

GEOLOGICAL, GEOCHEMICAL & GEOPHYSICAL REPORT

ON THE

OPEC 6-9 AND HY 1-2 MINERAL CLAIMS

OMINECA MINING DIVISION
LATITUDE 55°40'N, LONGITUDE 124°30'W
NTS 93N/9W AND 10E

OWNER - OPEC CLAIMS: GOLDEN RULE RESOURCES LTD
CALGARY, ALBERTA

HY 1-2 CLAIMS: ANACONDA CANADA EXPLORATION LTD
VANCOUVER, BRITISH COLUMBIA

OPERATOR: ANACONDA CANADA EXPLORATION LTD

by

L. Riccio, PhD

P. Matysek, BSc

A. Scott, BSc

**GEOLOGICAL TRANCH
ASSESSMENT REPORT**

12,013

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INTRODUCTION

This report summarizes exploration activities carried out on the OPEC 6-9 and HY 1-2 claims between June 13 and September 3, 1983. The OPEC claims are under option to Anaconda from Golden Rule Resources of Calgary, Alberta. The HY 1-2 claims were staked by Anaconda in 1983, and are included within the agreement.

LOCATION AND ACCESS

The property is located approximately 240 kilometers northwest of Prince George, B.C. (Figure 1, page 2), at latitude $55^{\circ}40'N$ and longitude $124^{\circ}30'W$, on the north slope of Blackjack Mountain.

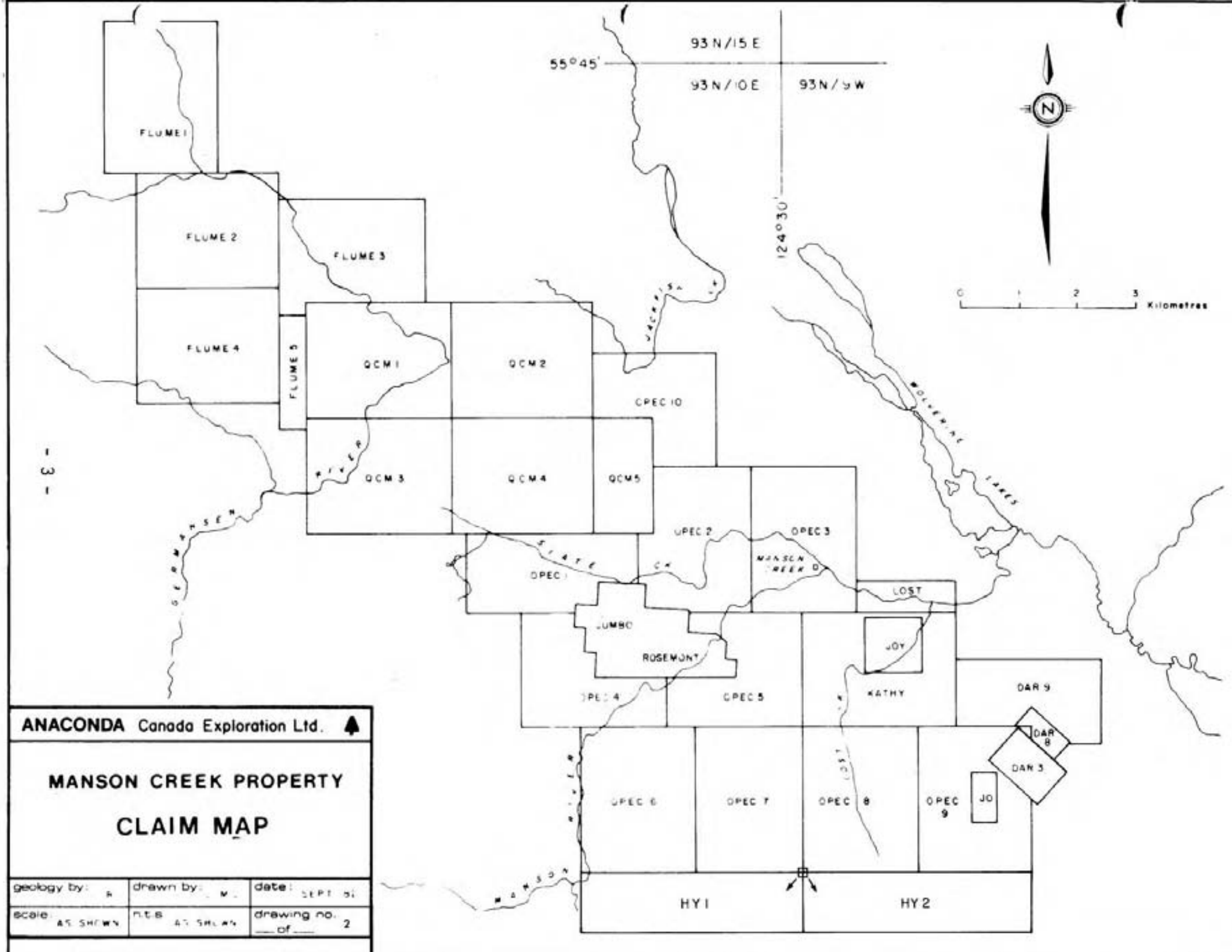
Closest settlement is the town of Manson Creek which can be reached by gravel road from Fort St. James, a distance of approximately 225 km. From Manson Creek access to the claims is either by foot (1-2 hour walk from the base of Blackjack Mountain) or via helicopter. Nearest helicopter base is Mackenzie, 100 air km southeast of Manson Creek.

PROPERTY

The claims (Figure 2, page 3) are located in the Omineca Mining Division. They are recorded as follows:

Claim Name	Units	Record Number	Date of Record
Opec 6	20	2554	February 25, 1980
Opec 7	20	2556	February 25, 1980
Opec 8	20	2557	February 25, 1980
Opec 9	20	2558	February 25, 1980
Hy 1	16	5088	April 6, 1983
Hy 2	16	5089	April 6, 1983





ANACONDA Canada Exploration Ltd. ▲

**MANSON CREEK PROPERTY
CLAIM MAP**

geology by: R	drawn by: M	date: SEPT 51
scale: AS SHOWN	N.T.S. AS SHOWN	drawing no. 2
		of

REGIONAL GEOLOGY

The claims lie within the Omineca Geoanticline of the Canadian Cordillera, (Figure 3, page 5), in Nina Creek Group rocks interpreted to be of Pennsylvanian to Permian age, (Monger & Paterson, 1974). The Nina Creek Group is in fault contact with Takla Group alkaline volcanic rocks on the west and the Lower Cambrian-Proterozoic Wolverine Complex metamorphic rocks in the east.

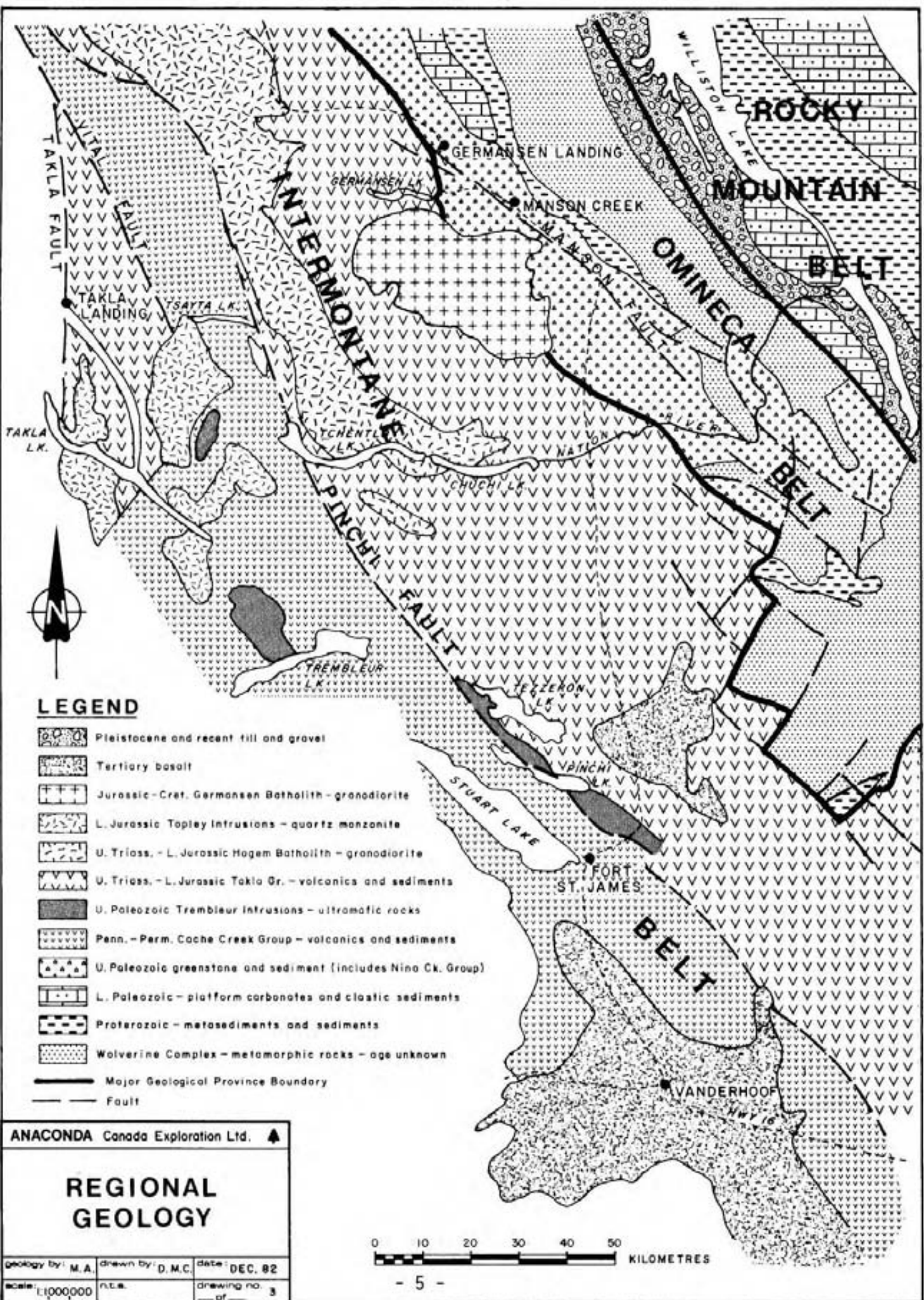
The Manson Fault zone cuts and/or is the western boundary of the Nina Creek Group over at least 40 km. It is marked by ultramafic rocks and their carbonatized equivalents and by a prominent aeromagnetic high trending approximately 120° .

