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COMINCO LTD.

EXPLORATION
NTS:92H/9,10

WESTERN DISTRICT
January 5, 1983

REPORT TO THE OWNERS

ON WORK CONDUCTED ON THE

STAR 1-8 AND SNOW 1-8 MINERAL

CLAIMS DURING 1982

SUMMERS CREEK AREA, SIMILKAMEEN M.D., B.C.

LATITUDE: 49°37'43"N

LONGITUDE: 120°29'30"W

REPORT BY: D.T. MEHNER

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SUMMARY

The Snow and Star claims(16 units) cover altered and mineralized Nicola volcanics at the southeast corner of the Axe, alkaline porphyry copper prospect in south-central B.C. During 1982, grid construction, rock and soil geochem sampling, ground magnetometer and V.L.F.(N.L.K and N.A.A) surveys were carried out on the Snow claims from lines 19S to 27S. Moderate copper and weak lead and molybdenum soil anomalies were found in an area underlain by mineralized and altered Nicola volcanics and coeval intrusives. Numerous small, malachite with minor chalcopyrite and pyrite showings occur within the area. Ground magnetometer surveys yielded relatively high magnetic values that are not easily correlated with the underlying rock types. V.L.F. surveys picked up a number of north-south trending anomalies that likely represent minor faults related to the Summers Creek fault system. A minimum of 4, 300 ft. percussion holes are recommended to test the extent of mineralization between grid lines 19S and 27S.

INTRODUCTION

The Snow and Star mineral claims are situated along the south and east sides of the Axe, alkaline porphyry Cu-Au prospect located about 20 km north of Princeton, B.C.

The claims were examined by B. Cousens and D. Mehner on June 26, 1981 and were subsequently recommended to Cominco Ltd. for option. An agreement between the owners and Cominco Ltd. was made on August 20, 1981.

During 1982, 4.8 km of new flagged and blazed grid lines were constructed, 10.4 km of ground magnetometer and V.L.F. surveys(stations N.L.K. and N.A.A) were completed and 37 soil samples were collected and analyzed for Cu,Mo,Pb and Zn. Twenty-five rock chip samples collected from 13 trenches were analyzed for Cu,Ag and Au.

Construction of grid lines, completion of ground magnetometer and V.L.F. surveys, soil sampling and rock chip sampling was carried out by Dave Slade and John Donahue. Report writing was done by David Mehner.

LOCATION AND ACCESS

The Snow and Star mineral claims are located about 19 km north of Princeton, B.C. between Summers Creek and Rampart Creek. The centre of the claim block is situated at 120°29'30" west longitude and 49°37'43" north latitude(Plate 1).

Access to the property is available to all vehicles by turning east off Highway 5, 9.5 km north of Princeton on to the Missezula Lake Road and then following the road north for about 10 km.

TOPOGRAPHY AND VEGETATION

The Snow and Star claims are situated along the top of a gently rolling, north trending ridge that is situated between the Summers Creek and Rampart Creek Valleys. Elevations vary from less than 950 meters in the most southerly portion of the claime to over 1250 meters in the northern parts.

Vegetation covering the claims includes large fir and pine with lesser amounts of spruce, poplar and willow. Water for drilling purposes is available from either Summers Creek or Rampart Creek.

PROPERTY AND OWNERSHIP

The Star and Snow claims are located in the Similkameen Mining Division and are part of the Axe Group of mineral claims. The Star and Snow claims consist of:

CLAIM NAME	RECORD NO.	UNITS	DATE RECORDED	DUE DATE
Snow 1-8	638 - 645	8	June 21/79	June 21/86
Star 1-8	1016 - 1023	8	May 20/80	May 20/86

The Snow 1-8 mineral claims are owned by T. Coyne Jr.
The Star 1-8 mineral claims are owned by T. Coyne.

Terms of the option agreement between the owners and Cominco Ltd. call for an initial payment of $2000 upon signing plus $8000 on Jan. 31, 1982 followed by optional payments of $10,000 on Jan. 31 of 1983, '84, '85 and '86 for a total of $50,000. Cominco Ltd. would become 100% owners of the property if all these payments were made.

