WHITING CREEK PROJECT

Geochemical Report

on the
WHIT 1 to 6 CLAIMS

OMINECA MINING DIVISION

NTS: 93E/11 and 14

LAT. 53° 45'N; LONG. 127° 12.5'W

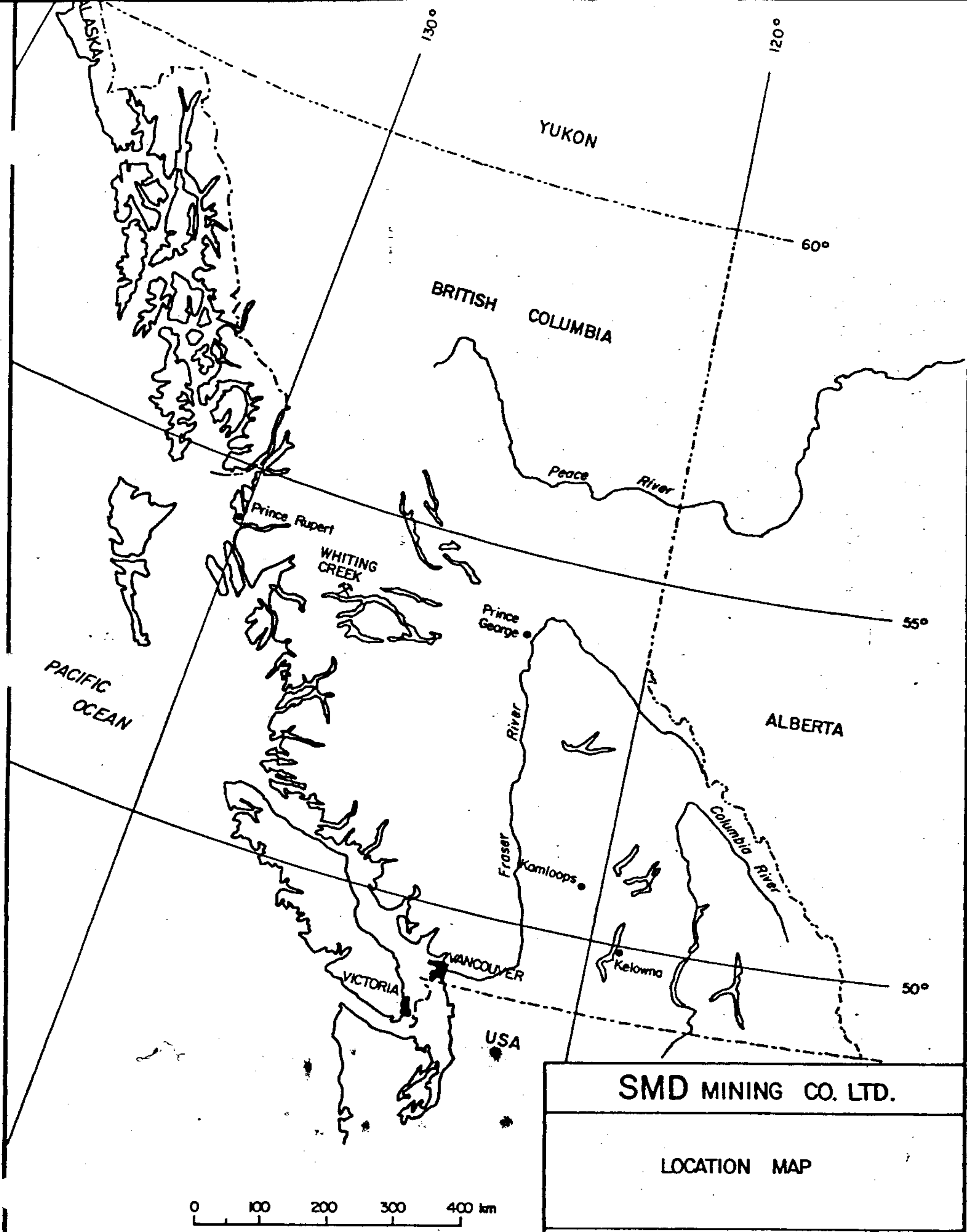
Owner: KENNCO EXPLORATIONS, (WESTERN) LTD.

Operator: SMD MINING COMPANY LTD.

Consultant: R.W. BAMFORD

By: R.W. Bamford
R. Cann

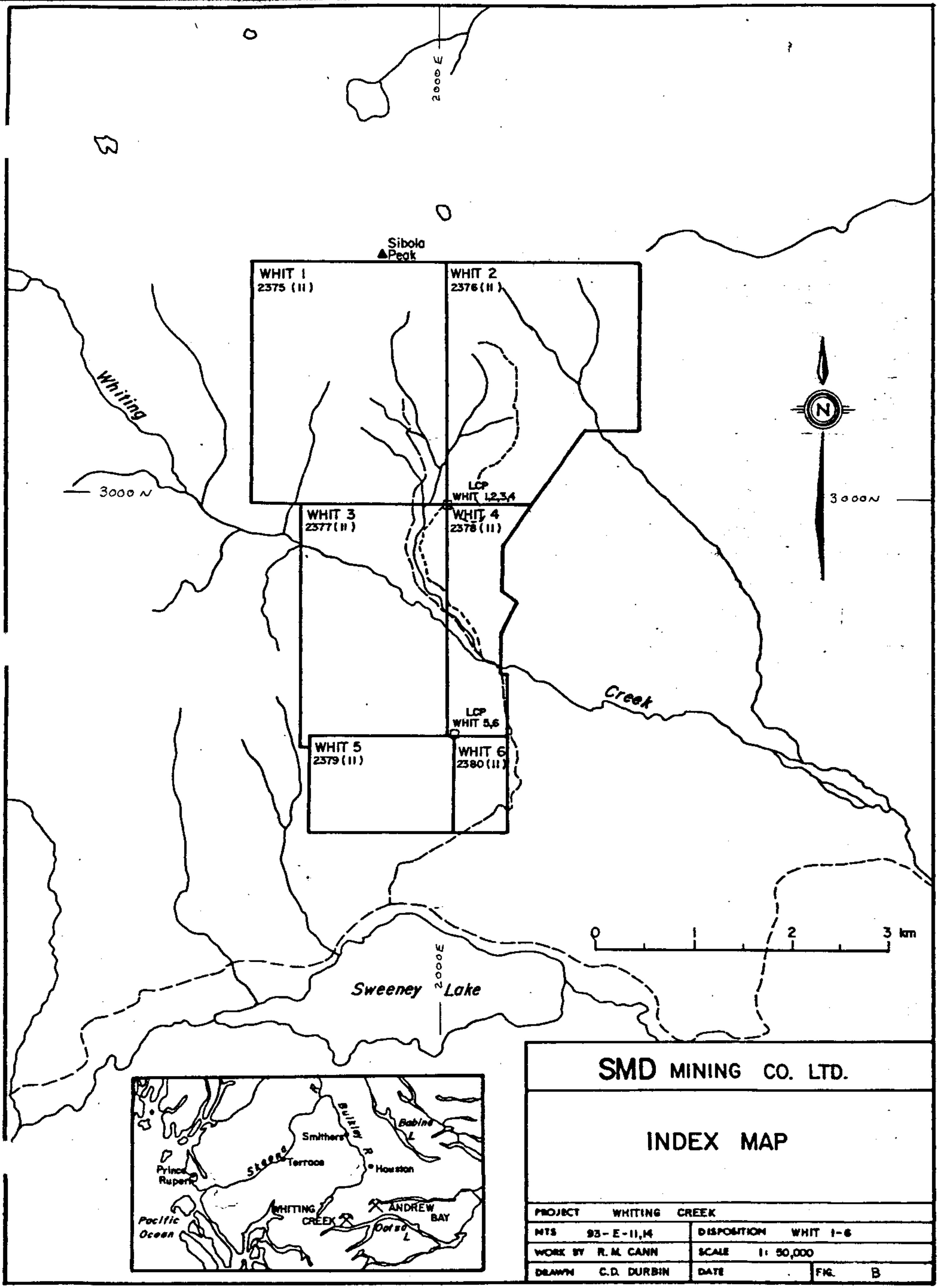
May, 1981



SMD MINING CO. LTD.

LOCATION MAP

PROJECT	WHITING CREEK		
NTS	93-E-11, 14	DISPOSITION	WHIT 1-6
WORK BY	R.M. CANN	SCALE	1 : 7,500,000
DRAWN	C.D. DURBIN	DATE	FIG. A



Sibola Peak
WHIT 1
2375 (11)
WHIT 2
2376 (11)
WHIT 3
2377 (11)
WHIT 4
2378 (11)
WHIT 5
2379 (11)
WHIT 6
2380 (11)
LCP WHIT 1,2,3,4
LCP WHIT 5,6
Whiting
Creek
Sweeney Lake
3000 N
2000 E
N
0 1 2 3 km
Prince Rupert
Pacific Ocean
Skeena
Terrace
Smithers
Bulkley R
Babine L
Houston
WHITING CREEK
ANDREW BAY
Ootsa L
SMD MINING CO. LTD.
INDEX MAP
PROJECT WHITING CREEK
NTS 93-E-11,14
DISPOSITION WHIT 1-6
WORK BY R. M. CANN
SCALE 1: 50,000
DRAWN C.D. DURBIN
DATE
FIG. B

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INTRODUCTION

Location and Access

The WHIT 1 - 6 claims (Figs. 1 and 2) are located 116 kilometres due south of Smithers in west-central B.C. Access is south via the Francois Lake Forestry road, which leaves Highway 16 just west of Houston, and then southwest via the Nadina Lake-Tahtsa Lake forestry access road to Sweeney Lake. Final access to the property is 3 km by a four-wheel drive road which leaves the forestry road at the north tip of Sweeney Lake. Total road distance from Houston is 120 kilometres.

Physiographically the property lies at the east end of the Sibola Range in a transition zone between the Coast Mountains and Nechako Plateau. Topography is rugged with the maximum elevation on the property being 2190 metres at Sibola Peak and lowest being 1030 metres.

Claim Definition

The property was originally staked in 1963 by Kennco Explorations (Western) Ltd. as the WHIT 1 to 40 claims. In 1979, SMD Mininc Co. Ltd. entered into an option agreement with Kennco Explorations (Western) Ltd. and in the same year the claims were abandoned and relocated as the WHIT 1 to 6 claims as defined below. Current owner is Kennco Explorations (Western) Ltd. and current operator is SMD Mining Company Ltd.

Claim	Units	Tag. No.	Record No.	Record Date
WHIT 1	20	49581	2375	November 29, 1979
WHIT 2	20	49582	2376	November 29, 1979
WHIT 3	15	49583	2377	November 29, 1979
WHIT 4	15	49584	2378	November 29, 1979
WHIT 5	6	49585	2379	November 29, 1979
WHIT 6	6	49586	2380	November 29, 1979

Summary of Work

Fifty-three surface rock chip samples were collected by SMDC personnel on a 250 m grid over the WHIT 1,2 claims and part of the WHIT 3 and 4 claims. These surface samples were supplemented by 37 samples from drill holes. Samples were analyzed for 15 elements.

Consultant R.W. Bamford was responsible for supervision of the sampling, and all data compilation and interpretation.

ROCK GEOCHEMISTRY

This survey provides an independent determination of Mo-Cu resource targets within the claimed area. Pyrite-mineralized high-relief terrain in the northern third of the claim block, hitherto sparsely sampled, is included in the survey to provide initial systematic exploration of that area and to ensure adequately broad sample coverage for establishing zoning trends.

Survey Method

Geochemical zoning and gradients are determined by separation and analysis of a nonmagnetic +3.3 specific gravity (sp. gr.) fraction from composite rock samples collected both at the surface and from shallow intervals in drill holes. Interpretation of the geochemical results is based primarily on empirical multielement geochemical zoning models provided by proprietary studies of known porphyry copper and porphyry molybdenum deposits and their surroundings. The models incorporate an extensive and probably unique data base. They reflect consistent three-dimensional zoning relationships indicated by +3.3 sp. gr. and, in many cases, corresponding whole rock geochemical data for a variety of deposit types and environments.

The +3.3 sp. gr. fraction analyzed in this work provides large (three- to more than ten-fold) enhancements of hydrothermal trace element signatures relative to those of original rock. Heavy liquid separation procedures selectively concentrate hydrothermal sulfides and oxides (or their oxidation products), the principal hosts for the trace elements, in the +3.3 fraction. The predominant rock and alteration silicates in the original sample, which are relatively barren of hydrothermal trace elements, partition mainly into the light (-3.3 sp. gr.) fraction. General advantages of +3.3 sample geochemistry for exploring large sulfide systems include: (1) more effective detection of interpretable trace element signatures in the outer fringes of sulfide systems, (2) clearer definition of trace element zoning patterns and gradients related to ore, (3) minimization of rock type effects in the geochemical data, (4) elimination of pseudo-zoning indications caused by variations in total sulfide contents, and (5) improved utilization of Bi, Te, As, Sb, Sn, W, and Co data.

Sample Collection

Ninety samples, fifty-three from surface outcrops and thirty-seven from drill holes, were obtained for this survey. Surface samples were rock chip composites collected on a nominal 500-meter grid in the northern third of the survey area by SMDC personnel. Information reported for each sample site includes lithology, estimated volume % sulfide in rock, degree of oxidation, economic minerals present, style of mineralization (vein vs. disseminated), and nature of the sample (high-graded or representative chip sample). Drill hole samples were composites from core and percussion drilling chips, each representing a 30-meter (maximum) composite interval in the shallowest part of one drill hole. Sampling density is good in northern and central parts of the SMDC claim block and fair to poor in southern parts where outcrop is limited and samples are primarily derived from a few irregularly spaced drill holes (Figure 23).

Sample Preparation and Analytical Procedures

Samples are composited and/or pulverized to -80 mesh as needed. Eighty grams of each -80 mesh composite sample is used for the preparation of a corresponding +3.3 sp. gr. fraction. A magnetic fraction consisting mostly of magnetite is separated from the +3.3 sp. gr. fraction using a hand magnet leaving a sample ready for analysis. Total weights and percentages in original sample materials are recorded for both sample fractions.

The nonmagnetic +3.3 sp. gr. fractions were analyzed for Cu, Mo, Pb, Zn, Ag, Mn, Co, and Fe by conventional atomic absorption spectrophotometry (AAS); for As, Sb, and Bi by hydride generation AAS; and for S by Leco induction furnace. This analytical work and the sample preparation were carried out by Rocky Mountain Geochemical Corporation, Salt Lake City, following specified procedures. Additional analyses for Te, Sn, and W were performed by COORS Spectro-Chemical Laboratory, Golden, Colorado, using optical emission spectrographic (OES) techniques. In a few instances S analyses were omitted because of insufficient sample. Omissions are indicated on the plots by the letters ND (no data).

Data Presentation

The geochemical results are presented in four forms: (1) a tabulation of original geochemical and sample fraction data (Appendix B), (2) tabulations and plots of various statistics for the geochemical data (Appendix A), (3) computer-generated contoured plan plots of the original geochemical and sample fraction data (Figures 1 thru 17), and (4) similar plan plots of geochemical parameters useful for interpretation and target selection in Cu-Mo sulfide systems (Figures 18 thru 22). A plot of sample numbers and generalized geology is also included.

Statistics presented include simple statistics, Spearman rank correlation and cluster analysis, and Pearson product-moment correlation and cluster analysis. Correlation and cluster analysis by the Spearman rank method is free of underlying assumptions regarding type of data distribution and therefore is considered superior to the Pearson product-moment method for this work. Product-moment correlation assumes that data are normally distributed.

Plan plots are produced at two scales: at approximately 1:20,000 scale for the bound reports and at 1:5,000 scale for direct comparison with full scale geologic and geophysical maps. Minimum contour values on the plots are lowest meaningful values determined by inspection. Each successive contour value is double that of the neighboring smaller value. Sample type is distinguished on the plots by plot symbols: triangles indicate surface samples, circles indicate percussion hole samples, and stars indicate diamond drill hole samples.

DISCUSSION

Sulfide and Magnetic Mineral Zoning

Distribution data for the non-magnetic +3.3 sp. gr. fraction and the magnetic fraction, which consist mainly of pyrite and magnetite (or pyrrhotite), respectively, appear to define a reasonably coherent pyrite-magnetite(?) halo, hereafter referred to as the "pyrite" halo (Figures 16, 17, and 20). High total pyrite (approx. 2 to 12 wt. %) with high magnetite and/or pyrrhotite (0.10 to 2 wt. %) is indicated to roughly surround the cluster of three porphyritic intrusions on all sides except the southeast where the presence of premineral(?) granodiorite appears to have disrupted the zoning pattern. The "pyrite" halo is delineated by spatially associated high abundances of both +3.3 and magnetic fractions in less oxidized rocks of topographically low central parts of the survey area, and predominantly by the magnetic fraction in oxidized surface rocks of the tographically higher northern and northwestern parts of the area. Highgraded surface samples collected in this work do not appear to cause spurious major perturbations of the zoning pattern.

Hydrothermal Element Zoning

A systematic large-scale zoning of hydrothermal elements which corresponds in part to the mineral zoning is also defined for the area north of the granodiorite (Figures 1-18 and Appendix A, Figures A-1 and A-2). Zoned element anomaly associations distinguished by Spearman rank correlation and cluster analysis include Cu-Mo-Sn-W, Pb-Zn-Ag-As-Mn, Bi-Te, and possibly Fe-S. The statistics (Appendix A, Table A-2 and Figure A-1) indicate relatively high distribution similarity for elements within each of these associations and relatively low distribution similarity between the associations. Similarity in distribution is lowest between the Cu-Mo-Sn-W and Pb-Zn-Ag-As-Mn associations, indicating these to be relatively distinct element assemblages. Distributions of the Fe-S and the Bi-Te anomaly associations display partial similarity to those of the Cu-Mo-Sn-W and Pb-Zn-Ag-As-Mn associations, respectively.

Reference to the element distribution maps shows that the Cu-Mo-Sn-W association mainly constitutes a centrally zoned element assemblage (Figures 1, 2, 14, 15, and 18) and the Pb-Zn-Ag-As-Mn association a peripherally zoned assemblage (Figures 3, 4, 5, 6, 8, and 19). The Bi-Te association displays a possible bimodal distribution which is mainly peripheral but includes a spatially distinct central component (Figure 21). A tendency towards central zonation is indicated for the Fe-S association (Figure 22 and Appendix A, Figure A-1), but is probably mainly a reflection of greater pyrite oxidation and sulfur loss in samples from the high ridges in the northern and western parts of the survey area where peripherally zoned element assemblages predominate.

Peripheral geochemical zones and the heavy mineral ("pyrite") halo display reasonably similar spatial relationships (cf. Figures 19 and 20) and thus provide parallel confirmation of system configuration north of the granodiorite (north of about 3000 N). Cu-Mo-Sn-W anomaly associations are asymmetrically distributed inside of and/or partially overlap the peripheral or halo zones, mainly along their southern limits. Zonal relationships between Cu-rich and Mo-rich components of this association remain somewhat obscure, due in part to the apparent zoning asymmetry. Cu is tentatively inferred to be more peripherally distributed and more clearly associated with inner parts of the pyrite halo.

Zoning is usefully defined only within the part of the claim block north of about 3500 N. South of 3500 N sample coverage becomes restricted and irregular and, coupled with the occurrence of hybrid element assemblages in several samples collected south of 2000 N, prevents further delineation of system zoning. Some potentially significant mineralization was encountered in this area, however, and additional systematic sampling of southern parts of the claim block by percussion drilling is recommended in order that major targets not be overlooked or only partially defined.

Sulfide System Model

Based on results of this work, the mineralization north of 3000 N at Whiting Creek is considered to comprise a major segment of a single, fairly conventionally zoned Mo-Cu porphyry sulfide system in which Mo may have more potential economic importance than Cu. Hydrothermal element and heavy mineral zoning in this segment is well developed, reasonably coherent, and similar to zoning in many other porphyry systems.

Peripheral or halo zones of the system are defined by the locus of Pb-Zn-Ag-As-Mn-Bi-Te anomaly associations and pyrite-magnetite(?) enrichments (Figures 3, 4, 6, 8, 12, 13, 19, 20 and 21) and are considered to provide the clearest indication of overall system geometry. These halo zones closely surround and in part overlap the three porphyritic stocks (aplitic quartz porphyry, crowded monzonite porphyry, and quartz monzonite porphyry) and intervening Hazelton Group rocks on the west, north, and east but are not presently defined in granodiorite country rock on the south.

The central area of the sulfide system, the part underlain by the three porphyritic stocks and intervening Hazelton Group rocks, contains asymmetrically distributed zones characterized by Cu-Mo-Sn-W anomaly associations, a possible barren core zone, and areas with poorly defined zonal affinity. The zones characterized by Cu-Mo-Sn-W anomaly associations occur along the inner margin of the halo zones and are broadly developed only in the southern part of the central area at lower elevations (Figure 18). The very limited development of Cu-Mo-Sn-W zones in northern parts of the central area where elevations are higher may reflect an actual zoning asymmetry or might alternately be only an apparent difference related to vertical zoning. Zoning asymmetry is tentatively considered a somewhat more tenable explanation because of the geologic asymmetry in the system: the southern part of the central area appears to contain a unique causative(?) intrusion (the aplitic quartz porphyry) and a unique structural and host rock environment related to the granodiorite body (the geochemical results suggest that structural ground preparation may have been best along a southwest-northeast trending zone in Hazelton group rocks which parallels and is locally close to the granodiorite contact (e.g., compare Figure 2 with Figure 23 or the geologic map--SMDC, 1980). A core zone barren of most hydrothermal trace elements possibly occurs within the central area of the system around and/or to the northwest of 4000 N and 2000 E. This barren zone is largely centered on the quartz monzonite porphyry and associated crowded monzonite porphyry stocks, which are indicated to be only locally weakly mineralized near contacts with Hazelton Group rocks (cf. Figures 18 and 19 with Figure 23 or the geologic map--SMDC, 1980).