The lower member of the Pennsylvanian-Permian package is predominately chert and clastic sedimentary rock with minor limestone, while the upper member is a thick mafic volcanic pile typically massive, rarely pillowed and containing thin tuff and volcanic breccia horizons (Monger & Paterson 1974).

The Germansen-Manson River area has been an active placer camp since gold was discovered on the Germansen River in 1870. The most productive rivers have been Germansen and Manson Rivers and Slate, Lost, Blackjack and Kildare Creeks. Armstrong (1949) noted the general spatial relationship of the gold bearing creeks and the Manson Fault zone.

SUMMARY OF 1983 PROGRAM

Two chained and flagged grid (Figure 4, in pocket) totalling 33 line kilometers were established along the Germansen Batholith-metasediment contact to follow-up on regional tungsten soil anomalies (>10 ppm W) outlined in 1982 (Ass. Rep. 10746). The grids were covered with geological mapping (1:5000 scale), soil sampling (519 samples collected) at 50 and 25 m intervals, and ground magnetometer surveys.



While establishing the East Zone grid, an old blasted silicified and pyritized outcrop with epithermal characteristics was discovered. A few grab samples were collected and returned geochemically anomalous (hundreds of ppb Au) gold values. As a result, a program of detailed geological mapping (1:2500 scale), rock and soil sampling, and VLF-EM was initiated to evaluate its mineral potential. Nine rock and 153 soil samples were collected from the epithermal zone.

EAST ZONE

Geology

Outcrops within the East Zone are confined to the southeastern portion of the grid between lines 6E and 20E (Figure 5, in pocket). This area is centered along the contact between the Cretaceous Germansen batholith and psammitic (quartz-muscovite schist, Unit 1) and semi-pelitic (quartz-biotite schist, Unit 2) Paleozoic metasediments.

Quartz biotite schists form a hornfelsic halo surrounding the batholith along the eastern margin of the map area. They are strongly foliated, finely laminated, and contain calcareous intercalations which are converted to skarn assemblages (Unit 3) near the contact with the intrusives. The skarn portion of the hornfelsic package consists of light green layers (0.5 to 5 cm thick) intercalated with finely laminated biotite, amphibole, and quartz layers. The skarny layers contain diopside, pale garnet, epidote, and minor quartz. Minor disseminated pyrrhotite and magnetite are present in the melanocratic layers. Layering in the skarn bearing sequence dips at shallow angles to the south (5° - 10°). In contrast, the schistosity in both muscovite and biotite schists is invariably steeply dipping to subvertical.

Granitic phases within the map area are invariably leucocratic, equigranular, and consist of equal proportions of quartz, Ksp, subordinate plagioclase, and up to 5-10% biotite (Unit 5) or biotite-muscovite (Unit 6). Hololeucocratic, medium to fine grained, muscovite-granite (Unit 7) patches are erratically distributed through

the main granite mass. Quartz-feldspar-muscovite pegmatite dykes, locally with well developed graphic intergrowths, commonly transect the granite.

A hydrothermally altered silicified zone with epithermal characteristics occurs near the granite-sediment contact between lines 8E and 10E (Figure 4, pocket). This area is described in detail in a later section.

Soil Geochemistry - Tungsten East Zone Grid

Two hundred and nineteen soils were collected from the West Zone, predominantly from a residual reddish, clay rich, Bf soil horizon, taken at average depth of 20 to 40 cm. Swampy and boggy areas were not sampled. Field notes on the sample and sample site were recorded at each station. The soils were collected in numbered wet-strength Kraft sample bags and air dried prior to shipment to Bondar Clegg Labs of North Vancouver. Analyses for W were determined by DCP methods on soil lines east of 13E and by colourimetric methods to the west. Details on sample preparation and analytical techniques are given in Appendix I. Soil sample locations are shown in Figure 5 (pocket) and analytical results listed in Appendix II. Soil sample results are presented in Figure 6 (pocket).

Raw geochemical data were assessed through a systematic application of standard procedures which consist of:

- (1) Calculation of summary statistics (both for arithmetic and log transformed data - Appendix III).
- (2) Determination of contour intervals from analysis of appropriate arithmetic or logarithmic histograms (Appendix III) and probability plots.
- (3) Contouring of threshold level metal concentrations and highlighting of very anomalous samples on a geochemical map.

Results

Tungsten

Tungsten variability obtained is relatively low for both analytical methods as evidenced by their restrictive ranges (1-16 ppm W and 2-30 ppm W) for the DCP and colorimetric techniques, respectively. Colorimetrically determined W highs of 13 and 16 ppm on L20E are probably related to weak skarn mineralization. DCP determined W highs of greater than 10 ppm W tend to cluster and coincide with patchy zones of intense to moderate silicification and quartz veining proximal to the contact between granite and quartz muscovite schist.

Tin

Tin values on the East Zone range from 1 to 11 ppm with more than 90% of the distribution being less than 5 ppm. As a consequence, the spatial distribution of high and low values is intermixed and no discernible pattern is recognized.

Magnetometer Survey

A total field magnetometer survey was completed over the East Zone grid. Readings were taken at a station interval of 25 meters on crosslines separated by 200 meters. Some fill in to a 100 meter interline spacing was performed in the eastern-most portion of the grid. A Geometrics Unimag II was used for the survey, and readings were corrected for diurnal drift by reference to base station readings with a Unimag I at half hour intervals. The base station was located at the camp.

The results of the magnetometer survey are presented in contour plan form in Figure 8 (pocket). The narrow high amplitude magnetic high located at 4+25S on line 19E is coincident with magnetite skarn at a granitic contact. The magnetic high located at 1S on line 16E is coincident with a magnetite bearing biotite schist. Other magnetic highs on the East Zone grid (such as Line 20W/station 0+50S; Line 18W/stations 1N to 2+50N; Line 14W/station 0+25N; Line 8W/stations 1N, 2+50N, and 4N;

Line 4W/station 2N; Line 2W/station 1+25S; and Line 10E/stations 1+75N to 2+25N) occur in areas where no outcrop was located. Their source may be inferred as either skarn or biotite schist.

EPITHERMAL ZONE

Geology

Epithermal mineralization occurs in a WNW trending, 30 m wide zone of aplite, quartz muscovite, pegmatite, and patchy silica flooding and brecciation which straddles the contact between biotite-muscovite phases of the Germansen Batholith and surrounding quartz-muscovite schists (Figure 9, pocket). A WNW trending, 6 m wide aplite sill also occurs 75 m north of the main granite contact. The contact between the epithermal zone and the metasediments is gradational and conformable. It is characterized by a decrease in silicification and corresponding increase in schistosity away from the zone. The contact between the epithermal zone and the batholith is obscured by residual overburden.

