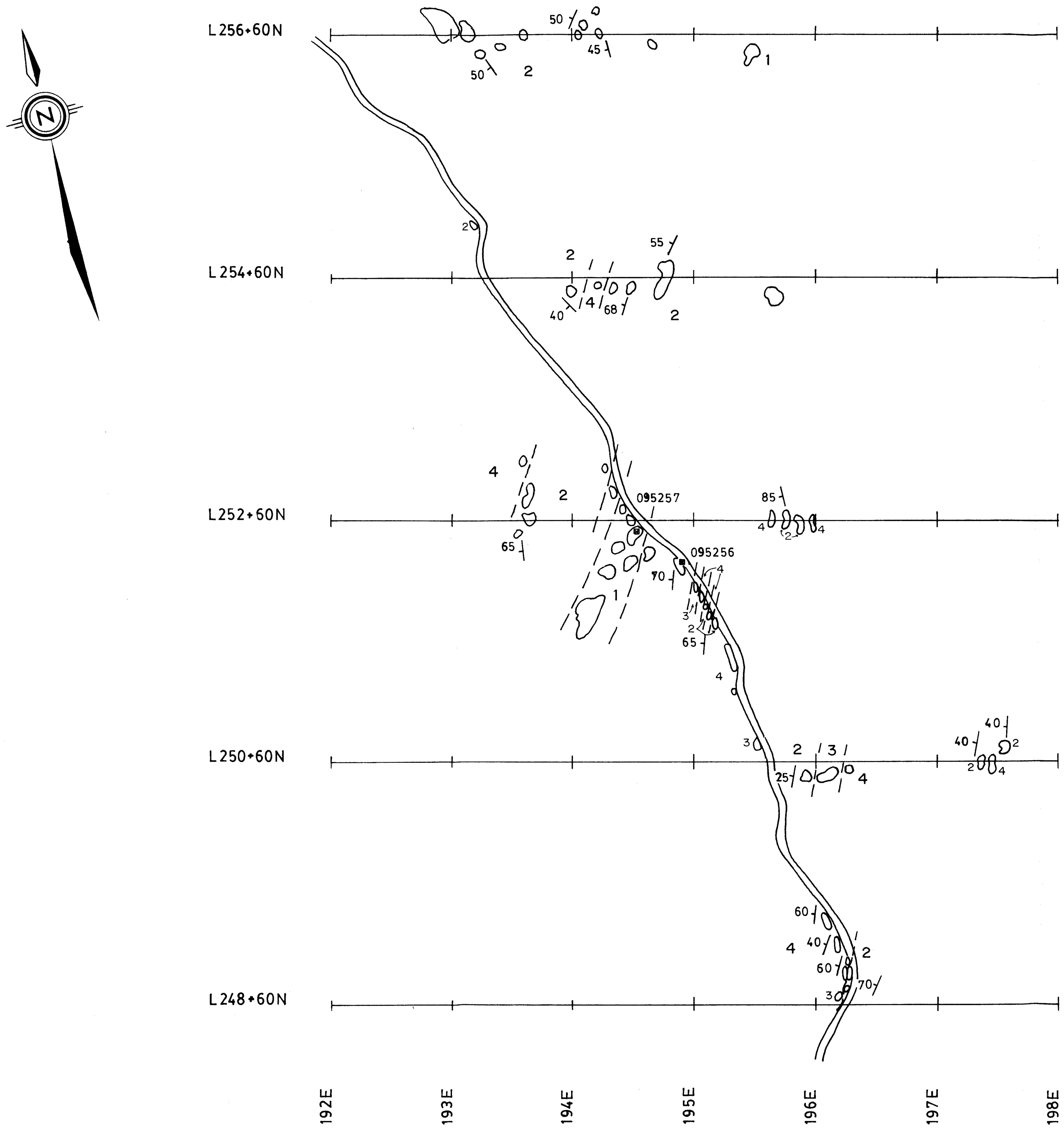
50m 25m 0m 50m 100m

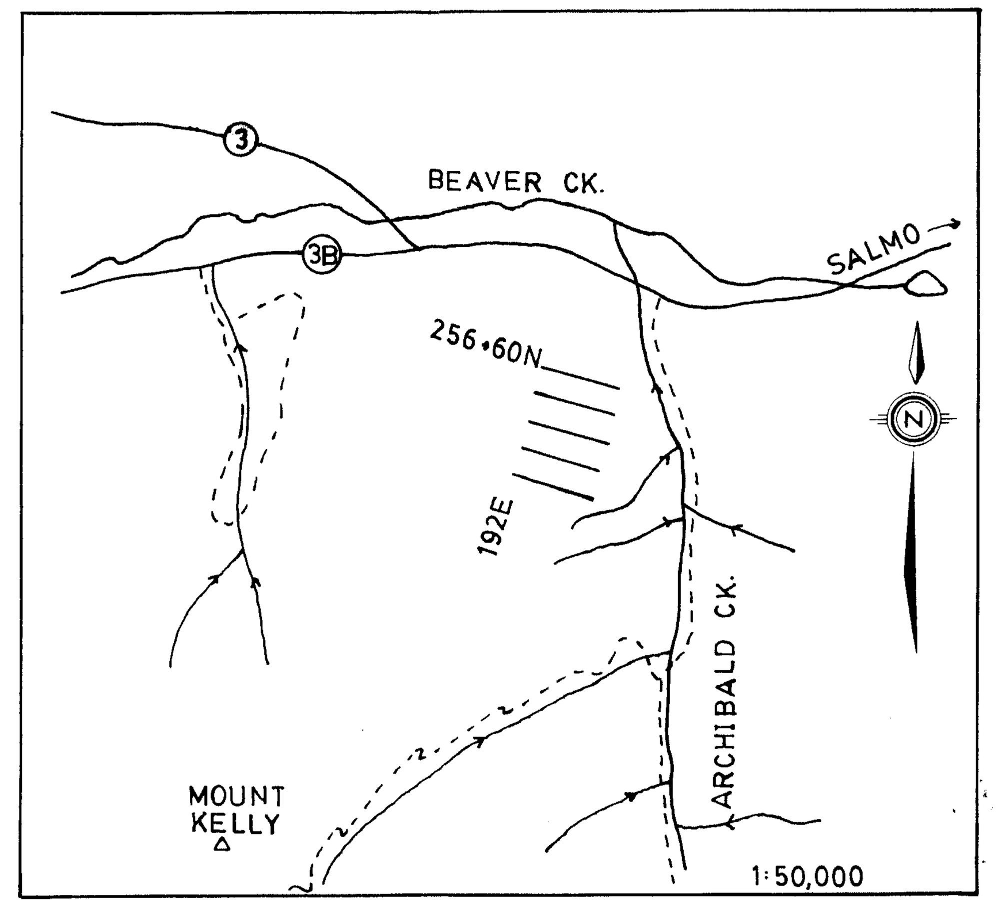
FELSIC

MAGNETOMETER SURVEY

PROJECT: SALMO PROJECT # : 432
BASELINE AZIMUTH : 360 Deg.

SCALE = 1: 2500 DATE : 7/ 1/85
SURVEY BY: TL NTS :
7 FILE: M432FEL.ZAT
NORANDA EXPLORATION





LOCATION MAP

LEGEND

4	TUFF – Dark Grey – Purple, Hornfelsed, Fine Grained Crystal to Ash Tuffs. Blocky Fracturing with Siltstone Interbeds. Locally Pyritic and Pyrrhotitic.
3	ANDESITIC TUFF – Crystal Tuff with Broken and Weathered Pyroxene Crystals. Grey Green Coloration.
2	ARGILLITE – Fine Grained, Black, Rusty, Locally Hornfelsed Madstones + Siltstones. Loccally Pyrite and Pyrrhotite Rich.
1	MONZONITE – DIORITE – SILL? – DISCORDANT – Porphyritic with Plagioclase, Minor Orthoclase and Pyroxene Crystals. Very Hard with Blocky Fracture.
40	Bedding
	Geological Contact
	Road
095257	Rock Sample Location

GEOLOGICAL BRANCH ASSESSMENT REPORT

14,374

SCALE
1:2500

Metres 50 0 50 100 150 200 250 Metres

REVISED	SALMO PROJECT
	ARCH CLAIM GROUP
	GEOLOGY
	GRID 28D
PROJ. No. 432	SURVEY BY: DGG DATE: JAN 1986
N.T.S. 82F/3	DRAWN BY: DGG; J.S. SCALE: 1:2500
DWG. No. 8	NORANDA EXPLORATION
	OFFICE: VANCOUVER

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,374

Instrument : SE88
Coil Spacing : 100m
Ref. Frequency : 112 Hz
Vertical Scale : 1 cm = 10%
Conductor Axis :
337 Hz
1012 Hz
3037 Hz