PREVIOUS WORK

An old adit located along the east side of Rampart Creek and believed to have been put in during the 1930's is the oldest known work conducted on the property. More recently, part of the ground covered by the Star and Snow claims was held by Coin Canyon Mines Ltd. who conducted a ground magnetometer survey, dug 4 trenches and drilled 1008 ft. in 2 percussion holes in 1966(Smith, 1966). In 1968, the ground was optioned to Quiotana Minorals Corp. by T. Coyne of Prinoeton, B.C. Three rotary holes totalling 1536 ft. were drilled before the option was dropped.

Further trenching was conducted by Mr. Coyne before Texas Gulf Sulphur Co. carried out geological mapping and a soil geochemical survey in 1971(assessment report 3396). In 1972 Iso Explorations optioned the ground and carried out geological mapping, rock sampling, an I.P. survey(assessment report 4166) and drilled 3 diamond drill holes(no data available). The property then sat idle until optioned by Cominco Ltd. in 1981. In that year Cominco carried out geological mapping and rock and soil geochemical sampling.

GRID CONSTRUCTION

In order to reduce grid line spacing to 100 meters over the main copper showings between 19S and 27S, 4.8 km of new flagged and blazed grid lines were established with topochains and compass. Grid line locations relative to claim boundaries were determined with the aid of a 1:5000 orthophoto.

GEOCHEMISTRY

SOIL GEOCHEMISTRY

Thirty-seven soil samples were collected at 100 meter intervals from the grid lines covering the Snow and Star claims. All samples were analyzed by Cominco's laboratory in Vancouver for Cu,Pb,Zn, and Mo. The results are listed in Appendix "A" and the sample locations and contoured results are shown on Plates 2 and 3. All soils were dried and then sieved through 80 mesh screens. Copper,Pb and Zn analyses were made using nitric acid(20%HNO_3) digestion followed by atomic absorption.

Molybdenum was determined by using aqua regia digestion followed by atomic absorption.

Using threshold values of 80ppm Cu, 10ppm Pb, 150ppm Zn and 3ppm Mo, the area between lines 19S and 27S contains a number of small Cu,Pb and Mo soil anomalies with the Cu and Pb anomalies open to the east. The anomalous area is underlain by altered and mineralized Nicola volcanics and coeval intrusives(see 1981 Report to Owners). However some of the anomalous soil values may be from mineralized material migrating down the steep hillside and not from underlying in-situ mineralization.

ROCK GEOCHEMISTRY

Twenty-five rock chip samples were collected from 13 trenches or outcrop exposures. All samples were analyzed by Cominco's laboratory in Vancouver for Cu,Ag and Au. The results are listed in Appendix "B" and results and sample locations are shown on Plate 4.

Copper and Ag analysis were done using aqua regia digestion followed by atomic absorption. Gold was determined by aqua regia digestion followed by solvent extraction and atomic absorption. A summary of the data follows:

SAMPLE	RANGE	MEAN	MEDIAN	MODE
Cu(ppm)	15-8250	589	48	42
Ag(ppm)	<.4-9.2	≈.9	<.4	<.4
Au(ppb)	<10-88	≈13	<10	<10

Where copper values in excess of 1000 ppm were obtained malachite and occasionally minor chalcopyrite were visible. Most rocks were weathered and oxidized with little primary sulphides remaining. This may account for the low Au and Ag values.

GEOPHYSICS

GROUND MAGNETOMETER SURVEY

A ground magnetometer survey was conducted over 10.4 km of grid line with readings taken every 25 meters. The survey was conducted with a Scintrex MP-2 proton precession magnetometer that measures the earth's total magnetic field to the nearest gamma. Diurnal variation was checked by establishing base stations where picket lines crossed the roads. Readings were taken at the base stations about every 2 hours with only minimal changes in values observed.

Background for the survey was taken to be 57000 gammas. Values relative to this are plotted on Plate 5 and contoured.

Most of the area surveyed has a relatively high magnetic background(300 gammas above background) with only the extreme east end of lines 23S to 27S having values less than 57000 gammas. A correlation between ground magnetic values and underlying rock type(see 1981 Report to Owners) is not apparent although the area having the magnetic low is strongly fractured and weathered and may be part of a fault zone.