The epithermal zone is exposed over a strike length of 400 m and disappears beneath overburden in both directions. A NE trending fault, subparallel to the dominant joint direction in the granite, apparently offsets the zone between lines 9E and 10E.

Rock Geochemistry-Mineralization

Nine rock samples were collected from the epithermal zone and analyzed by fire assay and AA for Au and Ag. Six of these samples were also analyzed by DCP for a suite of trace elements. Sample locations and Au results are shown in Figure 9, (pocket). Trace element data are shown in Table 1 (p.7).

Gold values (up to 440 ppb Au) occur in intensely silicified portions of the epithermal zone containing aggregates of massive, white, beige, and grey coloured fine grained to cryptocrystalline (chalcedonic) quartz. The quartz is locally brecciated, rebrecciated, and healed with vuggy

quartz. Pyrite (up to 2%) and minor stibnite occur locally as disseminations or aggregates interstitial to brecciated quartz fragments.

Multielement geochemical data (Table 1) show the epithermal zone to be associated with geochemically anomalous Sb, As, Cr (127-388 ppm) concentrations, erratically high W values (up to 60 ppm) and sporadic high Pb-Sn contents (667 and 70 ppm, respectively).

Soil Geochemistry

A detailed soil sampling program was carried out in order to assess the geology and metal potential of the contact area between granite and quartz-mica schists.

153 samples were taken over the Epithermal Zone Grid which measured 600 x 300 metres. Soils were collected at 25 metre intervals on lines spaced 50 apart. Most of the samples were taken at an average depth of 20 to 40 cm from a moderately well developed residual Bf horizon employing sampling procedures previously described. The remaining samples were obtained from the C horizon. Organic rich samples were excluded.

Sampling Procedures

Analyses for Au, Ag, As, Sb, and Mn were carried out by DCP methods. Details on sample preparation and analytical techniques are given in Appendix I. Soil sample locations and Au-As-Sb geochemistry are shown in Figure 10 (pocket). Analytical results are listed in Appendix II.

Raw geochemical data were assessed through a systematic application of standard procedures previously described.

Results

Gold

Four major areas of gold accumulation (>20 ppb) are found on the Epithermal Zone. Two of them, one located to the extreme northeast and the other in the centre of the grid (Figure 33) have their axis parallel to the zone of quartz veining and silicification and contain gold values in excess of 150 ppb and up to 535 ppb. The two peripheral zones are open at their respective grid boundaries.

Arsenic

The distribution of arsenic-rich soils is more widespread than that for gold. Three of the gold anomalies are also arsenic-rich. These zones are characterized by accumulations of arsenic from 40 to 509 ppm with an average value of >100 ppm.

Antimony

Antimony rich soils tend to reflect the contact zone between the quartz muscovite schist and intrusive rocks. Their distribution to the northwest coincides with anomalous gold and arsenic. Generally the outlined anomalous zone averages greater than 80 ppm (maximum value 408 ppm).

Silver

Silver contents are typically very low, ranging from detection limit levels of .2 ppm to a high of 2.0 ppm. Their distribution is sporadic and elevated concentrations of silver do not correlate with anomalous concentrations of other metals.

VLF Survey

A VLF survey was completed from the baseline to 3S on lines 6E to 10E, and 12E covering the Epithermal Zone. Stations were read at 25 meter

Intervals using Cutler, Maine (NAA) as the primary VLF field. The in phase tilt angle values are plotted as line profiles, and the horizontal component of the field strength in contour plan form, in Figure 11 (pocket).

A weak VLF conductor was defined in line 8E near station 1+25S. The conductor trends grid east west to lines 7E and 9E, and lies in an area of background magnetic field strength (see magnetic field contour plan, East Zone grid, Figure 8, in pocket).

TUNGSTEN WEST ZONE

INTRODUCTION

A program consisting of geological mapping, soil sampling, magnetometer survey, and ultra-violet prospecting was performed to assess tungsten anomalies (>20 ppm) obtained from a 1982 regional soil survey on the OPEC 6 claims. Geological reconnaissance during grid construction confirmed the lack of visible outcrop as evidenced in previous year's work. The overburden in the area is generally believed to be a relatively shallow lodgement till (3 to 10 m ?) slightly complicated by mass wasting along steep slopes. Despite the overburden coverage, detection of a mechanical dispersion pattern of W by soil sampling the appropriate soil horizon was deemed a viable exploration tool in this geochemical landscape.

Soil Geochemistry

300 soil samples were collected from the West Zone predominantly from the Bf and Bt soil horizon taken at an average depth of 20 to 40 cm, employing the same sampling techniques as previously described. Swamps and boggy areas were not sampled. 53 samples from the centre of the previously outlined reconnaissance W soil anomalies were selected and analyzed for W using both pulverized and unpulverized -80 mesh fractions. Soil sample location and analytical results are shown in Figures 12 and 13 (pocket) respectively. Geochemical data were assessed

through a systematic application of standard procedures previously described. Analytical results are listed in Appendix II. Summary statistics and histograms are listed in Appendix III.

Results

The distribution of tungsten in soils exhibits a large variability with values ranging from 3 to 360 ppm W, averaging about 18 ppm. Despite the high variability, anomalous areas (>40 ppm) were easily distinguishable from background areas. A continuous zone measuring 300 by 75 metres trending northeast to southwest over 4 soil lines averaged greater than 40 ppm W and contained many values in excess of 100 ppm W (Figure 13, pocket). Locally derived skarn-float failed to fluoresce in short wave ultra-violet light. However, it appears that the UV lamp used in the field was defective. In contrast, -80 mesh fractions of soil material lamped at the lab in the fall, fluoresced brilliantly.

A comparison of pulverized and unpulverized -80 mesh sieved fractions revealed that geochemical contrast is much improved in the latter.

Magnetometer Survey

A total field magnetometer survey was completed over the West Zone grid. Stations were read at 25 meter intervals along crosslines at 100 meter interline spacing. A geometrics Unimag II was used on the survey, and readings were corrected for diurnal drift by reference to base station readings taken at the camp with a Unimag I at half hour intervals.

The results of the magnetometer survey are presented in contour plan form in Figure 14 (pocket). The plotted values should be multiplied by 10 and have 50000 gammas added to obtain the magnetic field value of shading on the contour plan:

- dark shading - greater than 58,700 gammas
- light shading - 58,500 to 58,700 gammas

Several discontinuous moderate to strong magnetic field highs were outlined on the West Zone grid, such as at Line 200E/station 125N, 200N,

and 325N; Line 500E/station 450S; Line 600E/station 125N and 425N; Line 700E/station 325S and 325N; Line 900E/station 425S; and Line 1100E/station 325S. These anomalies are well defined and correlate quite well from line to line, although often at a lower amplitude. Similar amplitude anomalies detected on the East Zone grid were coincident with biotite schist and magnetite skarn.

SUMMARY AND RECOMMENDATIONS

Several interesting features were discovered as a result of the 1983 follow-up work carried out on the south Opec and Hy claims.

1. Diopside-garnet endoskarns at the contact between Cretaceous intrusives and Paleozoic metasediments in the southeast corner of the East Zone grid.
2. Magnetic highs, possibly reflecting buried skarns, in both East and West Zone grids.
3. Strong W in soil geochemical anomalies (up to 360 ppm W) in the West Zone.
4. Anomalous gold (up to 440 ppb Au) values associated with high Sb-As-Cr-W concentrations in a quartz-flooded epithermal zone occurring within the East Zone grid along the Germansen Batholith-metasediment contact.

Although scheelite bearing outcrops were not discovered during the present survey, additional sampling and some hand trenching are recommended to further evaluate the West Zone tungsten anomalies.

A petrochemical study of skarns and granitic rocks is also warranted to a) determine if the skarn zones discovered in the East Zone could belong to potential tungsten-bearing skarns, and b) to investigate the Sn-W potential of S-type granitic phases bordering the Germansen Batholith.

Further soil and rock sampling followed by hand trenching is recommended to further evaluate the strike length extension of the epithermal zone.

REFERENCES

Armstrong, J.E., 1949: Fort St. James Map Area, Cassiar and Coast Districts, British Columbia; Geological Survey of Canada, Memoir 252.

Monger, J.W.H. and I.A. Paterson, 1974: Upper Paleozoic and Lower Mesozoic rocks of the Omineca Mountain; Geological Survey of Canada, Paper 74-1A, pp. 19-20.