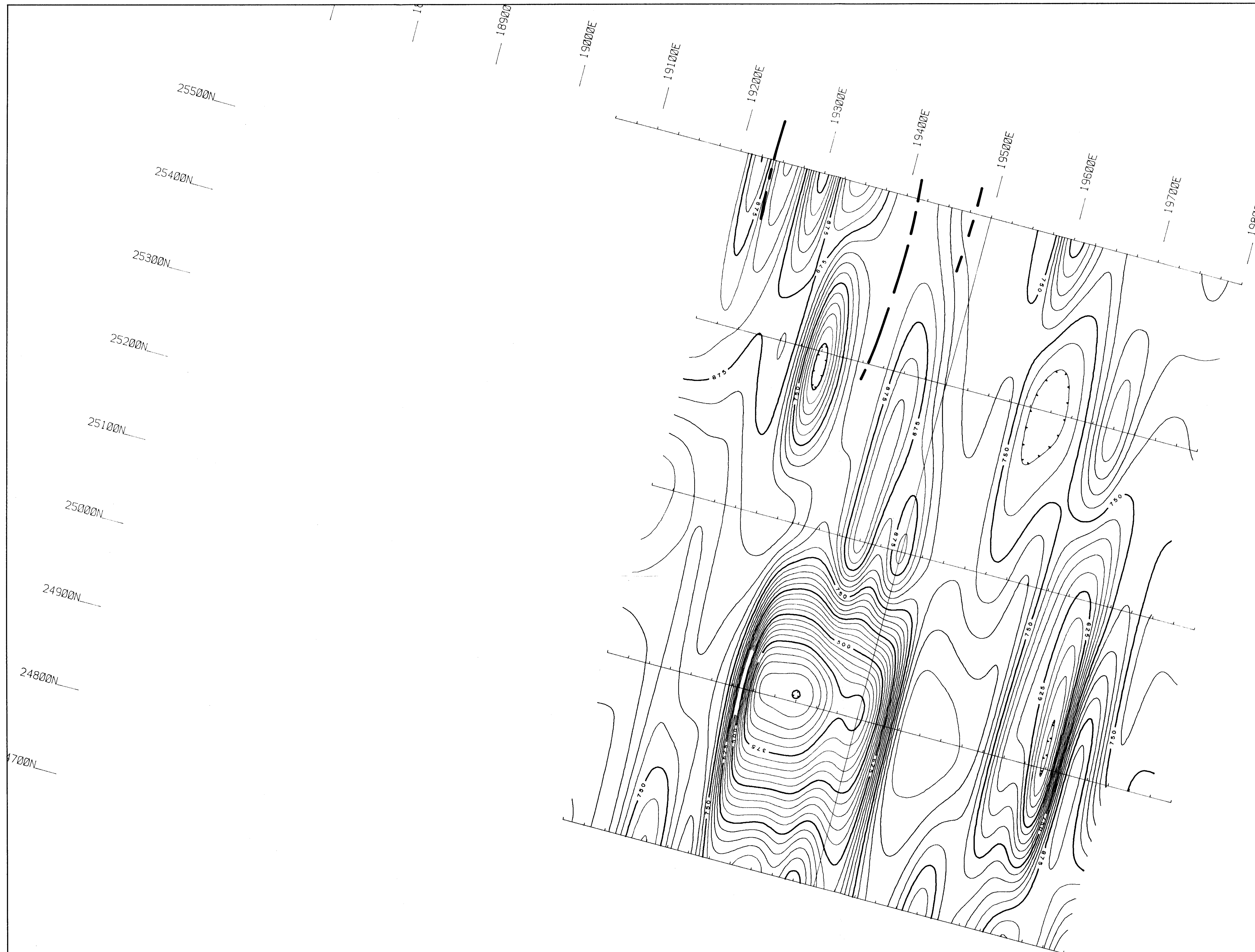
50m 25m 0m 50m 100m

28D

SE-88 SURVEY

PROJECT: SALMO AIRBORNE PROJECT # : 432-
BASELINE AZIMUTH : 15 Deg.

SCALE = 1: 2500 DATE : 6/10/85
SURVEY BY: WK/TL NTS :
9
FILE: 5432-28D.ZAT
NORANDA EXPLORATION



GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,374

Instrument : MP-3

Datum : 5800.0 nT

Contour Interval : 25 nT
(4 passes through a 9 pt. Hanning Filter.)
(6 passes through a 3 pt. Hanning Filter.)

Conductor Axis :

50m 25m 0m 50m 100m

28D

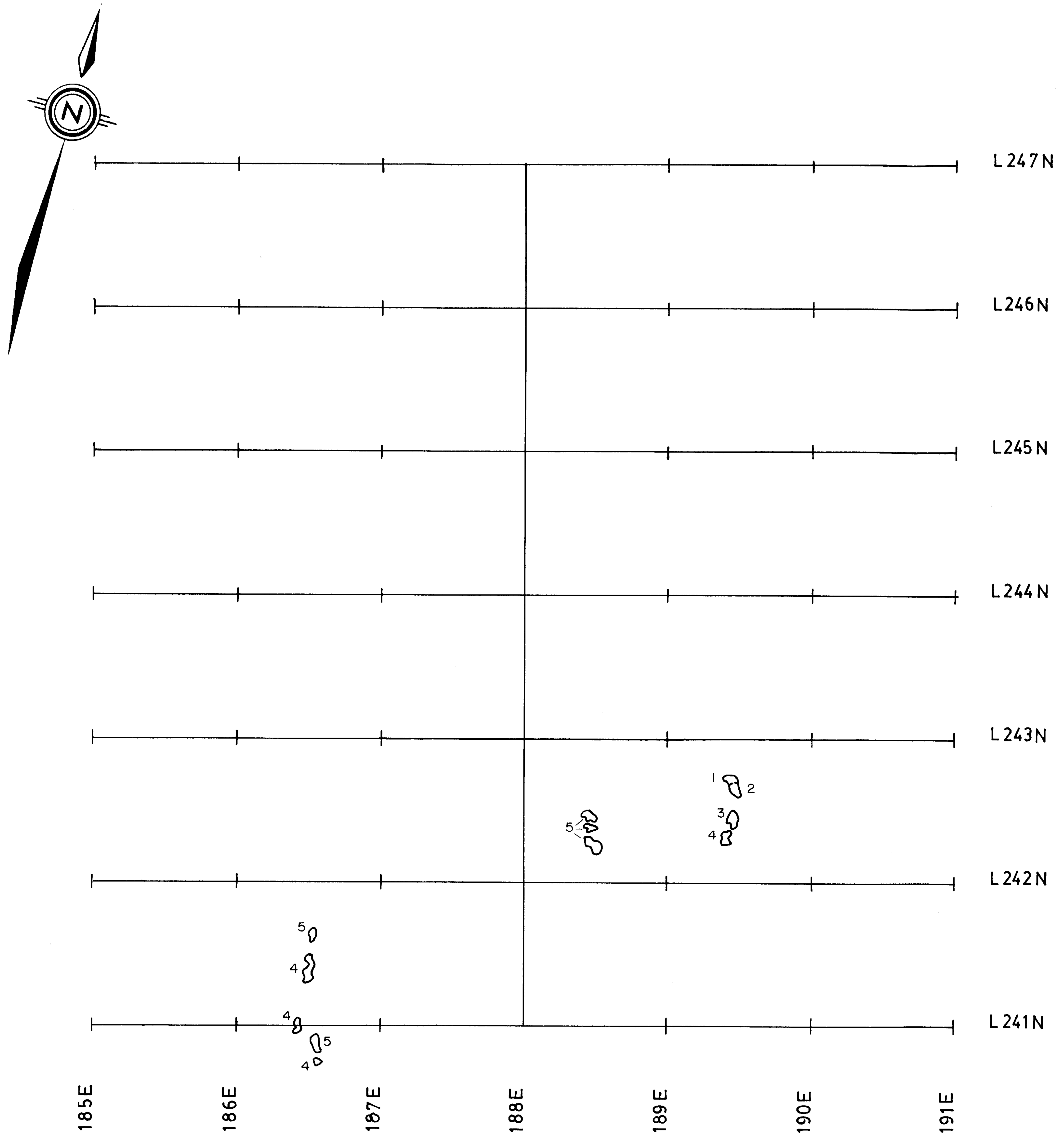
MAGNETOMETER SURVEY

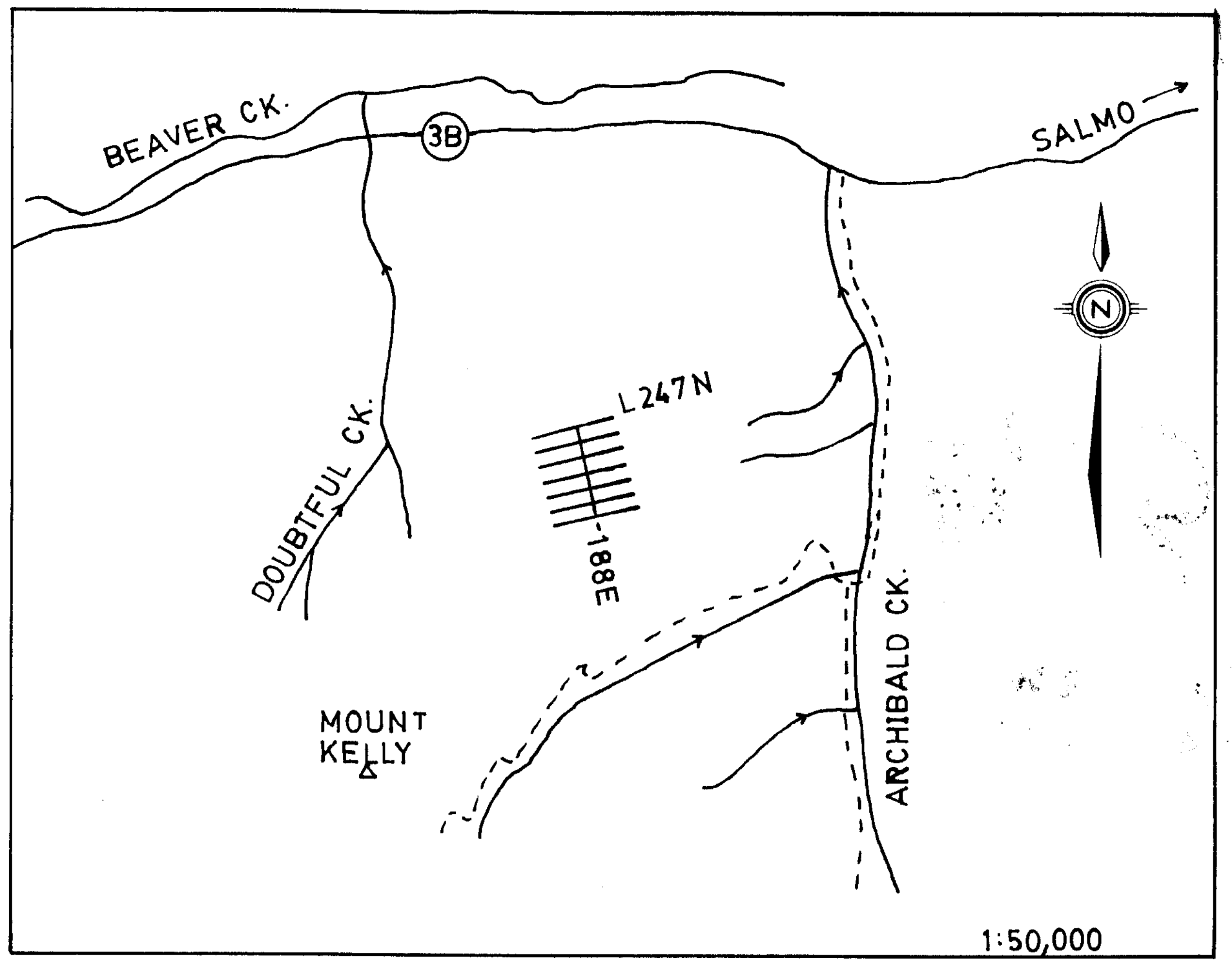
(FILTERED CONTOUR PRESENTATION)

PROJECT: SALMO AIRBORNE PROJECT # : 432-
BASELINE AZIMUTH : 195 Deg.

