

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

10,126
NO. _____

GEOCHEMICAL REPORT

**Model Claim Group
(Model 1 to 3)**

KAMLDOPS N.D.

**N.T.S. 92I/10W
50 36'N., 120 49'W**

**Work performed during the period
12 to 17 June, 1981**

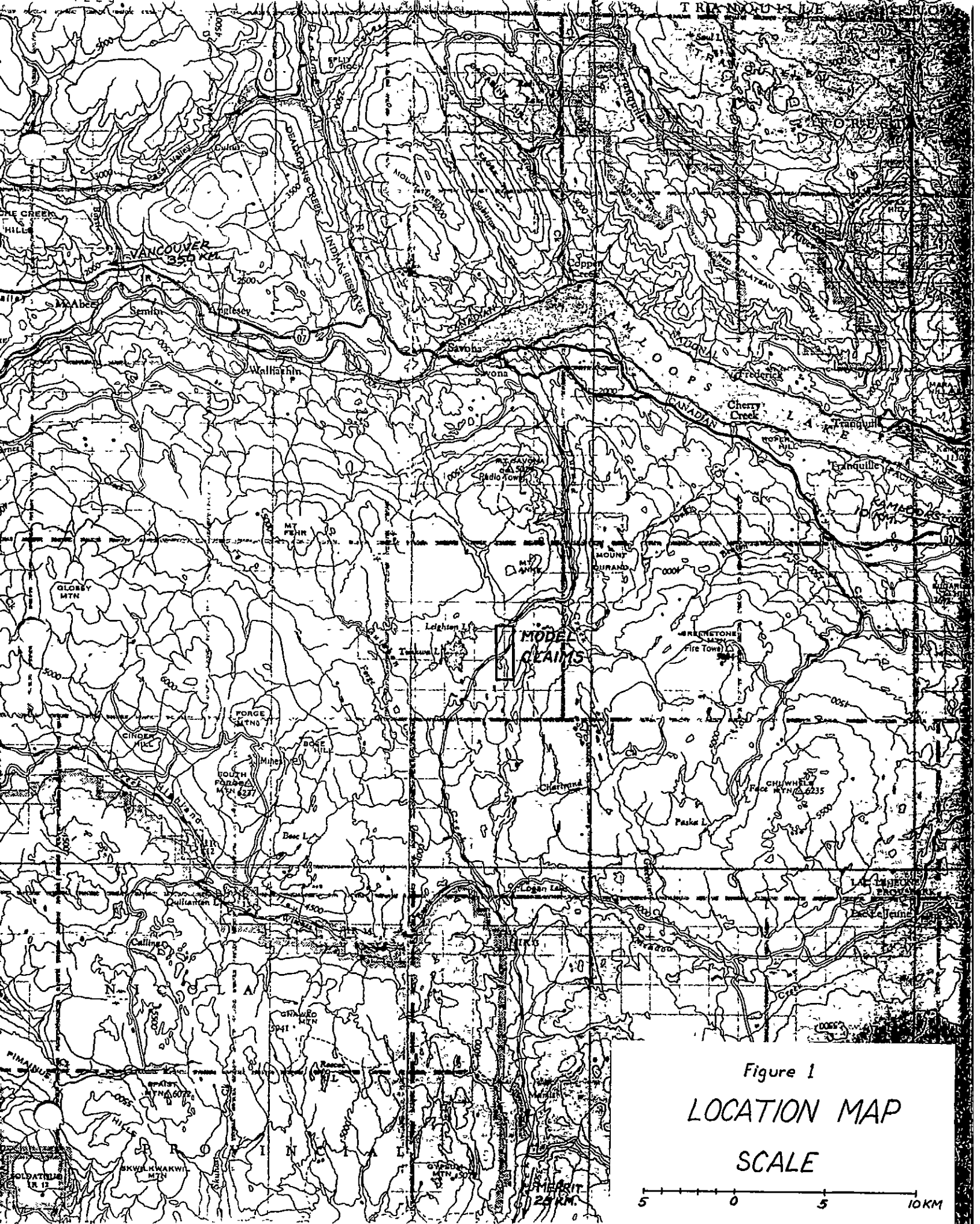
**29 January, 1982
R.A. Boyce
Placer Development Ltd.**

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6	" Zinc	"
7	" Molybdenum	"
8	" Gold	"
9	" Silver	"
10	Rock Geochemistry - Mercury	"
11	" Antimony	"
12	" Arsenic	"
13	" Copper	"
14	" Zinc	"
15	" Molybdenum	"
16	" Silver	"



3. History and Ownership

Mercury prospects have been known within the Model claims since before 1918. It was originally staked as the Summit Group, but has also been known as the Mercury, OK, Cinnabar, Ridge, Bull Horn, RR, and Tunkwa. The original workings were a shaft about five metres deep, and a two-metre-deep pit. Less than fifty kilograms of mercury was obtained. A newer shaft and incline reached six metres deep and eight trenches were dug. A retort was erected on the site in 1937, but no production was recorded. In 1941, the property was prospected by D.B. Sterrit and Associates, of Kamloops.

The Model claims were located between 10 March and 13 March, 1981, by Murray Morrison of Kelowna, B. C. They were subsequently acquired by Placer Development Ltd., the current operator.

The property consists of three Modified-grid claims as follows: (see Map 1)

Model 1	record no. 3325	16 March, 1981	4 units
Model 2	3326	16 March, 1981	4 units
Model 3	3327	16 March, 1981	4 units

4. General Geology

The oldest rocks in the area are the Triassic Nicola Group, which underlies most of the claims. Lithology is commonly massive, chloritized and weakly epidotized greenstone. Calcite-filled fractures are common. Limonitized surfaces occur locally. Mineralized rock is described below.

The low hills to the east are capped by basic volcanics and sediments of Cretaceous age. The Miocene Kamloops Group occurs immediately west of the property and in the northwest corner. It also caps ridges to the north. Rock type is largely dark gray, fine-grained, crystalline basalt. Minor iron and manganese stain was noted. Common float on the property includes large, angular to rounded boulders of reddish-weathering, black porphyry. These may be assigned to Kamloops Group.

The old mercury showings occur in outcrops surrounding a pond near the center of the claims, just east of the road. The commonest rock type is a banded tuff. Other types include agglomerate, fine-grained to aphanitic rhyolite, and rare mafic porphyry. The rock is intensely carbonate-altered. The usual pattern is pervasive ankeritization and filling of veins and fractures with dolomite. Dolomite-sealed breccia was noted. The rock is also strongly sheared at 165°/60 NE which is parallel to the outcrop ridge orientation. Ankeritic rock is fine-grained, crystalline, and buff to dark gray. Weathered surfaces are commonly limonitized, ranging in colour from brown to yellow-orange and purplish. The ankeritic zone is traceable by fragments in soil for a kilometre southerly from outcrops. Cinnabar occurs in small masses in thin dolomite stringers. Stringers often have reddish to brown carbonate

veins, and may be drusy. Maximum mercury values are 0.08% over widths of greater than one-half metre. Small high-grade zones assay as high as 1.26% mercury. Minor amounts of stibnite, tetrahedrite, malachite, and azurite occur outside of the high-grade zones. No cinnabar was seen in outcrops east of the pond, or elsewhere on the property.

5. Geochemical Survey

The entire Model property was covered by a geochemical soil sampling program. A sampling grid was established by chain and compass, using the eastern claim boundary for a baseline. East-west lines were set 250 metres apart, with sample spacing of 25 metres. The purpose of such tight sample spacing relative to line separation was an attempt to pick up any expression of a structure lying roughly parallel to the baseline. A total of 471 soil samples was collected. Several duplicate samples were taken to test sampling precision. Several gaps occur in sampling cover due to lines crossing ponds or swamps. See Map 1 for grid location.

Samples were collected by the following method. A hole was dug with a mattock to B horizon, an average depth of about twenty centimetres. A kraft paper soil bag was filled with at least 400 grams of B horizon material, and marked for identification with the grid location. Samples were air-dried on site. They were then shipped to Placer Development Limited Research Centre for analysis.

Lithochemical samples were collected from outcrops on the property. Most samples were clustered around the pond near the centre of the property where known showings are found. Outcrop locations are shown on Map 1. Samples were collected by hammering off approximately one kilogram of chips into a plastic bag marked with the grid location. These were then shipped to the same laboratory.

Initial laboratory procedure for soils involved dry sieving to -80 mesh size, and discarding the oversize. Analytical procedures for Placer Research Lab are summarized in Appendix A.

6. Geochemical Results

6.1 Soil Samples

All samples received by the Placer laboratory were analyzed for content of mercury, gold, silver, arsenic, antimony, molybdenum, copper, and zinc. Data produced were subjected to computer treatment to establish elementary statistical values. Maximum, minimum, mean, standard deviation, and histograms were printed out and included in Appendix B. These statistics were studied and contour levels determined by population grouping within the framework of mean plus standard deviations. Applying these levels, data plots were prepared by computer, with machine-drawn contours. (See Maps 2 to 9) Results are discussed below.

Molybdenum analyses were all 2 ppm or less. This is considered background level.

Mercury shows a large, very distinct anomaly around the known showings. The highest analysis is greater than 2000 ppb. All these anomalous samples occur on one grid line, so the anomaly may be smaller than indicated on the computer plot. Other samples with more than 100 ppb occur just northeast of the large anomaly, on the shore of a pond. Another anomaly is in the southeast corner of the property, at a road junction. This last anomaly may be conjecturally joined with the main anomaly by a 60 ppb contour, giving a linear pattern at about 160°. This contour is also open to the east. Other highs are isolated, and generally contain only one or two samples.

Antimony values show a very distinct pattern which closely approximates the main mercury anomaly. The high value is 35 ppm. It reaches southward to the next line, and is open at the eastern edge of the grid. Apart from this anomaly, no other high values exist.