B.C.D.M. Assessment Report 10746

STATEMENT OF COSTS

Food and Accomodation

98 man days @ 31.5 3,087.00

Personnel

P. Matysek, Geochemist

June 13, 15-21, 23-28, 30;

July 1-3, 6; Aug.24-26

22 days @ 104 2,288.00

T. Frake, Jr Geological Asst.

June 13, 15-21, 23-28, 30;

July 1-4, 13-14, 18-20

24 days @ 69.6 1,670.40

F. Thrane, Field Technician

June 13, 15-21, 23-28, 30;

July 1-4, 13-14, 18-20,

August 25, September 3

26 days @ 78.4 2,038.40

B. Marini, Field Technician

June 15-21, 23-28, 30; July 1-4

18 days @ 138 2,484.00

R. Cann, Geologist

August 24-26, September 3

4 days @ 125 500.00

M. Atkinson, Geologist

July 23, July 6

2 days @ 104 208.00

L. Riccio, Project Supervisor

July 23, July 6

2 days @ 162.5 325.00

		9,513.80
	<u>Benefits @ 20% of salaries and wages</u>	1,902.76
Rental Equipment		
	Chev 3/4 ton pick up 4 x 4	
	30 days @ 32/day	960.00
	2 Unimag magnetometers	
	2 x 30 days @ 15/day	900.00
	Phoenix VLF2	
	30 days @ 15/day	<u>450.00</u>
		2,310.00
Helicopter		
	Northern Mountain, Mackenzie	
	June 15,23,28	
	Jet Ranger 206, 6.6 hrs @ 450	2,970.00
Fixed Wing		
	Vancouver-Prince George-Return	
	2 return trips @ 244.10	488.20
Disposable Material & Supplies		
	Sample Bags, Flagging, Hip Chains,	
	Notebooks, etc.	375.50
Freight		
	Motorways	278.30
Geochemistry		
	Rocks	
	15 rock samples analyzed and multielement DCP	
	Sample preparation: 15 samples @ 2.75 =	41.25
	15 rock samples assayed for Au @ 6.00 =	90.00

5 rock samples analyzed for Ag @ 1.62	=	8.10	
1 rock sample assayed for As @ 7.65	=	7.65	
1 rock sample assayed for Sn @ 3.60	=	3.60	
1 rock sample assayed for Sb @ 7.20	=	7.20	
6 rock samples analyzed by DCP @ 18.00	=	<u>108.00</u>	
			265.80

Soils

Sample preparation 343 samples @ 0.75	=	257.25	
Sample pulverizing 146 samples @ 1.75	=	255.50	
173 soil samples analyzed for W @ 3.82	=	660.86	
170 soil samples analyzed for Au @ 6.00	=	1,020.00	
146 soil samples analyzed by DCP @ 10.00	=	<u>1,460.00</u>	
			3,653.61

Computer Costs:

transmission, printing, summary statistics, histograms	=	300.00
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Drafting

160 hrs @ 15		2,400.00
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Report Preparation

	1,500.00
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GRAND TOTAL	29,044.97
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COSTS APPORTIONED TO CLAIMS

CLAIMS	UNITS	COSTS
OPEC 6-9	80	22,364.63 (77%)
HY 1-2	32	<u>6,680.34</u> (23%)
		29,044.97

STATEMENT OF QUALIFICATIONS

- L. Riccio - BSc (1969) - University of Turin - Geology
- MSc (1972) - University of Western Ontario
 - Geology
- PhD (1976) - University of Western Ontario
 - Geology
- P. Matysek - BSc (1980) - University of Toronto - Geology
- A. R. Scott - BSc (1970) - University of British Columbia
 - Geophysics

Respectfully Submitted



L. Riccio
Project Geologist

February 1984

APPENDIX I

ANALYTICAL PROCEDURES

1. Gold Analysis
2. Multielement Analyses
3. DCP Multielement Analyses



QUALIFICATION OF ORGANIZATION

Bondar-Clegg & Company Ltd., is a proven organization of professional chemists, analysts and technicians offering a wide range of analytical services to industry, universities and government departments.

The organization acts as a check laboratory to both the United Nations and the Canadian International Development agency. Many major mining, consulting and industrial firms, including Canadian government departments, are among the company's clientele.

The North Vancouver facility was established in 1966 and was expanded into new quarters in 1979.

LABORATORY FACILITIES AND EQUIPMENT

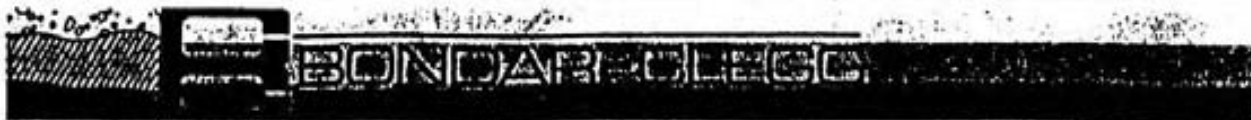
Bondar-Clegg's North Vancouver laboratory comprises some 10,000 square feet of office, laboratory and sample storage space, and is well equipped with the required scientific equipment and supplies.

The sample preparation equipment includes:

1. Primary (Jaw) crusher-reduces particle size to 1/2".
2. Secondary (Cone) crusher-reduces particle size to 1/8".
3. Jones riffle splitter.
4. Ring and puck pulverizer-reduces representative sample to 100 mesh.

With the major instruments being:

1. Techtron AA5
with Fisher Recordall 5000
2. Varian AA-1275
with 5150A thermal Printer by Hewlett-Packard
3. I. L. AA/Ae Spectrophotometer 751
with Digital Printer
4. Techtron AA4
with Fisher Recordall 5000
5. Techtron AA6
with Fisher Recordall 5000
6. Jarrell - Ash fluorimeter
7. X-ray Fluorescence instrument (built by Bondar-Clegg Instrument Division)



GEOCHEMICAL SAMPLE FLOW

- STEP 1**
LOGGING IN - each sample submission is assigned a unique lot number
- STEP 2**
SORT - according to sample type (soils, streams, rocks, etc.) and then according to alphabetic and/or numeric order.
- physical sample is checked off against sample submittal form which has been completed (?) by the client.
- STEP 3**
SAMPLE PREPARATION - all samples are processed in numeric order with adequate drying being ensured before preparation
- a) soils-sediments - hand dry sample in the bag with rubber mallet to break loose fines from clods/mosses/etc.
- pour into 80 mesh stainless steel sieve.
- sift out all-80; if samples are for Au, sift out -20 +80 if -80 fraction less than 20 gm.
- re-bag sample and refile if retention of rejects requested otherwise - out goes the oversize
- b) rock and drill core - put in numerical order; insert made-up pulp bags into proper rock bag
- primary crush
- secondary crush (80% -10 mesh)
- split out 200 - 400 gm with a Jones riffle splitter
- pulverize via an impact (ring and puck) grinder. Final product is about 50% -150 mesh and 99% -80 mesh, and is free from pulverizer contamination.
- c) pan concentrates - sample is pulverized in its entirety to ensure homogeneity
- please no coarse metallic nuggets without prior warning
- d) pulps - spot check for proper preparation; if unacceptable we re-prep
- e) other sample types are prepared according to client's request
- STEP 4**
WEIGHING - using electronic balances, with a precision of +/-0.01g, we weigh 5% of the samples for duplicate analysis and 2% of our analyses are performed on accepted standards.
- STEP 5**
EXTRACTION METHODS - HNO₃-HCl - a vicious attack that satisfactorily leaches Cu Pb Zn Mo Ag Mn Cd Ni Co etc. in 'all' rocks and soils/seds. Problems would be low level values (less 40 ppm) in high iron oxide soils or in tight refractory lattices



- 2 -

- HN03 - satisfactory for almost all ore minerals of U, Bi some As minerals, and most sulphides.
- PARTIAL EXTRACTIONS - specific for specific type occurrences or for loosely bonded (e.s. hydromorphically deposited) ions.
- HN03-HCl04-HF - a higher temperature, vicious attack that specifically attacks some refractory silicates and oxides. More difficult to control precision, but useful for elements like V, Re, Se and certain low level metallics in rock geochem programs.
- HBr-Br - a slow, but powerful oxidative attack designed for Te and Tl minerals.
- VARIOUS FUSIONS - for difficult to handle elements in refractory lattices (e.s. W Cr Au Pt).
- STEP 6 ANALYSIS - (see attached sheet)
- STEP 7 DATA APPROVAL AND TRANSFER - (see accompanying sheet entitled Computer services)
- STEP 8 QUALITY CONTROL - fifteen percent of our staff do nothing else but supervise and check procedures and techniques. The resident assayer, chemist and geochemist provide the final check.

ANACONDA CANADA EXPLORATION LTD.

Please note that in 1983 your Au assays were analyzed by classic fire assay at 0.5 assay ton (14.58g) and 1 assay ton (29.166g) depending on the fuseability of the samples being analyzed. The dore bead (combined AuAg) was then dissolved and run on A.A. for Au. High Au's (over 0.20 OPT) were checked by re assay and finished by the classical method of weighing the Au bead taken from the sample.