SCALE = 1: 2500 DATE : 10/16/85
SURVEY BY: BH NTS :
10
FILE: M432-28D.ZAT
NORANDA EXPLORATION

Vers. 2.10 Fri 22 Nov 1985 at 9:29 Grid Center at 19462.5E 25200.0N





LOCATION MAP

LEGEND

5	Fine Grained Light Green Siliceous Ash Tuff
4	Fine Grained Light Green Andesitic Flow - Weathering is a Brown Grey, White Colour with Blocky Fracture
3	Very Fine Grained Grey / Green Siltstone (Silicious) with Minor Sandstone Interbeds Weathers to Brownish Grey
2	Fine Grained Black Siltstone
1	Medium Grained Augite Porphyry with White / Brown Weathering & Blocky Fracture

GEOLOGICAL BRANCH
ASSESSMENT REPORT

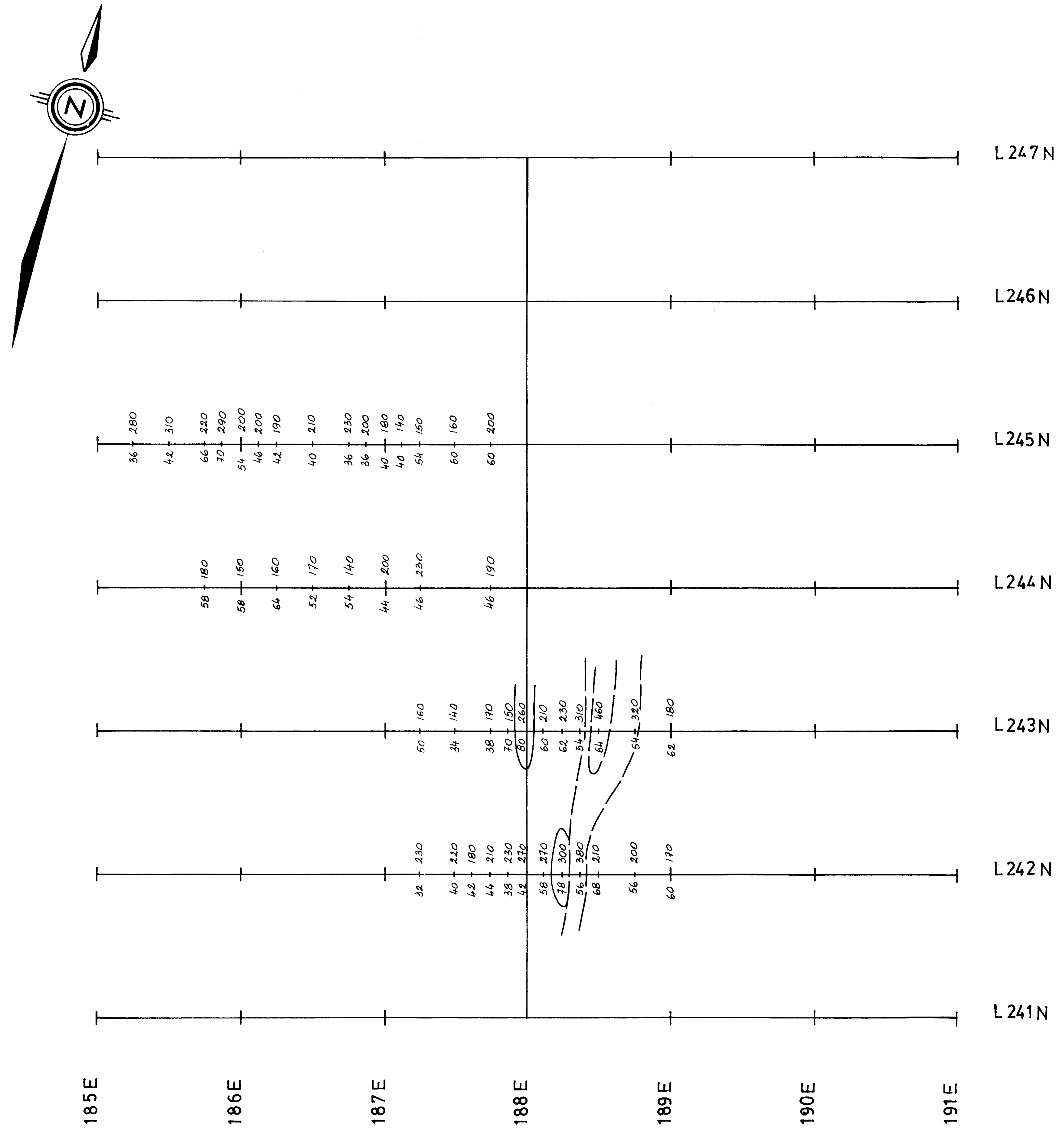
14,374

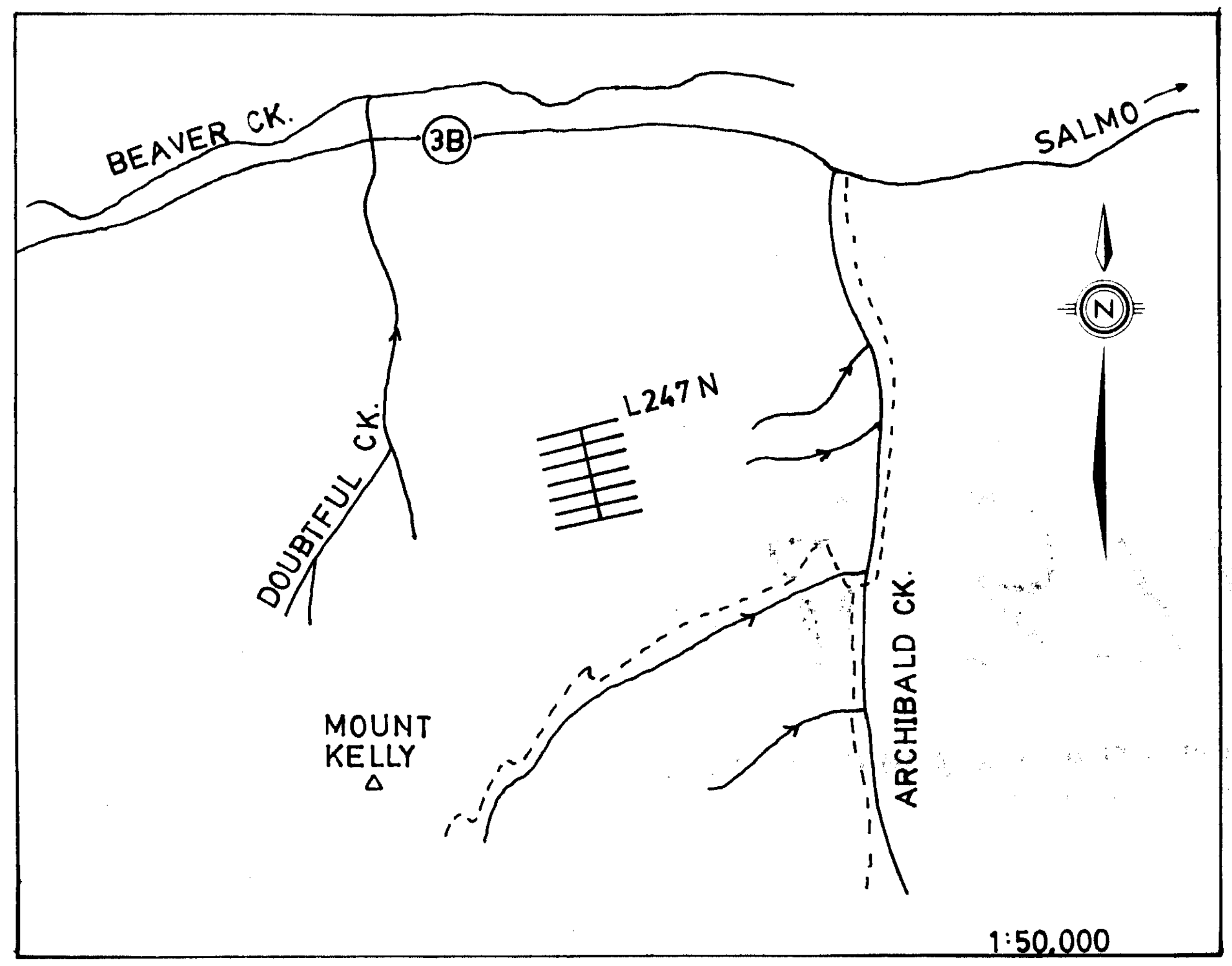
SCALE
1 : 2500

Metres 50 0 50 100 150 Metres

REVISED	
	SALMO PROJECT
	ARCH CLAIM GROUP
	GEOLOGY
PROJ. No. 432	SURVEY BY: DGG DATE: JAN 1986
N.T.S. 82F/3	DRAWN BY: DGG, J.S. SCALE: 1:2500
DWG. No. 11	NORANDA EXPLORATION
	OFFICE: VANCOUVER