Arsenic shows a pattern which is very similar to antimony, but less distinct. The highest value is 110 ppm. Additionally, a very distinct anomaly, oriented in a north-linear pattern, crosses three lines in the northeastern part of the property.

Copper shows a spotty pattern. Weak anomalies occur in troughs between the main anomalies of arsenic and antimony, and at the east edge of the grid. In three cases, small anomalies occur just east of small mercury anomalies, and in one case they correspond. There are two small anomalies of one or two samples in the north. The highest value anomaly occur in the southeast corner, and is open. The indication is that more high values exist east of the grid.

Zinc weakly correlates with mercury in the main showing area. A stronger anomaly to the northeast of it, at the map edge, corresponds with a copper high. Another anomaly with a high value of 138 occurs between a copper high and an outcrop sample which contains 91 ppm Copper. A weak but distinct anomaly crosses four soil lines in the northeast of the map, directly correlative with the arsenic anomaly. One anomaly occurs at the south end of the lake.

Gold analyses showed two high values of .03 ppm which is considered insignificant.

Silver analyses were all below detection limit.

6.2 Rock Samples

All rock samples were analyzed for the same metals as soil. Rock samples analyses were not treated statistically, but were plotted by computer on Maps 10 to 16.

Molybdenum shows low values, the highest being 5 ppm, in the northeast corner of the showings.

Mercury values were all high in the showing area, with three samples greater than 1000 ppb. Other samples outside the showings were low.

Antimony analyses were very low with the exception of the area of showings, where it was as high as 19 ppm.

Arsenic shows high values around the showings, with up to 270 ppm.

Copper shows no results that can be considered anomalously high. The greatest value of 91 ppm, occurs in the northwest part of the grid, adjacent to soil anomalies in zinc and copper.

Zinc values were generally very low except for one sample in the northeast of the showing area, in which a sample contained 84 ppm, which is not considered high.

Both gold and silver were not detectable in sample analyses.

7. Conclusions and Recommendations

The geochemical program results indicate that the only significant mercury signature in soil occurs in the immediate vicinity of the previously-worked showings. These have already been shown to contain no economic quantity of mercury. The mercury anomaly in the southeast may be connected with the main anomaly along a shear zone. However, as the area is covered with drift, it could be a transported anomaly. There is the possibility of more anomalies lying east of the grid, but there are no indications that it would be as high-value as that near the showings. Therefore, it is likely that the largest mercury source has been located. Arsenic and antimony have shown as good indicators for mercury. Copper also may be useful as an indicator, although its geochemical pattern is weaker and more sporadic. It might exist as a halo effect with respect to mercury. Zinc and arsenic produce a distinct linear pattern in the north, which may be related to shearing through the outcrop showings. However, values are not very high. There is no indication of precious metals concentrations on the property.

It is recommended that no further work be done on this property.

8. Statement of Expenditures

Geochemical:	471 soil samples x 20.15 =	9490.65	
	15 rock samples x 21.65 =	324.75	
	Shipping	<u>50.00</u>	
		9865.40	9865.40
Vehicle:	6 days x 30. =	180.	
	Fuel - 6 ddays x 13. =	<u>78.</u>	
		258.	258.00
Accomodation:	Bonaparte Motel, Cache Creek, B. C.		570.00
Meals:			409.00
Salaries:	M.C. Allen (student) 5 days @ 70. =	350.	
	R.A. Boyce (geologist) 6 days @ 155. =	930.	
	S.V. Cirka (student) 5 days @ 100. =	500.	
	D.A. Wilson (student) 5 days @ 70. =	<u>350.</u>	
		2130.	2130.00
Computer:	Operating Expense -	300.	
	W. Green - 1/2 day @ 180. =	<u>90.</u>	
		390.	390.00
Preparation of Report and Maps:			
R.A. Boyce	4 1/2 days @ 155. =	697.50	
A. Kemp	1 day @ 150. =	150.00	
Typing and duplicating		<u>360.00</u>	
		1,207.50	<u>1207.00</u>
TOTAL EXPENDITURE APPLIED TO MODEL CLAIMS			14,829.90

9. Statement of Qualifications

I, R.A. Boyce, with business address at P.O. Box 49330, Bentall Postal Station, Vancouver, B. C., V7X 1P1, do hereby certify that:

1. I have personally supervised and carried out the field work, and have assessed and interpreted the data from this geochemical program on the Model claim group, Kamloops Mining Division.
1. I am a graduate of the University of British Columbia, Vancouver, B.C. (B.Sc., Geological Sciences, 1977).
3. I am a member of the Canadian Institute of Mining and Metallurgy.
4. I have engaged in the practice of mineral exploration since graduation, in the provinces of British Columbia and Saskatchewan and Yukon Territory.

PLACER DEVELOPMENT LIMITED

R.A. Boyce

R.A. Boyce
February 4, 1982

RAB/cs

APPENDIX A

STANDARD ANALYSIS METHODS USED BY PDL GEOCHEM LAB ARE LISTED BELOW:
 ALL RESULTS EXPRESSED AS INDICATED IN UNITS COLUMN BELOW
 ANY EXCEPTIONS FOR THIS PROJECT ARE NOTED ABOVE

REMARKS: INTERNAL LAB STANDARDS HAVE BEEN INCLUDED FOR REFERENCE.
 SAMPLE NUMBERS FOLLOWED BY * ARE DUPLICATE ANALYSES.

	UNITS	WT.G	ATTACK USED	TIME	RANGE	METHOD
MO	PPM	0.5	C HCL04/HNO3	4HRS	1-1000	ATOMIC ABSORPTION
CU	PPM	0.5	C HCL04/HNO3	4HRS	2-4000	ATOMIC ABSORPTION
ZN	PPM	0.5	C HCL04/HNO3	4HRS	2-3000	ATOMIC ABSORPTION
PB	PPM	0.5	C HCL04/HNO3	4HRS	2-3000	A.A. BACKGROUND COR.
CD	PPM	0.5	C HCL04/HNO3	4HRS	0.2-200	A.A. BACKGROUND COR.
NI	PPM	0.5	C HCL04/HNO3	4HRS	2-2000	ATOMIC ABSORPTION
CO	PPM	0.5	C HCL04/HNO3	4HRS	2-2000	ATOMIC ABSORPTION
AG1	PPM	0.5	C HCL04/HNO3	4HRS	0.2-20	A.A. BACKGROUND COR
AG2	PPM	0.5	C HNO3	2HRS	0.02-4.00	A.A. SOLVENT EXTRACT
AU	PPM	3.0	C HBR/BR	12HRS	0.02-4.00	A.A. SOLVENT EXTRACT
U	PPM	0.25	DIL HNO3	2HRS	1.0-1000	FLUORIMETRY SOLV. EX.
V	PPM	0.5	C HF/HCL04/HNO3/HCL	6HRS	5-1000	ATOMIC ABSORPTION
W	PPM	1.0	C HF/HNO3/HCL/H2SO4	4HRS	5-500	A.A. SOLVENT EXTRACT.
F	PPM	0.25	NA2CO3/KNO3 FUSION	30MIN	40-4000	SPECIFIC ION ELECTRODE
AS	PPM	0.5	C HCL04/HNO3	4HRS	1-1000	A.A. HYDRIDE GENERATOR
SB	PPM	0.5	C HCL04/HNO3	4HRS	2-1000	A.A. HYDRIDE GENERATOR
BI	PPM	0.5	C HCL04/HNO3	4HRS	2-2000	ATOMIC ABSORPTION
MN	PPM	0.5	C HCL04/HNO3	4HRS	2-3000	ATOMIC ABSORPTION
FE	%	0.5	C HF/HCL04/HNO3/HCL	6HRS	0.02-20%	ATOMIC ABSORPTION
HG	PPB	0.5	DIL HNO3	2HRS	5-2000PPB	A.A. COLD VAPOR GEN.
BA	%	0.5	C HF/HI/OXALIC	4HRS	0.02-20%	ATOMIC ABSORPTION
NA	%	0.5	C HF/HCL04/HNO3/HCL	6HRS	0.2 -20%	ATOMIC ABSORPTION
K	%	0.5	C HF/HCL04/HNO3/HCL	6HRS	0.2 -20%	ATOMIC ABSORPTION
CA	%	0.5	C HF/HCL04/HNO3/HCL	6HRS	0.02-20%	ATOMIC ABSORPTION
SR	PPM	0.5	C HF/HCL04/HNO3/HCL	6HRS	10-2000	ATOMIC ABSORPTION
MG	%	0.5	C HF/HCL04/HNO3/HCL	6HRS	0.2-20%	ATOMIC ABSORPTION
SN	PPM	1.0	NH4I FUSION	15MIN	5-500	A.A. SOLVENT EXTRACT.
LOI	%	1.0	ASH 600 DEG C	2HRS	0.02-99%	WEIGH RESDUE

APPENDIX B

HISTOGRAM FOR: MODEL - ZN

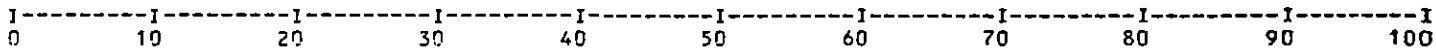
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 40 CLASSES WILL BE PLOTTED DATA WILL BE LIMITED TO RANGE .0000 TO 160.0000