NOTE: - Geochem Au is run on 20gms of sample.

Bondar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
Canada V7P 2R5
Phone: (604) 985-0681
Telex: 04-352667



GEOCHEMICAL METHODS

ELEMENT	EXTRACTION	METHOD OF ANALYSIS
Cu, Pb, Zn, Mo, As, Cd, Ni, Co, Mn, Fe	Hot Lefort Aqua Regia	Atomic Absorption
U	Hot Conc HNO ₃	Fluorimetric
<u>W</u>	Basic Oxidation Fusion	Colourimetric
F	Basic Fusion	Citrate Buffer-Specific Ion
<u>Au</u> , Pt, Pd	Fire Assay & Hot Aqua Regia	Atomic Absorption
<u>As</u>	HClO ₄ -HNO ₃ Arsine	Colourimetric
Hg	Aqua Regia	Closed Cell, Flameless Atomic Absorption
<u>Sn</u> , <u>Sb</u> , Ba, Rb, Sr, Y Zr, Nb, La, Ce, Ti		Energy dispersive XRF
Th, Se, Ta, Ga, In		Discrete angle/cathode XRF
Ri	Hot Conc HNO ₃	Atomic Absorption
V, Be, Li	HClO ₄ -HNO ₃ -HF	Atomic Absorption
Cr	Sodium Peroxide Fusion	Atomic Absorption
Tl, Te	HBr-Br + Organic Extraction	Atomic Absorption
B	Basic Fusion	Plasma
Re	Alkali Fusion + Organic Extraction	Atomic Absorption
C		Leco Induction Furnace
WHOLE ROCK ANALYSIS		
SiO ₂ K ₂ O Na ₂ O CaO		
MgO MnO Fe Al ₂ O ₃	HF-HNO ₃	Atomic Absorption
TiO ₂ P ₂ O ₅	HF-HNO ₃	Colourimetric
S		Leco Induction Furnace

Fraction used for analysis: Rocks -100 mesh; soils/sediments -80 unless otherwise noted.

DIRECT CURRENT PLASMA EMISSION SPECTROSCOPY

=====

INSTRUMENTATION:

MAKE: SPECTRAMETRICS

MODEL: SPECTRASPAN III B

THEORY OF OPERATION:

The fluid sample is introduced as an aerosol and enters the direct current argon plasma which serves as a high temperature (5000 to 6000 degree K) excitation source. The emission lights of the atoms (or Ions) enter the optical module with echelle grating for high resolution and reach the detector module capable of simultaneous multi-element measurement.

SAMPLE DISSOLUTION:

MAJOR OXIDES WHOLE ROCK ANALYSIS:

Sample pulp is fused with Lithium Tetraborate and dissolved in 6 percent nitric acid.

MINOR OXIDES AND TRACE METAL ELEMENTS BY TOTAL ACID DISSOLUTION:

Sample pulp is treated with HF, HCl, HNO₃ and HClO₄ and heated to fuming. The nearly dry sample mixture is dissolved in dilute HCl and HNO₃.

APPENDIX II

OPEC-HY CLAIMS: SOIL GEOCHEMISTRY

Anaconda Canada Exploration Limited

Property Name: Tungsten East Zone	Survey Type: B Soils	Province: B.C.	NTS: 93N/10
Project Name: Manson Creek	Project Code: 51992	Claims: Opec-Hy	Year: 1983

Sample Description	W ppm COL
25061	3.
25062	4.
25063	3.
25064	6.
25065	9.
25066	4.
25067	5.
25068	4.
25069	3.
25070	2.
25071	3.
25072	2.
25073	2.
25074	16.
25075	6.
25076	3.
25077	13.
25078	2.
25079	2.
25080	4.
25081	3.
25082	3.
25083	2.
25257	2.
25320	3.
25321	2.
25322	2.
25323	2.
25324	4.
25325	5.
25326	4.
25327	2.
25328	3.
25329	2.
25330	14.

Anaconda Canada Exploration Limited

Property Name: Tungsten East Zone	Survey Type: B Soils	Province: B.C.	NTS: 93N/10
Project Name: Manson Creek	Project Code: 51992	Claims: Opec-Hy	Year: 1983

Sample Description	W COL	ppm
25331	2.	
25332	2.	
25333	4.	
25334	6.	
25335	5.	
25336	30.	
25337	2.	
25338	8.	
25339	3.	
25340	6.	
25341	2.	
25429	4.	
25446	3.	
25489	8.	
25490	3.	
25491	6.	
25492	2.	
25493	2.	
25494	6.	
25495	4.	
25496	4.	
25497	5.	
25498	4.	
25499	2.	
25500	2.	
25501	3.	
25502	2.	
25503	2.	
25504	5.	
25505	3.	
25506	3.	
25507	2.	
25508	7.	

Anaconda Canada Exploration Limited

Property Name: Tungsten West Zone
Project Name: Manson Creek

Survey Type: B Soils
Project Code: 51992

Province: B.C.
Claims: Opec 6

NTS: 93N/9
Year: 1983

Sample Description	W Pulv ppm	W Unpul ppm
25554	4.	3.
25555	75.	75.
25556	15.	11.
25557	43.	40.
25558	28.	30.
25676	60.	85.
25703	16.	19.
25712	10.	5.
25713	7.	4.
25714	9.	9.
25715	15.	21.
25716	23.	48.
25717	4.	4.
25718	33.	35.
25719	38.	30.
25720	10.	9.
25753	5.	3.
25754	11.	16.
25755	10.	4.
25756	4.	4.
25757	3.	3.
25758	3.	4.
25759	4.	4.
25760	3.	3.
25781	25.	19.
25782	40.	43.
25783	18.	11.
25784	48.	38.
25785	115.	135.
25786	65.	85.
25787	70.	115.
25788	93.	190.
25789	4.	3.
25790	135.	170.
25813	14.	38.

Anaconda Canada Exploration Limited

Property Name: Tungsten West Zone
Project Name: Manson Creek

Survey Type: B Soils
Project Code: 51992

Province: B.C.
Claims: Opec 6

NTS: 93N/9
Year: 1983

Sample Description	W Pulv ppm	W Unpul ppm
25814	6.	2.
25815	75.	78.
25816	190.	360.
25817	14.	14.
25818	48.	85.
25819	35.	17.
25820	48.	40.
25821	15.	25.
25845	6.	3.
25846	10.	18.
25847	15.	75.
25848	5.	4.
25849	14.	14.
25853	55.	43.
25854	73.	73.
25855	12.	16.
25856	23.	13.
25858	6.	6.

Anaconda Canada Exploration Limited

Property Name: Epithermal Zone
Project Name: Manson Creek

Survey Type: B Soils
Project Code: 51992

Province: B.C.
Claims: Opec-Hy

NTS: 93N/10
Year: 1983

Sample Description	Au ppb FAA
25188	35.
25312	20.
25342	10.
25343	40.
25344	20.
25345	15.
25346	570.
25358	20.
25359	15.
25360	20.
25361	5.
25362	15.
25363	20.
25364	15.
25365	45.
25366	25.

Anaconda Canada Exploration Limited

Property Name: Epithermal Zone Survey Type: B Soils Province: B.C. NTS: 93N/10
 Project Name: Manson Creek Project Code: 51992 Claims: Opec-Hy Year: 1983

Sample Description	Au ppb FAA	Mn ppm DCP	Ag ppm DCP	As ppm DCP	W ppm DCP	Sb ppm DCP	Sn ppm DCP
18928	80.	2215.	.3	509.	10.	121.	9.
18929	15.	376.	.6	142.	16.	38.	3.
18930	5.	434.	.6	80.	8.	13.	1.
18931	10.	1041.	.9	84.	4.	5.	3.
18932	10.	743.	.7	58.	1.	11.	3.
18933	20.	523.	.2	44.	16.	5.	4.
18934	10.	1308.	.7	28.	2.	6.	4.
18935	5.	617.	.3	26.	2.	2.	5.
18936	5.	1799.	.5	42.	2.	2.	6.
18937	5.	739.	.4	10.	2.	2.	5.
18938	15.	301.	1.1	11.	2.	2.	5.
18939	10.	400.	2.0	35.	2.	2.	11.
18940	10.	359.	.4	52.	4.	8.	7.
18941	10.	360.	.9	49.	4.	2.	7.
18942	10.	635.	.8	116.	4.	21.	2.
18943	20.	660.	.7	157.	12.	18.	7.
18944	10.	327.	1.0	17.	4.	2.	4.
18945	10.	312.	.7	21.	4.	6.	2.
18946	5.	151.	.7	53.	4.	96.	4.
18947	160.	349.	.5	43.	2.	14.	4.
18949	10.	294.	.3	27.	4.	2.	2.
18950	5.	333.	.4	94.	2.	63.	1.
18954	20.	350.	1.0	85.	4.	63.	1.
18955	10.	313.	.6	117.	4.	35.	1.
18956	5.	454.	.7	48.	4.	19.	3.
18957	5.	388.	.3	22.	2.	14.	4.
18958	15.	283.	.5	22.	8.	10.	5.
18959	5.	155.	.3	24.	4.	8.	4.
18960	5.	293.	.4	5.	4.	11.	7.
18961	5.	257.	.3	43.	4.	2.	4.
18962	5.	319.	.2	37.	8.	5.	3.
18963	5.	1123.	.7	35.	4.	2.	3.
18964	5.	1245.	.4	34.	1.	2.	3.
18965	10.	726.	.2	269.	4.	2.	2.
18966	5.	350.	.8	32.	4.	16.	1.