Target Concepts

Several ore target concepts suggested by this work are outlined below. To the extent possible specific types of targets within each category are presented in order of probable importance. Most of the concepts apply specifically to the zoned part of the sulfide system north of about 3000 N. They are indirectly developed from indicated zoning relationships, commonly assume some vertical zoning, and, therefore, are tentative but should also be new. Speculation regarding ore targets south of 3000 N, within or near the granodiorite, is briefly summarized under a separate heading. No obvious high-potential new targets were directly defined by the survey in either part of the sulfide system.

Copper Ore Targets. Primary Cu mineralization in zoned parts of the sulfide system appears most likely to occur within or near the inner margins of the "pyrite" and geochemical halo zones. Assuming vertical zoning from relatively barren pyrite halo at higher levels in the system to more Cu-rich zones at depth, much of the halo zone in high terrain at the northern end of the system (Figures 19 and 20) can be considered permissive for Cu at depth. Deeper targets may be situated under outer parts of the halo zones if the zones dip outward. Weakly developed Cu-Mo mineralization in samples 1021 and 1022 possibly indicates a target of this type at relatively shallow depth in the area centered on 4700 N, 1500 E.

Enriched Cu ore could be associated with the Cu targets if oxidation and leaching has penetrated sufficiently into upper fringes of the primary copper mineralization. The probability of at least spotty Cu enrichment in the 4700 N, 1500 E area, for example, is considered moderate based on overall geochemical data for the area.

Molybdenum Ore Targets. Ore target concepts for Mo are similar to those for primary Cu targets. The principal difference is that Mo-rich zones in the Whiting creek sulfide system would probably be situated somewhat further inside the halo zones near the inner margins of the Cu-rich zones (if developed). Potential for Mo-rich targets other than extensions of the known Mo mineralization could be low within zoned parts of the system if this mineralization is uniquely linked in origin to the aplitic quartz porphyry. Occurrence of Mo with the Cu mineralization near 4700 N and 1500 E (cf. Figures 1 and 2), however, suggests that potential for new Mo ore may be at least as great as that for Cu.

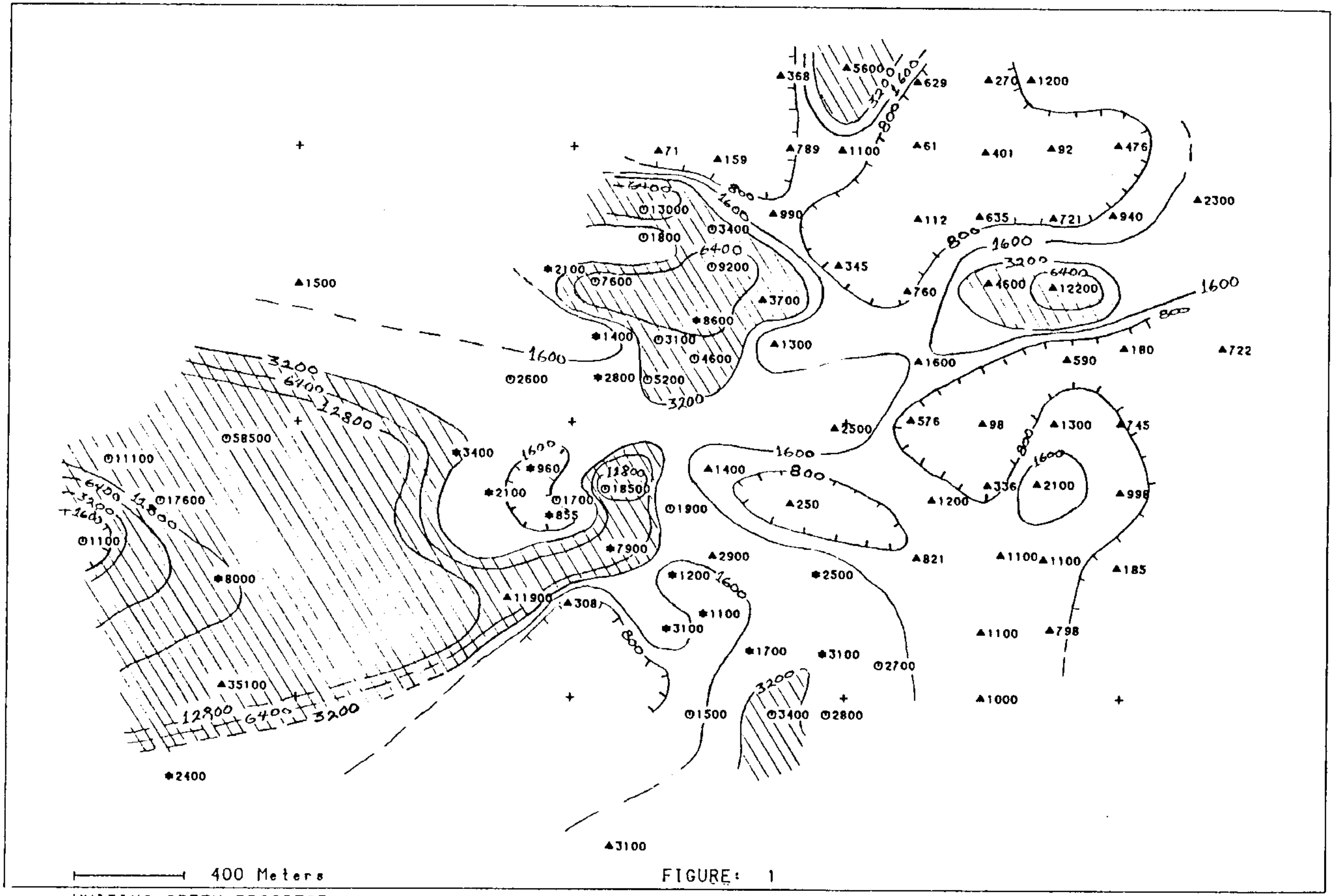
Ore Targets Located South of 3000 N. The geochemical results suggest that ore targets possibly occur in the area south of 3000 N but, due to limited sampling in the area and the occurrence of somewhat unusual element associations, do not provide systematic indications of target size or nature. Samples from percussion holes 19, 20, and 21 appear to represent relatively high-grade hybrid Cu-Mo-Pb-Zn mineralization with little associated pyrite. Mo/(Pb+Zn) and absolute concentrations of Mo are significantly greater in the hole 19 sample, tenuously suggesting a potential for yet higher grade Mo mineralization to the west or northwest of hole 19 along a possible extension of the southwest-northeast trend of known Mo mineralization (Figure 2). Limited additional support for this concept is provided by the apparent southwesterly extension of W anomaly trends into this area (Figure 15).

Recommended Follow-up Work

Work to evaluate, refine, and expand target concepts presented in this report should include: (1) near term discussions of the survey results to facilitate their full integration with other exploration data, (2) systematic expansion of shallow percussion hole sampling in the area south of 3000 N, and (3) if possible, additional evaluation of the inferred Mo-Cu target near 4700 N and 1500 E.

REFERENCES

Saskatchewan Mining Development Corporation (SMDC), 1980, Geologic and Drill Site Map for the Whiting Creek Prospect, British Columbia (Map 1).



WHITING CREEK PROSPECT
BRITISH COLUMBIA

FIGURE: 1

COPPER (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS

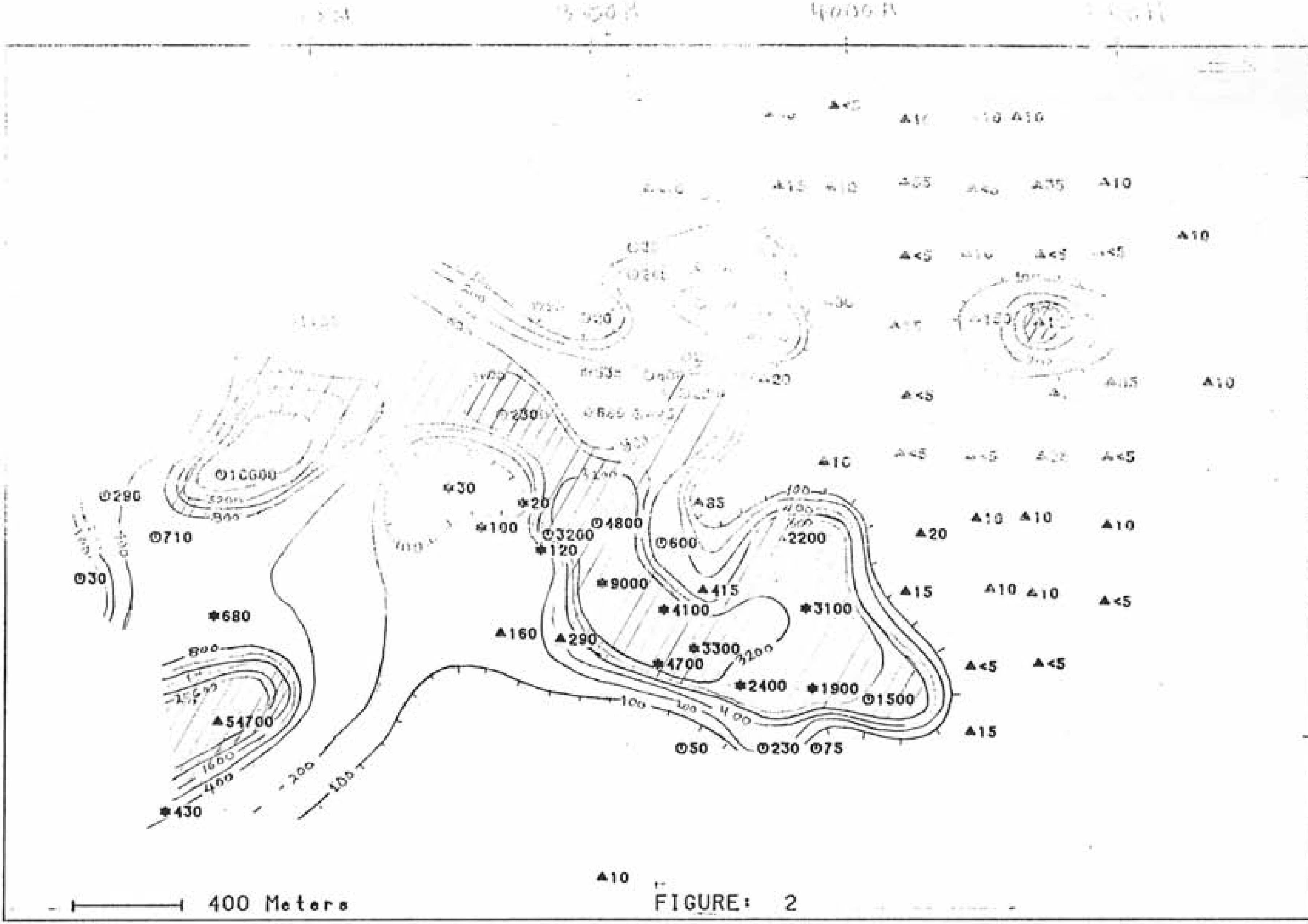
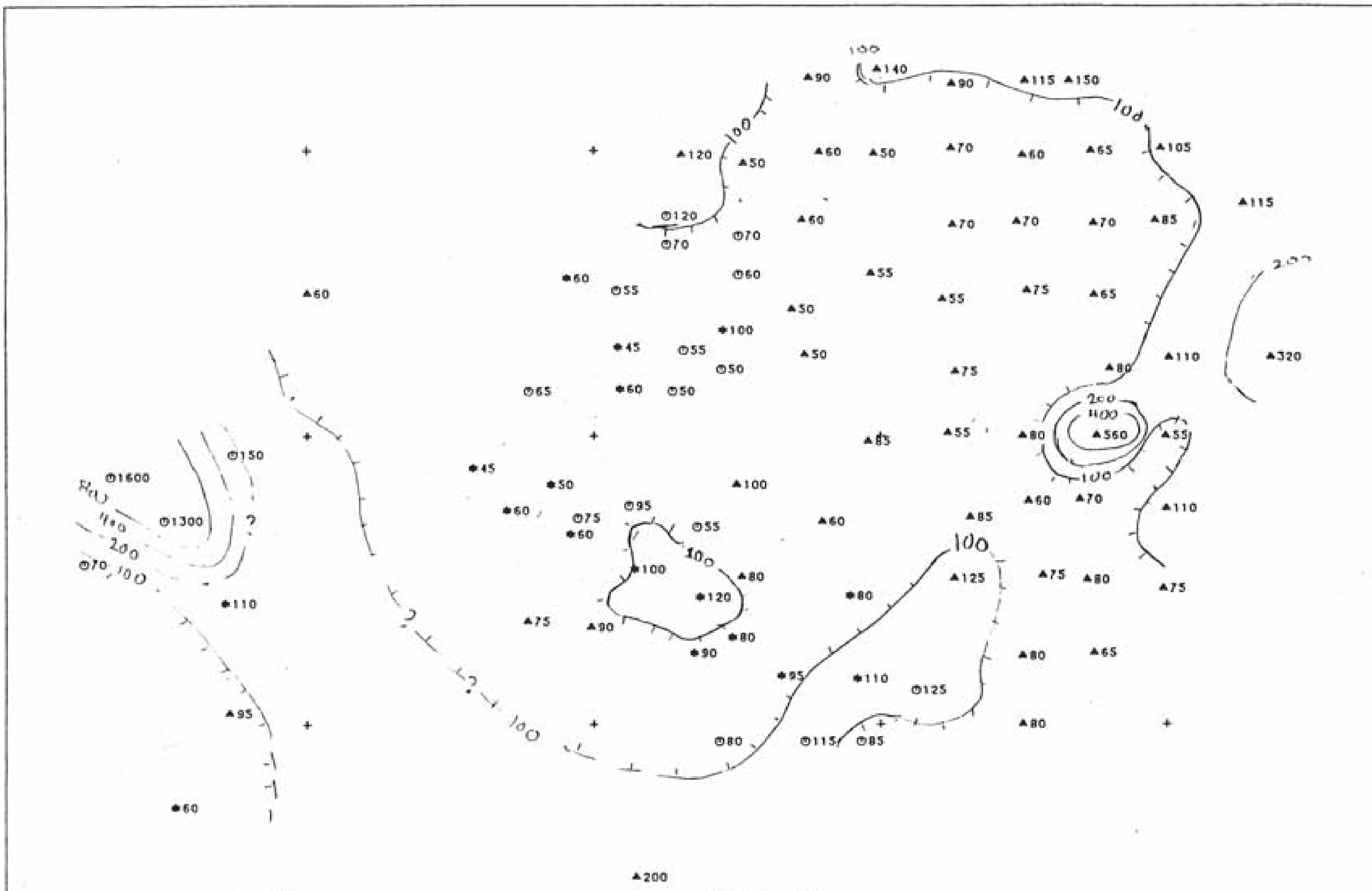