STATISTICS OF X: MINIMUM: 30.0000 MAXIMUM: 138.0000 MEAN: 58.5953 STD. DEVIATION: 10.9619

0 VALUES WERE OUTSIDE THE HISTOGRAM RANGE 467 PLOTTED

SCALE OF HISTOGRAM IS 1.00 COUNTS/PRINT POSITION

NUMBER	MIDPOINT	PERCENT	0	10	20	30	40	50	60	70	80	90	100
0	2.0000	.00	I										I
0	6.0000	.00	I										I
0	10.0000	.00	I										I
0	14.0000	.00	I										I
0	18.0000	.00	I										I
0	22.0000	.00	I										I
0	26.0000	.00	I										I
1	30.0000	.21	I*										I
1	34.0000	.21	I*										I
3	38.0000	.64	I***										I
15	42.0000	3.21	I*****										I
29	46.0000	6.21	I*****										I
66	50.0000	14.13	I*****										I
85	54.0000	18.20	I*****										I
83	58.0000	17.77	I*****										I
73	62.0000	15.63	I*****										I
35	66.0000	7.49	I*****										I
31	70.0000	6.64	I*****										I
11	74.0000	2.36	I*****										I
13	78.0000	2.78	I*****										I
5	82.0000	1.07	I*****										I
8	86.0000	1.71	I*****										I
1	90.0000	.21	I*										I
3	94.0000	.64	I***										I
1	98.0000	.21	I*										I
2	102.0000	.43	I**										I
0	106.0000	.00	I										I
0	110.0000	.00	I										I
0	114.0000	.00	I										I
0	118.0000	.00	I										I
0	122.0000	.00	I										I
0	126.0000	.00	I										I
0	130.0000	.00	I										I
0	134.0000	.00	I										I
1	138.0000	.21	I*										I
0	142.0000	.00	I										I
0	146.0000	.00	I										I
0	150.0000	.00	I										I
0	154.0000	.00	I										I
0	158.0000	.00	I										I



HISTOGRAM FOR: MODEL - M0

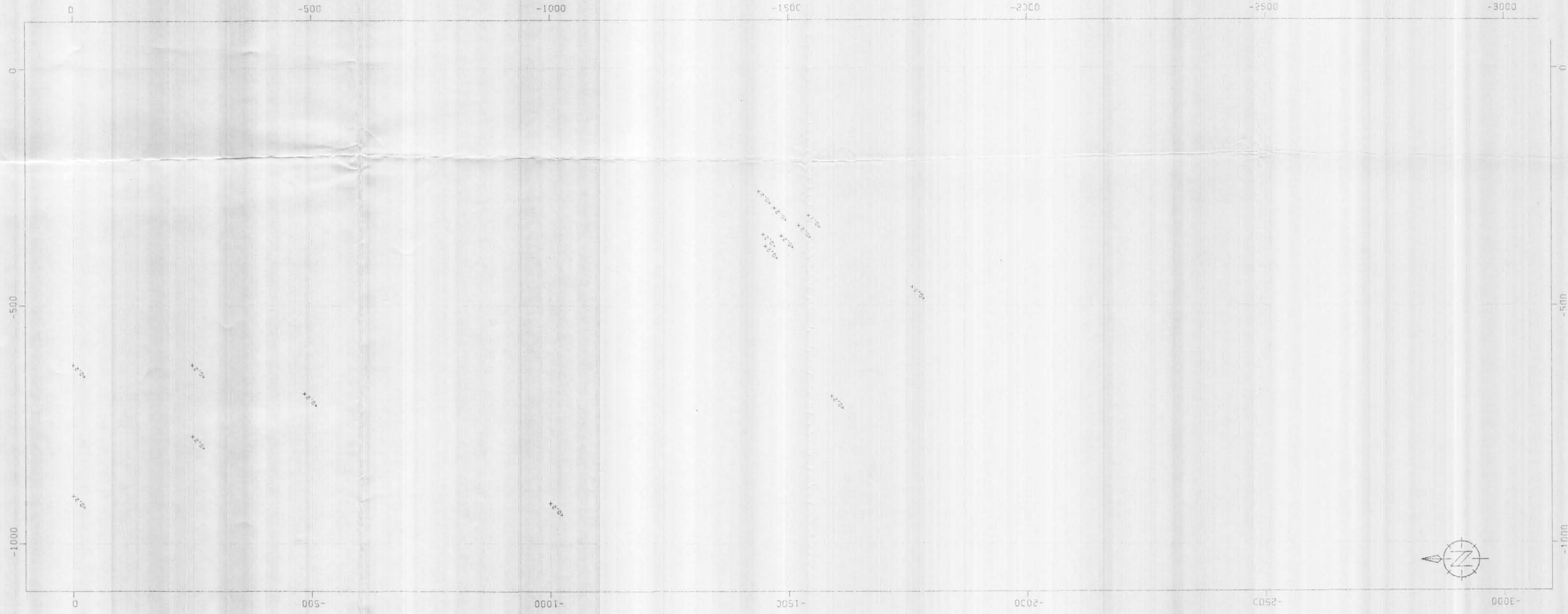
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0 VALUES WERE OUTSIDE THE HISTOGRAM RANGE 270 PLOTTED

SCALE OF HISTOGRAM IS 3.00 COUNTS/PRINT POSITION

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0	.7500	.00	I										I	
241	1.2500	89.26	I	*****										I
0	1.7500	.00	I										I	
28	2.2500	10.37	I	*****										I
0	2.7500	.00	I										I	
1	3.2500	.37	I										I	
0	3.7500	.00	I										I	
			I										I	
			0	30	60	90	120	150	180	210	240	270	300	

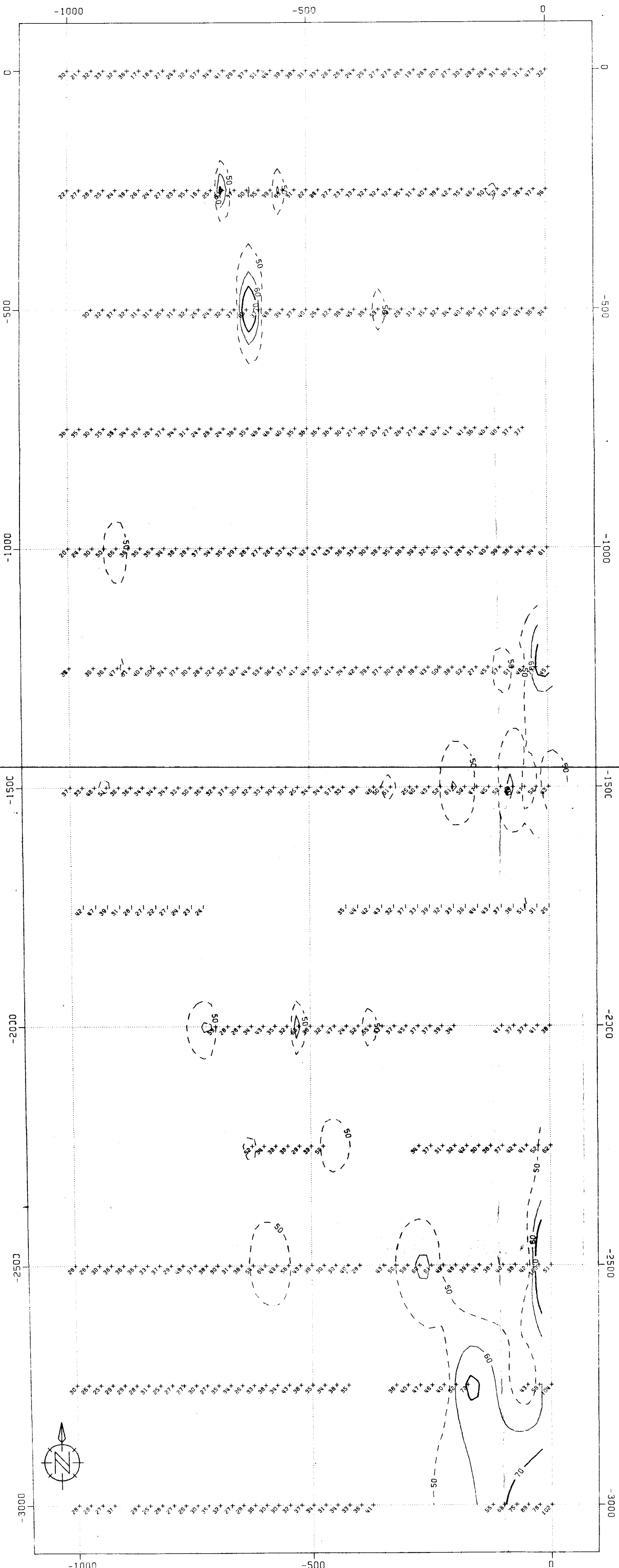


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SCALE
 0 100 200 300 400
 METRES

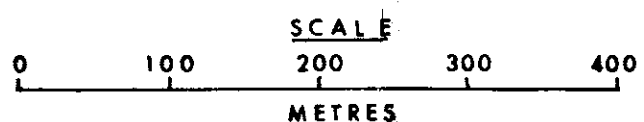
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MODEL ROCK SAMPLES
 MAP 16. SILVER ANALYSES (PPM)