Anaconda Canada Exploration Limited

Property Name: Epithermal Zone
Project Name: Manson Creek

Survey Type: B Soils
Project Code: 51992

Province: B.C.
Claims: Opec-Hy

NTS: 93N/10
Year: 1983

Sample Description	Au ppb	Mn ppm	Ag ppm	As ppm	W ppm	Sb ppm	Sn ppm
	FAA	DCP	DCP	DCP	DCP	DCP	DCP
18967	25.	410.	.4	104.	4.	30.	1.
19080	10.	170.	1.4	53.	4.	25.	2.
25901	5.	409.	.2	41.	12.	26.	1.
25902	5.	375.	.2	89.	12.	40.	1.
25903	55.	781.	.6	131.	12.	79.	1.
25904	5.	365.	.2	69.	12.	74.	4.
25905	5.	780.	.4	62.	8.	16.	1.
25906	15.	771.	.7	57.	8.	14.	3.
25907	10.	658.	.3	43.	8.	21.	7.
25908	5.	927.	.4	41.	2.	17.	3.
25909	5.	340.	.2	17.	4.	6.	5.
25910	5.	952.	.2	16.	12.	2.	4.
25911	5.	351.	.3	8.	4.	2.	1.
25912	5.	412.	.2	41.	2.	13.	3.
25913	5.	369.	.2	15.	2.	12.	3.
25914	5.	644.	.2	29.	2.	4.	4.
25915	5.	316.	.2	20.	3.	5.	5.
25916	10.	391.	.3	120.	12.	53.	4.
25917	5.	789.	.3	126.	8.	37.	6.
25918	15.	559.	.5	129.	8.	55.	5.
25919	20.	1204.	.7	427.	8.	74.	5.
25920	10.	1268.	.8	391.	4.	52.	5.
25921	5.	497.	.2	21.	4.	5.	3.
25922	15.	774.	.2	31.	2.	14.	5.
25923	5.	1696.	.2	14.	4.	3.	3.
25924	15.	1116.	.2	18.	4.	2.	3.
25925	5.	456.	.2	9.	2.	2.	1.
25926	10.	389.	.5	7.	2.	9.	1.
25927	5.	497.	.4	18.	4.	3.	3.
25928	5.	342.	.3	5.	4.	2.	1.
25930	15.	558.	.2	24.	4.	9.	4.
25931	15.	1095.	.5	279.	2.	51.	4.
25932	5.	403.	.2	9.	1.	2.	4.
25933	5.	362.	.4	25.	4.	21.	3.
25934	5.	174.	.2	33.	8.	18.	5.

Anaconda Canada Exploration Limited

Property Name: Epithermal Zone
Project Name: Manson Creek

Survey Type: B Soils
Project Code: 51992

Province: B.C.
Claims: Opec-Hy

NTS: 93N/10
Year: 1983

Sample Description	Au ppb FAA	Mn ppm DCP	Ag ppm DCP	As ppm DCP	W ppm DCP	Sb ppm DCP	Sn ppm DCP
25935	5.	1044.	.4	38.	4.	20.	3.
25936	5.	1073.	.4	145.	12.	34.	5.
25937	5.	293.	.4	36.	8.	19.	2.
25938	10.	312.	.2	62.	8.	34.	5.
25939	10.	257.	1.0	19.	4.	10.	4.
25940	10.	214.	.4	17.	2.	10.	4.
25941	10.	1615.	.8	53.	2.	24.	3.
25942	5.	1266.	1.2	48.	3.	18.	6.
25943	5.	972.	.2	9.	2.	2.	3.
25944	10.	247.	.2	16.	2.	16.	4.
25945	5.	366.	.2	47.	2.	30.	4.
25946	5.	159.	.4	28.	8.	21.	6.
25947	10.	211.	.2	61.	8.	41.	5.
25948	10.	170.	.2	28.	12.	11.	3.
25949	5.	347.	.2	53.	4.	10.	7.
25950	5.	355.	.2	70.	8.	21.	3.
25951	5.	293.	.4	51.	2.	13.	1.
25952	10.	308.	1.4	47.	1.	49.	3.
25953	15.	346.	1.4	48.	1.	63.	2.
25954	5.	281.	.2	141.	2.	408.	4.
25955	5.	294.	.2	68.	2.	70.	3.
25956	5.	244.	.8	95.	1.	34.	4.
25957	5.	292.	.2	118.	1.	26.	2.
25958	5.	289.	.2	31.	8.	31.	4.
25959	5.	302.	.2	32.	8.	11.	2.
25960	5.	603.	.4	54.	4.	20.	3.
25961	5.	276.	.2	35.	2.	9.	2.
25962	5.	260.	.2	43.	8.	14.	1.
25963	5.	203.	.2	20.	4.	2.	5.
25964	5.	351.	.2	45.	4.	14.	2.
25965	10.	330.	.8	47.	8.	15.	1.
25966	10.	167.	.2	12.	4.	2.	4.
25967	5.	83.	.2	34.	4.	16.	7.
25968	15.	178.	.5	38.	8.	35.	6.
25969	15.	261.	.4	65.	4.	137.	2.

Anaconda Canada Exploration Limited

Property Name: Epithermal Zone
Project Name: Manson Creek

Survey Type: B Soils
Project Code: 51992

Province: B.C.
Claims: Opec-Hy

NTS: 93N/10
Year: 1983

Sample Description	Au ppb FAA	Mn ppm DCP	Ag ppm DCP	As ppm DCP	W ppm DCP	Sb ppm DCP	Sn ppm DCP
25970	10.	301.	.7	21.	2.	31.	2.
25971	10.	311.	.6	17.	4.	15.	5.
25972	25.	433.	.3	22.	4.	14.	4.
25973	25.	249.	.3	50.	12.	21.	4.
25974	5.	323.	.6	51.	8.	9.	2.
25975	15.	198.	.6	33.	12.	5.	5.
25976	10.	221.	.2	10.	1.	2.	5.
25977	15.	347.	.4	9.	4.	2.	4.
25978	15.	287.	.5	71.	4.	77.	4.
25979	5.	310.	.3	23.	4.	10.	2.
25980	5.	206.	.3	18.	4.	17.	3.
25981	10.	166.	.2	28.	4.	134.	6.
25982	65.	157.	.5	66.	4.	30.	5.
25983	10.	223.	.3	27.	2.	32.	4.
25984	5.	475.	.9	14.	1.	27.	5.
25985	5.	266.	.4	51.	4.	62.	3.
25986	10.	232.	.3	32.	2.	24.	3.
25987	50.	787.	.7	30.	4.	14.	2.
25988	5.	219.	.3	23.	4.	18.	3.
25989	10.	353.	.2	23.	2.	5.	1.
25990	10.	418.	.5	31.	4.	2.	2.
25991	535.	142.	.2	43.	8.	20.	2.
25992	10.	153.	.2	46.	16.	15.	5.
25993	20.	319.	.4	84.	4.	33.	1.
25994	5.	225.	.3	55.	12.	7.	3.
25995	5.	377.	.4	14.	2.	12.	2.
25996	5.	354.	.3	10.	1.	2.	2.
25997	5.	360.	.3	16.	1.	3.	2.
25998	5.	365.	.2	47.	2.	3.	1.
25999	5.	288.	.3	143.	16.	39.	2.
26000	15.	298.	.2	40.	2.	7.	1.
26001	25.	399.	.4	92.	16.	23.	2.
26002	5.	361.	.2	87.	16.	23.	4.
26003	5.	478.	.6	31.	2.	19.	1.
26004	5.	569.	.2	41.	4.	7.	3.