NGI-778





LOCATION MAP

GEOCHEMICAL CONTOUR PARAMETERS

	Cu	Zn
Threshold	73	327
Ist Order	94	438
2nd Order	115	549

GEOLOGICAL BRANCH
ASSESSMENT REPORT

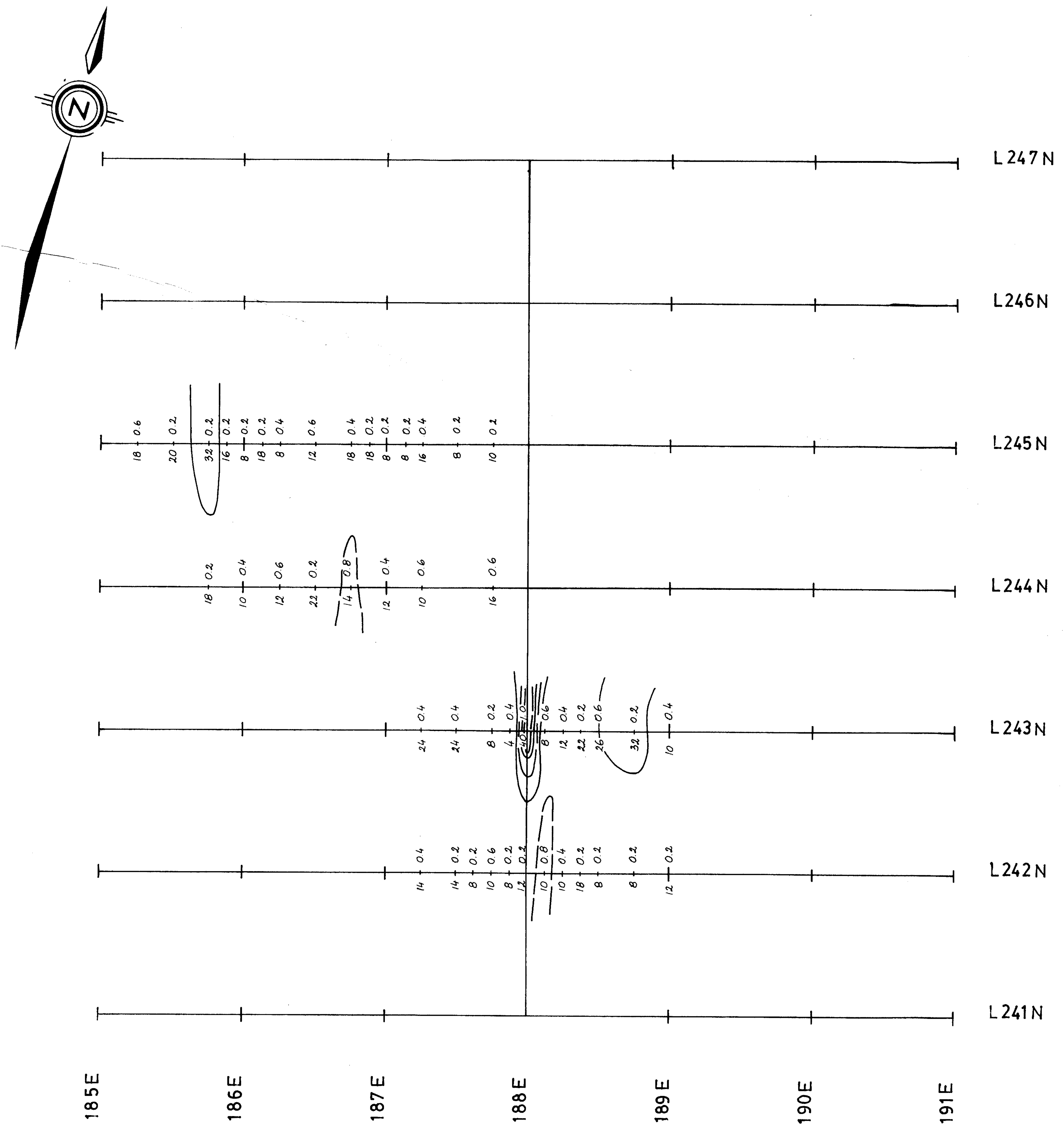
14,374

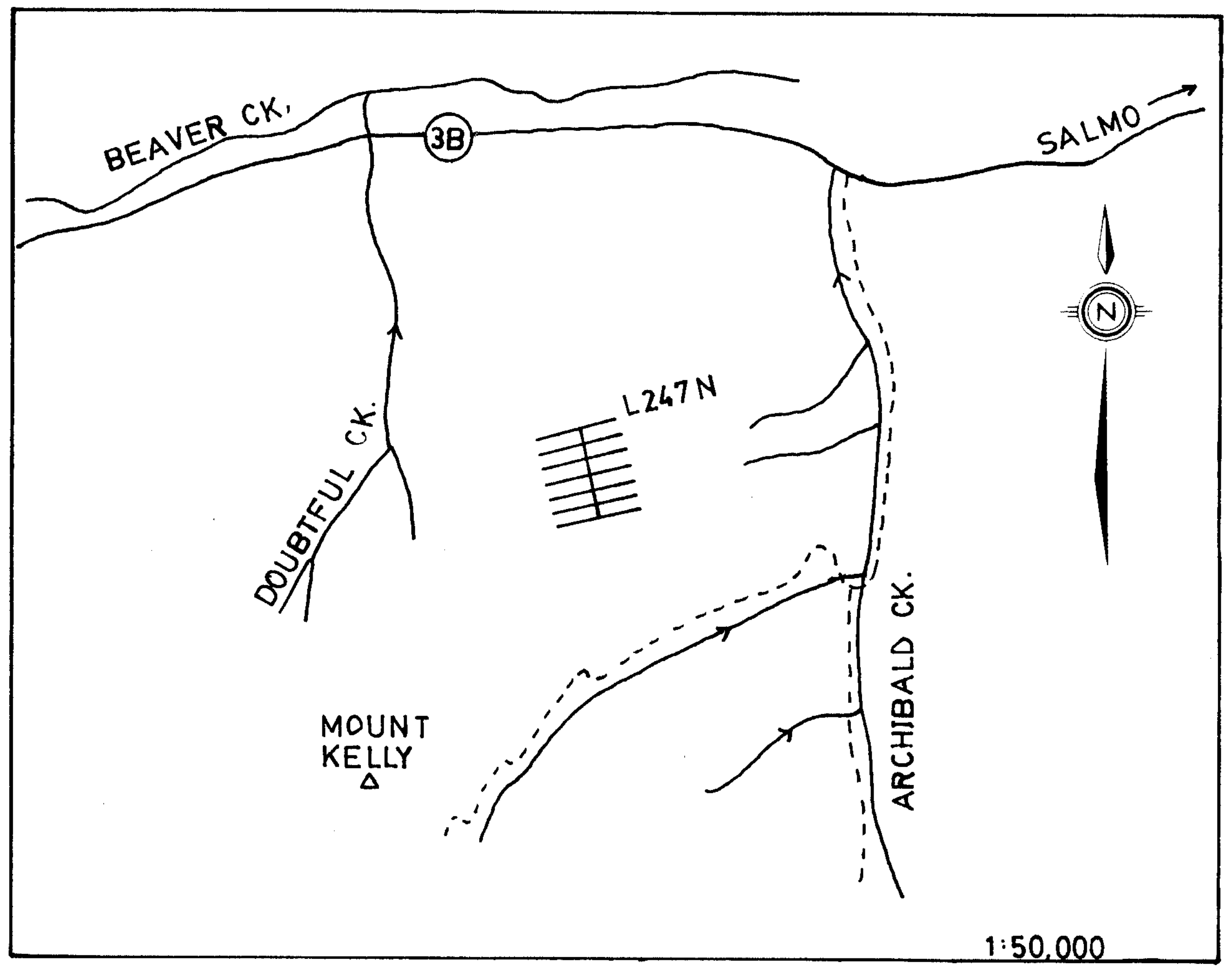
SCALE
1: 2500

Metres 50 0 50 100 150 Metres

REVISED	SALMO PROJECT ARCH CLAIM GROUP SOIL GEOCHEMISTRY Cu - Zn (ppm) GRID 23B
PROJ. No. 432 N.T.S. 82F/3	SURVEY BY: DGG DATE: JAN 1986 DRAWN BY: DGG, J.S. SCALE: 1:2500
DWG. No. 12	NORANDA EXPLORATION OFFICE: VANCOUVER

NGI-778





LOCATION MAP

GEOCHEMICAL CONTOUR PARAMETERS

	Pb	Ag
Threshold	26	.7
Ist Order	37	.9
2nd Order	47	1.2

GEOLOGICAL BRANCH
ASSESSMENT REPORT

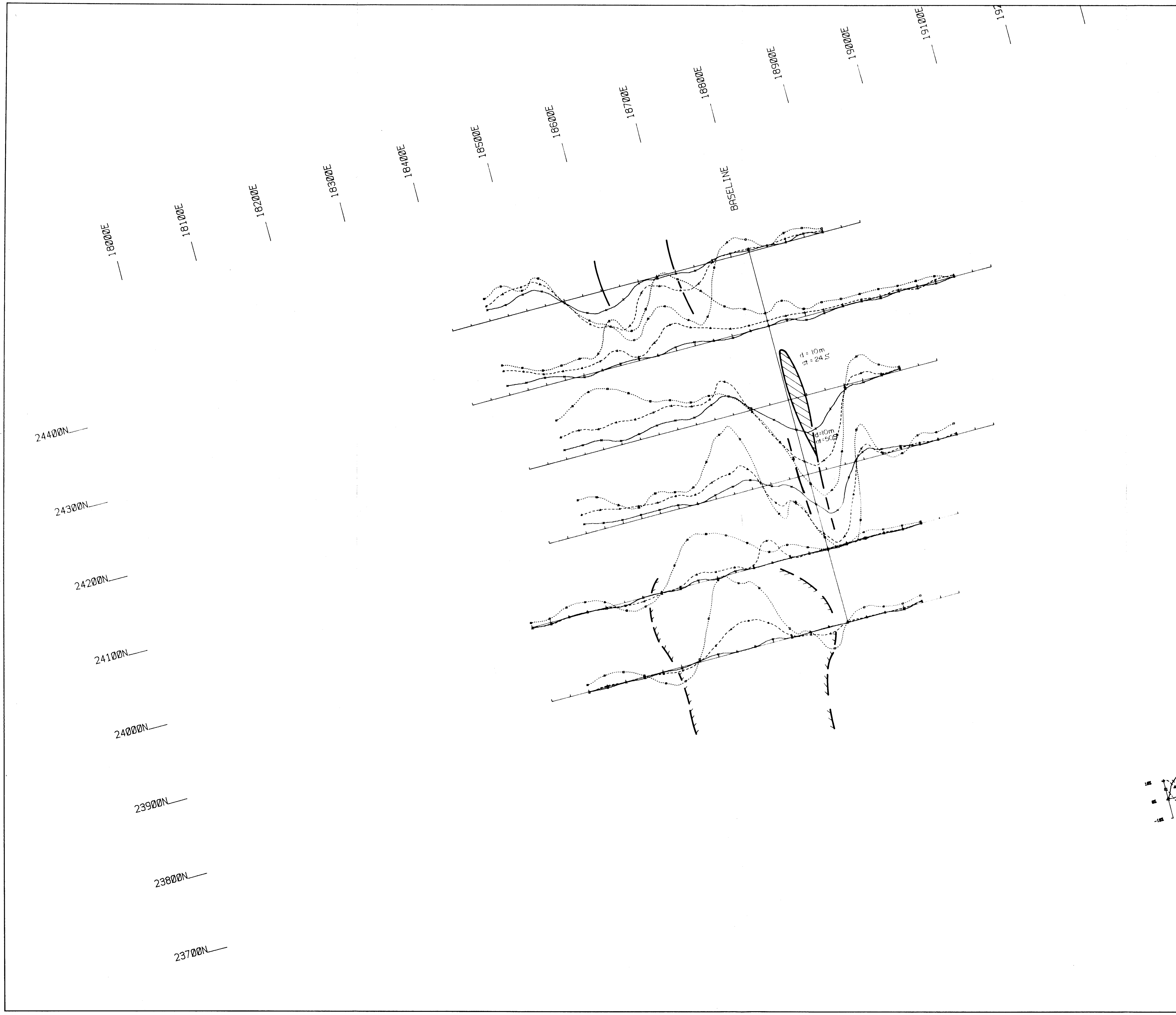
14,374

SCALE
1 : 2500

Metres 50 0 50 100 150 Metres

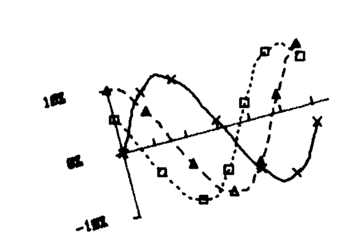
REVISED	SALMO PROJECT
	ARCH CLAIM GROUP
	SOIL GEOCHEMISTRY Pb - Ag (ppm)
	GRID 23B
PROJ. No. 432	SURVEY BY: DGG DATE: JAN 1986
N.T.S. 82F/3	DRAWN BY: DGG., J.S. SCALE: 1:2500
DWG. No. 13	NORANDA EXPLORATION
	OFFICE: VANCOUVER