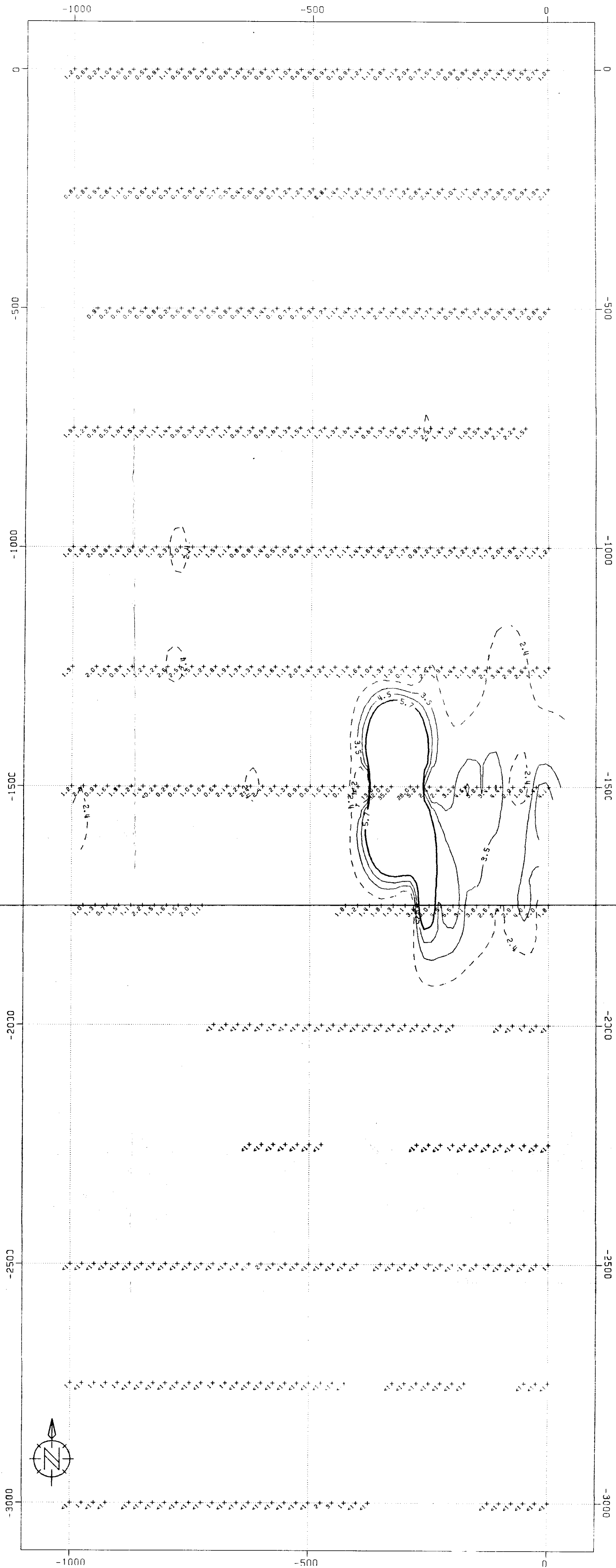


MINERAL RESOURCES BRANCH
 ATTENTION REPORT
 MODEL SOIL SAMPLE GRID
 MAP 5. COPPER ANALYSES (PPM)

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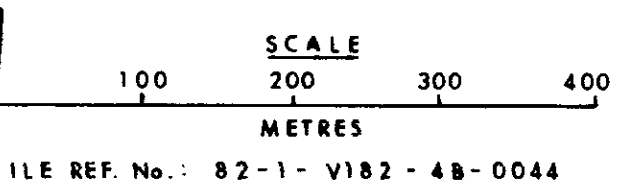


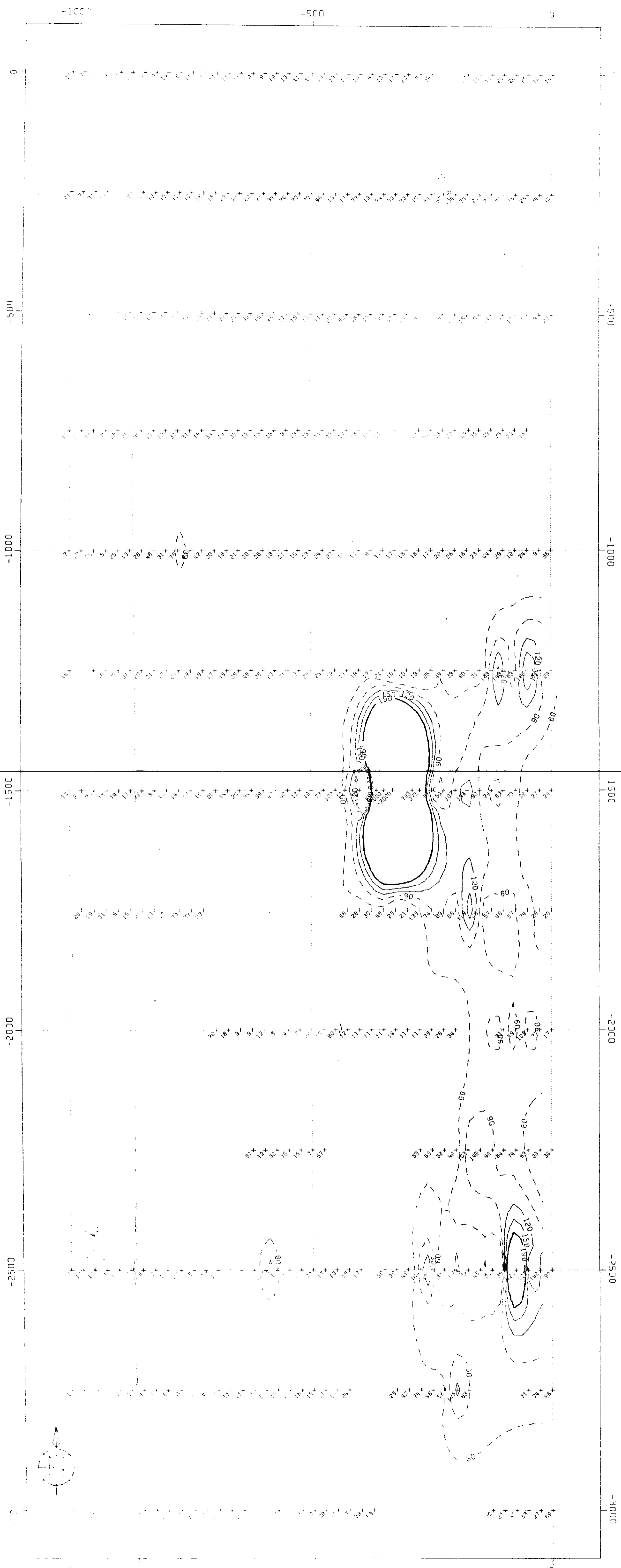
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MODEL SOIL SAMPLE GRID
 MAP 3. ANTIMONY ANALYSES (PPM)

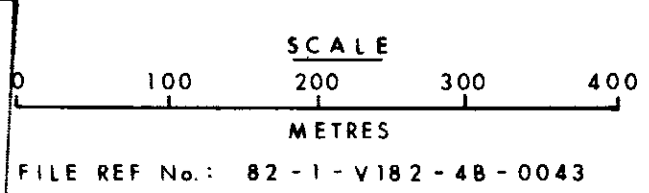
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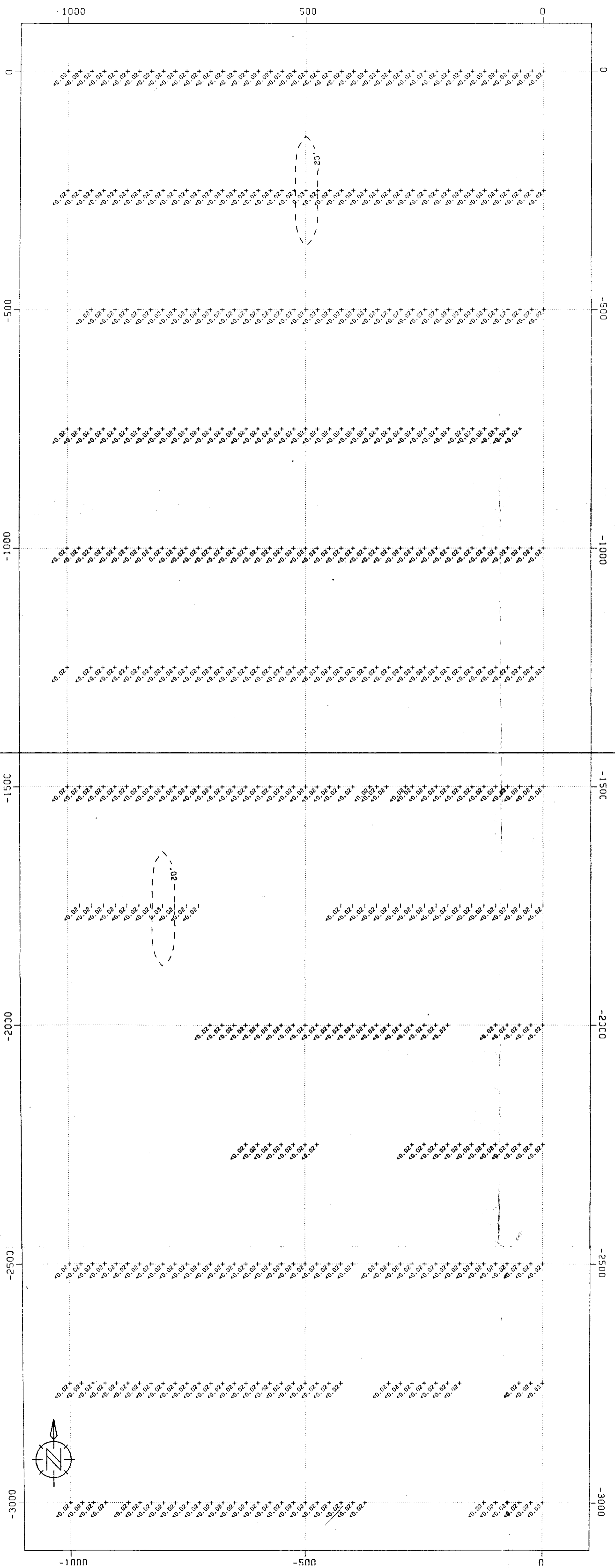


MODEL SOIL SAMPLE GRID
 MAP 2. MERCURY ANALYSES (PPB)

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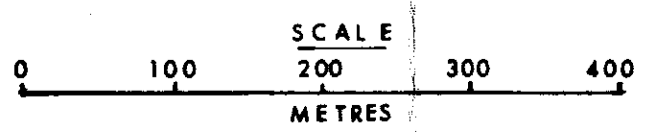