FIGURE: 2

WHITING CREEK PROSPECT
BRITISH COLUMBIA

MOLYBDENUM (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS

100 ✓
200 ✓
400 ✓
800 ✓
1600 ✓
3200 ✓

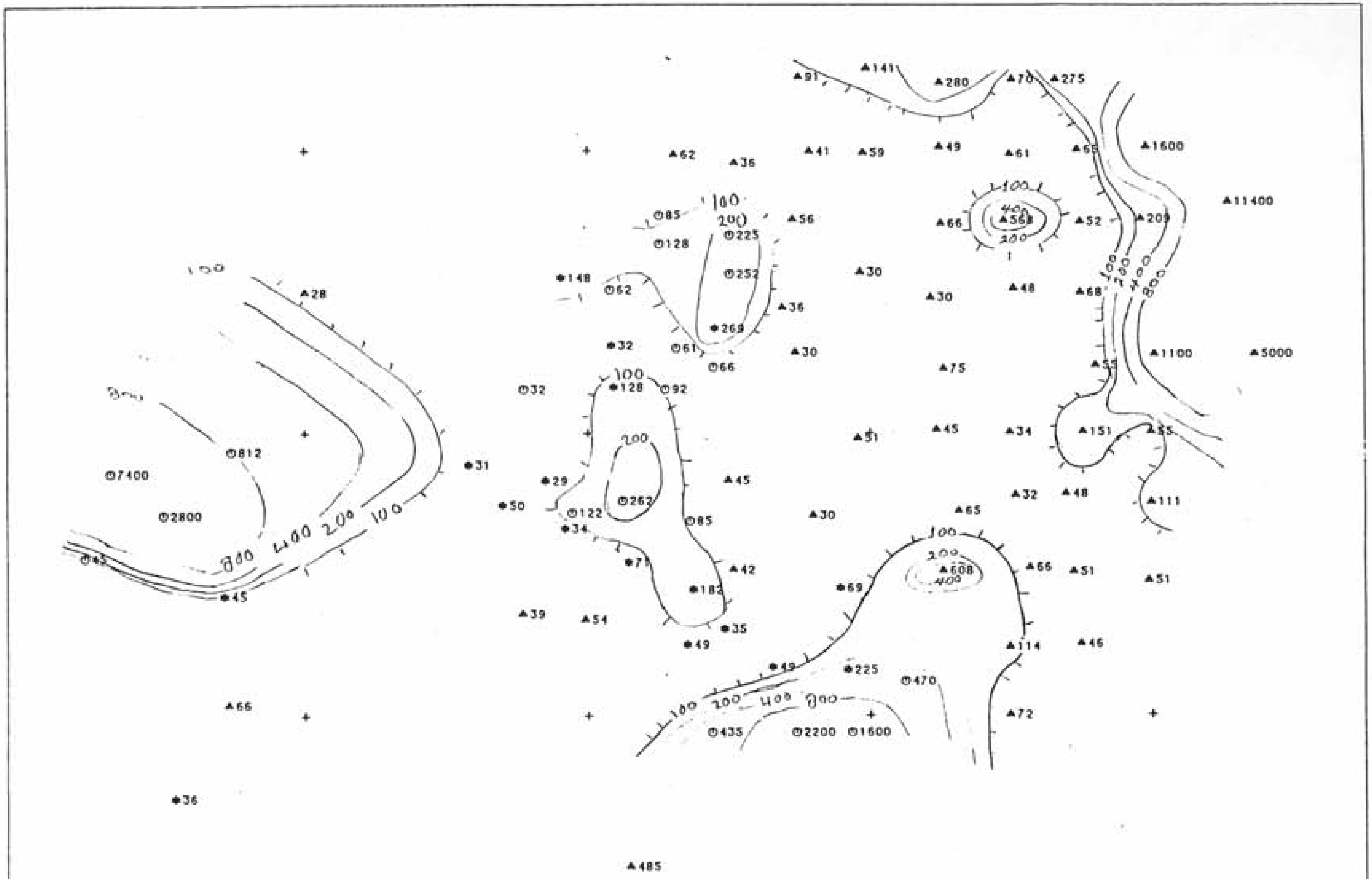


400 Meters

FIGURE: 3

WHITING CREEK PROSPECT
BRITISH COLUMBIA

LEAD (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS



400 Meters

FIGURE: 4

WHITING CREEK PROSPECT
BRITISH COLUMBIA

ZINC (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS

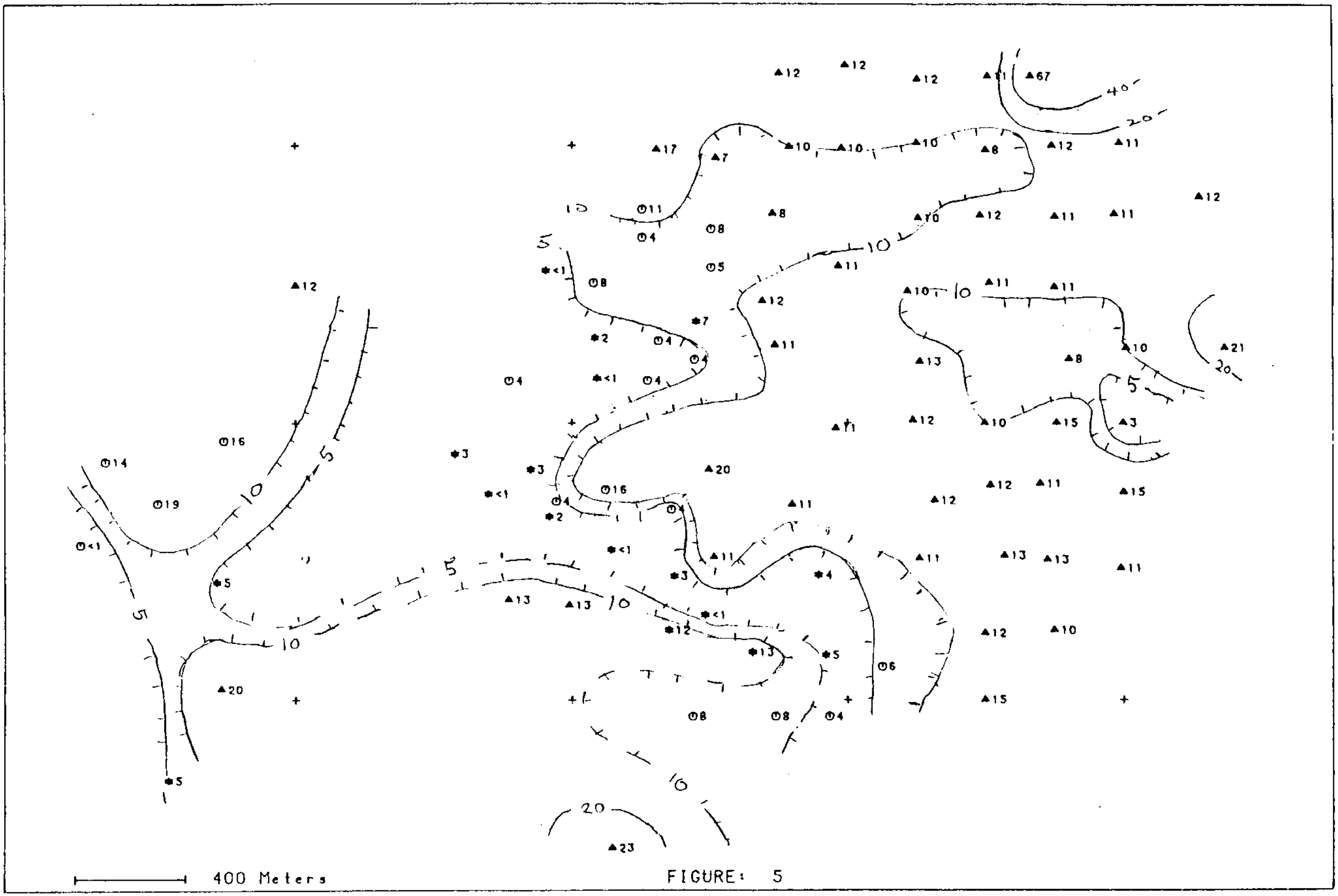


FIGURE: 5

WHITING CREEK PROSPECT
BRITISH COLUMBIA

SILVER (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS

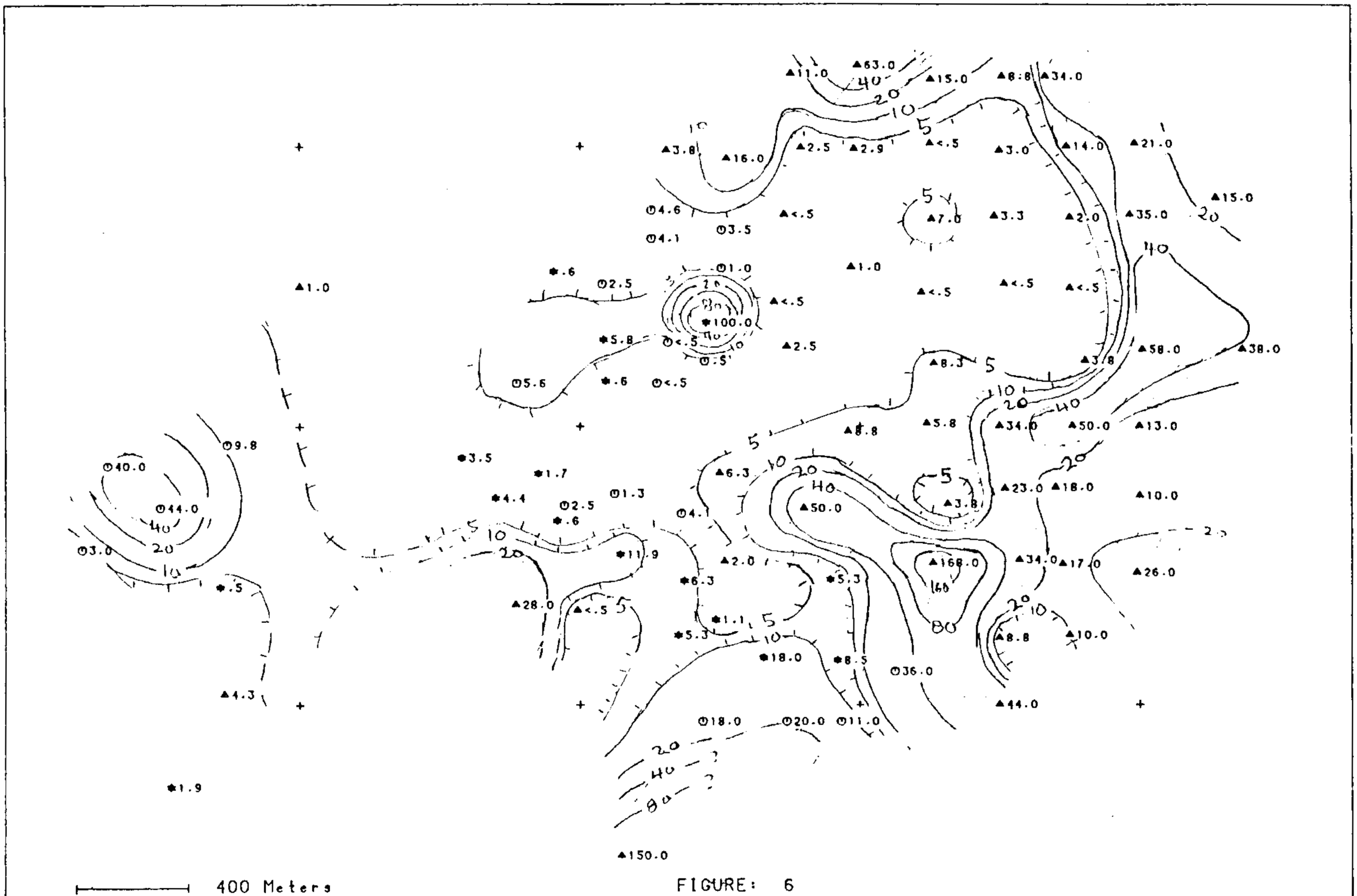


FIGURE: 6

WHITING CREEK PROSPECT
BRITISH COLUMBIA

ARSENIC (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: HYDRIDE GENERATION

5 ✓
10 ✓
20 ✓
40 ✓
80 ✓

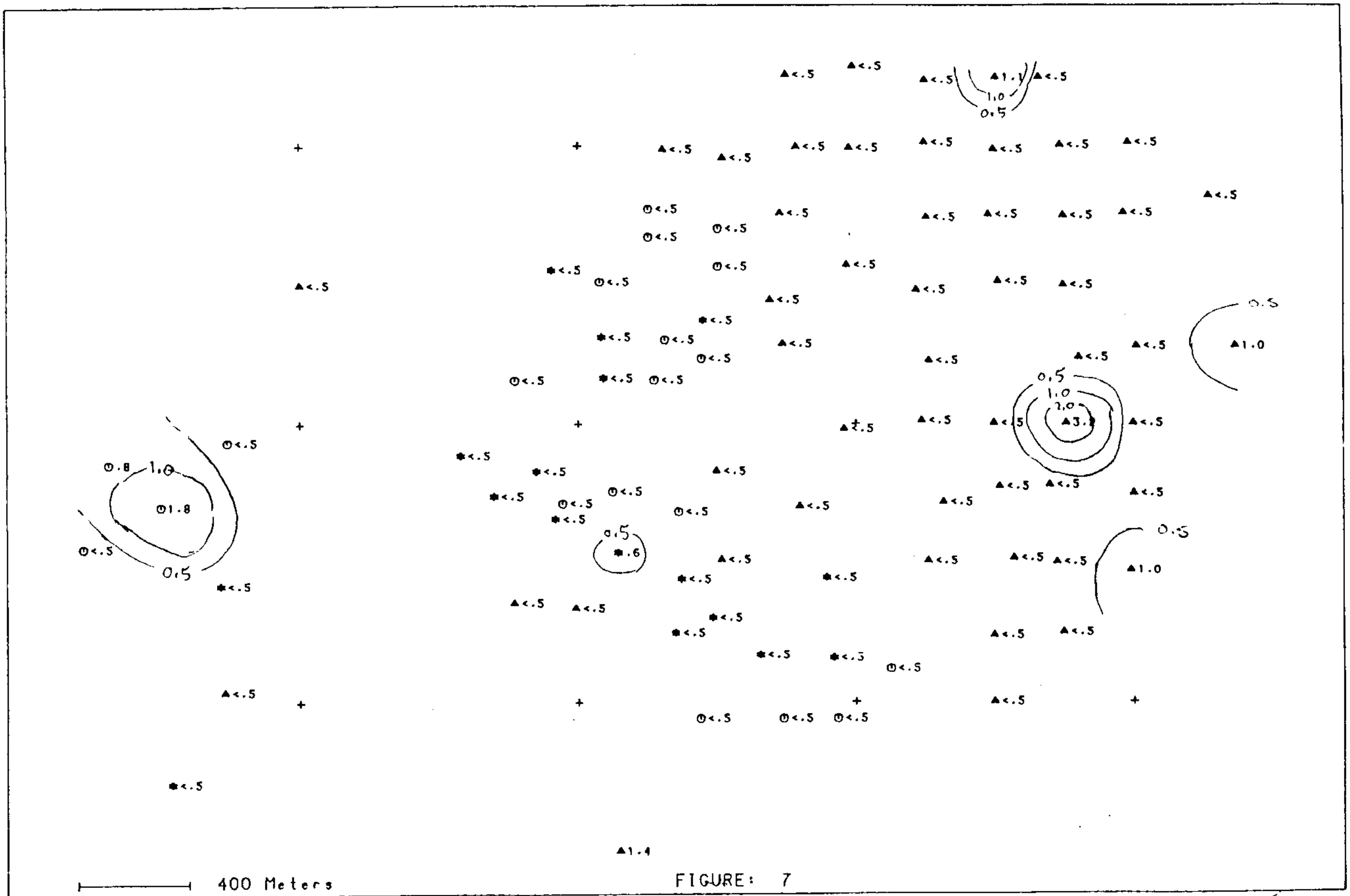


FIGURE: 7

WHITING CREEK PROSPECT
BRITISH COLUMBIA

ANTIMONY (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: HYDRIDE GENERATION

2.0 ✓
1.0 ✓
0.5 ✓

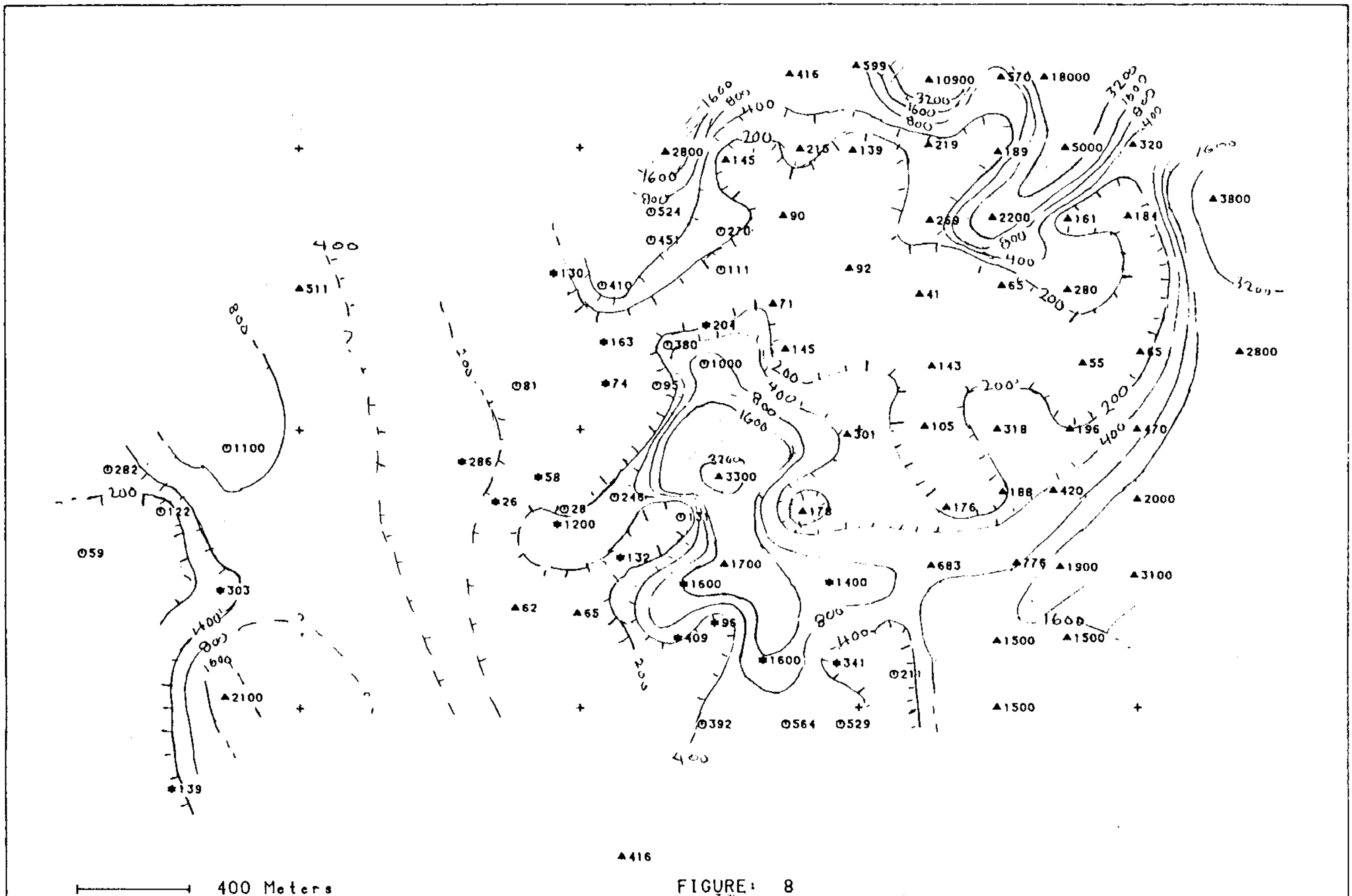
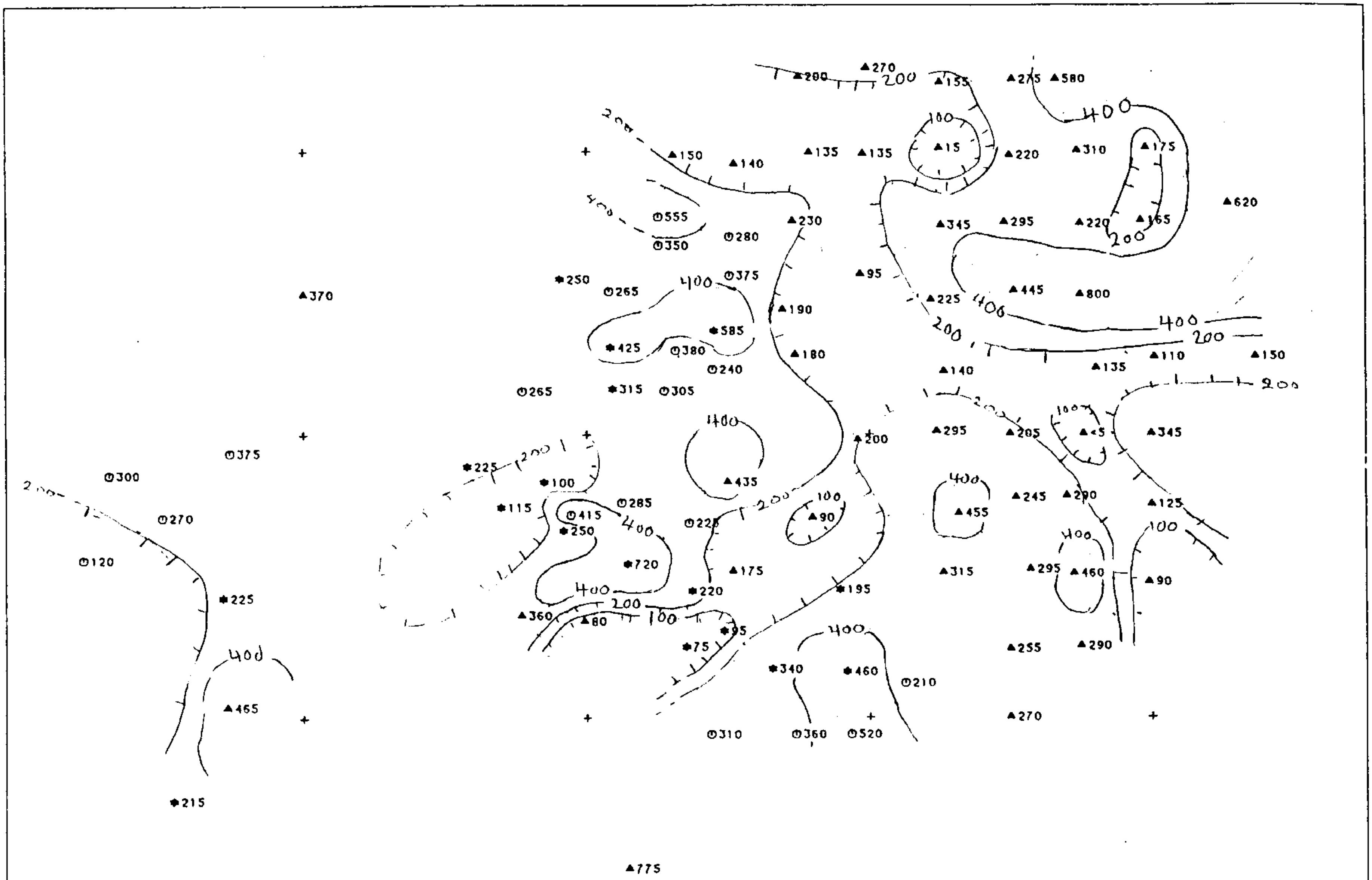


FIGURE: 8

WHITING CREEK PROSPECT
BRITISH COLUMBIA

MANGANESE (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS

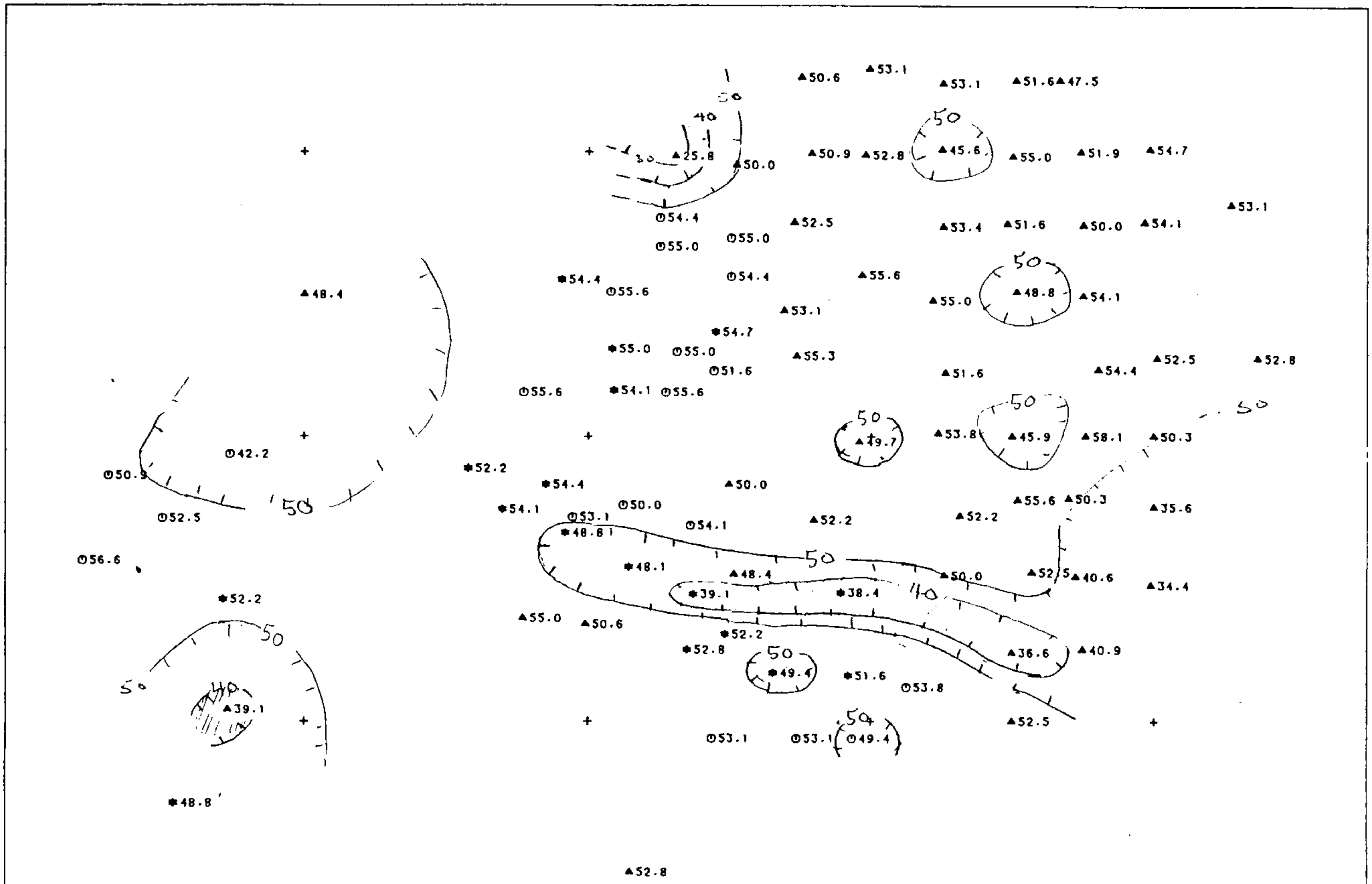


400 Meters

FIGURE: 9

WHITING CREEK PROSPECT
BRITISH COLUMBIA

COBALT (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS

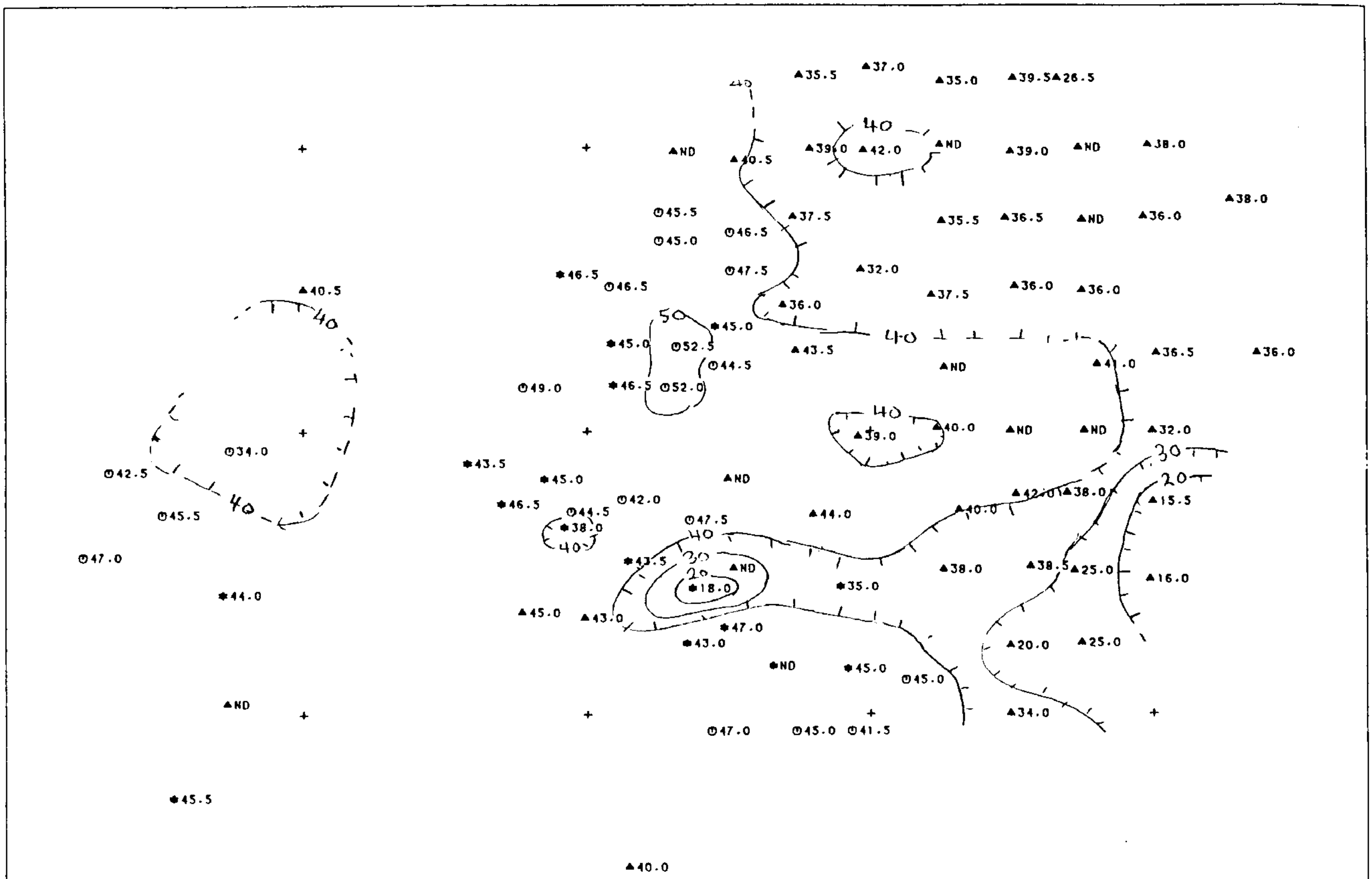


400 Meters

FIGURE: 10

WHITING CREEK PROSPECT
BRITISH COLUMBIA

IRON (%)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS



400 Meters

FIGURE: 11

WHITING CREEK PROSPECT
BRITISH COLUMBIA

SULFUR (%)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: LECO INDUCTION FURNACE