V.L.F.

A V.L.F. survey using a GEONICS EM16 instrument and transmitting stations N.L.K.(Seattle, Washington) and N.A.A.(Cutler, Maine) was carried out over 10.4 km of grid line.

The results of the surveys are plotted in standard profile form on Plate 6(N.L.K.) and Plate 7(N.A.A.)

The profiles are plotted to give right wave crossovers over V.L.F. conductive features. Such features are noted by heavy lines on the diagram.

In general, a number of north-south trending features occur throughout the area tested. However, correlation of the V.L.F. conductors from line to line is difficult and interpretation of results is very subjective. It is likely that many of the conductors represent small shears and faults paralleling the Summers Creek fault system.

CONCLUSIONS

The Snow-Star mineral claims are underlain by altered and mineralized Nicola Group volcanics and coeval intrusives intruded by quartz-rich rocks of the Cretaceous, Summers Creek steck. Soil sampling in tho area between lines 19S and 27S has produced anomalous values in Cu,Pb and Mo. A ground magnetometer survey over the same area yielded retatively high magnetic values with no obvious correlation between ground magnetic readings and underlying geology. V.L.F. surveys using stations N.L.K. and N.A.A. have picked up a number of north-south trending conductors that likely represent faults related to the Summers Creek fault system.

The size and extent of the known mineralized area has not been outlined or defined by the techniques used during 1982, however it appears the area of interesting Nicola Group rocks within the Snow claims is at least 800 m x 500 m.

RECOMMENDATIONS

A percussion drill test of at least 4, 300 ft. holes is recommended for the mineralized area within the Snow mineral claims between lines 19S and 27S.

REFERENCES

Mullan, A.W. 1972 Report on the induced polarization and resistivity survey on the Kalco Valley Mines Ltd(N.P.L.) option, Summers Creek Valley, Tulameen Area, Similkameen M.D., B.C. for Iso Exploration Ltd. Assessment report 4166.

Newell, J.M. and Peatfield, G.R., 1971. Geological and geochemical report on surveys completed during June and July, 1971 on the Dig, Ted, Ken, Snow and Pat mineral claims situated on Rampart and Summers Creeks, 10 miles north of Princeton in the Similkameen M.D. Assessment report 3396.

Preto, V.A. 1979. Geology of the Nicola Group between Merritt and Princeton, B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 69.

Smith D. 1966. Snow, Pine, Tom, F.C., Leo claims, Coin Canyon Mines Ltd., Minister of Mines and Petroleum Resources, Annual Report 1966, p176.

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G. Harden, Manager
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Distribution:
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W.D. File(1)
Vernon File(1)

DTM/sw

APPENDIX "A"