FILE REF No.: 82-1-V182-4B-0043

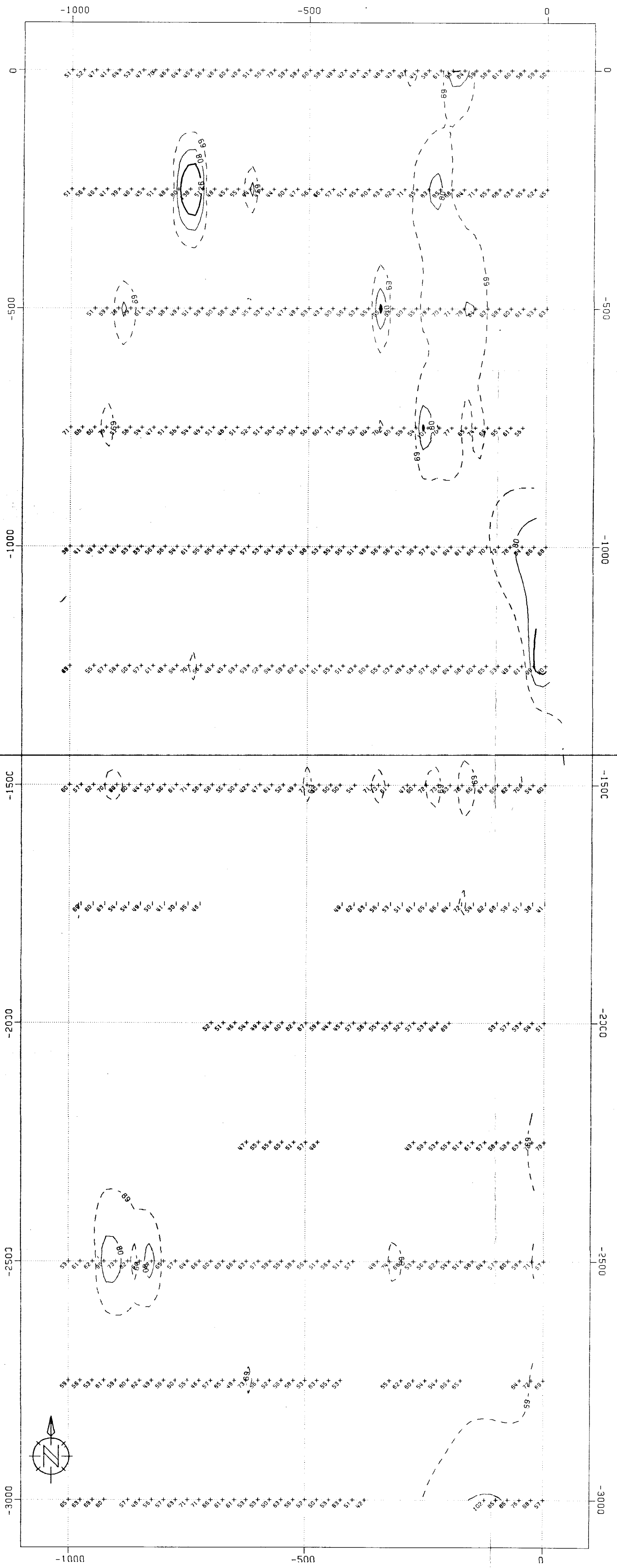


MODEL SOIL SAMPLE GRID
 MAP 8. GOLD ANALYSES (PPM)

METALS RESEARCH BRANCH
 ASSOCIATED PORT
10,126
 NO.

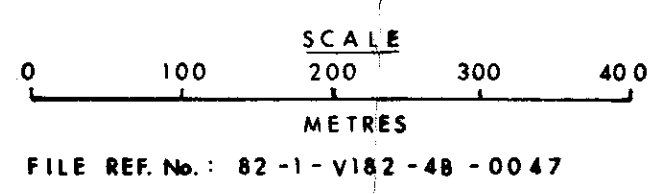


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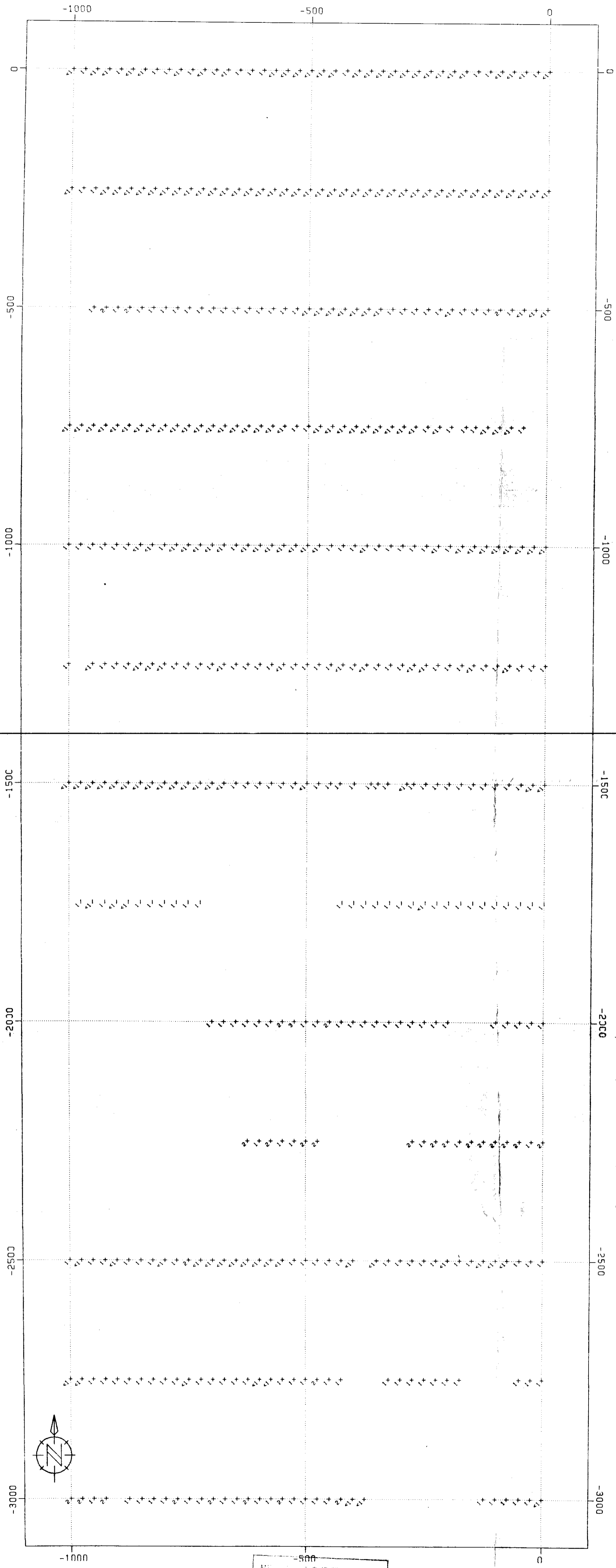


MODEL SOIL SAMPLE GRID
 MAP 6. ZINC ANALYSES (PPM)

10,126

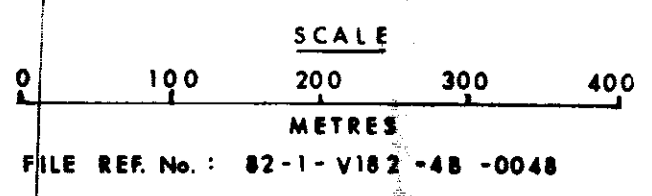


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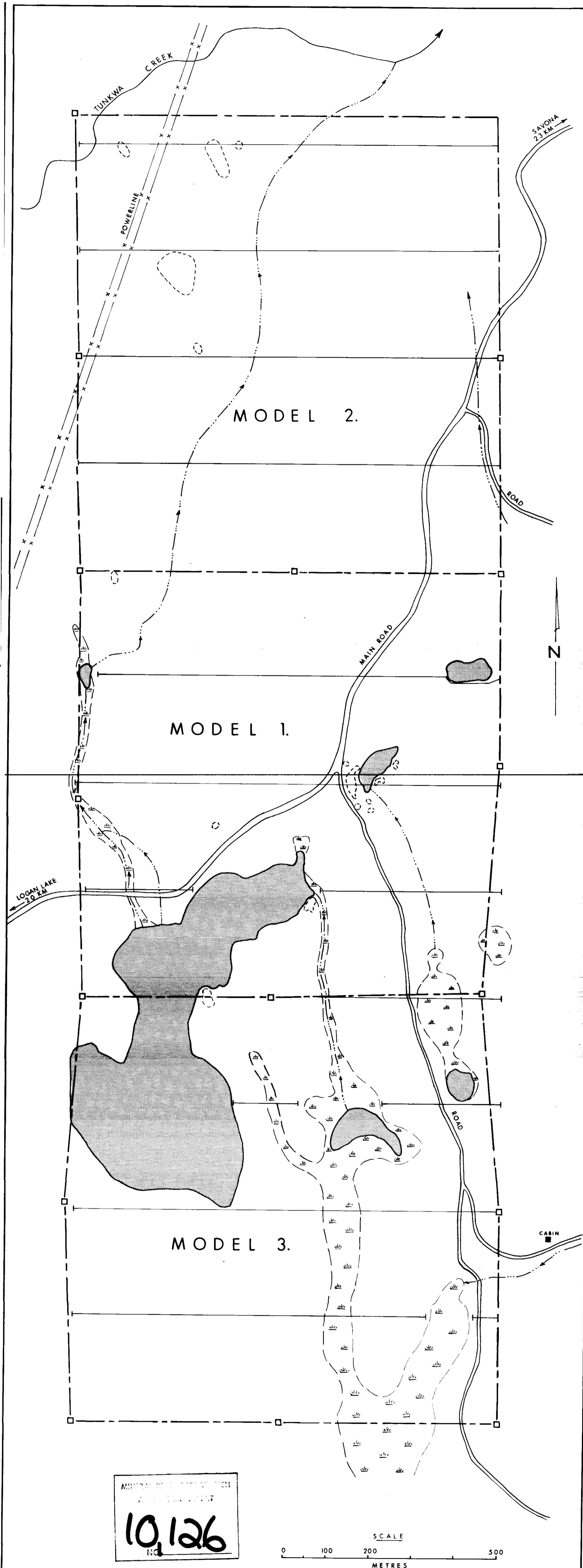