FIGURE 12

(PPM)

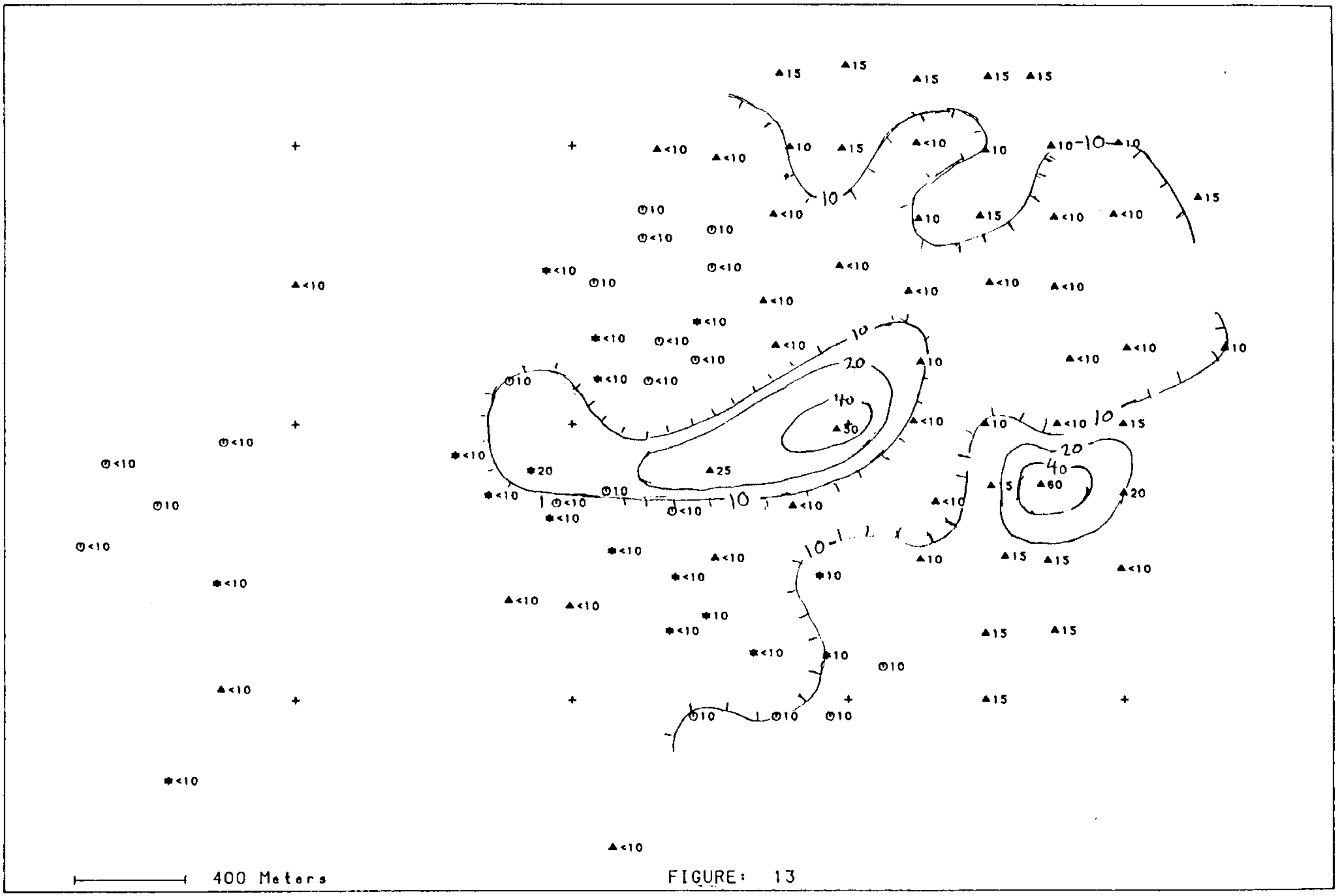


FIGURE: 13

WHITING CREEK PROSPECT
BRITISH COLUMBIA

TELLURIUM (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: OPTICAL EMISSION SPEC.

10 ✓
20 ✓
40 ✓

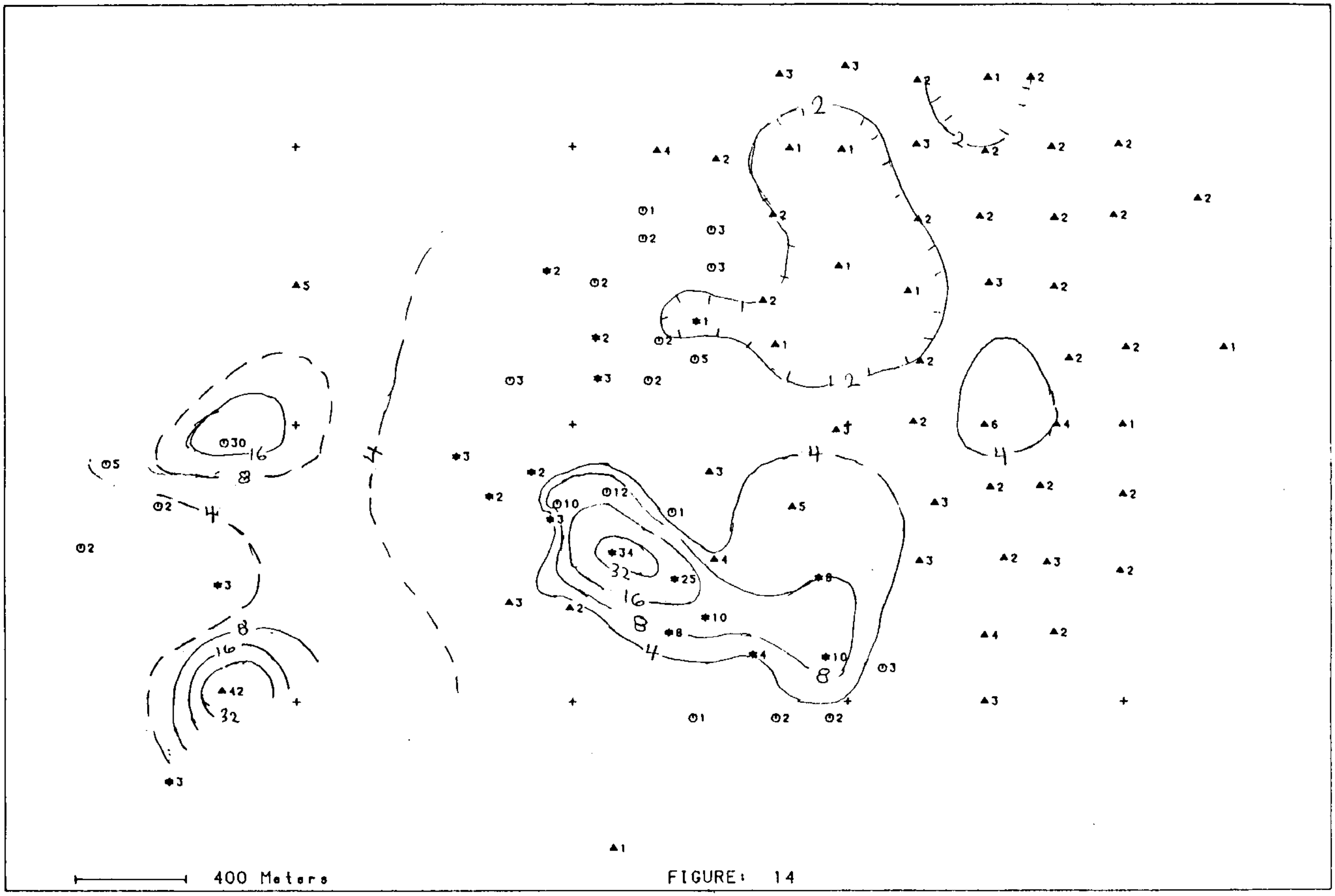
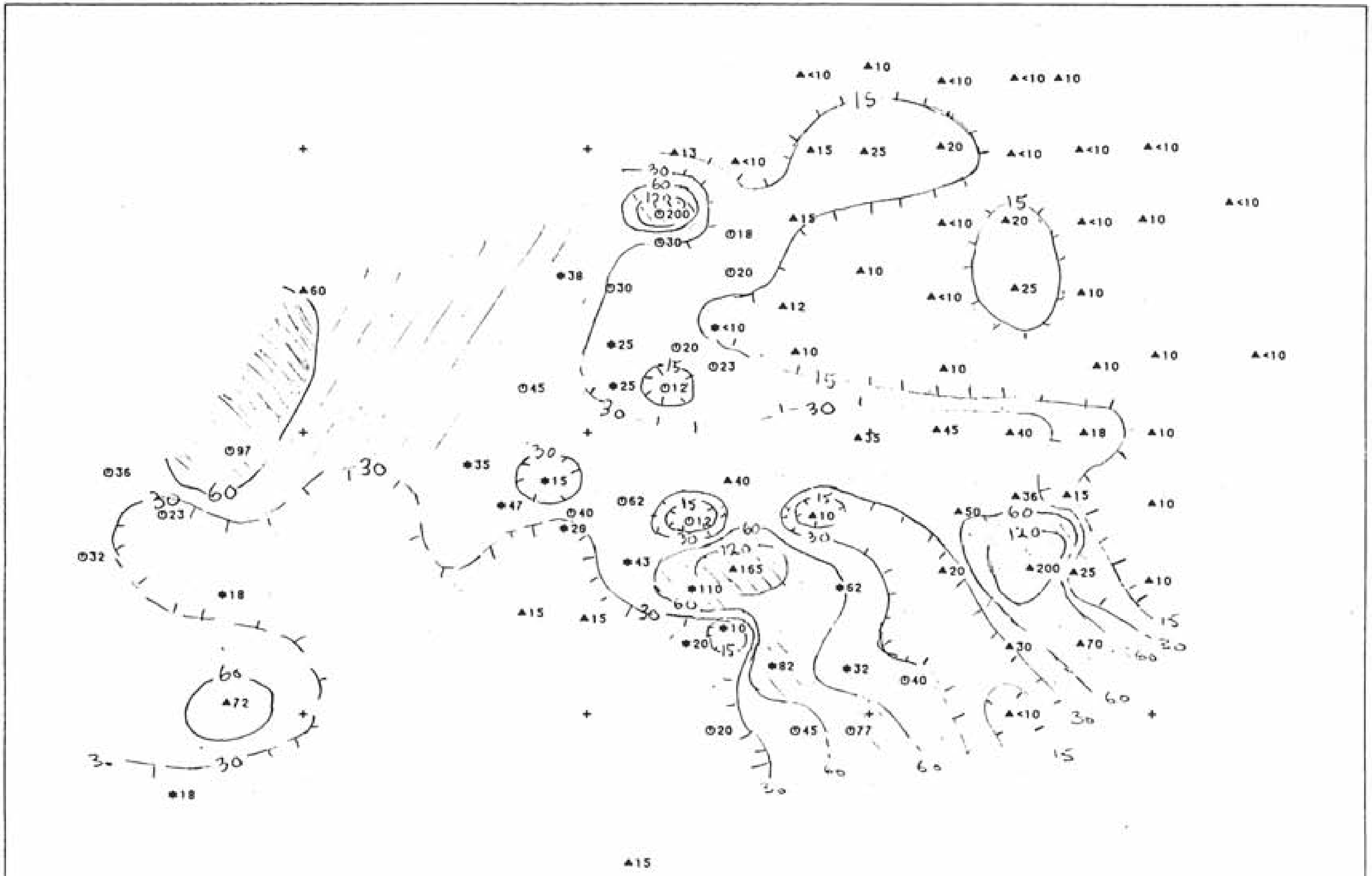


FIGURE: 14

WHITING CREEK PROSPECT
BRITISH COLUMBIA

TIN (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: OPTICAL EMISSION SPEC.



400 Meters

FIGURE: 15

WHITING CREEK PROSPECT
BRITISH COLUMBIA

TUNGSTEN (PPM)
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: OPTICAL EMISSION SPEC.

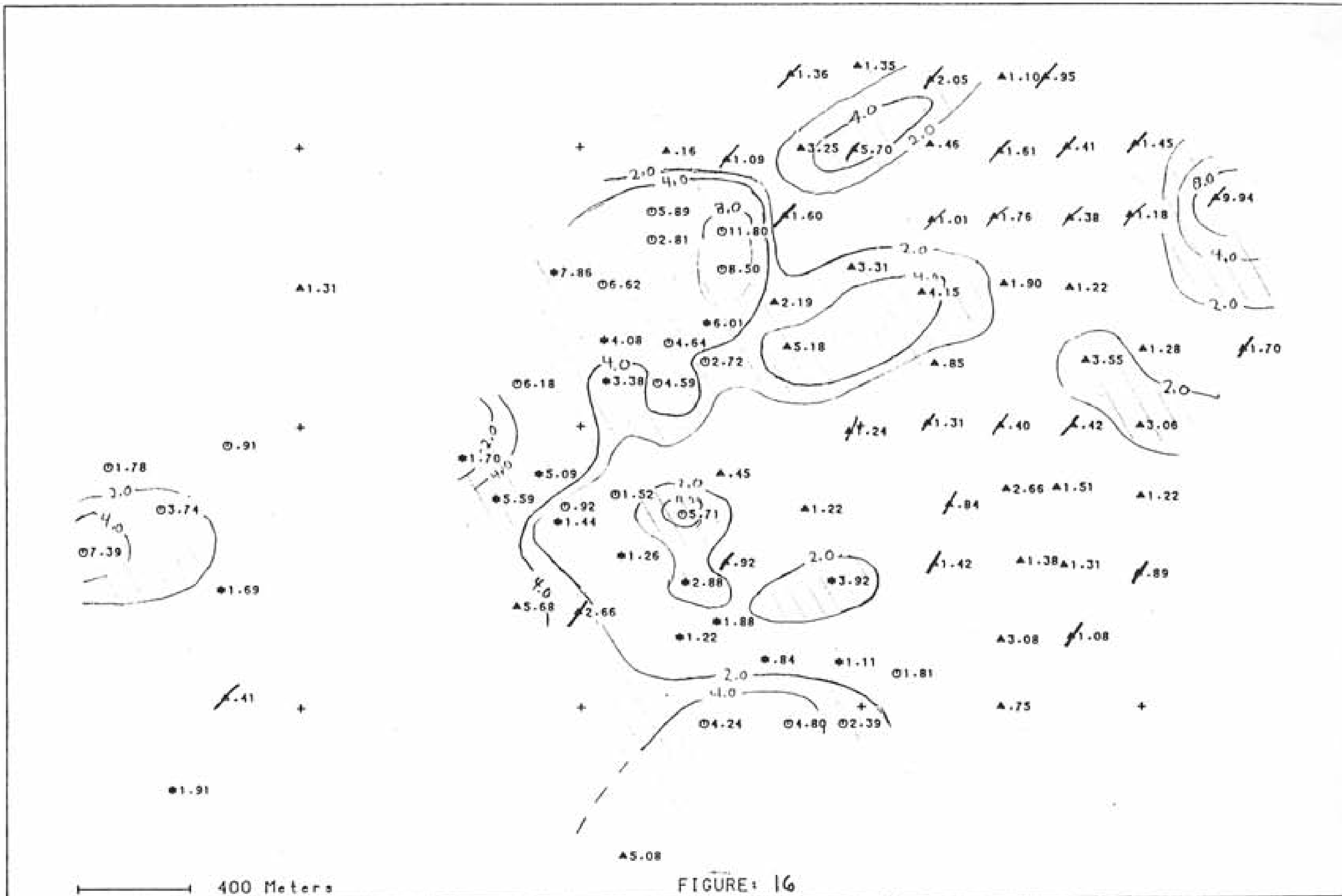


FIGURE: 16

WHITING CREEK PROSPECT
BRITISH COLUMBIA

+3.3 SP. GR. FRACTION (WT.%)
SAMPLE TYPE: WHOLE ROCK
ANALYTICAL METHOD:

2.0 ✓
4.0 ✓
8.0 ✓

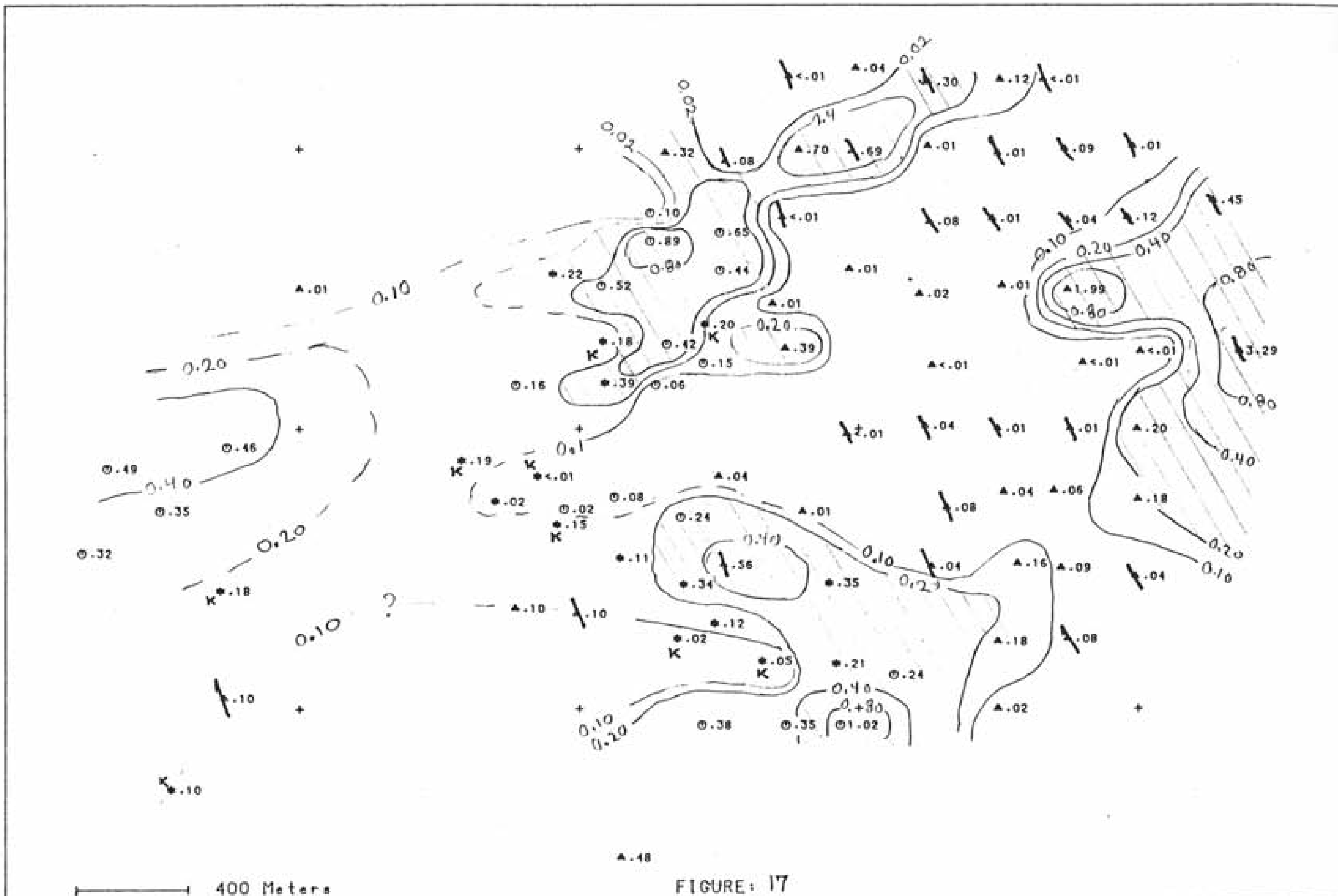


FIGURE: 17

WHITING CREEK PROSPECT
BRITISH COLUMBIA

MAGNETIC FRACTION (WT.%)
SAMPLE TYPE: WHOLE ROCK
ANALYTICAL METHOD:

0.10 ✓
0.20 ✓
0.40 ✓

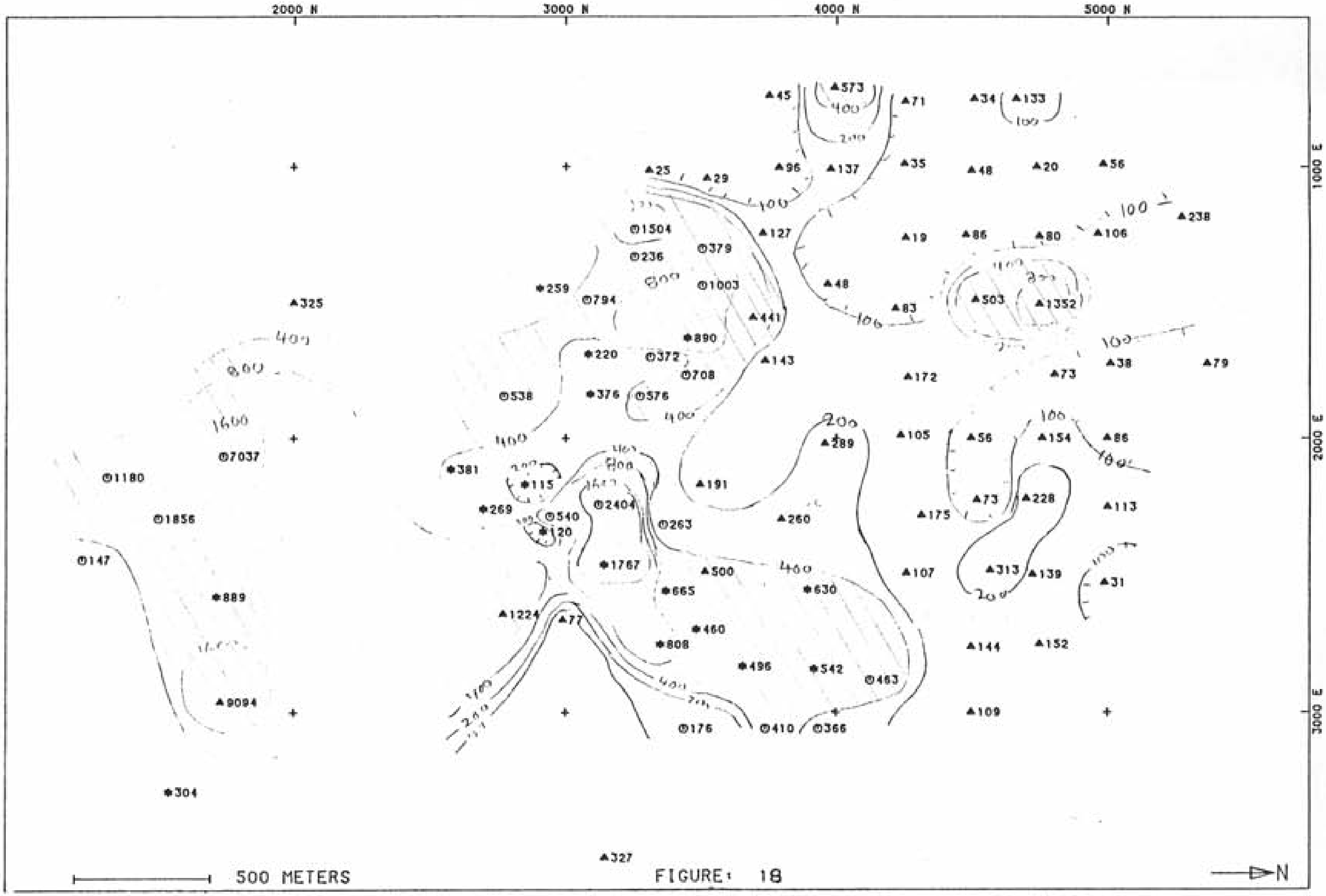


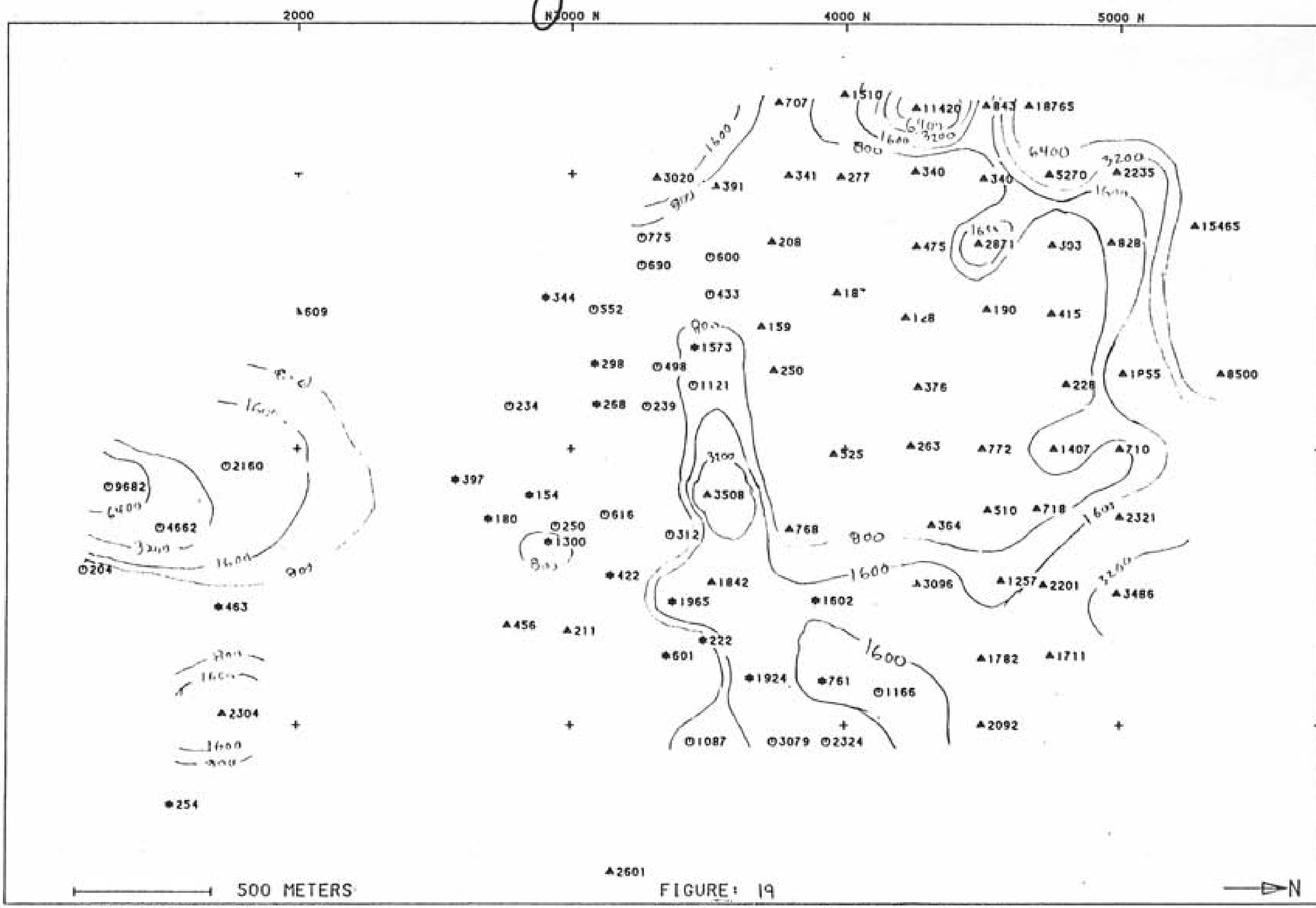
FIGURE: 18

WHITING CREEK PROSPECT
BRITISH COLUMBIA

CENTRAL-ZONE Cu-Mo-Sn-W PARAMETER

SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS & OES

● - DIAMOND DRILL HOLE SAMPLES
⊙ - PERCUSSION HOLE SAMPLES
▲ - SURFACE ROCK CHIP AND VEIN SAMPLES



WHITING CREEK PROSPECT
BRITISH COLUMBIA

HALO-ZONE Pb-Zn-Mn-As PARAMETER

SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS & HYDRIDE GENERATION

- ● = DIAMOND DRILL HOLE SAMPLES. ⊙ = PERCUSSION
- ⊙ = PERCUSSION DRILL HOLE SAMPLES
- ▲ = SURFACE ROCK CHIP AND VEIN SAMPLES

800 ✓
1600 ✓
3200 ✓
6400 ✓

FIGURE 20

WHITING CREEK PROSPECT
BRITISH COLUMBIA

HEAVY MINERALS ("PYRITE") HALO

SAMPLE TYPE: WHOLE ROCK
ANALYTICAL METHOD:

- ● = DIAMOND DRILL HOLE SAMPLES
- ⊙ = PERCUSSION DRILL HOLE SAMPLES
- ▲ = SURFACE ROCK CHIP AND VEIN SAMPLES

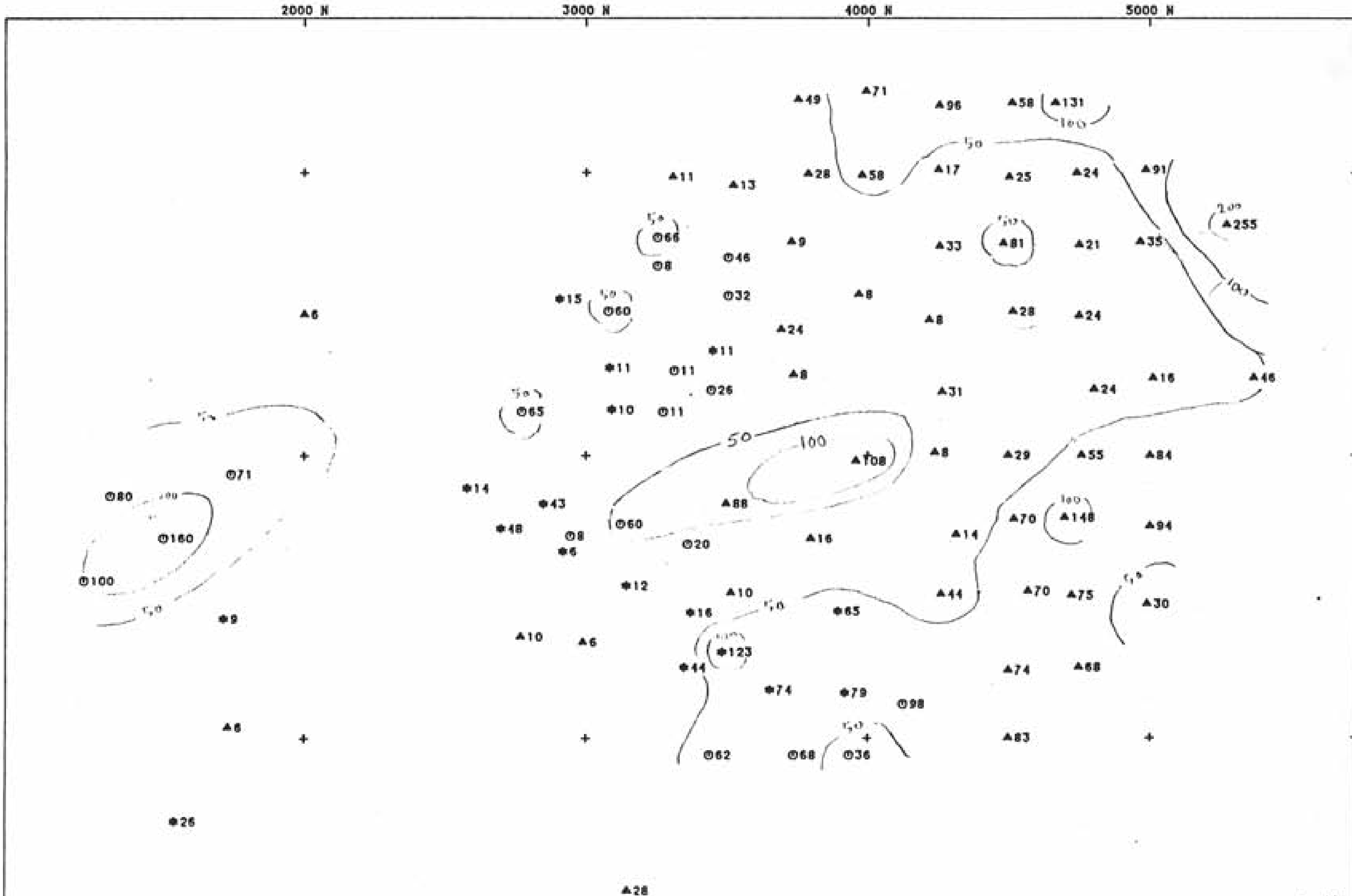


FIGURE: -21

WHITING CREEK PROSPECT
BRITISH COLUMBIA

Bi+Te
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: HYD. GEN. & OPT. EMISS. SPEC.

50 ✓
100 ✓
200 ✓

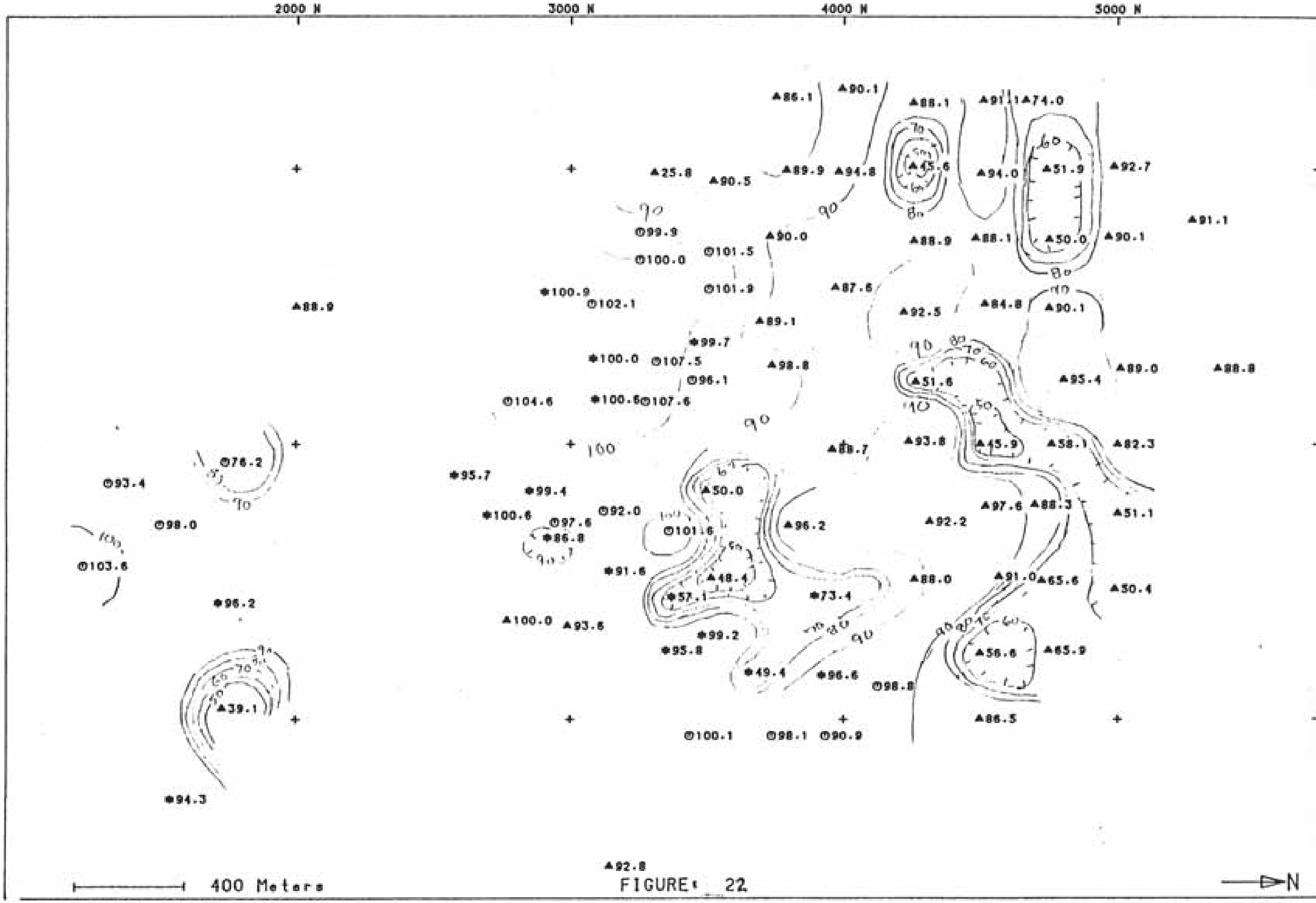


FIGURE: 22

WHITING CREEK PROSPECT
BRITISH COLUMBIA

S+Fe
SAMPLE TYPE: +3.3 SP. GR.
ANALYTICAL METHOD: AAS & LECO INDUCTION FURNACE

50
60
70
80
90
100
use 10
contour int.
50 = lowest
100 = highest

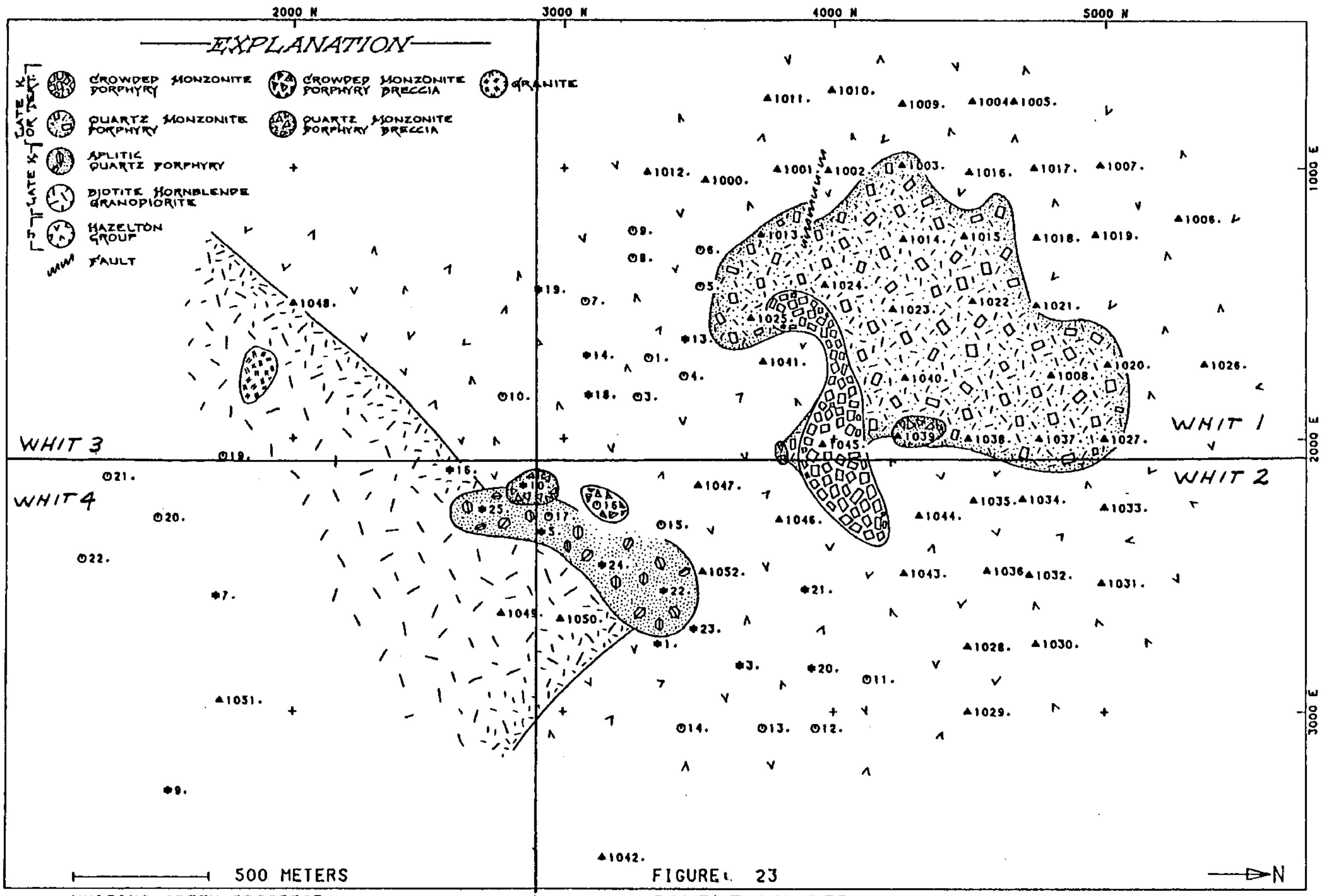
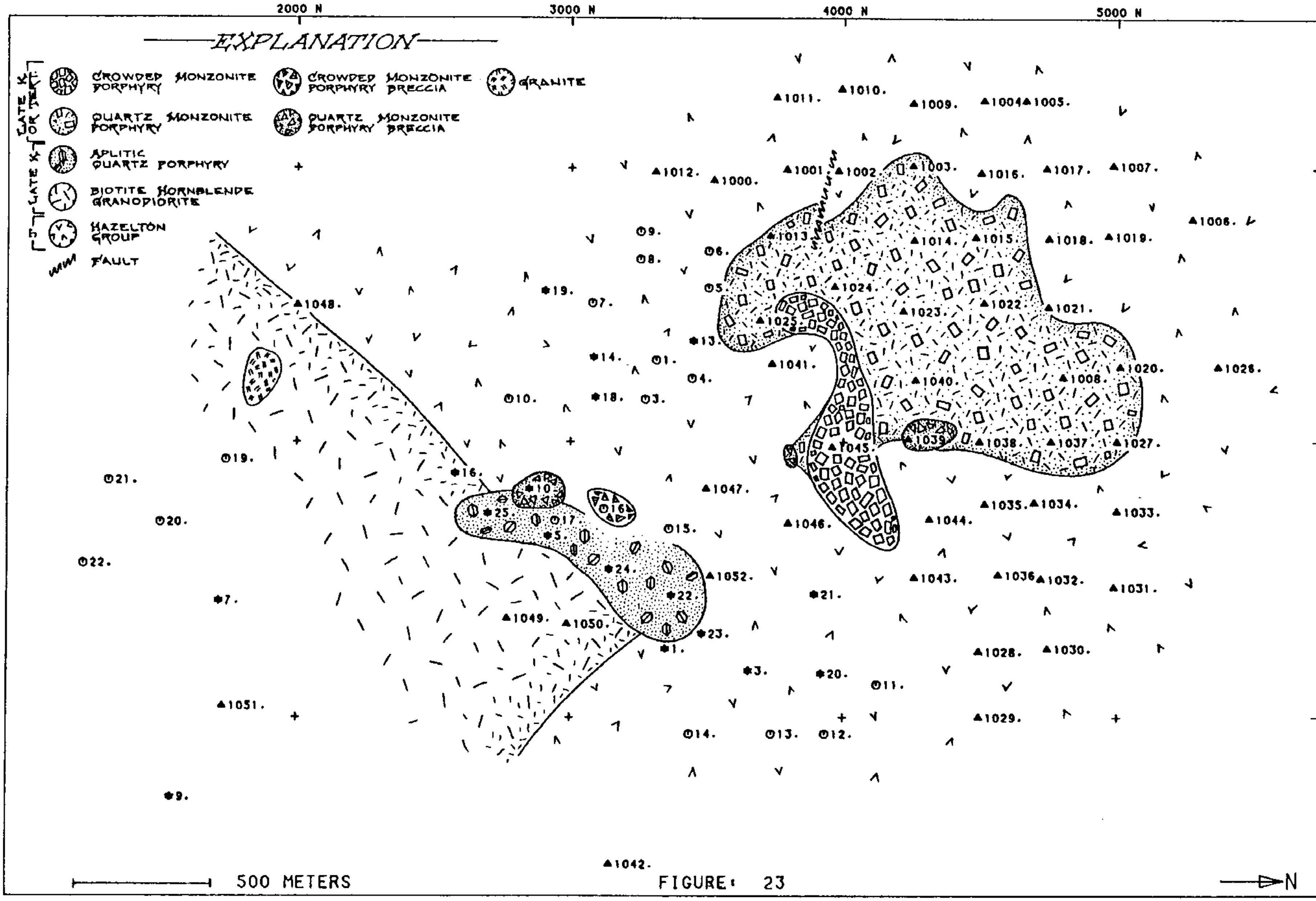