NCI-778



GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,374



Instrument : SE88 GENIE
Coil Spacing : 100m
Ref. Frequency : 112 Hz
Vertical Scale : 1 cm = 10%
Conductor Axis :
337 Hz
1012 Hz
3037 Hz

50m 25m 0m 50m 100m

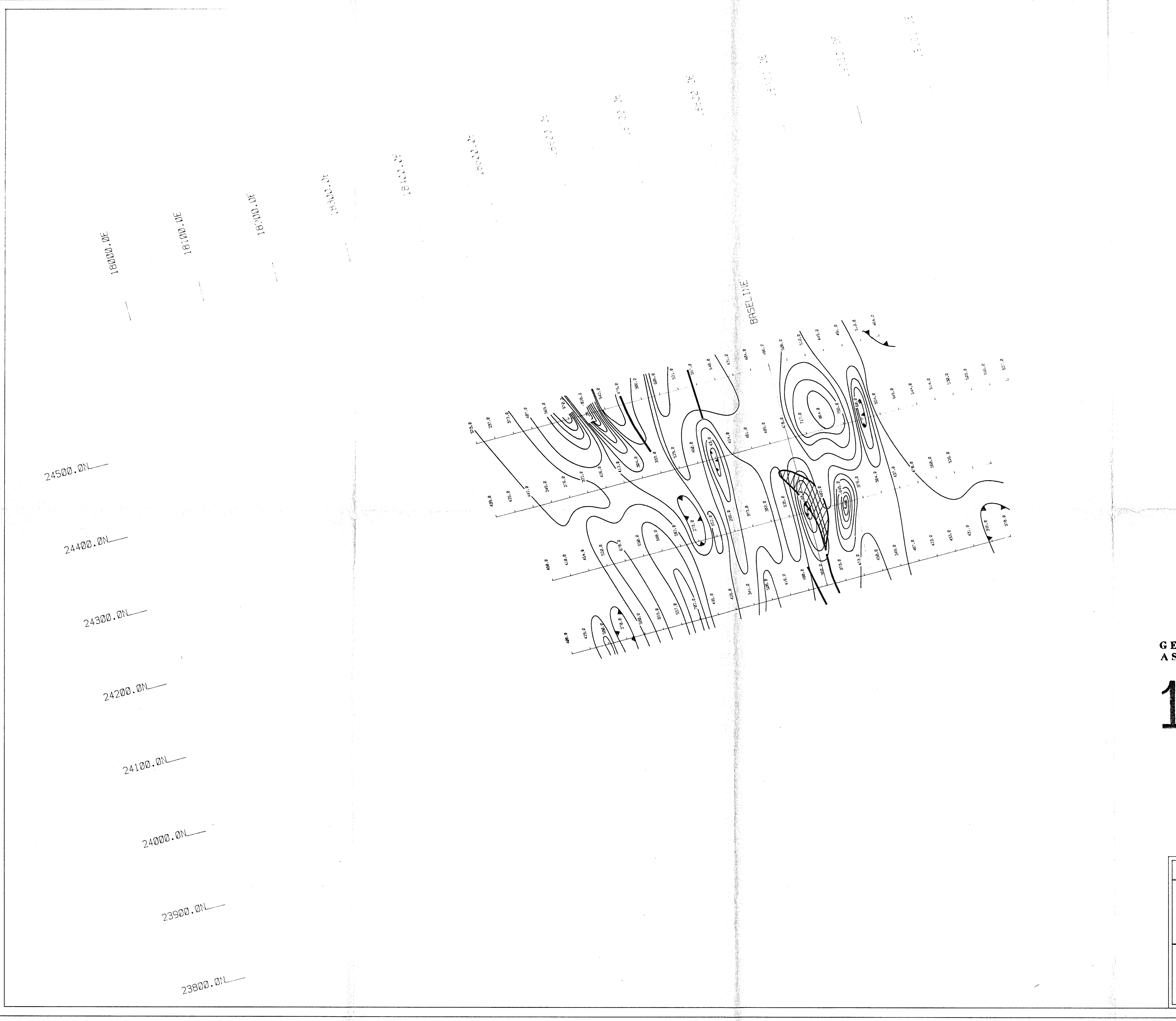
23B

SE-88 SURVEY

PROJECT: SALMO AIRBORNE PROJECT # : 32A
BASELINE AZIMUTH : 345 Deg.

SCALE = 1: 2500 DATE : 7/ 4/85
SURVEY BY: BK/TK NTS : 82F
FILE: SE8832A.Zat
NORANDA EXPLORATION

14



GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,374

Instrument : MP-3

Datum Plane : 57300.0

Contour Interval : 50nT

Conductor Axes :