MODEL SOIL SAMPLE GRID
 MAP 7. MOLYBDENUM ANALYSES (PPM)

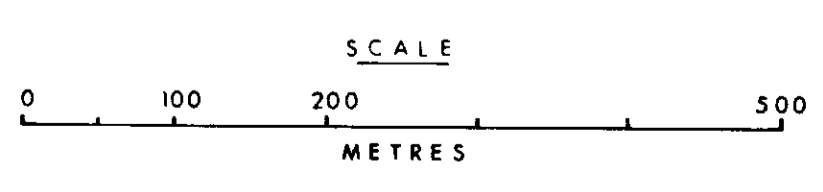
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FILE REF. No. : 82-1-V182-4B-0048

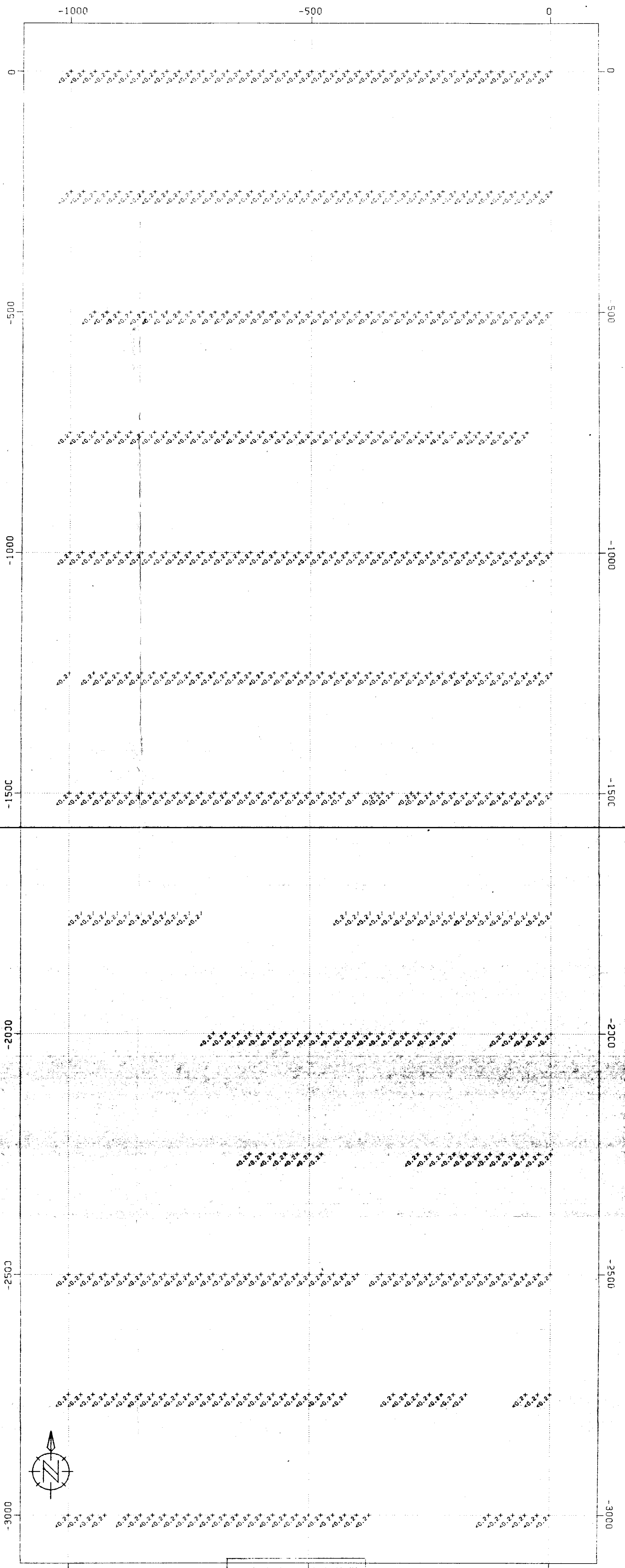


MINING CLAIMS
 10,126
 No.



- LEGEND
- INTERMITTANT STREAM
 - CLAIM LINE & POST
 - SOIL SAMPLE GRID LINE
 - POWERLINE
 - ROAD
 - OUTCROP

MAP 1.
 MODEL CLAIMS
 KAMLOOPS MINING DIVISION
 CLAIM MAP & SAMPLE LOCATIONS
 FILE REF. No.: 82-1-V182-9B-0042

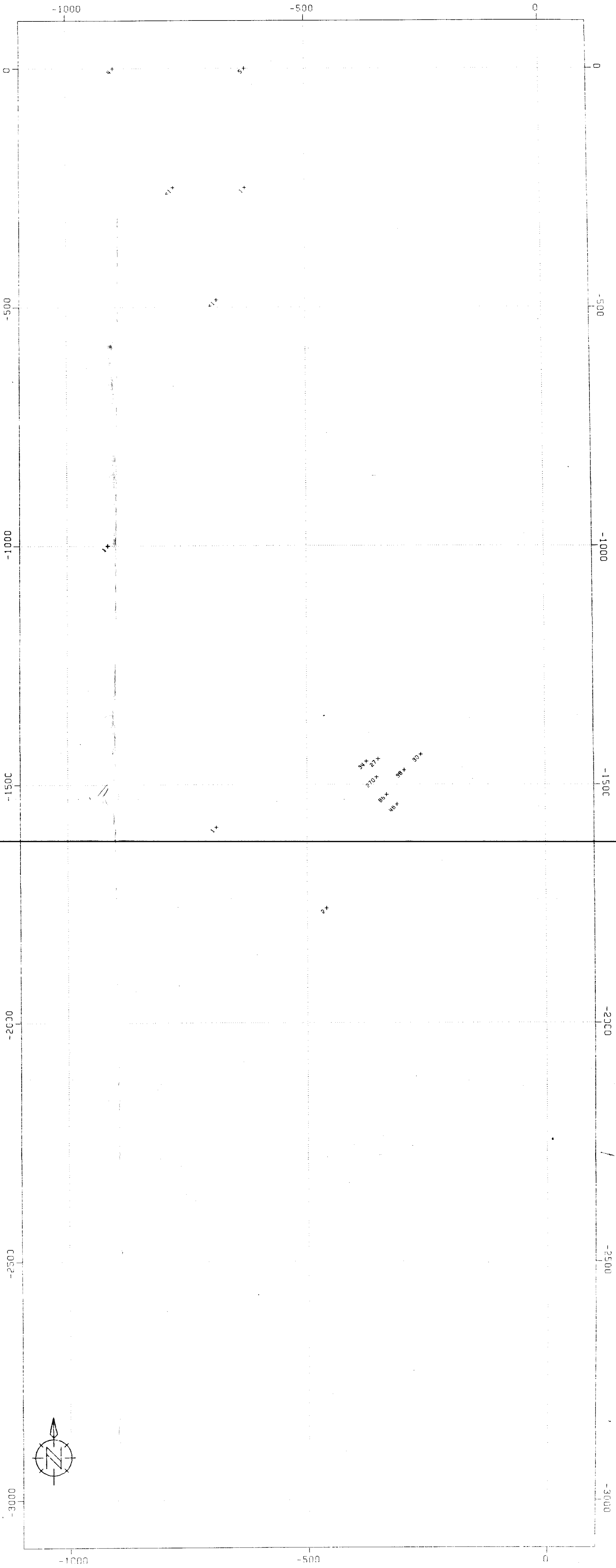


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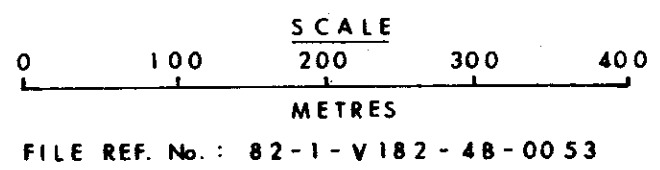
MODEL SOIL SAMPLE GRID





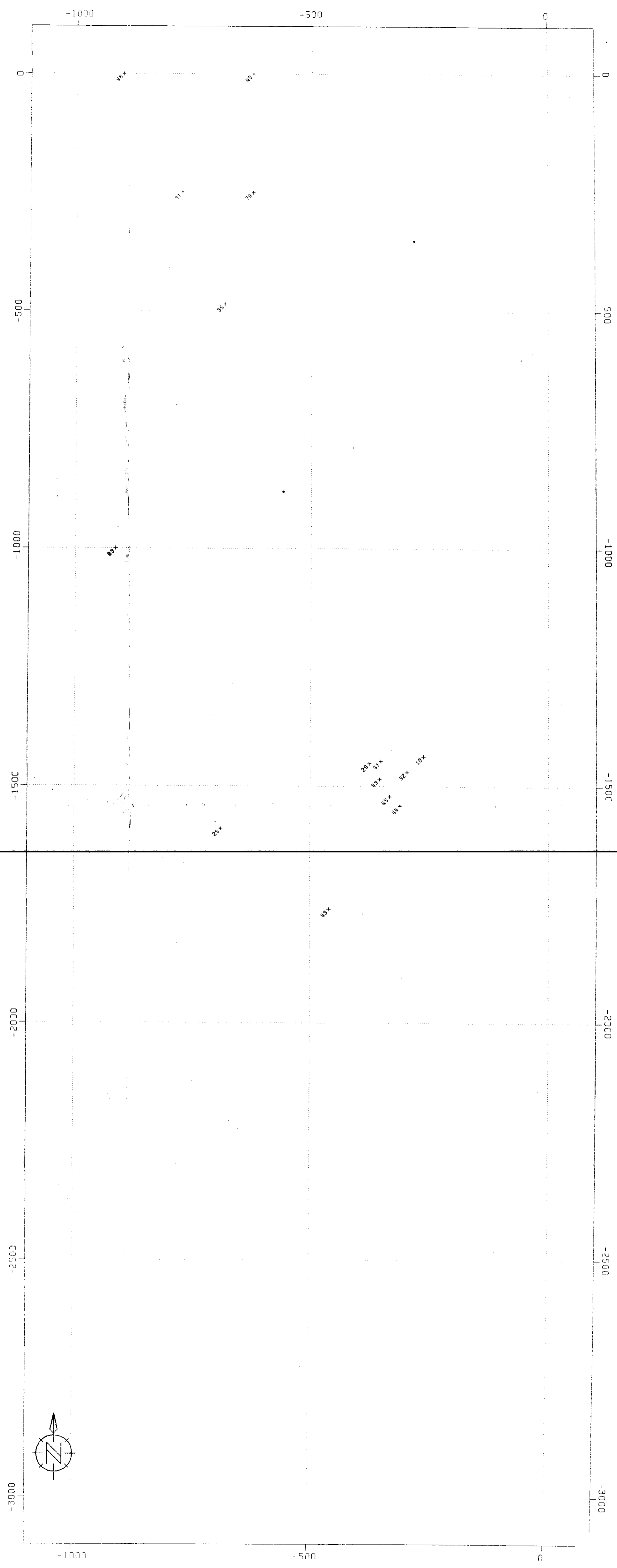
MODEL ROCK SAMPLES
 MAP 12. ARSENIC ANALYSES (PPM)