FIGURE 23

WHITING CREEK PROSPECT
BRITISH COLUMBIA

SAMPLE NUMBERS & GENERALIZED GEOLOGY

SAMPLE TYPE:
ANALYTICAL METHOD:
- DIAMOND DRILL HOLE SAMPLES
- PERCUSSION DRILL HOLE SAMPLES
- SURFACE ROCK CHIP AND VEIN SAMPLES



WHITING CREEK PROSPECT
BRITISH COLUMBIA

SAMPLE NUMBERS & GENERALIZED GEOLOGY

SAMPLE TYPE:
ANALYTICAL METHOD:

- ● = DIAMOND DRILL HOLE SAMPLES
- ⊕ = PERCUSSION DRILL HOLE SAMPLES
- ▲ = SURFACE ROCK CHIP AND VEIN SAMPLES

APPENDIX A

Geochemical Data Statistics

TABLE A-1. SIMPLE STATISTICS FOR SURFACE GEOCHEMICAL DATA

WHITING CREEK PROSPECT
BRITISH COLUMBIA

Rcd #	Description	# Pts	Minimum	Maximum	Mean	Variance	Std. Deviation
9	COPPER (PPM)	90	61.000	58500.	3776.0	.59120+008	7689.0
10	MOLYBDENUM (PPM)	90	5.0000	54700.	1350.3	.35362+008	5946.6
11	LEAD (PPM)	90	45.000	1600.0	119.33	45104.	212.38
12	ZINC (PPM)	90	28.000	11400.	475.09	.23737+007	1540.7
13	SILVER (PPM)	90	1.0000	67.000	10.122	61.210	7.8237
14	ARSENIC (PPM)	90	.20000	168.00	16.378	770.39	27.756
15	ANTIMONY (PPM)	90	.30000	3.2000	.39444	.14637	.38259
16	MANGANESE (PPM)	90	26.000	18000.	984.28	.53325+007	2309.2
17	COBALT (PPM)	90	5.0000	800.00	280.11	24843.	157.62
18	IRON (%)	90	25.800	58.100	50.748	30.715	5.5421
19	SULFUR (%)	79	15.500	52.500	39.658	56.632	7.5254
20	BISMUTH (PPM)	90	1.0000	240.00	37.557	1428.3	37.792
21	TELLURIUM (PPM)	90	5.0000	60.000	9.5556	68.340	8.2668
22	TIN (PPM)	90	1.0000	42.000	4.2444	44.411	6.6642
23	TUNGSTEN (PPM)	90	5.0000	200.00	31.033	1336.6	36.559
7	+3.3 SP. GR. FRACTION (WT. %	90	.16000	11.800	2.7029	5.3323	2.3092
8	% MAGNETIC FRACTION	90	.10000-001	3.2900	.24078	.18630	.43162

TABLE A-2. SPEARMAN RANK CORRELATION MATRIX FOR SURFACE GEOCHEMICAL DATA

*** Spearman Rank Correlation Matrix ***

WEITING CREEK PROSPECT
BRITISH COLUMBIA

Element	Cu	Mo	Pb	Zn	Ag	As	Sb	Mn	Co	Fe	S	Bi	Te	Sn	W	R 7	R 8
Cu	1.000	.581	.149	.248	-.070	-.122	.053	-.055	.490	.126	.435	.089	-.175	.275	.435	.341	.400
	(0)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(79)	(90)	(90)	(90)	(90)	(90)	(92)
	.000	.000	.079	.009	.261	.124	.314	.387	.000	.117	.000	.296	.047	.004	.000	.001	.000
Mo	.581	1.000	.003	-.006	-.293	-.303	-.048	-.220	.168	.025	.504	-.197	-.476	.483	.412	.165	.219
	(90)	(0)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(79)	(90)	(90)	(90)	(90)	(90)	(92)
	.000	.000	.487	.478	.003	.002	.329	.018	.055	.403	.000	.030	.000	.000	.000	.055	.018
Pb	.149	.003	1.000	.627	.492	.568	.400	.417	.151	-.311	-.244	.427	.204	.266	.075	-.297	.085
	(90)	(90)	(0)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(79)	(90)	(90)	(90)	(90)	(90)	(92)
	.079	.487	.000	.000	.000	.000	.000	.000	.076	.001	.014	.000	.026	.005	.255	.002	.284
Zn	.248	-.006	.627	1.000	.194	.412	.277	.299	.308	.003	-.067	.384	.183	-.027	-.034	.067	.327
	(90)	(90)	(90)	(0)	(90)	(90)	(90)	(90)	(90)	(90)	(79)	(90)	(90)	(90)	(90)	(92)	(90)
	.009	.478	.000	.000	.031	.000	.004	.002	.002	.488	.264	.000	.040	.397	.373	.269	.001
Ag	-.070	-.293	.492	.194	1.000	.385	.254	.407	.060	-.266	-.504	.244	.241	.036	-.120	-.441	-.182
	(90)	(90)	(90)	(90)	(0)	(90)	(90)	(90)	(90)	(90)	(79)	(90)	(90)	(90)	(90)	(90)	(92)
	.261	.003	.000	.031	.000	.000	.008	.000	.290	.005	.000	.010	.011	.367	.130	.000	.041
As	-.122	-.323	.560	.412	.385	1.000	.362	.363	.099	-.103	-.265	.475	.362	-.024	-.095	-.219	-.012
	(90)	(90)	(90)	(90)	(90)	(0)	(90)	(90)	(90)	(90)	(79)	(90)	(90)	(90)	(90)	(90)	(92)
	.124	.002	.000	.000	.000	.000	.000	.000	.322	.332	.009	.000	.000	.410	.313	.018	.453
Sb	.053	-.048	.400	.277	.254	.362	1.000	.073	-.010	-.040	-.050	.131	-.070	-.069	-.091	-.088	.135
	(90)	(90)	(90)	(90)	(90)	(90)	(0)	(90)	(90)	(90)	(79)	(90)	(90)	(90)	(90)	(90)	(92)
	.314	.329	.000	.004	.008	.000	.000	.251	.463	.329	.332	.100	.258	.264	.302	.293	.102
Mn	-.055	-.220	.417	.299	.407	.363	.073	1.000	.246	-.519	-.508	.352	.430	.142	.070	-.355	.220
	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(0)	(90)	(90)	(79)	(90)	(90)	(90)	(90)	(90)	(92)
	.307	.018	.000	.002	.000	.000	.251	.000	.009	.000	.000	.000	.000	.089	.258	.000	.018
Co	.490	.168	.151	.308	.060	.099	-.010	.246	1.000	-.026	.082	.039	.065	.056	.286	.064	.262
	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(0)	(90)	(79)	(90)	(90)	(90)	(90)	(92)	(92)
	.000	.055	.076	.002	.290	.322	.463	.009	.000	.400	.261	.357	.275	.304	.003	.278	.006
Fe	.126	.025	-.311	.003	-.266	-.103	-.048	-.519	-.026	1.000	.544	-.097	-.149	-.436	-.219	.569	.080
	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(0)	(79)	(90)	(90)	(90)	(90)	(92)	(92)
	.117	.423	.001	.488	.005	.332	.329	.000	.400	.000	.000	.317	.079	.000	.018	.000	.270
S	.435	.524	-.244	-.067	-.504	-.265	-.050	-.508	.082	.544	1.000	-.170	-.310	.019	.256	.561	.279
	(79)	(79)	(79)	(79)	(79)	(79)	(79)	(79)	(79)	(79)	(0)	(79)	(79)	(79)	(79)	(79)	(79)
	.000	.000	.014	.284	.000	.009	.332	.000	.261	.000	.000	.065	.003	.431	.011	.000	.006
Bi	.089	-.197	.427	.384	.244	.475	.131	.352	.039	-.097	-.170	1.000	.680	.019	.035	.027	.050
	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(79)	(0)	(90)	(90)	(90)	(90)	(92)
	.296	.030	.000	.000	.010	.000	.108	.000	.357	.317	.065	.000	.000	.426	.370	.395	.272
Te	-.175	-.476	.204	.183	.241	.362	-.070	.430	.065	-.149	-.310	.680	1.000	-.154	-.084	-.025	-.042
	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(79)	(90)	(0)	(90)	(92)	(90)	(92)
	.047	.000	.026	.040	.011	.000	.258	.000	.275	.079	.003	.000	.000	.072	.282	.406	.347
Sn	.275	.483	.266	-.027	.036	-.024	-.069	.142	.056	-.436	.019	.019	-.154	1.000	.451	-.396	-.120
	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(79)	(90)	(90)	(0)	(90)	(90)	(92)
	.004	.000	.005	.397	.367	.410	.264	.089	.304	.000	.431	.426	.072	.000	.000	.000	.129
W	.435	.412	.075	-.034	-.120	-.095	-.091	.070	.288	-.219	.256	.035	-.084	.451	1.000	.042	.197
	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(79)	(90)	(90)	(90)	(0)	(90)	(92)
	.000	.000	.255	.373	.130	.313	.302	.259	.003	.016	.011	.370	.282	.000	.000	.349	.032
R 7	.341	.165	-.297	.067	-.441	-.219	-.088	-.355	.064	.569	.561	.027	-.025	-.396	.042	1.000	.423
	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(92)	(79)	(90)	(90)	(90)	(92)	(0)	(92)
	.001	.058	.002	.269	.000	.018	.293	.000	.278	.000	.000	.398	.406	.000	.349	.349	.002
R 8	.400	.219	.085	.327	-.182	-.012	.135	.220	.262	.080	.279	.080	-.042	-.120	.197	.423	1.000
	(90)	(92)	(90)	(90)	(90)	(90)	(92)	(92)	(90)	(90)	(79)	(90)	(90)	(92)	(92)	(92)	(0)
	.000	.018	.284	.001	.041	.453	.102	.018	.006	.270	.006	.270	.347	.129	.030	.000	.000

*** Correlation Coefficient / (# of data points) / Significance

R 7 = +3.3 SP. GR. FRACTION (WT. %)

R 8 = % MAGNETIC FRACTION

TABLE A-3. PEARSON PRODUCT-MOMENT CORRELATION MATRIX FOR SURFACE GEOCHEMICAL DATA

*** Pearson Product-Moment Correlation Matrix ***

WEITING CREEK PROSPECT
BRITISH COLUMBIA

Element	Cu	Mo	Pb	Zn	Ag	As	Sb	Mn
Cu	1.000 (0) .000	.583 (90) .000	.215 (90) .020	.084 (90) .282	.131 (90) .108	-.017 (90) .433	.039 (90) .357	-.043 (90) .345
Mo	.583 (90) .000	1.000 (0) .000	-.014 (90) .446	-.042 (90) .347	.098 (90) .319	-.076 (90) .258	-.037 (90) .365	.028 (90) .394
Pb	.215 (90) .020	-.014 (90) .446	1.000 (0) .000	.515 (90) .000	.206 (90) .024	.242 (90) .010	.550 (90) .000	-.007 (90) .474
Zn	.084 (90) .282	-.042 (90) .347	.515 (90) .000	1.000 (0) .000	.125 (90) .120	.143 (90) .087	.161 (90) .063	.110 (90) .152
Ag	.131 (90) .108	.098 (90) .319	.206 (90) .024	.125 (90) .120	1.000 (0) .000	.266 (90) .006	.187 (90) .037	.722 (90) .000
As	-.017 (90) .433	-.076 (90) .258	.242 (90) .010	.143 (90) .087	.266 (90) .005	1.000 (0) .000	.330 (90) .001	.054 (90) .306
Sb	.039 (90) .357	-.037 (90) .365	.550 (90) .000	.161 (90) .063	.187 (90) .037	.330 (90) .001	1.000 (0) .000	-.030 (90) .387
Mn	-.043 (90) .345	.028 (90) .394	-.007 (90) .474	.110 (90) .152	.722 (90) .000	.054 (90) .308	-.030 (90) .387	1.000 (0) .000
Co	.285 (90) .003	.169 (90) .054	-.003 (90) .488	.184 (90) .039	.195 (90) .031	.208 (90) .023	-.066 (90) .272	.163 (90) .060
Fe	-.146 (90) .083	-.266 (90) .005	.026 (90) .400	.067 (90) .267	-.198 (90) .029	.063 (90) .282	.086 (90) .286	-.235 (90) .012
S	.082 (79) .261	.034 (79) .381	.050 (79) .334	.004 (79) .485	-.375 (79) .000	-.078 (79) .252	-.051 (79) .331	-.383 (79) .000
Bi	.078 (90) .265	-.091 (90) .301	.322 (90) .001	.582 (90) .000	.283 (90) .003	.110 (90) .150	.150 (90) .077	.339 (90) .001
Te	-.116 (90) .138	-.105 (90) .336	-.045 (90) .339	.023 (90) .411	.160 (90) .064	.014 (90) .445	-.070 (90) .259	.147 (90) .081
Sn	.641 (90) .000	.790 (90) .000	.014 (90) .445	-.042 (90) .348	-.005 (90) .482	-.093 (90) .306	-.021 (90) .419	.002 (90) .492
W	.292 (90) .003	.187 (90) .037	-.001 (90) .494	-.069 (90) .263	-.032 (90) .382	-.099 (90) .322	-.093 (90) .305	-.050 (90) .322
R 7	.001 (90) .494	-.140 (90) .092	-.053 (90) .313	.236 (90) .012	-.270 (90) .005	-.051 (90) .318	-.084 (90) .281	-.148 (90) .080
R 8	.097 (90) .317	-.035 (90) .371	.139 (90) .095	.348 (90) .000	.041 (90) .351	.017 (90) .433	.118 (90) .133	.033 (90) .379

Element	Co	Fe	S	Bi	Te	Sn	W	R 7	R 8
Cu	.285 (90) .003	-.146 (90) .083	.082 (79) .261	.078 (90) .265	-.116 (90) .138	.641 (90) .000	.292 (90) .003	.001 (90) .494	.097 (90) .317
Mo	.169 (90) .054	-.266 (90) .005	.034 (79) .381	-.091 (90) .301	-.105 (90) .336	.790 (90) .000	.187 (90) .037	-.140 (90) .092	-.035 (90) .371
Pb	-.003 (90) .488	.026 (90) .400	.050 (79) .334	.322 (90) .001	-.045 (90) .339	.014 (90) .445	-.001 (90) .494	-.053 (90) .313	.139 (90) .095
Zn	.184 (90) .039	.067 (90) .267	.004 (79) .485	.582 (90) .000	.023 (90) .411	-.042 (90) .348	-.069 (90) .263	.236 (90) .012	.348 (90) .000
Ag	.195 (90) .031	-.198 (90) .029	-.375 (79) .000	.283 (90) .003	.160 (90) .064	-.005 (90) .482	-.032 (90) .382	-.270 (90) .005	.041 (90) .351
As	.208 (90) .023	.063 (90) .282	-.078 (79) .252	.110 (90) .150	.014 (90) .445	-.093 (90) .306	-.099 (90) .322	-.051 (90) .318	.017 (90) .433
Sb	-.066 (90) .272	.086 (90) .286	-.051 (79) .331	.150 (90) .077	-.070 (90) .259	-.021 (90) .419	-.093 (90) .305	-.084 (90) .281	.118 (90) .133
Mn	.163 (90) .060	-.235 (90) .012	-.383 (79) .002	.339 (90) .001	.147 (90) .081	.002 (90) .492	-.050 (90) .322	-.148 (90) .080	.033 (90) .379
Co	1.000 (0) .000	.044 (90) .342	.064 (79) .292	.120 (90) .130	-.005 (90) .480	.217 (90) .019	.179 (90) .044	.132 (90) .106	.180 (90) .043
Fe	.044 (90) .342	1.000 (0) .000	.794 (79) .000	-.001 (90) .496	-.080 (90) .269	-.367 (90) .000	-.156 (90) .070	.375 (90) .000	.063 (90) .280
S	.064 (79) .292	.794 (79) .000	1.000 (0) .000	-.141 (79) .107	-.204 (79) .034	-.111 (79) .334	-.009 (79) .468	.424 (79) .000	.029 (79) .396
Bi	.120 (90) .130	-.001 (90) .496	-.141 (79) .107	1.000 (0) .000	.408 (90) .000	-.072 (90) .254	.006 (90) .476	.180 (90) .042	.017 (90) .435
Te	-.005 (90) .480	-.080 (90) .269	-.204 (79) .034	.408 (90) .000	1.000 (0) .000	-.132 (90) .107	-.025 (90) .406	-.089 (90) .294	-.074 (90) .252
Sn	.217 (90) .019	-.367 (90) .000	-.111 (79) .334	-.072 (90) .254	-.132 (90) .107	1.000 (0) .000	.291 (90) .003	-.209 (90) .023	-.055 (90) .305
W	.179 (90) .044	-.156 (90) .070	-.009 (79) .468	.006 (90) .476	-.025 (90) .406	.291 (90) .003	1.000 (0) .000	-.030 (90) .389	-.001 (90) .496
R 7	.132 (90) .106	.375 (90) .000	.424 (79) .000	.180 (90) .042	-.089 (90) .294	-.209 (90) .023	-.030 (90) .389	1.000 (0) .000	.149 (90) .079
R 8	.180 (90) .043	.063 (90) .280	.029 (79) .396	.017 (90) .435	-.074 (90) .252	-.055 (90) .305	-.001 (90) .496	.149 (90) .079	1.000 (0) .079

*** Correlation Coefficient / (# of data points) / Significance

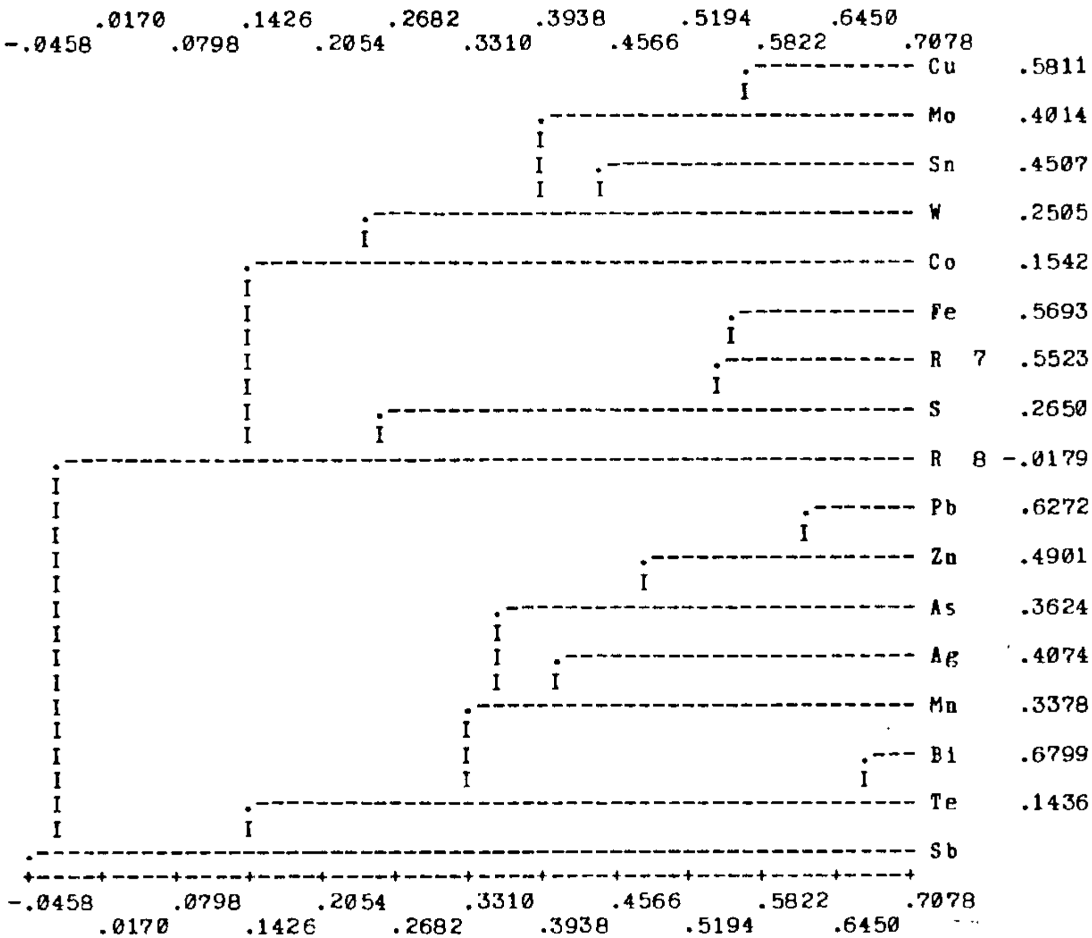
R 7 = +3.3 SP. GR. FRACTION (WT. %)