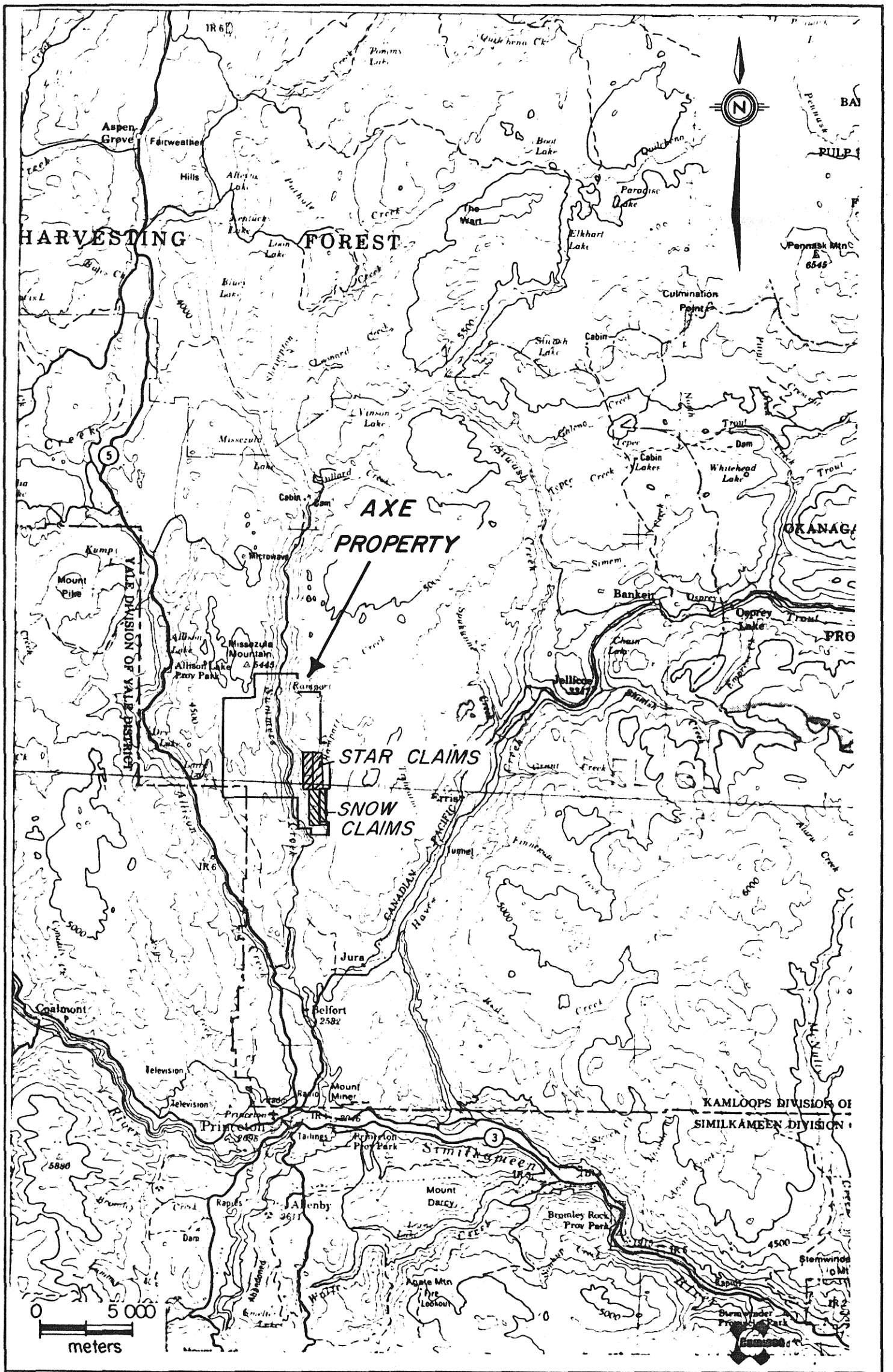
SOIL GEOCHEM VALUES FROM 1982 SAMPLING

SAMPLE	Cu(ppm)	Pb(ppm)	Zn(ppm)	Mo(ppm)
19S/BL	36	5	50	< 2
/100W	62	9	71	2
100E	61	6	104	2
200E	79	12	90	2
300E	77	10	82	2
400E	63	10	128	< 2
21S/100W	103	8	82	2
100E	108	10	101	2
200E	78	11	116	3
300E	94	12	88	2
400E	105	12	88	2
22S/100W	79	12	79	< 2
100E	154	14	108	< 2
200E	413	28	130	12
300E	73	15	103	2
400E	100	13	93	2
23S/100W	111	16	69	2
100E	104	9	79	< 2
200E	148	35	118	5
300E	121	16	91	3
400E	102	12	76	< 2
24S/300E	116	10	92	2
400E	110	7	82	3
25S/100W	63	6	112	5
100E	57	< 4	90	2
300E	98	11	99	2
400E	124	14	58	3
26S/100W	204	< 4	72	2
100E	124	20	94	4
200E	199	43	48	5
300E	88	39	45	3
400E	121	10	95	3
27S/100W	61	6	120	4
100E	55	6	141	4
200E	60	9	109	2
300E	103	18	124	4
400E	132	11	104	2

APPENDIX "B"