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FILE REF. No.: 82-1-V182-48-0053

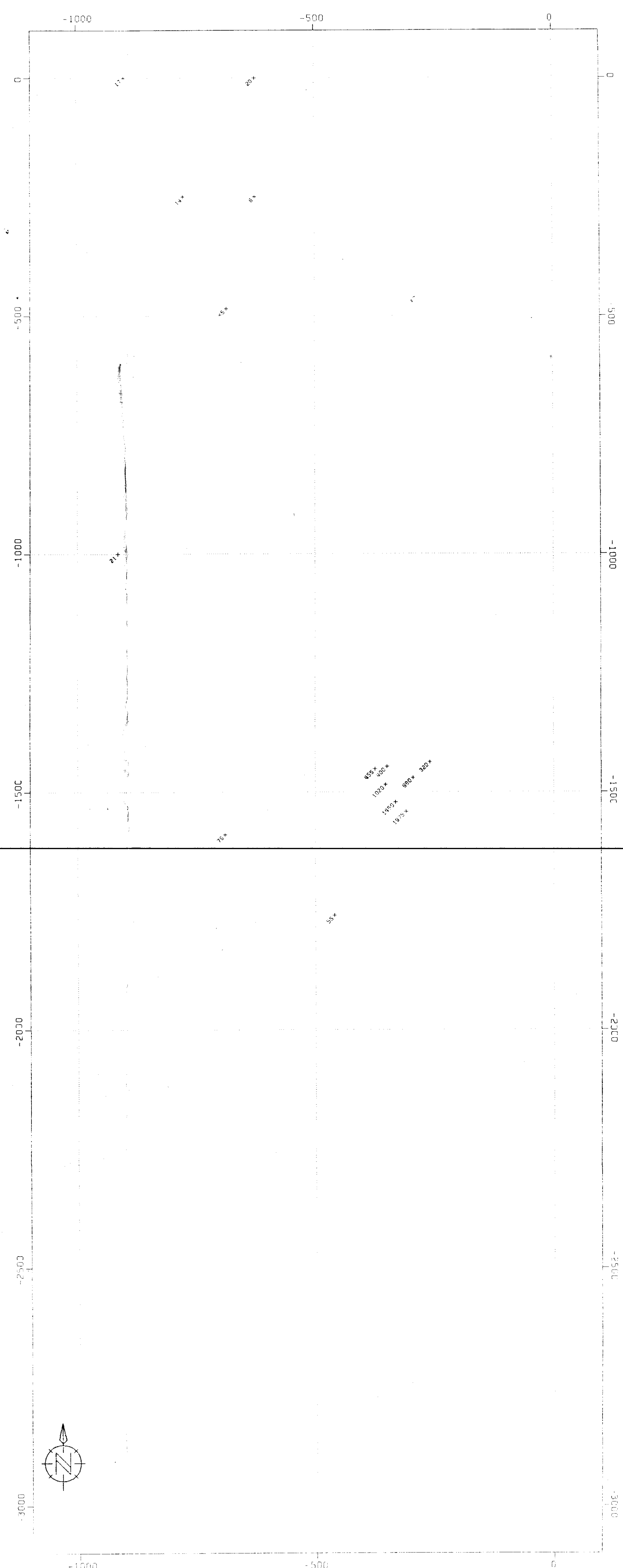
1.270.2
ASSAY PLOTS OF CARABINE ROCK SAMPLES (MODEL SAMPLES)



MODEL ROCK SAMPLES
MAP 13. COPPER ANALYSES (PPM)

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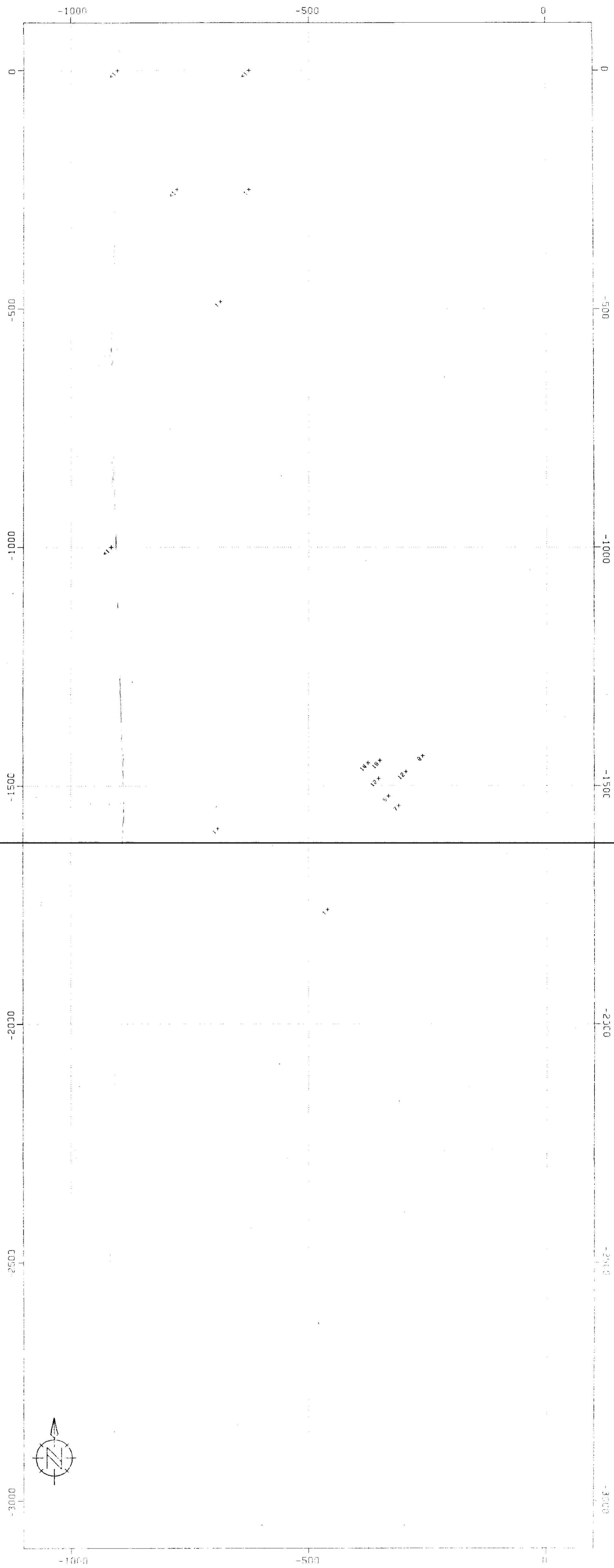
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METRES
FILE REF. No. : 82-1-V182-4B-0054



MODEL ROCK SAMPLES
 MAP 10. MERCURY ANALYSES (PPB)