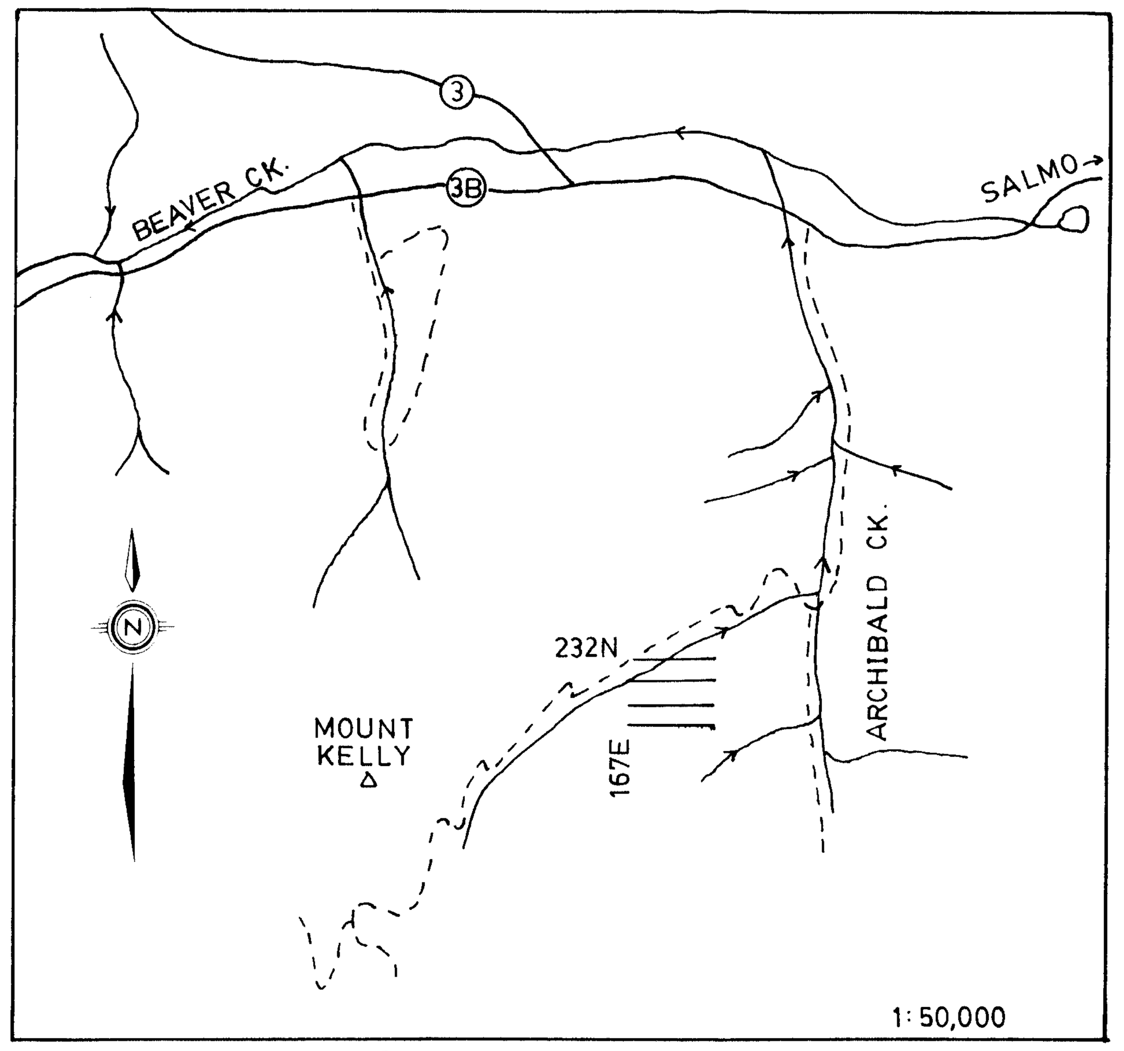
50m 25m 0m 50m 100m

23B

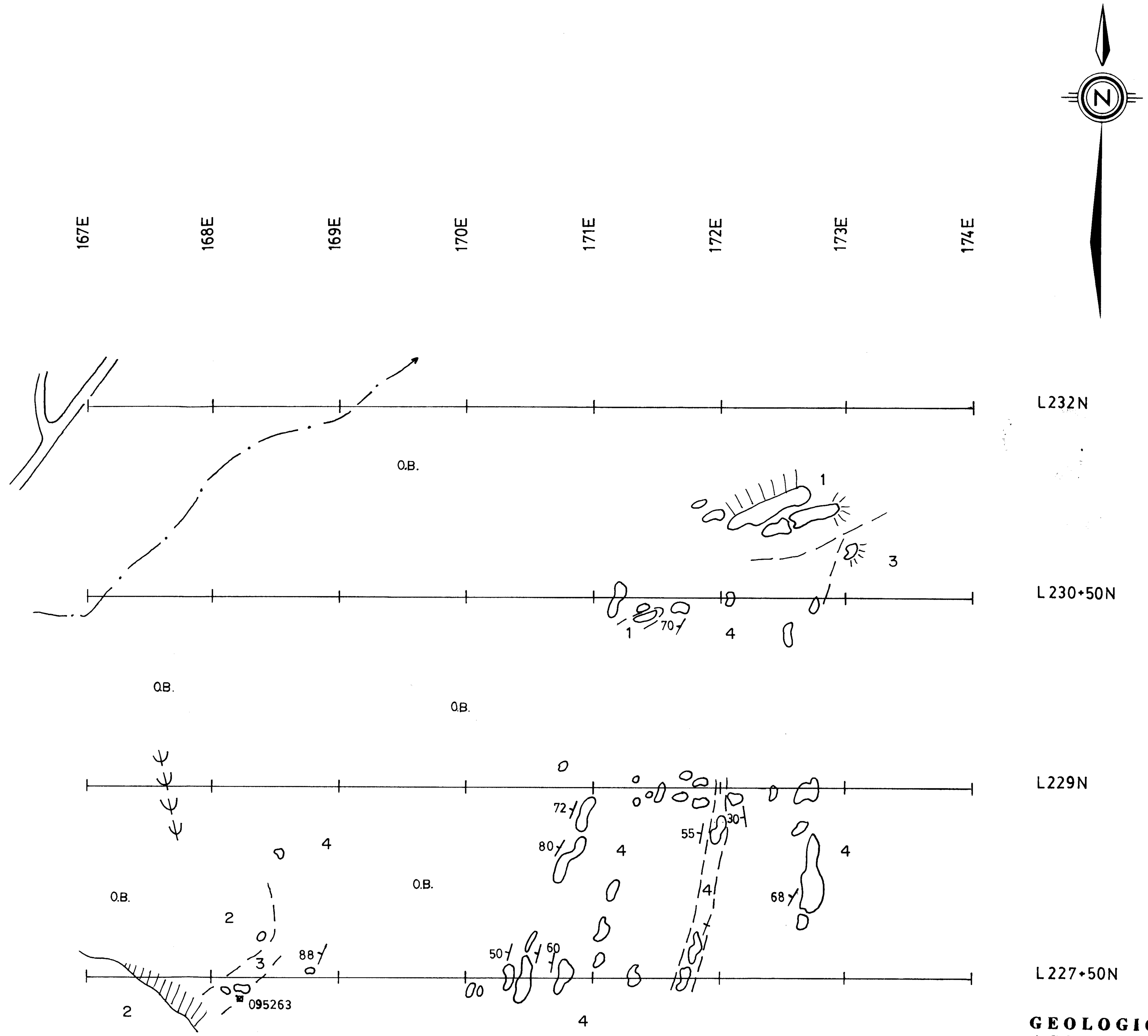
MAGNETOMETER SURVEY

PROJECT: SALMO AIRBORNE PROJECT # : 32
BASELINE AZIMUTH : 345 Deg.

SCALE = 1: 2500 DATE : 7/ 6/85
SURVEY BY: TL NTS :
15 FILE: MG3223B.Zot
NORANDA EXPLORATION



LOCATION MAP



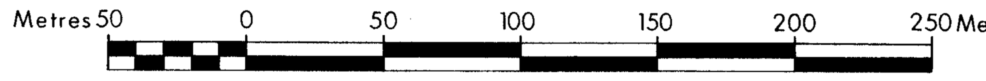
LEGEND

4		Sediments Tf ; Very Fine Grained, Dark Grey, Hard, Massive Tuffs S.S.; Fine - Medium Grayned, Grey - Green - Brown Sandstone Sh.; Light - Dark Grey, Thinly Laminated Shales Sl. ; Slate Silt - Mdst ; Light - Dark Grey Siltstone + Mudstones
3	An. Fl.	Andesite Flows - Light - Dark Green Matrix. Locally Porphyritic with Feldspar and or Pyroxene Phenocrysts.
2	A.P.	Augite Porphyry Flows
1		Hornblende Pyroxene to Feldspar Porphyry Dykes.
095263		Rock Sample Location
		Bluff
82		Bedding
O.B.		Overburden
		Road
		Creek
		Geological Contact

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,374

SCALE
1:2500



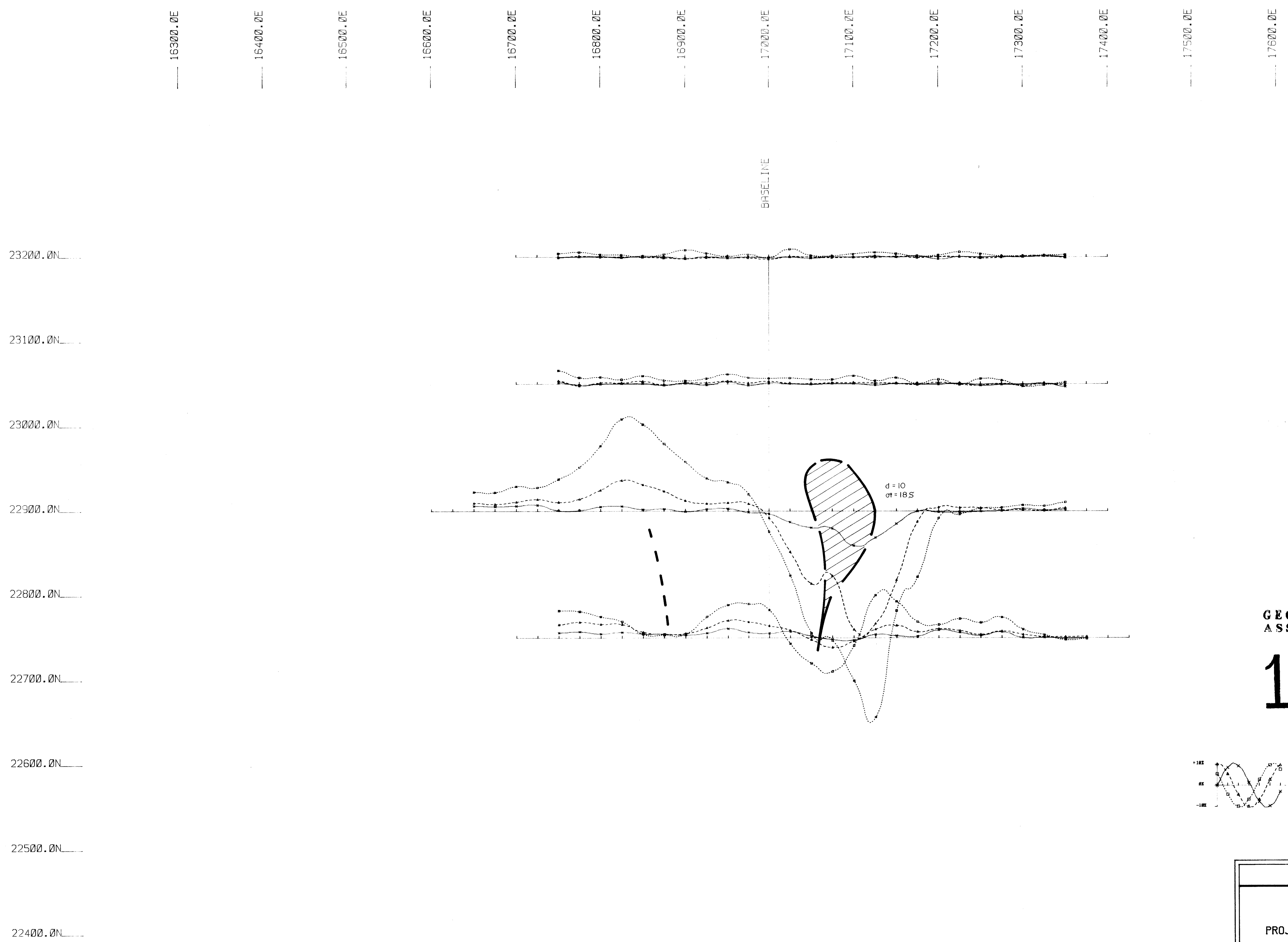
REVISED

SALMO PROJECT
ARCH CLAIM GROUP
GEOLOGY

PROJ. No. 432
N.T.S. 82F/3
DWG. No. 16

SURVEY BY: DGG DATE: JAN 1986
DRAWN BY: DGG, P.J.A., J.S. SCALE: 1:2500

NORANDA EXPLORATION
OFFICE: VANCOUVER



GEOLOGICAL BRANCH ASSESSMENT REPORT

14,374

Instrument : SE88
Coil Spacing : 360m
Ref. Frequency : 112 Hz
Vertical Scale : 1 cm = 10%
Conductor Axis :
337 Hz
1012 Hz
3037 Hz

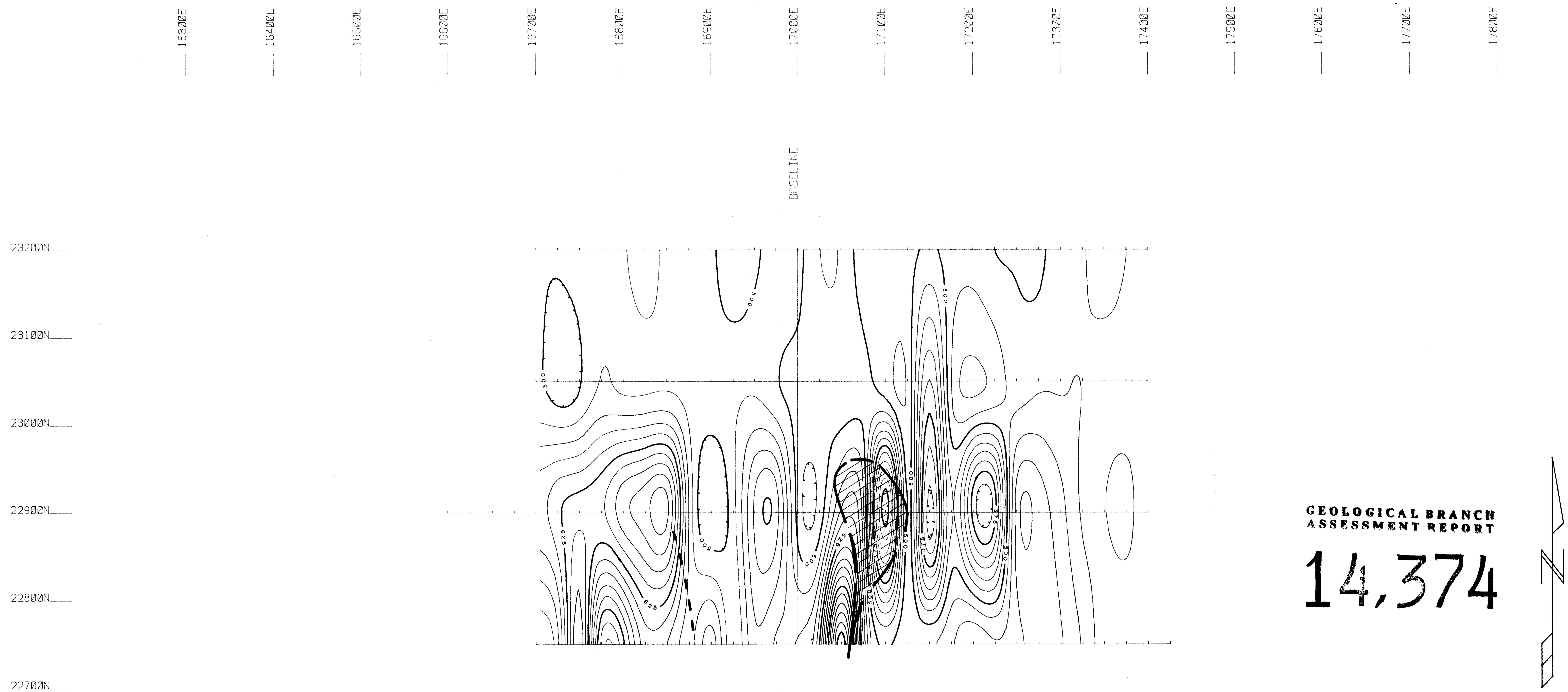
50m 25m 0m 50m 100m

23D

SE-88 SURVEY

PROJECT: SALMO AIRBORNE PROJECT # : 0432
BASELINE AZIMUTH : 360 Deg.