R 8 = % MAGNETIC FRACTION

FIGURE A-4. SPEARMAN RANK CLUSTER ANALYSIS FOR SURFACE GEOCHEMICAL DATA

*** Spearman Rank Cluster Analysis ***

WHITING CREEK PROSPECT
BRITISH COLUMBIA



Cu	Mo	.58106
Pb	Zn	.62716
Fe	R 7	.56928
Bi	Te	.67989
Pb	As	.49008
Ag	Mn	.40738
Fe	S	.55233
Sn	W	.45065
Cu	Sn	.40144
Pb	Ag	.36236
Pb	Bi	.33777
Fe	R 8	.26500
Cu	Co	.25049
Pb	Sb	.14357
Cu	Fe	.15420
Cu	Pb	-.01790

Columns 1 and 2 - Observations combined into clusters
Column 3 - Similarity level of clustering

DENDROGRAM - VALUES ALONG X-AXIS ARE SIMILARITIES

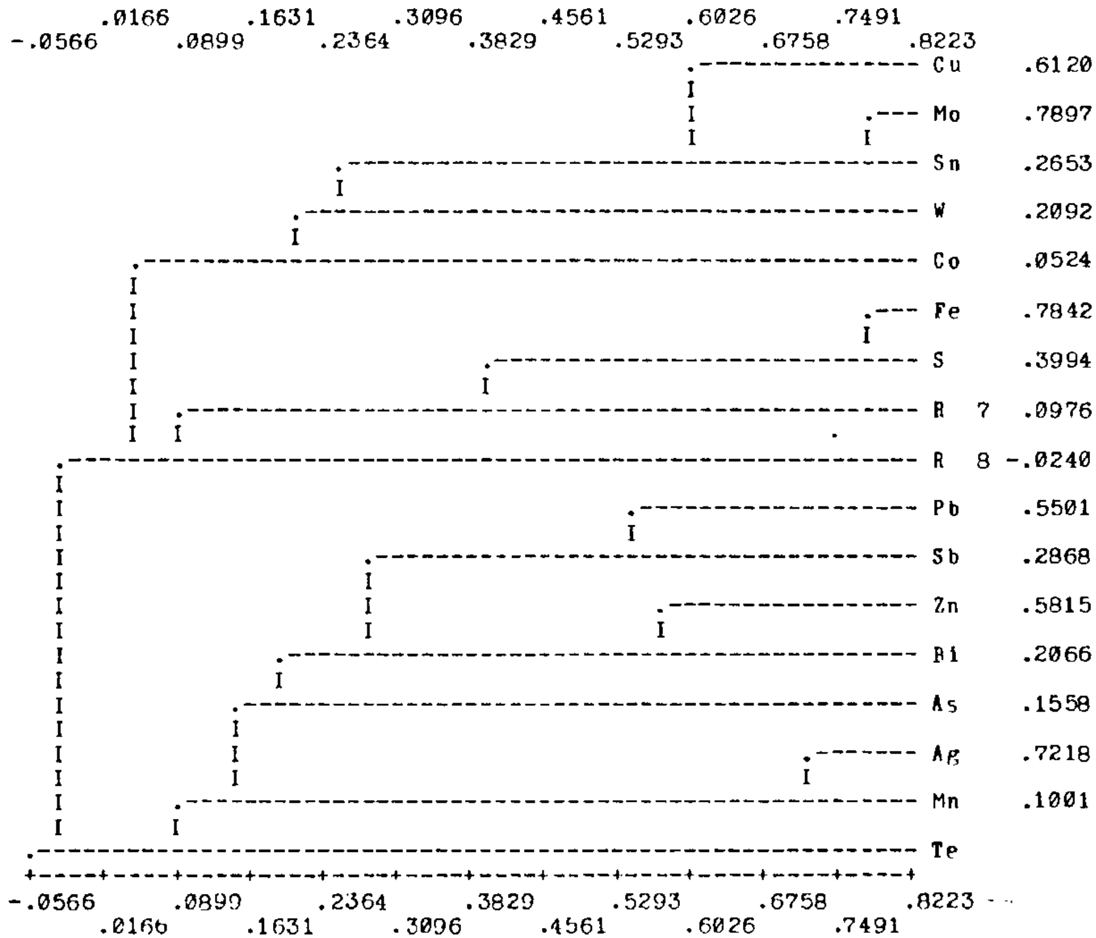
R 7 = +3.3 SP. GR. FRACTION (WT. %)

R 8 = % MAGNETIC FRACTION

FIGURE A-5. PEARSON PRODUCT-MOMENT CLUSTER ANALYSIS FOR SURFACE GEOCHEMICAL DATA

*** Pearson Product-Moment Cluster Analysis ***

WHITING CREEK PROSPECT
BRITISH COLUMBIA



DENDROGRAM - VALUES ALONG X-AXIS ARE SIMILARITIES

R 7 = +3.3 SP. GR. FRACTION (WT. %)

R 8 = % MAGNETIC FRACTION

Mo	Sn	.78974
Pb	Sb	.55012
Zn	Bi	.58150
Ag	Mn	.72177
Fe	S	.78423
Cu	Mo	.61196
Pb	Zn	.28682
Fe	R 7	.39941
Cu	W	.26530
Cu	Co	.20918
Pb	As	.20658
Pb	Ag	.15575
Fe	R 8	.09760
Pb	Te	.10005
Cu	Fe	.05237
Cu	Pb	-.02404

Columns 1 and 2 - Observations combined into clusters
Column 3 - Similarity level of clustering

APPENDIX B

Original Geochemical Data

ROCKY MOUNTAIN GEOCHEMICAL CORP.

1323 W. 7900 SOUTH • WEST JORDAN, UTAH 84084 • PHONE: (801) 255-3558

WEST JORDAN OFFICE

Certificate of Analysis

RMGC Numbers:

Local Job No.: 80-35-37-SL and 81-01-07-SL

Foreign Job No.:

Invoice No.: M 102937

Date: February 26, 1981

Client: Robert W. Bamford
1138 Gilmer Drive
Salt Lake City, Utah 84105

Client Order No.: Whiting Creek Samples

Report On: 91 Samples

Submitted by: Robert W. Bamford

Date Received: 10/31/80 and 1/5/81

Analysis: Heavy Mineral Seperation, Copper, Lead, Zinc, Cobalt, Molybdenum, Antimony, Arsenic, Manganese, Iron, Silver, Sulfur and Bismuth.

Analytical Methods: Antimony and Arsenic determined by hydride. Sulfur determined by leco induction furnace. Remaining elements determined by atomic absorption.

Remarks:

cc:

enc.
file (2)
GJC/lw

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

Referances Table

Standards	Copper Sought	Copper Found	Lead Sought	Lead Found	Zinc Sought	Zinc Found
Sy-2	5	12,15	80	130,125	250	294,270
MRG-1	135	132,141	10	70,80	190	211,228
GRLD-105	0.73%	0.74%,0.69%	37	65,75	48	59,68

Standards	Molybdenum Sought	Molybdenum Found	Antimony Sought	Antimony Found	Arsenic Sought	Arsenic Found
Sy-2	3	10	0.2	-0.5,-0.5	18	14,8.1
MRG-1		15	0.4	-0.5,-0.5	0.7	2.5,-0.5
GRLD-105	344	200,235		-0.5,-0.5	26	14,10

Standards	Manganese Sought	Manganese Found	Iron Sought	Iron Found
Sy-2	0.25%	0.30%,0.31%	4.39%	4.38%,5.09%
MRG-1	0.13%	0.15%,0.16%	12.5%	12.9%,12.9%
GRLD-105	106	102,106	2.90%	3.06%,3.04%

Standards	Cobalt Sought	Cobalt Found	Silver Sought	Silver Found
Sy-2	11	15,15		-1,-1
MRG-1	86	95,95	0.14	-1,-1
GRLD-105	24	20,15	3.2	2.5,3.8

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

.mple No.	Wt +3.3 gr.	Wt % +3.3	Wt Mag. gr.	Wt % Mag.	Sample Wt Separated gr.
WC - 1000	0.87	1.09	0.06	0.08	80
1001	2.60	3.25	0.56	0.70	80
1002	4.56	5.70	0.55	0.69	80
1003	0.37	0.46	0.01	0.01	80
1004	0.88	1.10	0.10	0.12	80
1005	0.76	0.95	0.00	-0.01	80
1006	7.95	9.94	0.36	0.45	80
1007	1.16	1.45	0.01	0.01	80
1008	2.84	3.55	0.00	-0.01	80
1009	1.64	2.05	0.24	0.30	80
1010	1.08	1.35	0.03	0.04	80
1011	1.09	1.36	0.01	-0.01	80
1012	0.13	0.16	0.26	0.32	80
1013	1.28	1.60	0.00	-0.01	80
1014	0.81	1.01	0.06	0.08	80
1015	1.41	1.76	0.01	0.01	80
1016	1.29	1.61	0.01	0.01	80
1017	0.33	0.41	0.07	0.09	80
1018	0.30	0.38	0.03	0.04	80
1019	0.94	1.18	0.10	0.12	80
1020	1.02	1.28	0.00	-0.01	80
1021	0.98	1.22	1.59	1.99	80
1022	1.52	1.90	0.01	0.01	80
1023	3.32	4.15	0.02	0.02	80
WC - 1024	2.65	3.31	0.01	0.01	80

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

ample No.	Wt +3.3	Wt % +3.3	Wt Mag. Gr.	Wt % Mag.	Sample Wt Separated gr.
WC - 1025	1.75	2.19	0.01	0.01	80
1026	1.36	1.70	2.63	3.29	80
1027	2.45	3.06	0.16	0.20	80
1028	2.46	3.08	0.14	0.18	80
1029	0.60	0.75	0.02	0.02	80
1030	0.86	1.08	0.06	0.08	80
1031	0.71	0.89	0.03	0.04	80
1032	1.05	1.31	0.07	0.09	80
1033	0.98	1.22	0.14	0.18	80
1034	1.21	1.51	0.05	0.06	80
1035	2.13	2.66	0.03	0.04	80
1036	1.10	1.38	0.13	0.16	80
1037	0.34	0.42	0.01	0.01	80
1038	0.32	0.40	0.01	0.01	80
1039	1.05	1.31	0.03	0.04	80
1040	0.68	0.85	0.00	-0.01	80
1041	4.14	5.18	0.31	0.39	80
1042	4.06	5.08	0.38	0.48	80
1043	1.14	1.42	0.03	0.04	80
1044	0.67	0.84	0.06	0.08	80
1045	0.99	1.24	0.00	-0.01	80
1046	0.98	1.22	0.01	0.01	80
1047	0.36	0.45	0.03	0.04	80
1048	1.05	1.31	0.01	0.01	80
WC - 1049	4.54	5.68	0.08	0.10	80

Sample No.	Wt +3.3	Wt % +3.3	Wt Mag. gr.	Wt % Mag.	Sample Wt Separated gr.
WC - 1050	2.13	2.66	0.08	0.10	80
1051	0.33	0.41	0.08	0.10	80
WC - 1052	0.74	0.92	0.45	0.56	80
DDH- 1 96-114	0.98	1.22	0.02	0.02	80
3 92-129	0.67	0.84	0.04	0.05	80
5 121-137	1.18	1.48	0.11	0.14	80
5 137-152	1.15	1.44	0.12	0.15	80
7 98-120	1.35	1.69	0.14	0.18	80
9 112-131	1.53	1.91	0.08	0.10	80
10 123-141	4.07	5.09	0.00	-0.01	80
13 80-96	4.81	6.01	0.16	0.20	80
14 84-101	3.26	4.08	0.14	0.18	80
DH-16 80-96	1.36	1.70	0.15	0.19	80
WCPH- 1/135-120(537)	3.71	4.64	0.34	0.42	80
3/80-180(538-547)	3.67	4.59	0.05	0.06	80
4/49-150(561-570)	2.18	2.72	0.12	0.15	80
5/28-120(582-591)	6.80	8.50	0.35	0.44	80
6/28-130(612-621)	9.44	11.8	0.52	0.65	80
7/15-110(642-651)	5.30	6.62	0.42	0.52	80
8/11-110(673-682)	2.25	2.81	0.71	0.89	80
9/34-130(695-704)	4.71	5.89	0.08	0.10	80
10/18-120(725-734)	4.94	6.18	0.13	0.16	80
WCPH-11/11-110(756-765)	1.45	1.81	0.19	0.24	80

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

Sample No.		Wt +3.3 gr	Wt % +3.3	Wt Mag gr.	Wt % Mag.	Sample Wt Separated gr.
WCPH-12/24-120	(780-789)	1.91	2.39	0.82	1.02	80
13/31-130	(811-820)	3.84	4.80	0.28	0.35	80
14/13-110	(830-839)	3.39	4.24	0.30	0.38	80
15/48-140	(862-871)	4.57	5.71	0.19	0.24	80
16/20-110	(886-894)	1.22	1.52	0.06	0.08	80
17/28-120	(895-904)	0.74	0.92	0.02	0.02	80
19/70-170	(926-935)	0.73	0.91	0.37	0.46	80
20/18-120	(952-961)	2.99	3.74	0.28	0.35	80
21/15-110	(981-990)	1.42	1.78	0.39	0.49	80
WCPH-22/17-110	(2010-2019)	5.91	7.39	0.26	0.32	80
WCDDH-18/14.9-45.0	(1001-1010)	2.70	3.38	0.31	0.39	80
19/12.0-42.0	(1120-1129)	6.29	7.86	0.18	0.22	80
20/7.6-37.0	(1205-1214)	0.89	1.11	0.17	0.21	80
21/14.3-44.0	(1303-1312)	3.14	3.92	0.28	0.35	80
22/13.7-44.0	(1397-1406)	0.23	2.88	0.27	0.34	80
23/19.7-49.0	(1489-1498)	1.50	1.88	0.10	0.12	80
24/6.8-36.0	(1588-1597)	1.01	1.26	0.09	0.11	80
WCDDH-25/3.0-33.0	(1681-1690)	4.47	5.59	0.02	0.02	80

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

ample No.	gr. Sample Wt Analyzed	ppm Copper	ppm Lead	ppm Zinc	ppm Molybdenum
WC - 1000	0.2000	159	50	36	60
1001	0.2000	789	60	41	15
1002	0.2000	0.11%	50	59	10
1003	0.2000	61	70	49	55
1004	0.2000	270	115	70	10
1005	0.2000	0.12%	150	275	10
1006	0.2000	0.23%	115	1.14%	10
1007	0.2000	476	105	0.16%	10
1008	0.2000	590	80	55	20
1009	0.2000	629	90	280	10
1010	0.2000	0.56%	140	141	-5
1011	0.2000	368	90	91	-5
1012	0.1000	71	120	62	-10
1013	0.2000	990	60	56	110
1014	0.2000	112	70	66	-5
1015	0.2000	635	70	568	10
1016	0.2000	401	60	61	-5
1017	0.2000	92	65	65	35
1018	0.2000	721	70	52	-5
1019	0.2000	940	85	209	-5
1020	0.2000	180	110	0.11%	85
1021	0.2000	1.22%	65	68	0.12%
1022	0.2000	0.46%	75	48	150
1023	0.2000	760	55	30	15
WC - 1024	0.2000	345	55	30	30

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

ample No.	gr. Sample Wt Analyzed	ppm Copper	ppm Lead	ppm Zinc	ppm Molybdenum
WC - 1025	0.2000	0.37%	50	36	570
1026	0.2000	722	320	0.50%	10
1027	0.2000	745	55	55	-5
1028	0.2000	0.11%	80	114	-5
1029	0.2000	0.10%	80	72	15
1030	0.2000	798	65	46	-5
1031	0.2000	185	75	51	-5
1032	0.2000	0.11%	80	51	10
1033	0.2000	998	110	111	10
1034	0.2000	0.21%	70	48	10
1035	0.2000	336	60	32	10
1036	0.2000	0.11%	75	66	10
1037	0.2000	0.13%	560	151	25
1038	0.2000	98	80	34	-5
1039	0.2000	576	55	45	-5
1040	0.2000	0.16%	75	75	-5
1041	0.2000	0.13%	50	30	20
1042	0.2000	0.31%	200	485	10
1043	0.2000	821	125	608	15
1044	0.2000	0.12%	85	65	20
1045	0.2000	0.25%	85	51	10
1046	0.2000	250	60	30	0.22%
1047	0.2000	0.14%	100	45	85
1048	0.2000	0.15%	60	28	0.11%
WC - 1049	0.2000	1.19%	75	39	160

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

Sample No.	gr Sample Wt Analyzed	ppm Copper	ppm Lead	ppm Zinc	ppm Molybdenum
WC - 1050	0.2000	308	90	54	290
1051	0.2000	3.51%	95	66	5.47%
WC - 1052	0.2000	0.29%	80	42	415
DDH- 1 96-114	0.2000	0.31%	90	49	0.47%
3 92-129	0.2000	0.17%	95	49	0.24%
5 121-137	0.2000	0.12%	55	41	175
5 137-152	0.2000	855	60	34	120
7 98-120	0.2000	0.80%	110	45	680
9 112-131	0.2000	0.24%	60	36	430
10 123-141	0.2000	960	50	29	20
13 80-96	0.2000	0.86%	100	269	240
14 84-101	0.2000	0.14%	45	32	535
DDH-16 80-96	0.2000	0.34%	45	31	30
WCPH- 1/35-120(537)	0.2000	0.31%	55	61	400
3/80-180(538-457)	0.2000	0.52%	50	92	425
4/49-150(561-570)	0.2000	0.46%	50	66	0.22%
5/28-120(582-591)	0.2000	0.92%	60	252	600
6/28-130(612-621)	0.2000	0.34%	70	225	185
7/15-110(642-651)	0.2000	0.76%	55	62	20
8/11-110(673-682)	0.2000	0.18%	70	128	245
9/34-130(695-704)	0.2000	1.30%	120	85	30
10/18-120(725-734)	0.2000	0.26%	65	32	0.23%
WCPH-11/11-110(756-765)	0.2000	0.27%	125	470	0.15%

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

ample No.		GR. Sample Wt Analyzed	ppm Copper	ppm Lead	ppm Zinc	ppm Molybdenum
WCPH-12/24-120	(780-789)	0.2000	0.28%	85	0.16%	75
13/31-130	(811-820)	0.2000	0.34%	115	0.22%	230
14/13-110	(830-839)	0.2000	0.15%	80	435	50
15/48-140	(862-871)	0.2000	0.19%	55	85	600
16/20-110	(886-894)	0.2000	1.85%	95	262	0.48%
17/28-120	(895-904)	0.2000	0.17%	75	122	0.32%
19/70-170	(926-935)	0.2000	5.85%	150	812	1.06%
20/18-120	(952-961)	0.2000	1.76%	0.13%	0.28%	710
21/15-110	(981-990)	0.2000	1.11%	0.16%	0.74%	290
WCPH-22/17-110	(2010-2019)	0.2000	0.11%	70	45	30
WCDDH-18/14.9-45.0	(1001-1010)	0.2000	0.28%	60	128	680
19/12.0-42.0	(1120-1129)	0.2000	0.21%	60	148	90
20/ 7.6-37.0	(1205-1214)	0.2000	0.31%	110	225	0.19%
21/14.3-44.0	(1303-1312)	0.2000	0.25%	80	69	0.31%
22/13.7-44.0	(1397-1406)	0.2000	0.12%	120	182	0.41%
23/19.7-49.0	(1489-1498)	0.2000	0.11%	80	35	0.33%
24/ 6.8-36.0	(1588-1597)	0.2000	0.79%	100	71	0.90%
WCDDH-25/ 3.0-33.0	(1681-1690)	0.2000	0.21%	60	50	100

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

Sample No.	ppm Manganese	% Iron	ppm Cobalt	ppm Silver
WC - 1000	145	50.0	140	7
1001	215	50.9	135	10
1002	139	52.8	135	10
1003	219	45.6	15	10
1004	570	51.6	275	11
1005	1.80%	47.5	580	67
1006	0.38%	53.1	620	12
1007	320	54.7	175	11
1008	55	54.4	135	8
1009	1.09%	53.1	155	12
1010	599	53.1	270	12
1011	416	50.6	200	12
1012	0.28%	25.8	150	17
1013	90	52.5	230	8
1014	269	53.4	345	10
1015	0.22%	51.6	295	12
1016	189	55.0	220	8
1017	0.50%	51.9	310	12
1018	161	50.0	220	11
1019	184	54.1	165	11
1020	65	52.5	110	10
1021	280	54.1	800	11
1022	65	48.8	445	11
1023	41	55.0	225	10
WC - 1024	92	55.6	95	11