ROCK GEOCHEM VALUES FROM 1982 CHIP SAMPLING

SAMPLES	Cu(ppm)	Ag(ppm)	Au(ppb)
CLI-0-10	63	<.4	<10
CLI-10-20	116	<.4	<10
CLT-0-1	8250	9.2	88
CUI-0-5	42	<.4	<10
CUI-8-10	81	.4	<10
C2-0-6	2200	2.3	36
C2-12-16	1361	2.0	40
C3-0-10	767	.9	<10
C3-10-18	1141	3.4	<10
C4-0-5	45	.4	<10
C4-20-24	31	.4	<10
C4B-0-2	44	<.4	<10
C5-0-10	54	<.4	<10
C6-0-10	37	<.4	<10
C6-10-15	26	<.4	<10
C7-0-10	42	<.4	<10
C7-10-20	64	<.4	<10
C7-30-40	48	<.4	<10
C7-45-50	15	<.4	<10
CA-0-10	109	1.8	68
C8-0-5	87	<.4	<10
C8-10-20	25	<.4	<10
C8-20-30	20	<.4	<10
C9-0-10	29	<.4	<10



Drawn by:		Traced by: DTM	
Revised by	Date	Revised by	Date
DTM	Jan 26/82		

AXE PROPERTY
SNOW & STAR CLAIMS

Scale 1:250,000 | Date: DEC 16, 1981 | Plate: 1

inches
0 1
0 1 2
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

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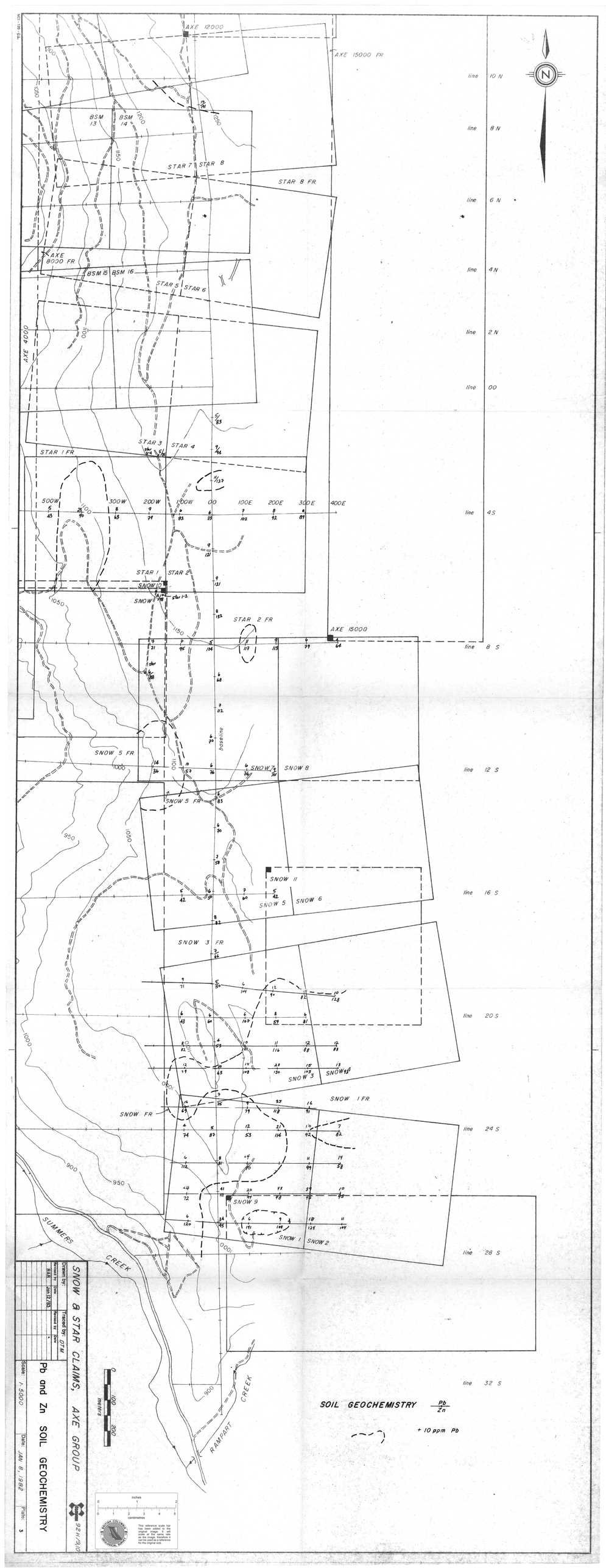
210-0610