APPENDIX III

OPEC-HY CLAIMS: SOIL STATISTICS

Anaconda Canada Exploration Limited

LOGARITHMIC SUMMARY STATISTICS

Anaconda Canada Exploration Limited
B Soil Horizon Results

Manson Creek

East Zone

Metals	W
No of Samples	68
Minimum Value	2.00
Maximum Value	30.00
Range	28.00
Median	3.00
Mode	2.00
Mean	3.55
Log St Dev	.26
Mean + 2SD	11.58
Coeff Variation	.47
Skewness	1000.00
Kurtosis	1.72
2.5 Percentile	2.00
5.0 Percentile	2.00
16.5 Percentile	2.00
50.0 Percentile	3.00
82.2 Percentile	6.00
90.0 Percentile	7.00
95.0 Percentile	13.00
97.5 Percentile	14.00
99.0 Percentile	16.00

Anaconda Canada Exploration Limited

LOGARITHMIC HISTOGRAM

Log Interval (STDV/4): .064 No. Samples: 68

Anaconda Canada Exploration Limited
B Soil Horizon Results

Manson Creek

East Zone

W

Cell	Lower Limit	Num Samp		Cell %	Cum %
1	.60	0		.0	.0
2	.70	0		.0	.0
3	.81	0		.0	.0
4	.94	0		.0	.0
5	1.09	0		.0	.0
6	1.26	0		.0	.0
7	1.46	0		.0	.0
8	1.69	0		.0	.0
9	1.97	22	*****	32.4	32.4
10	2.28	0		.0	32.4
11	2.64	15	*****	22.1	54.4
12	3.06	0		.0	54.4
13	3.55	11	*****	16.2	70.6
14	4.12	0		.0	70.6
15	4.77	5	*****	7.4	77.9
16	5.53	6	*****	8.8	86.8
17	6.41	1	*	1.5	88.2
18	7.43	2	***	2.9	91.2
19	8.62	1	*	1.5	92.6
20	9.99	0		.0	92.6
21	11.58	1	*	1.5	94.1
22	13.43	1	*	1.5	95.6
23	15.57	1	*	1.5	97.1
24	18.05	0		.0	97.1
25	20.93	0		.0	97.1

0 5 10 15 20 25 30 35 40 45 50
% Of Samples In Class Interval

Anaconda Canada Exploration Limited

LOGARITHMIC SUMMARY STATISTICS

Anaconda Canada Exploration Limited
B Soil Horizon Results

Manson Creek

Epithermal Zone

Metals	GoI
No of Samples	162
Minimum Value	5.00
Maximum Value	570.00
Range	565.00
Median	10.00
Mode	5.00
Mean	9.28
Log St Dev	.36
Mean + 2SD	48.19
Coeff Variation	.37
Skewness	1.89
Kurtosis	6.23
2.5 Percentile	5.00
5.0 Percentile	5.00
16.5 Percentile	5.00
50.0 Percentile	10.00
82.2 Percentile	15.00
90.0 Percentile	20.00
95.0 Percentile	40.00
97.5 Percentile	65.00
99.0 Percentile	160.00

Anaconda Canada Exploration Limited

LOGARITHMIC HISTOGRAM

Log Interval (STDV/4): .089 No. Samples: 162

Anaconda Canada Exploration Limited Manson Creek Epithermal Zone
B Soil Horizon Results

Gol

Cell	Lower Limit	Num Samp		Cell %	Cum %
1	.79	0		.0	.0
2	.96	1		.6	.6
3	1.19	0		.0	.6
4	1.46	0		.0	.6
5	1.79	0		.0	.6
6	2.20	0		.0	.6
7	2.70	0		.0	.6
8	3.32	0		.0	.6
9	4.08	78	*****	48.1	48.8
10	5.01	0		.0	48.8
11	6.15	0		.0	48.8
12	7.56	0		.0	48.8
13	9.28	37	*****	22.8	71.6
14	11.41	0		.0	71.6
15	14.01	20	*****	12.3	84.0
16	17.22	10	*****	6.2	90.1
17	21.15	6	****	3.7	93.8
18	25.99	0		.0	93.8
19	31.93	1		.6	94.4
20	39.22	2	*	1.2	95.7
21	48.19	2	*	1.2	96.9
22	59.20	1		.6	97.5
23	72.74	1		.6	98.1
24	89.36	0		.0	98.1
25	109.79	0		.0	98.1

0 5 10 15 20 25 30 35 40 45 50
% Of Samples In Class Interval

Anaconda Canada Exploration Limited

LOGARITHMIC SUMMARY STATISTICS

Anaconda Canada Exploration Limited
B Soil Horizon Results

Manson Creek

Epithermal Zone

Metals	Mn	Ag	As	W	Sb	Sn
No of Samples	146	146	146	146	146	146
Minimum Value	83.00	.20	5.00	1.00	2.00	1.00
Maximum Value	2215.00	2.00	509.00	16.00	408.00	11.00
Range	2132.00	1.80	504.00	15.00	406.00	10.00
Median	351.00	.30	38.00	4.00	14.00	3.00
Mode	293.00	.20	47.00	4.00	2.00	3.00
Mean	393.01	.36	38.55	4.00	12.61	2.91
Log St Dev	.26	.25	.37	.32	.51	.26
Mean + 2SD	1286.82	1.14	208.59	17.30	131.24	9.59
Coef Variation	.10	-.57	.23	.53	.46	.56
Skewness	.79	.65	.00	.02	.00	12.08
Kurtosis	1000.00	.00	1.88	.00	1000.00	143.00
2.5 Percentile	153.00	.20	8.00	1.00	2.00	1.00
5.0 Percentile	159.00	.20	9.00	1.00	2.00	1.00
16.5 Percentile	244.00	.20	18.00	2.00	2.00	2.00
50.0 Percentile	351.00	.30	38.00	4.00	14.00	3.00
82.2 Percentile	726.00	.70	80.00	8.00	34.00	5.00
90.0 Percentile	972.00	.80	117.00	12.00	53.00	5.00
95.0 Percentile	1245.00	1.00	143.00	12.00	74.00	7.00
97.5 Percentile	1308.00	1.20	269.00	16.00	96.00	7.00
99.0 Percentile	1799.00	1.40	427.00	16.00	137.00	9.00

Anaconda Canada Exploration Limited

LOGARITHMIC HISTOGRAM

Log Interval (STDV/4): .064 No. Samples: 146

Anaconda Canada Exploration Limited Manson Creek Epithermal Zone
B Soil Horizon Results

Mn

Cell	Lower Limit	Num Samp		Cell %	Cum %
1	66.33	0		.0	.0
2	76.93	0		.0	.0
3	89.23	0		.0	.0
4	103.49	0		.0	.0
5	120.03	0		.0	.0
6	139.21	6	****	4.1	4.1
7	161.46	6	****	4.1	8.2
8	187.26	6	****	4.1	12.3
9	217.19	8	*****	5.5	17.8
10	251.90	13	*****	8.9	26.7
11	292.15	23	*****	15.8	42.5
12	338.84	29	*****	19.9	62.3
13	395.00	10	*****	6.8	69.2
14	455.80	7	*****	4.8	74.0
15	528.65	5	****	3.4	77.4
16	613.14	5	****	3.4	80.8
17	711.12	9	*****	6.2	87.0
18	824.77	2	*	1.4	88.4
19	956.59	5	****	3.4	91.8
20	1109.46	6	****	4.1	95.9
21	1286.77	1		.7	96.6
22	1492.42	2	*	1.4	97.9
23	1730.94	1		.7	98.6
24	2007.57	1		.7	99.3
25	2328.41	0		.0	99.3

0 5 10 15 20 25 30 35 40 45 50
% Of Samples In Class Interval

Anaconda Canada Exploration Limited

LOGARITHMIC HISTOGRAM

Log Interval (STDV/4): .062 No. Samples: 146

Anaconda Canada Exploration Limited Manson Creek Epithermal Zone
B Soil Horizon Results

Ag

Cell	Lower Limit	Num Samp		Cell %	Cum %
1	.07	0			
2	.08	0		.0	.0
3	.09	0		.0	.0
4	.10	0		.0	.0
5	.12	0		.0	.0
6	.13	0		.0	.0
7	.15	0		.0	.0
8	.18	51	*****	.0	.0
9	.20	0		34.9	34.9
10	.24	0		.0	34.9
11	.27	22	*****	.0	34.9
12	.32	0		15.1	50.0
13	.36	25	*****	.0	50.0
14	.42	0		17.1	67.1
15	.48	10	*****	.0	67.1
16	.56	8	*****	6.8	74.0
17	.65	11	*****	5.5	79.5
18	.74	6	****	7.5	87.0
19	.86	3	**	4.1	91.1
20	.99	5	****	2.1	93.2
21	1.14	1		3.4	96.6
22	1.32	3	**	.7	97.3
23	1.52	0		2.1	99.3
24	1.76	1		.0	99.3
25	2.03	0		.7	100.0
				.0	100.0