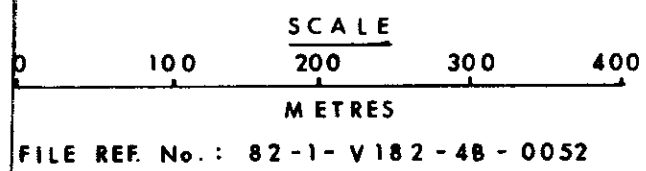
MINERAL RESOURCES BRANCH
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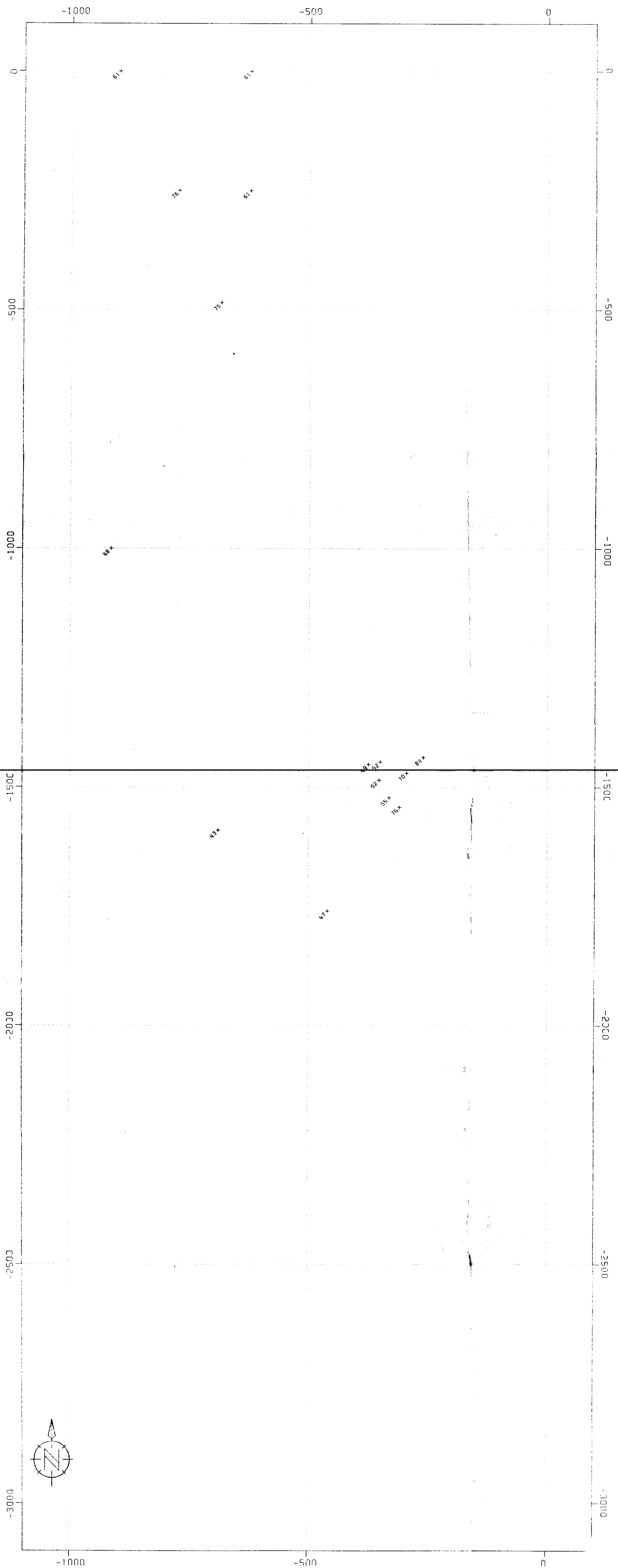


MODEL ROCK SAMPLES
 MAP 11. ANTIMONY ANALYSES (PPM)

ANTIMONY ANALYSES (PPM)
 10, 126

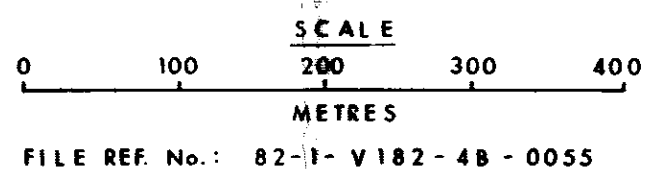


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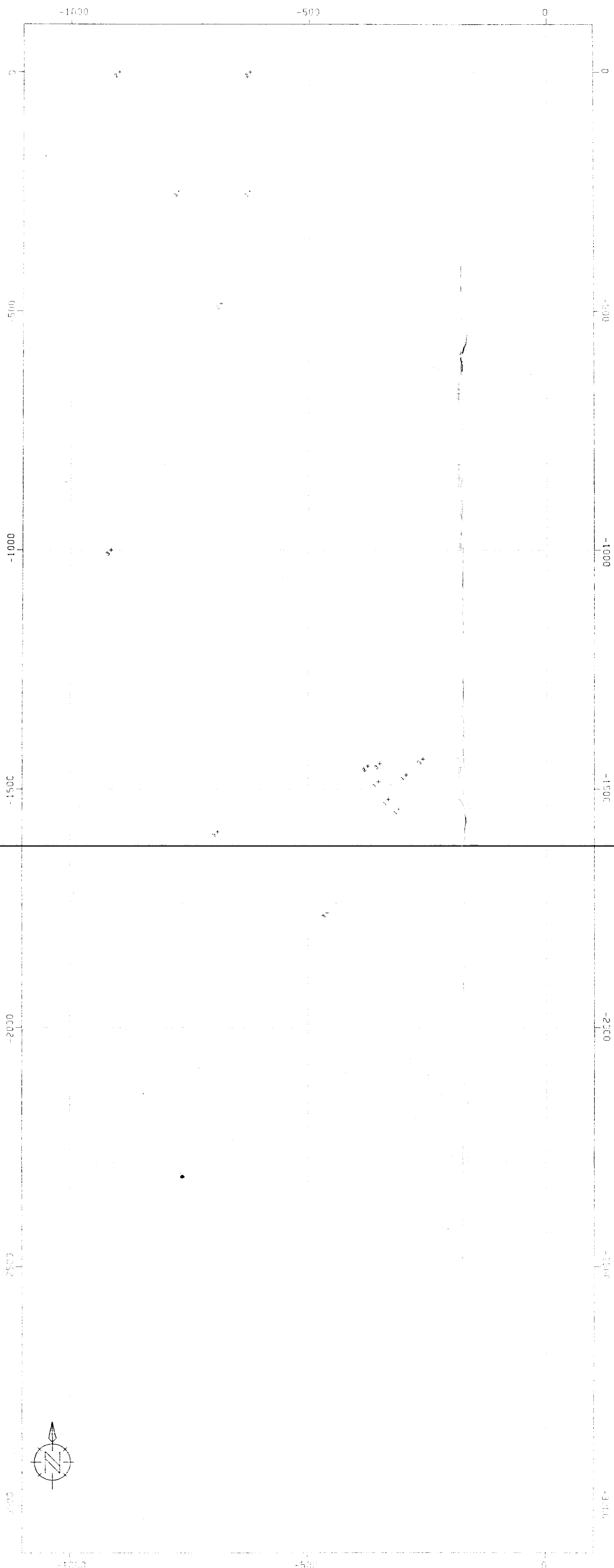


MODEL ROCK SAMPLES
 MAP 14. ZINC ANALYSES (PPM)

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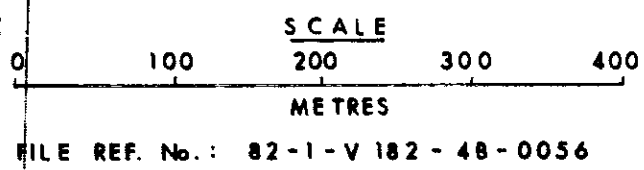


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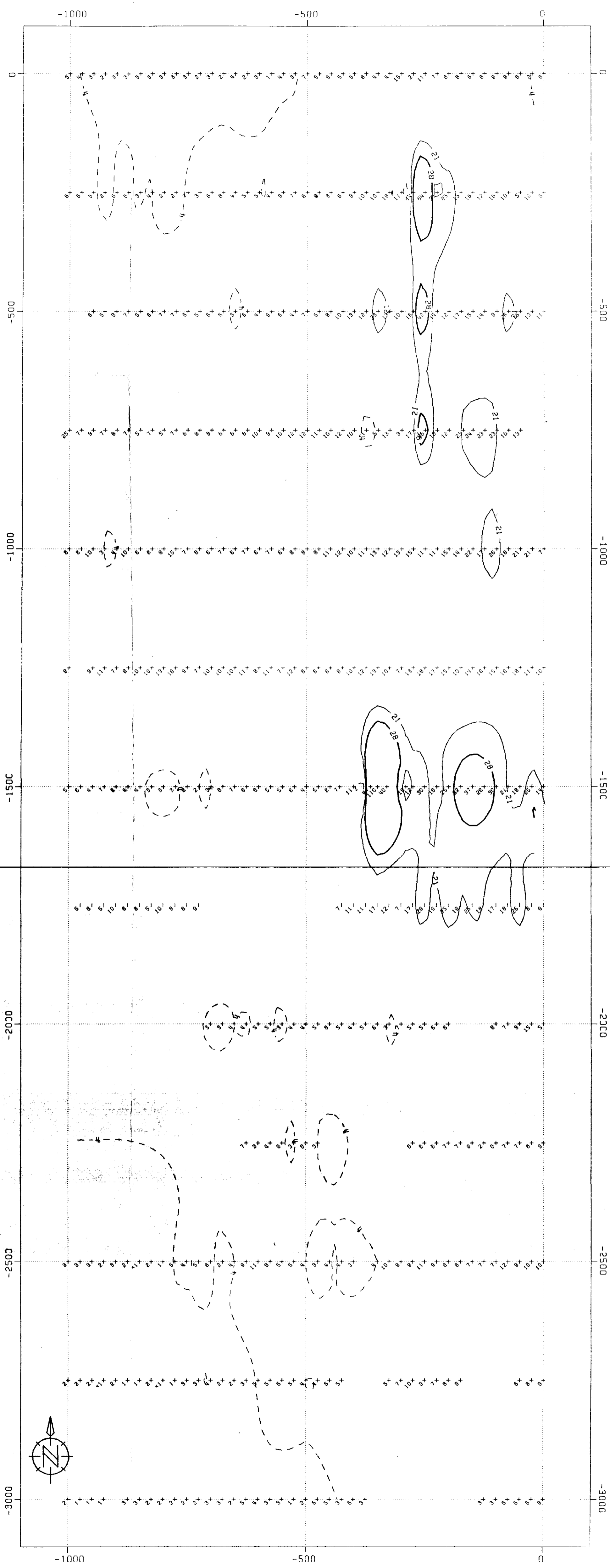


MODEL ROCK SAMPLES
 MAP 15. MOLYBDENUM ANALYSES (PPM)

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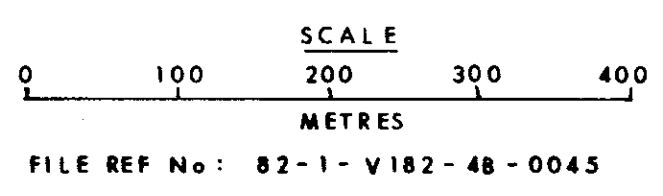


FILE REF. No.: 82-1-V 182-48-0056



MODEL SOIL SAMPLE GRID
 MAP 4. ARSENIC ANALYSES (PPM)

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