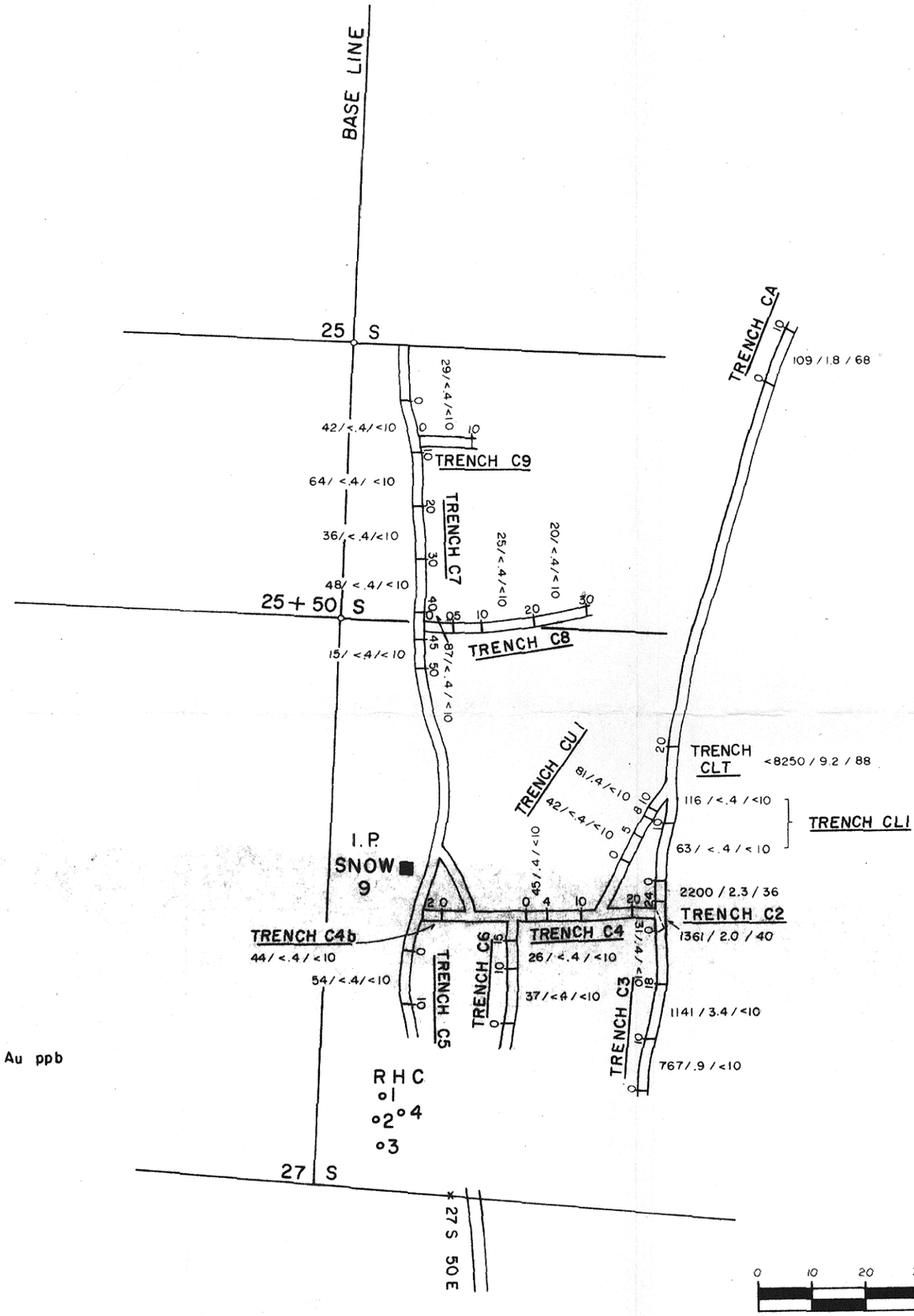


SNOW & STAR CLAIMS, AXE GROUP

Pb and Zn SOIL GEOCHEMISTRY

Drawn by: BAB	Revised by: date: Jan 12/83
Traced by: DTM	Revised by: date:
Scale: 1:5000	
Date: JAN 6, 1982	
Plate: 3	