SCALE = 1: 2500 DATE : 10/17/85
SURVEY BY: WK/BH NTS :
17 FILE: S432-23D.ZAT
NORANDA EXPLORATION



GEOLOGICAL BRANCH ASSESSMENT REPORT

14,374

Instrument : MP-3

Datum : 57500.0 nT

Contour Interval : 25 nT
(5 passes through a 9 pt. Hanning Filter.)
(7 passes through a 3 pt. Hanning Filter.)

Conductor Axis :

50m 25m 0m 50m 100m

23D

MAGNETOMETER SURVEY

(FILTERED CONTOUR PRESENTATION)

PROJECT: SALMO AIRBORNE PROJECT # : 432-
BASELINE AZIMUTH : 360 Deg.

SCALE = 1: 2500 DATE : 10/17/85

18

SURVEY BY: TL NTS :
FILE: M432-23D.ZAT
NORANDA EXPLORATION

Vers. 2.10 Fri 22 Nov 1985 at 19:58 Grid Center at 17012.5E 22975.0N

LEGEND

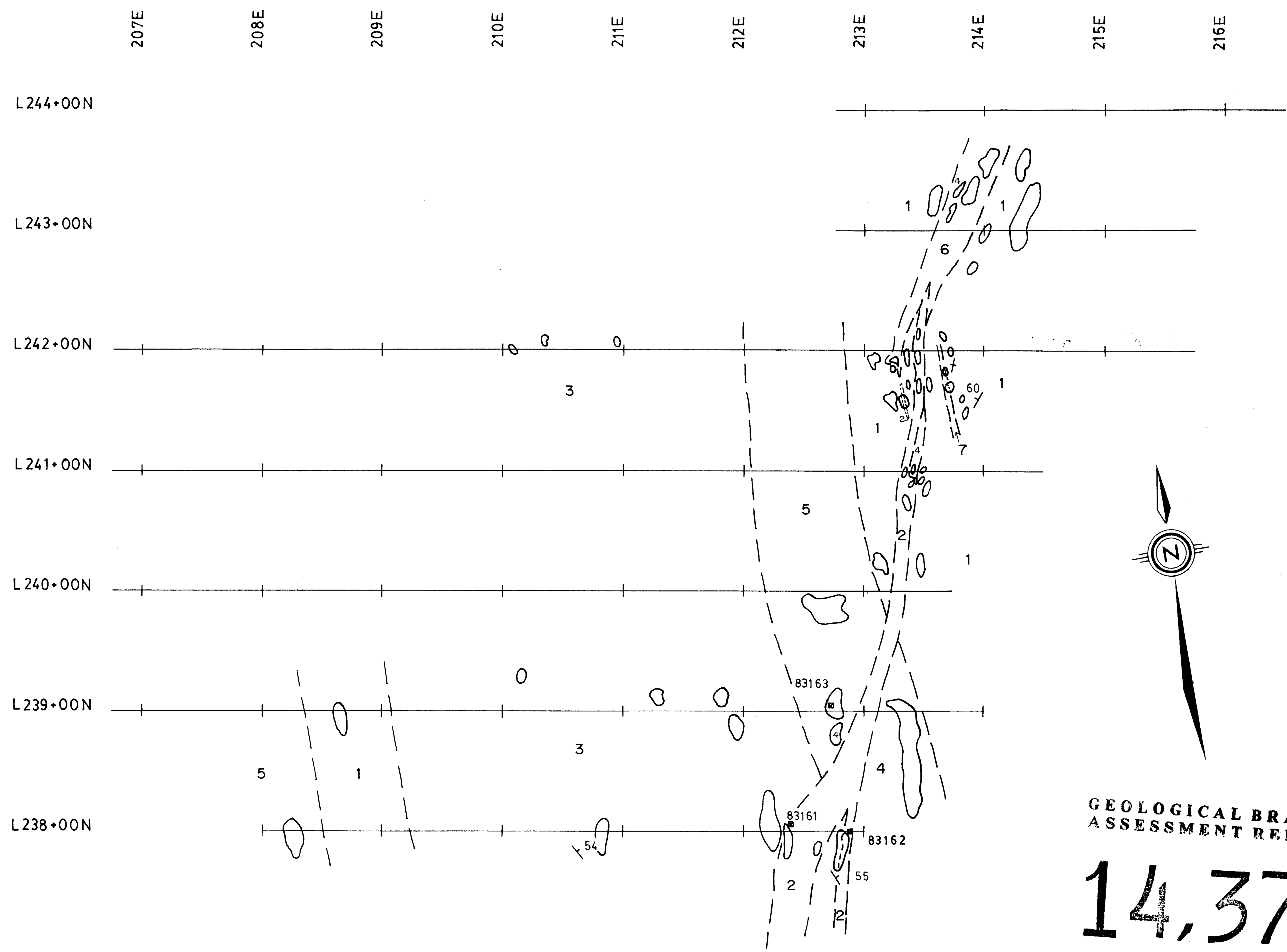
7		Diabase Dike
6	AUG.	Augite Porphyry Andesitic Flow. Dark Green Euhedral to Subhedral Augite Phenocrysts, Typically .1 - 1.5cm Long, Set in a Very Fine Grained to Aphanitic Green - Grey Matrix. Weathers Greyish Green.
5	FSPAR.	White Subhedral Feldspar Phenocrysts (.1-3mm) Set in an Aphanitic Grey - Green Matrix. Weathers Greyish Green to Orangy.
4	BX	Porphyry Andesitic Breccia. Augite Phenocrysts and Sometimes Feldspar Phenocrysts from .1 - 1.5cm. Contains Fragments of Shale and Ashtall Tuff which are Angular to Subrounded, and up to 20 cm in Diameter.
3		Interbedded Ash Fall Tuff and Ash Flow Tuff. Ash Fall Tuffs Consist of Well Sorted, Densely Packed and Thinly Bedded Tiny, Euhedral Feldspar Crystals, Often Visible Only with Hand Lens, Whitish Grey to Dark Grey, Often Weathering Rusty Locally. Bedding is Often Wraped.
2		Quartz Eye Rhyolite Porphyry Dike. Mottled Greyish to Whitish with Anhedral Feldspar Crystals and Greyish Quartz Eyes <4 mm Long. Crystals Often Densely Packed, and Set in a Slightly Purplish - Grey Aphanitic, Siliceous Matrix. Occasionally Appears Welded. Weathers Greenish - Grey to Purplish or Reddish.
1		Shale: Massive to Bedded, Blackish and Occasionally with Rusty Weathering.

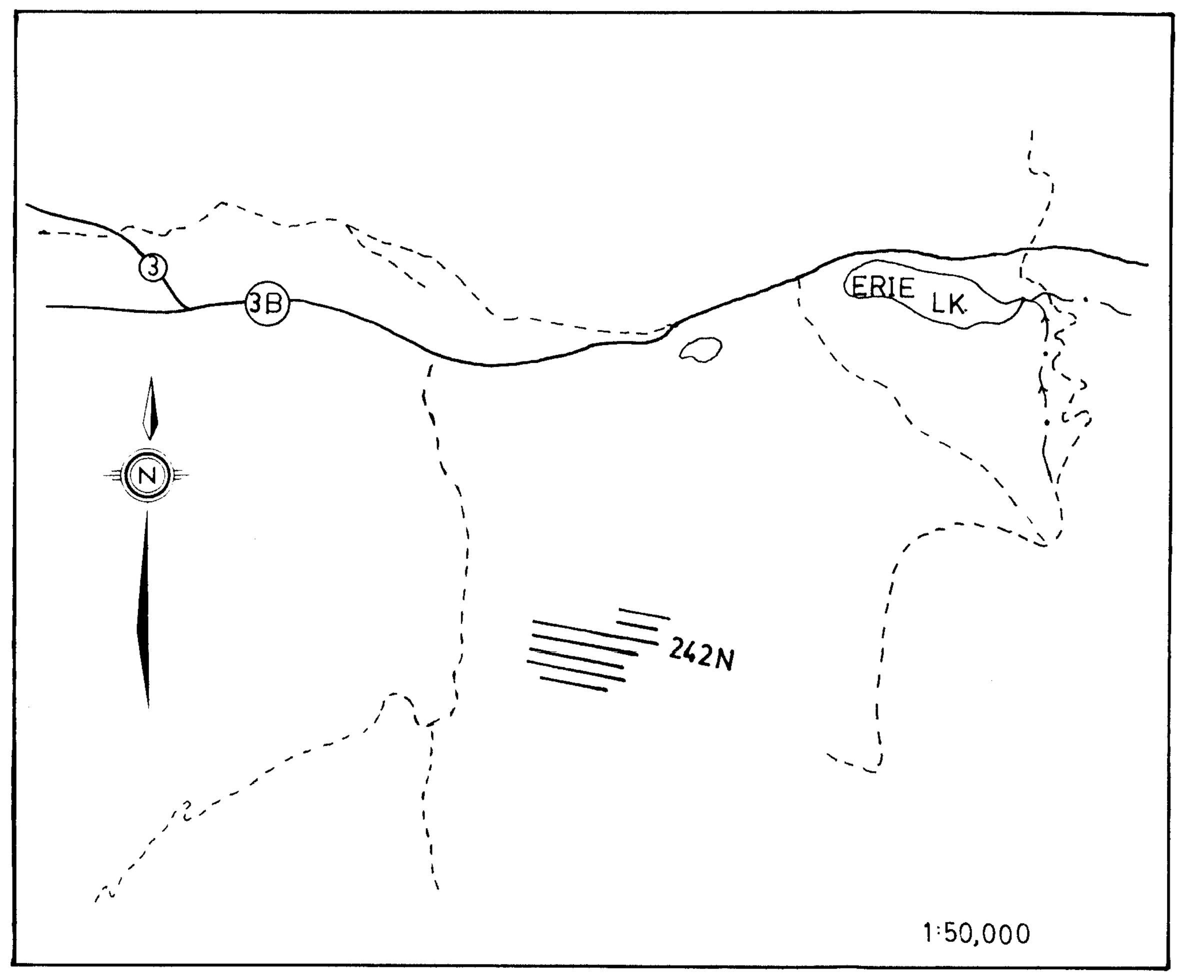
Geological Contact: Inferred, Except where Observed on Actual Outcrops.