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

ample No.	ppm Manganese	% Iron	ppm Cobalt	ppm Silver
WC - 1025	71	53.1	190	12
1026	0.28%	52.8	150	21
1027	470	50.3	345	3
1028	0.15%	36.6	255	12
1029	0.15%	52.5	270	15
1030	0.15%	40.9	290	10
1031	0.31%	34.4	90	11
1032	0.19%	40.6	460	13
1033	0.20%	35.6	125	15
1034	420	50.3	290	11
1035	188	55.6	245	12
1036	776	52.5	295	13
1037	196	58.1	-5	15
1038	318	45.9	205	10
1039	105	53.8	295	12
1040	143	51.6	140	13
1041	145	55.3	180	11
1042	416	52.8	775	23
1043	683	50.0	315	11
1044	176	52.2	455	12
1045	301	49.7	200	11
1046	178	52.2	90	11
1047	0.33%	50.0	435	20
1048	511	48.4	370	12
WC - 1049	62	55.0	360	13

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL & 81-01-07-SL

ample No.	ppm Manganese	% Iron	ppm Cobalt	ppm Silver
WC - 1050	65	50.6	80	13
1051	0.21%	39.1	465	20
WC - 1052	0.17%	48.4	175	11
DDH- 1 96-114	409	52.8	75	12
3 92-129	0.16%	49.4	340	13
5 121-137	0.15%	47.5	280	2
5 137-152	0.12%	48.8	250	2
7 98-120	303	52.2	225	5
9 112-131	139	48.8	215	5
10 123-141	58	54.4	100	3
13 80-96	204	54.7	585	7
14 84-101	163	55.0	425	2
DH-16 80-96	286	52.2	225	3
WCPH- 1/135-120(537)	380	55.0	380	4
3/80-180(538-457)	95	55.6	305	4
4/49-150(561-570)	0.10%	51.6	240	4
5/28-120(582-591)	111	54.4	375	5
6/28-130(612-621)	270	55.0	280	8
7/15-110(642-651)	410	55.6	265	8
8/11-110(673-682)	451	55.0	350	4
9/34-130(695-704)	524	54.4	555	11
10/18-120(725-734)	81	55.6	265	4
WCPH-11/11-110(756-765)	211	53.8	210	6

ample No.		ppm Manganese	% Iron	ppm Cobalt	ppm Silver
[illegible]CPH-12/24-120	(780-789)	529	49.4	520	4
13/31-130	(811-820)	564	53.1	360	8
14/13-110	(830-839)	392	53.1	310	8
15/48-140	(862-871)	131	54.1	225	4
16/20-110	(886-894)	246	50.0	285	16
17/28-120	(895-904)	28	53.1	415	4
19/70-170	(926-935)	0.11%	42.2	375	16
20/18-120	(952-961)	122	52.5	270	19
21/15-110	(981-990)	282	50.9	300	14
WCPH-22/17-110	(2010-2019)	59	56.6	120	-1
WCDDH-18/14.9-45.0	(1001-1010)	74	54.1	315	-1
19/12.0-42.0	(1120-1129)	130	54.4	250	-1
20/ 7.6-37.0	(1205-1214)	341	51.6	460	5
21/14.3-44.0	(1303-1312)	0.14%	38.4	195	4
22/13.7-44.0	(1397-1406)	0.16%	39.1	220	3
23/19.7-49.0	(1489-1498)	96	52.2	95	-1
24/ 6.8-36.0	(1588-1597)	132	48.1	720	-1
WCDDH-25/ 3.0-33.0	(1681-1690)	26	54.1	115	-1

Client Robert W. Bamford   Date 2/26/81   RMGC Job No. 80-35-37CL 81-01-07-SL

Sample No.	% Sulfur	ppm Antimony	ppm Arsenic	ppm Bismuth
WC - 1000	40.5	-0.5	16	7.5
1001	39.0	-0.5	2.5	18
1002	42.0	-0.5	2.9	43
1003	No Sample	-0.5	-0.5	12
1004	39.5	1.1	8.8	43
1005	26.5	-0.5	34	116
1006	38.0	-0.5	15	240
1007	38.0	-0.5	21	81
1008	41.0	-0.5	3.8	19
1009	35.0	-0.5	15	81
1010	37.0	-0.5	63	56
1011	35.5	-0.5	11	34
1012	No Sample	-0.5	3.8	5.6
1013	37.5	-0.5	-0.5	4.4
1014	35.5	-0.5	7.0	23
1015	36.5	-0.5	3.3	66
1016	39.0	-0.5	3.0	15
1017	No Sample	-0.5	14	14
1018	No Sample	-0.5	2.0	16
1019	36.0	-0.5	35	30
1020	36.5	-0.5	58	11
1021	36.0	-0.5	-0.5	19
1022	36.0	-0.5	-0.5	23
1023	37.5	-0.5	-0.5	2.5
WC - 1024	32.0	-0.5	1.0	3.1

Sample No.	% Sulfur	ppm Antimony	ppm Arsenic	ppm Bismuth
WC - 1025	36.0	-0.5	-0.5	19
1026	36.0	1.0	38	36
1027	32.0	-0.5	13	69
1028	20.0	-0.5	8.8	59
1029	34.0	-0.5	44	68
1030	25.0	-0.5	10	53
1031	16.0	1.0	26	25
1032	25.0	-0.5	17	60
1033	15.5	-0.5	10	74
1034	38.0	-0.5	18	88
1035	42.0	-0.5	23	55
1036	38.5	-0.5	34	55
1037	No Sample	3.2	50	50
1038	No Sample	-0.5	34	19
1039	40.0	-0.5	5.8	3.1
1040	No Sample	-0.5	8.3	21
1041	43.5	-0.5	2.5	3.1
1042	40.0	1.4	150	23
1043	38.0	-0.5	168	34
1044	40.0	-0.5	3.8	8.8
1045	39.0	-0.5	8.8	58.
1046	44.0	-0.5	50	11
1047	No Sample	-0.5	6.3	63
1048	40.5	-0.5	1.0	-2.5
WC - 1049	45.0	-0.5	28	5.0

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL 81-01-07-SL

Sample No.	% Sulfur	ppm Antimony	ppm Arsenic	ppm Bismuth
WC - 1050	43.0	-0.5	-0.5	-2.5
1051	No Sample	-0.5	4.3	-2.5
WC - 1052	No Sample	-0.5	2.0	5.0
DDH- 1 96-114	43.0	-0.5	5.3	39
3 92-129	No Sample	-0.5	18	69
5 121-137	No Sample	-0.5	0.9	12
5 137-152	38.0	-0.5	0.6	-2.5
7 98-120	44.0	-0.5	0.5	4.4
9 112-131	45.5	-0.5	1.9	21
10 123-141	45.0	-0.5	1.7	23
13 80-96	45.0	-0.5	100	5.6
14 84-101	45.0	-0.5	5.8	6.3
DH-16 80-96	43.5	-0.5	3.5	8.8
WCPH- 1/35-120(537)	52.5	-0.5	-0.5	5.9
3/80-180(538-547)	52.0	-0.5	-0.5	6.3
4/49-150(561-570)	44.5	-0.5	0.5	21
5/28-120(582-591)	47.5	-0.5	1.0	27
6/28-130(612-621)	46.5	-0.5	3.5	36
7/15-110(642-651)	46.5	-0.5	2.5	50
8/11-110(673-682)	45.0	-0.5	4.1	3.1
9/34-130(695-704)	45.5	-0.5	4.6	56
10/18-120(725-734)	49.0	-0.5	5.6	55
WCPH-11/11-110(756-765)	45.0	-0.5	36	88

Client Robert W. Bamford Date 2/26/81 RMGC Job No. 80-35-37-SL 81-01-07-SL

Sample No.	% Sulfur	ppm Antimony	ppm Arsenic	ppm Bismuth
H-12/24-120 (780-789)	41.5	-0.5	11	26
13/31-130 (811-820)	45.0	-0.5	20	58
14/13-110 (830-839)	47.0	-0.5	18	52
15/48-140 (862-871)	47.5	-0.5	4.1	15
16/20-110 (886-894)	42.0	-0.5	1.3	50
17/28-120 (895-904)	44.5	-0.5	2.5	3.1
19/70-170 (926-935)	34.0	-0.5	9.8	66
20/18-120 (952-961)	45.5	1.8	44	150
21/15-110 (981-990)	42.5	0.8	40	75
CPH-22/17-110 (2010-2019)	47.0	-0.5	3.0	95
DDH-18/14.9-45.0(1001-1010)	46.5	-0.5	0.6	5.0
19/12.0-42.0(1120-1129)	46.5	-0.5	0.6	10
20/ 7.6-37.0(1205-1214)	45.0	-0.5	8.5	69
21/14.3-44.0(1303-1312)	35.0	-0.5	5.3	55
22/13.7-44.0(1397-1406)	18.0	-0.5	6.3	10.6
23/19.7-49.0(1489-1498)	47.0	-0.5	1.1	113
24/ 6.8-36.0(1588-1597)	43.5	0.6	11.9	6.9
DDH-25/ 3.0-33.0(1681-1690)	46.5	-0.5	4.4	43

By Jim Cardwell
Jim Cardwell

Coors/SPECTRO-CHEMICAL LABORATORY
DIVISION OF COORS PORCELAIN COMPANY
GOLDEN, COLORADO, U.S.A.
303-278-4000 Ext. 2302

Mailing Address:
P.O. Box 500
Golden, Colorado 80401

Analytical Report

CI-1317-A

LABORATORY NUMBER	96759
DATE	3-4-81
CUSTOMER ORDER NO.	

TO: Robert W. Bamford
1138 Gilmer Drive
Salt Lake City, Utah 84105

Sample I.D.	Tin (ppm)	Bismuth (ppm)	Tungsten (ppm)	Tellurium (ppm)
WC-1000	2	5	< 10	< 10
WC-1001	1	5	15	10
WC-1002	1	10	25	15
WC-1003	3	5	20	< 10
WC-1004	1	15	< 10	15
WC-1005	2	20	10	15
WC-1006	2	> 200	< 10	15
WC-1007	2	20	< 10	10
WC-1008	2	5	10	< 10
WC-1009	2	15	< 10	15
WC-1010	3	25	10	15
WC-1011	3	15	< 10	15
WC-1012	4	5	13	< 10
WC-1013	2	4	15	< 10
WC-1014	2	10	< 10	10
WC-1015	2	25	20	15
WC-1016	2	8	< 10	10
WC-1017	2	5	< 10	10
WC-1018	2	8	< 10	< 10
WC-1019	2	10	10	< 10
WC-1020	2	7	10	< 10
WC-1021	2	10	10	< 10

< = Less than
> = Greater than

Coors/ SPECTRO-CHEMICAL LABORATORY

BY ________
LABORATORY MANAGER

Coors / SPECTRO-CHEMICAL LABORATORY

DIVISION OF COORS PORCELAIN COMPANY

GOLDEN, COLORADO, U.S.A.

303-278-4000 Ext. 2302

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P.O. Box 500
Golden, Colorado 80401

Analytical Report

CI-1317-A

LABORATORY NUMBER	96759
DATE	3-4-81
CUSTOMER ORDER NO.	

TO: Robert W. Bamford

Sample I.D.	Tin (ppm)	Bismuth (ppm)	Tungsten (ppm)	Tellurium (ppm)
WC-1022	3	10	25	< 10
WC-1023	1	2	< 10	< 10
WC-1024	1	2	10	< 10
WC-1025	2	8	12	< 10
WC-1026	1	15	< 10	10
WC-1027	1	15	10	15
WC-1028	4	20	30	15
WC-1029	3	40	< 10	15
WC-1030	2	20	70	15
WC-1031	2	8	10	< 10
WC-1032	3	35	25	15
WC-1033	2	40	10	20
WC-1034	2	84	15	60
WC-1035	2	20	36	15
WC-1036	2	18	> 200	15
WC-1037	4	15	18	< 10
WC-1038	6	10	40	10
WC-1039	2	3	45	< 10
WC-1040	2	10	10	10
WC-1041	1	3	10	< 10
WC-1042	1	10	15	< 10

< = Less than

> = Greater than

Coors / SPECTRO-CHEMICAL LABORATORY

BY ______ LABORATORY MANAGER

DISTRIBUTION: WHITE & PINK – Customer; GREEN – Numerical Files; CANARY – Customer Files

Coors / SPECTRO-CHEMICAL LABORATORY
DIVISION OF COORS PORCELAIN COMPANY
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Analytical Report

CI-1317-A

LABORATORY NUMBER	96759
DATE	3-4-81
CUSTOMER ORDER NO.	

TO: .Robert W. Bamford

Sample I.D.	Tin (ppm)	Bismuth (ppm)	Tungsten (ppm)	Tellurium (ppm)
WC-1043	3	15	20	10
WC-1044	3	5	50	< 10
WC-1045	3	25	35	50
WC-1046	5	7	10	< 10
WC-1047	3	15	40	25
WC-1048	5	1	60	< 10
WC-1049	3	3	15	< 10
WC-1050	2	2	15	< 10
WC-1051	42	< 1	72	< 10
WC-1052	4	5	165	< 10
DDH-1	8	10	20	< 10
DDH-3	4	25	82	< 10
121'-137' DDH-5	3	12	20	< 10
137'-152' DDH-5	1	2	20	< 10
DDH-7	3	2	18	< 10
DDH-9	3	15	18	< 10
DDH-10	2	15	15	20
DDH-13	1	3	< 10	< 10
DDH-14	2	5	25	< 10
DDH-16	3	5	35	< 10
WCPH-1	2	4	20	< 10

< = Less than

Coors / SPECTRO-CHEMICAL LABORATORY

BY ______ LABORATORY MANAGER

Coors / SPECTRO-CHEMICAL LABORATORY
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Analytical Report

CI-1317-A

LABORATORY NUMBER	96759
DATE	3-4-81
CUSTOMER ORDER NO.	

TO: Robert W. Bamford

Sample I.D.	Tin (ppm)	Bismuth (ppm)	Tungsten (ppm)	Tellurium (ppm)
WCPH-3	2	5	12	< 10
WCPH-4	5	8	23	< 10
WCPH-5	3	10	20	< 10
WCPH-6	3	20	18	10
WCPH-7	2	25	30	10
WCPH-8	2	2	30	< 10
WCPH-9	1	50	> 200	10
WCPH-10	3	40	45	10
WCPH-11	3	45	40	10
WCPH-12	2	30	77	10
WCPH-13	2	20	45	10
WCPH-14	1	20	20	10
WCPH-15	1	10	12	< 10
WCPH-16	12	20	62	10
WCPH-17	10	5	40	< 10
WCPH-19	30	40	97	< 10
WCPH-20	2	80	23	10
WCPH-21	5	30	36	< 10
WCPH-22	2	30	32	< 10
WCPH-18	3	3	25	< 10
WCDDH-19	2	5	38	< 10

< = Less than
> = Greater than

Coors / SPECTRO-CHEMICAL LABORATORY

BY ______________
LABORATORY MANAGER

Coors / SPECTRO-CHEMICAL LABORATORY
DIVISION OF COORS PORCELAIN COMPANY
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303-278-4000 Ext. 2302

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P.O. Box 500
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Analytical Report

CI-1317-A

LABORATORY NUMBER	96759
DATE	3-4-81
CUSTOMER ORDER NO.	

TO: Robert W. Bamford

Sample I.D.	Tin (ppm)	Bismuth (ppm)	Tungsten (ppm)	Tellurium (ppm)
WCDDH-20	10	40	32	10
WCDDH-21	8	35	62	10
WCDDH-22	25	5	110	< 10
WCDDH-23	10	40	10	10
WCDDH-24	34	< 1	43	< 10
WCDDH-25	2	22	47	< 10

< = Less than

Coors / SPECTRO-CHEMICAL LABORATORY

BY ____________
LABORATORY MANAGER

DISTRIBUTION: WHITE & PINK – Customer; GREEN – Numerical Files; CANARY – Customer Files

ITEMIZED COST STATEMENT

A. Consultants Expenditures - December 4, 1980 - March 30, 1981

Consulting, Report Writing	13 days @ $479/day	$ 6,227
Geological Assistant	6.9 days @ $210/day	1,449
Data Processing, Computer Charges		975
Miscellaneous		210
Analyses		7,586
	SUB TOTAL	$16,447

B. Company Expenditures - May 7, 1981

1 day writing and typing		$ 120
	TOTAL	$16,567

note RL for CMK
& attach this to
invoice copies

SYSTEMATIC · COST-EFFECTIVE · RESOURCE DISCOVERY
Applications and Technique Development

Robert W. Bamford
Geologist/Geochemist

Consulting (hours worked per day) for SMDC on Whiting Creek and Andrew Bay geochemical surveys.

Date	Whiting Creek	Andrew Bay
Nov. 20, 1980	1.0 hrs.	
Dec. 4	2.5	
Dec. 10	1.0	
Jan. 6		2.0
Feb. 5		1.0
Feb. 9		1.0
Feb. 10		2.0
Feb. 11	1.5	
Feb. 23	0.5	
Mar. 5	1.5	
Mar. 6	2.0	
Mar. 6 invoice (#131)	10.0 hrs. = 1.25 days	6.5 hrs. = 0.81 days
Mar. 9	4.0 hrs.	
Mar. 10	5.0	
Mar. 11	4.5	
Mar. 12	5.0	
Mar. 13	6.5	
Mar. 14	2.0	
Mar. 16	4.0	
Mar. 17	6.5	
Mar. 18	4.0	
Mar. 19	7.0	
Mar. 20	8.0	
Mar. 23	6.0	
Mar. 24	6.5	
Mar. 25	11.0	
Mar. 26	3.5	1.5
Mar. 27	8.0	
Mar. 28	1.0	0.5
Mar. 29	4.5	
Mar. 30	8.0	1.0
Mar. 31 invoice (#132)	105.0 hrs. = 13.13 days (Charged 10.38 days)	3.0 hrs. = 0.38 days
Apr. 1		6.5 hrs.
Apr. 2		7.0
Apr. 3		4.0
Apr. 4		7.0
Apr. 6		5.0
Apr. 7		2.0
Apr. 8		2.5
Apr. 8 invoice (#135)		34.0 hrs. = 4.25 days

1138 Gilmer Drive, Salt Lake City, Utah 84105 / Telephone (801) 583-3366

Robert W. Bamford

1138 Gilmer Drive, Salt Lake City, Utah 84105

Ph.D., Geology (Economic Geology and Geochemistry), Stanford University, 1970, and B.Sc., Chemical Engineering, University of Washington, 1959.

Consultant in resource exploration, 1977 through present.

Project Manager, Geochemical Research, Earth Science Laboratory, University of Utah Research Institute, 1977 through 1979.

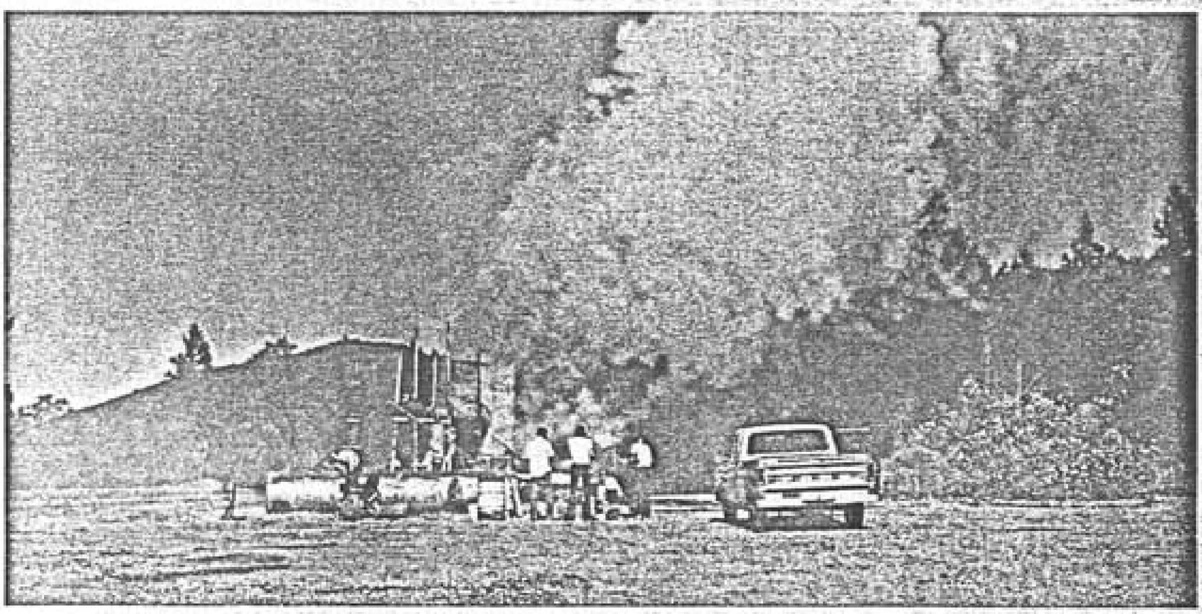
Project Manager, Sulfide System Research, Kennecott Exploration Services, 1974 through 1976.

Technical advisor to Kennecott's exploration programs in the Southwest Pacific area, 1972 and 1973.

Chief Site Geologist, Kennecott (Australia) Ok Tedi Project, Papua New Guinea, 1971.

Exploration/research geologist, Kennecott Exploration Services, 1970.

Member SEG, GRC, AEG, GSA, MSA, and AIME



I, ROBERT M. CANN, of the City of Vancouver, Province of British Columbia, hereby certify:

1. That I am a geologist residing at 4647 W. 15th Avenue, Vancouver, B.C.

2. That I am a graduate of the University of British Columbia with a B.Sc. degree in Geology in 1976 and a M.Sc. degree in Geology in 1979.

3. That I have practised my profession for six field seasons.

4. That I personally supervised the rock sampling on the WHIT Claims.

Signed ____________________

Date May 9, 1981