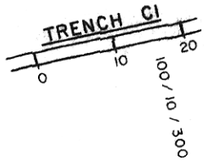
92H/3(0)



LEGEND

RHC
01

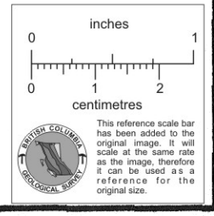
Rotory holes



Trench Rock Geochem

Sampling:

Shows trench number, sample interval and geochem values; Cu ppm / Ag ppm / Au ppb



COYNE SHOWING / AXE

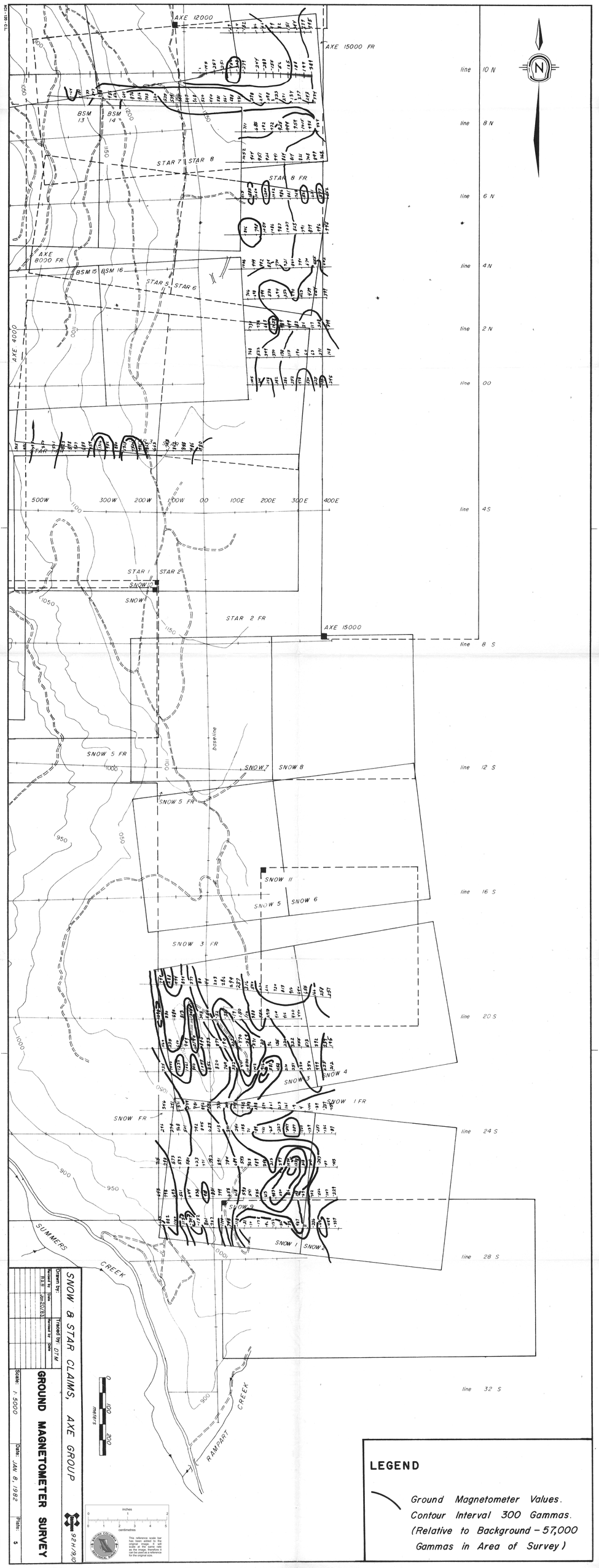
Cominco 92H 9/H

Drawn by: J.D.		Traced by: M.L.	
Revised by	Date	Revised by	Date

ROCK GEOCHEM SAMPLING

Scale: 1: 1000 | Date: Aug, 1982 | Plate: 4

210-0620



SNOW & STAR CLAIMS, AXE GROUP

GROUND MAGNETOMETER SURVEY

Drawn by: R.A.R. Date: Jan 82/83
Revised by: Date:
Traced by: GTM
Revised by: Date:

Scale: 1:5000

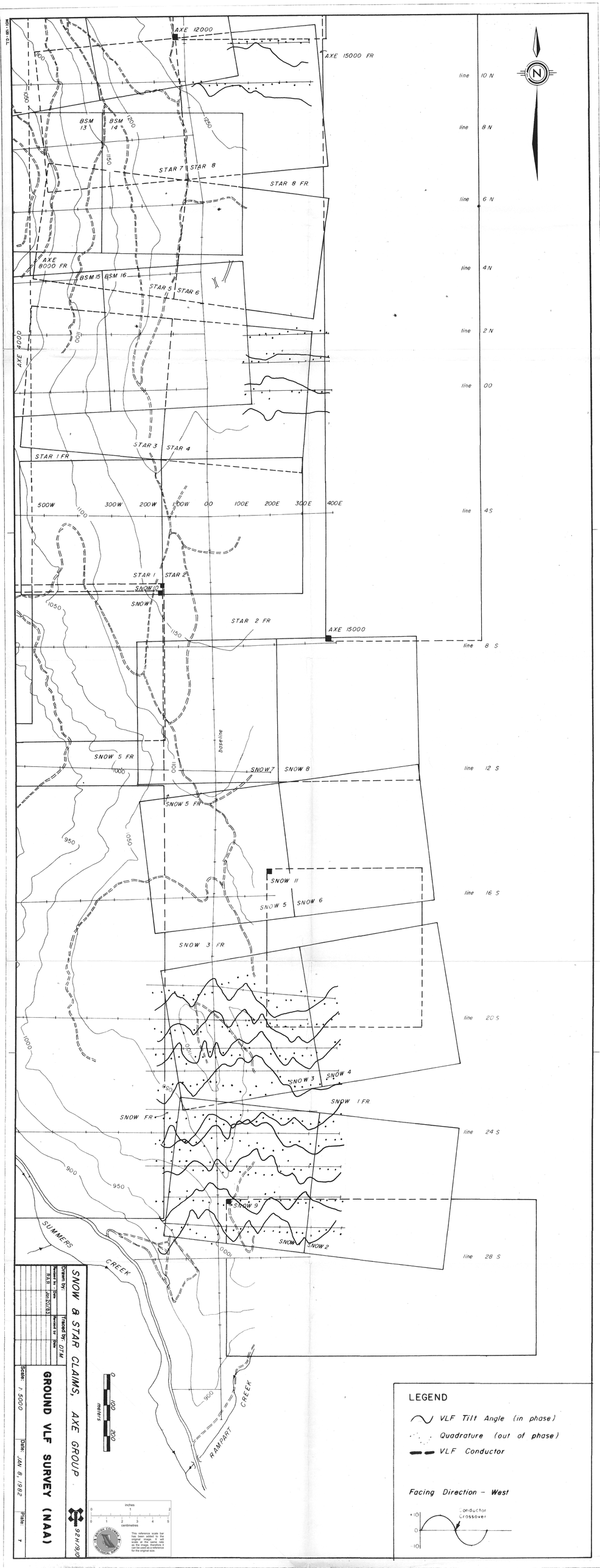
Date: JAN 6, 1982

Plate: 5

92H/9,10

LEGEND

Ground Magnetometer Values.
Contour Interval 300 Gammas.
(Relative to Background – 57,000 Gammas in Area of Survey)



SNOW & STAR CLAIMS, AXE GROUP

GROUND VLF SURVEY (NAA)

Drawn by: R.E.R. Date: Jan. 20/83

Revised by: Date:

Traced by: DTM

Revised by: Date:

Scale: 1:5000

Date: JAN 8, 1982

Plate: 1

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