Outcrop

Grab Rock Sample Location

54 Bedding Orientation





LOCATION MAP

GEOLOGICAL BRANCH ASSESSMENT REPORT

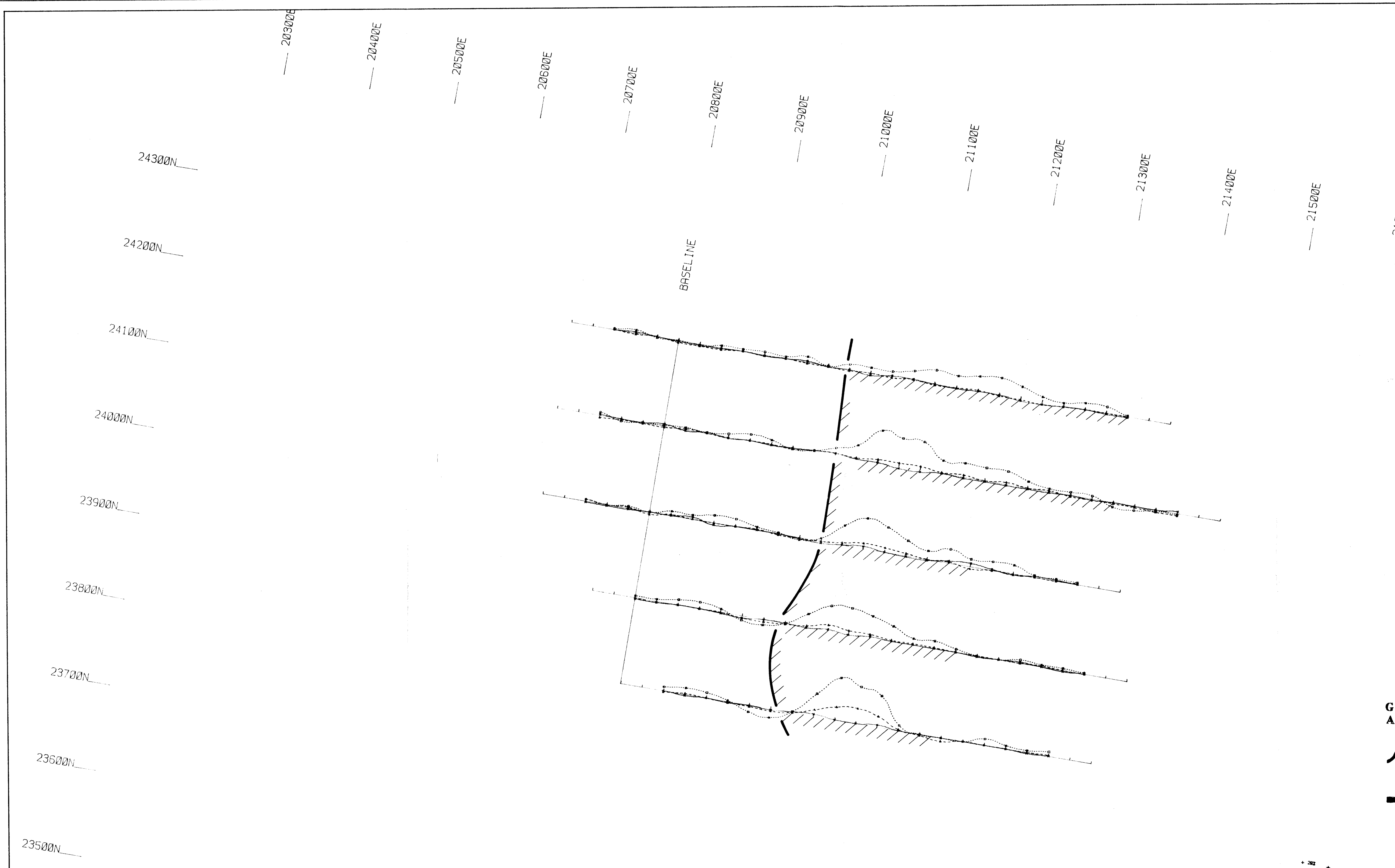
14,374

SCALE
1:2500

Metres 50 0 50 100 150 200 250 Metres

REVISED	SALMO PROJECT ARCH CLAIM GROUP GEOLOGY
PROJ. No. 432	SURVEY BY: JK/IGM DATE: JAN 1986
N.T.S. 82F/3	DRAWN BY: DGG, PJA, JS SCALE: 1:2500
DWG. No. 19	NORANDA EXPLORATION OFFICE: VANCOUVER

NO-780



GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,374

Instrument : SE88
Coil Spacing : 100m
Ref. Frequency : 112 Hz
Vertical Scale : 1 cm = 20%
Conductor Axis :
337 Hz
1012 Hz
3037 Hz

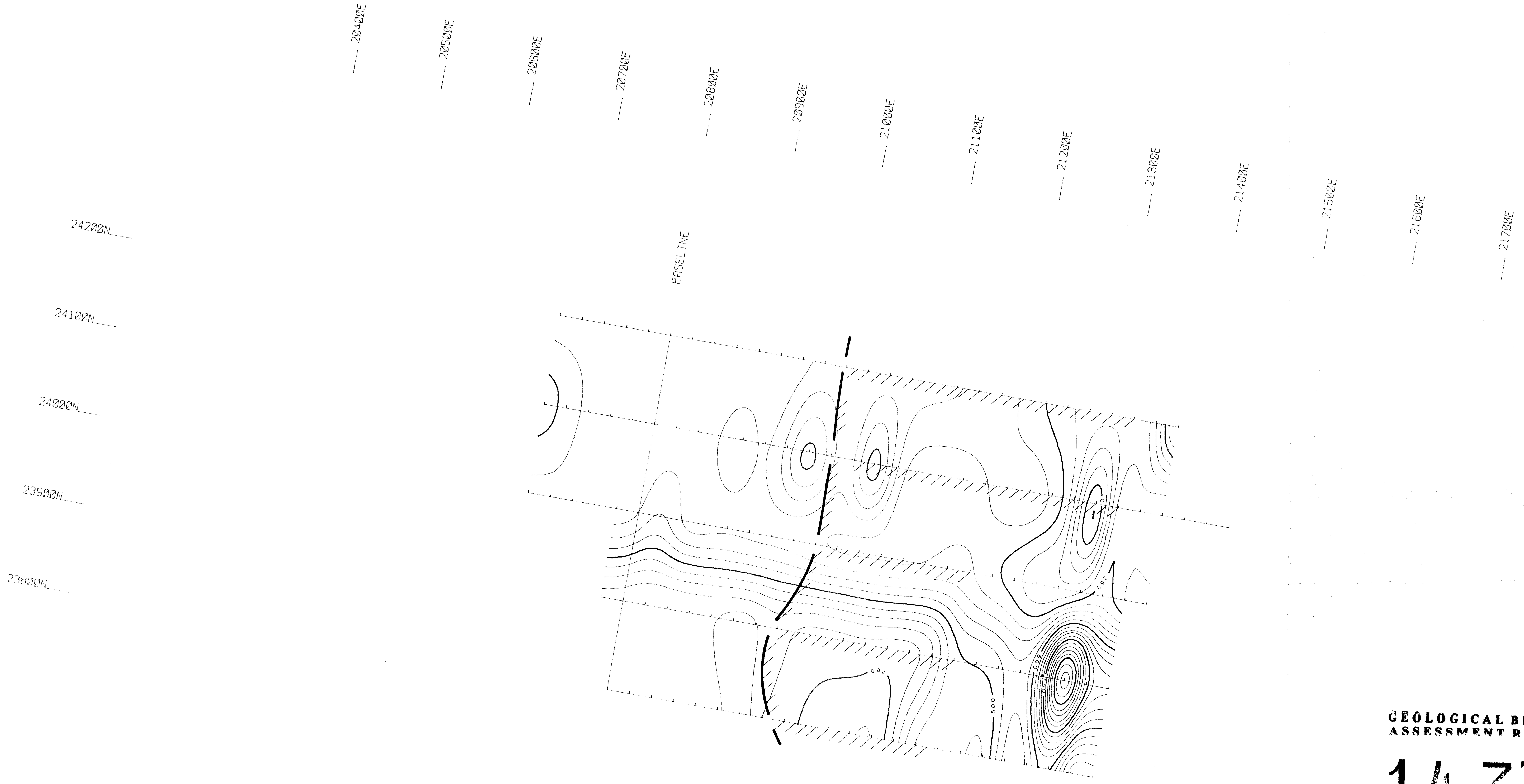
50m 25m 0m 50m 100m

28-B

SE-88 SURVEY

PROJECT: SALMO PROJECT # : 432
BASELINE AZIMUTH : 10 Deg.

SCALE = 1: 2500 DATE : 6/ 7/85
SURVEY BY: WK/TK NTS :
20
FILE: SE8832B.Zet
NORANDA EXPLORATION



GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,374

Instrument	:	MP-3
Field	:	TOTAL
Datum	:	57300.0 nT
Contour Interval	:	50 nT

(6 passes through a 9 pt. Hanning Filter.)
(8 passes through a 3 pt. Hanning Filter.)

Conductor Axis :

0m 25m 0m 50m 100m

28-B

MAGNETOMETER SURVEY

(FILTERED CONTOUR PRESENTATION)

PROJECT: SALMO AIRBORNE PROJECT # : 432
BASELINE AZIMUTH : 10 Deg.

SCALE = 1: 2500 DATE : 10/19/85
SURVEY BY: WK NTS :
21 FILE: M32B.ZAT
NORANDA EXPLORATION

Vers. 2.20 Mon 2 Dec 1985 at 15:08 Grid Center at 21062.5E 24000.0N