0 5 10 15 20 25 30 35 40 45 50
% Of Samples In Class Interval

Anaconda Canada Exploration Limited

LOGARITHMIC HISTOGRAM

Log Interval (STDV/4): .092 No. Samples: 146

Anaconda Canada Exploration Limited Manson Creek Epithermal Zone
B Soil Horizon Results

As

Cell	Lower Limit	Num Samp		Cell %	Cum %
1	3.06	0		.0	.7
2	3.78	0		.0	.7
3	4.67	1		.7	1.4
4	5.77	1		.7	2.1
5	7.12	1		.7	2.7
6	8.80	7	*****	4.8	7.5
7	10.87	2	*	1.4	8.9
8	13.42	7	*****	4.8	13.7
9	16.57	10	*****	6.8	20.5
10	20.47	14	*****	9.6	30.1
11	25.28	13	*****	8.9	39.0
12	31.22	16	*****	11.0	50.0
13	38.55	20	*****	13.7	63.7
14	47.61	17	*****	11.6	75.3
15	58.80	9	*****	6.2	81.5
16	72.61	6	****	4.1	85.6
17	89.67	4	***	2.7	88.4
18	110.74	7	*****	4.8	93.2
19	136.77	5	****	3.4	96.6
20	168.90	0		.0	96.6
21	208.59	0		.0	96.6
22	257.60	2	*	1.4	97.9
23	318.13	1		.7	98.6
24	392.88	1		.7	99.3
25	485.20	1		.7	100.0

0 5 10 15 20 25 30 35 40 45 50
% Of Samples In Class Interval

Anaconda Canada Exploration Limited

LOGARITHMIC HISTOGRAM

Log Interval (STDV/4): .079 No. Samples: 146

Anaconda Canada Exploration Limited Manson Creek Epithermal Zone
B Soil Horizon Results

W

Cell	Lower Limit	Num Samp		Cell %	Cum %
1	.45	0		.0	.0
2	.53	0		.0	.0
3	.64	0		.0	.0
4	.77	0		.0	.0
5	.93	11	*****	7.5	7.5
6	1.11	0		.0	7.5
7	1.33	0		.0	7.5
8	1.60	0		.0	7.5
9	1.92	35	*****	24.0	31.5
10	2.31	0		.0	31.5
11	2.78	2	*	1.4	32.9
12	3.33	54	*****	37.0	69.9
13	4.00	0		.0	69.9
14	4.81	0		.0	69.9
15	5.77	0		.0	69.9
16	6.93	24	*****	16.4	86.3
17	8.32	0		.0	86.3
18	9.99	1		.7	87.0
19	12.00	13	*****	8.9	95.9
20	14.41	6	****	4.1	100.0
21	17.30	0		.0	100.0
22	20.78	0		.0	100.0
23	24.95	0		.0	100.0
24	29.96	0		.0	100.0
25	35.98	0		.0	100.0

0 5 10 15 20 25 30 35 40 45 50
% Of Samples In Class Interval

Anaconda Canada Exploration Limited

LOGARITHMIC HISTOGRAM

Log Interval (STDV/4): .127 No. Samples: 146

Anaconda Canada Exploration Limited Manson Creek Epithermal Zone
B Soil Horizon Results

Sb

Cell	Lower Limit	Num Samp		Cell %	Cum %
1	.38	0		.0	.0
2	.50	0		.0	.0
3	.67	0		.0	.0
4	.90	0		.0	.0
5	1.21	0		.0	.0
6	1.62	24	*****	16.4	16.4
7	2.17	0		.0	16.4
8	2.92	4	***	2.7	19.2
9	3.91	9	*****	6.2	25.3
10	5.24	6	****	4.1	29.5
11	7.02	6	****	4.1	33.6
12	9.41	13	*****	8.9	42.5
13	12.61	18	*****	12.3	54.8
14	16.90	21	*****	14.4	69.2
15	22.64	11	*****	7.5	76.7
16	30.35	13	*****	8.9	85.6
17	40.67	5	****	3.4	89.0
18	54.51	6	****	4.1	93.2
19	73.06	5	****	3.4	96.6
20	97.92	1		.7	97.3
21	131.24	2	*	1.4	98.6
22	175.90	0		.0	98.6
23	235.74	0		.0	98.6
24	315.96	1		.7	99.3
25	423.46	0		.0	99.3

0 5 10 15 20 25 30 35 40 45 50
% Of Samples In Class Interval

Anaconda Canada Exploration Limited

LOGARITHMIC HISTOGRAM

Log Interval (STDV/4): .065 No. Samples: 146

Anaconda Canada Exploration Limited Manson Creek Epithermal Zone
 B Soil Horizon Results

Sn

Cell	Lower Limit	Num Samp		Cell %	Cum %
1	.48	0		.0	.0
2	.56	0		.0	.0
3	.65	0		.0	.0
4	.76	0		.0	.0
5	.88	23	*****	15.8	15.8
6	1.02	0		.0	15.8
7	1.19	0		.0	15.8
8	1.38	0		.0	15.8
9	1.60	0		.0	15.8
10	1.86	25	*****	17.1	32.9
11	2.16	0		.0	32.9
12	2.50	0		.0	32.9
13	2.91	31	*****	21.2	54.1
14	3.37	0		.0	54.1
15	3.92	30	*****	20.5	74.7
16	4.55	21	*****	14.4	89.0
17	5.28	6	****	4.1	93.2
18	6.13	7	*****	4.8	97.9
19	7.12	0		.0	97.9
20	8.26	1		.7	98.6
21	9.59	1		.7	99.3
22	11.14	0		.0	99.3
23	12.93	0		.0	99.3
24	15.01	0		.0	99.3
25	17.43	0		.0	99.3

0 5 10 15 20 25 30 35 40 45 50
 % Of Samples In Class Interval

Anaconda Canada Exploration Limited

LOGARITHMIC SUMMARY STATISTICS

Anaconda Canada Exploration Limited Manson Creek Tungsten West Zone
Pulverized (W-1) and unpulverized (W-2) -80 mesh B soil Horizon Results

Metals	W-1	W-2
No of Samples	53	53
Minimum Value	3.00	2.00
Maximum Value	190.00	360.00
Range	187.00	358.00
Median	15.00	18.00
Mode	4.00	4.00
Mean	17.91	18.20
Log St Dev	.49	.58
Mean + 2SD	168.70	263.79
Coeff Variation	.39	.46
Skewness	1000.00	.00
Kurtosis	.00	.00
2.5 Percentile	3.00	2.00
5.0 Percentile	3.00	3.00
16.5 Percentile	5.00	4.00
50.0 Percentile	15.00	18.00
82.2 Percentile	60.00	75.00
90.0 Percentile	75.00	85.00
95.0 Percentile	93.00	135.00
97.5 Percentile	135.00	190.00
99.0 Percentile	135.00	190.00

Anaconda Canada Exploration Limited

LOGARITHMIC HISTOGRAM

Log Interval (STDV/4): .122 No. Samples: 53

Anaconda Canada Exploration Limited Manson Creek Tungsten West Zone
Pulverized (W-1) and unpulverized (W-2) -80 mesh B soil Horizon Results

W-1

Cell	Lower Limit	Num Samp		Cell %	Cum %
1	.62	0		.0	.0
2	.82	0		.0	.0
3	1.09	0		.0	.0
4	1.44	0		.0	.0
5	1.90	0		.0	.0
6	2.52	2	****	3.8	3.8
7	3.33	5	*****	9.4	13.2
8	4.41	2	****	3.8	17.0
9	5.84	4	*****	7.5	24.5
10	7.72	5	*****	9.4	34.0
11	10.22	2	****	3.8	37.7
12	13.53	8	*****	15.1	52.8
13	17.91	3	*****	5.7	58.5
14	23.71	2	****	3.8	62.3
15	31.38	4	*****	7.5	69.8
16	41.53	4	*****	7.5	77.4
17	54.97	4	*****	7.5	84.9
18	72.75	4	*****	7.5	92.5
19	96.30	1	**	1.9	94.3
20	127.46	1	**	1.9	96.2
21	168.70	1	**	1.9	98.1
22	223.29	0		.0	98.1
23	295.54	0		.0	98.1
24	391.18	0		.0	98.1
25	517.76	0		.0	98.1

0 5 10 15 20 25 30 35 40 45 50
% Of Samples In Class Interval

Anaconda Canada Exploration Limited

LOGARITHMIC HISTOGRAM

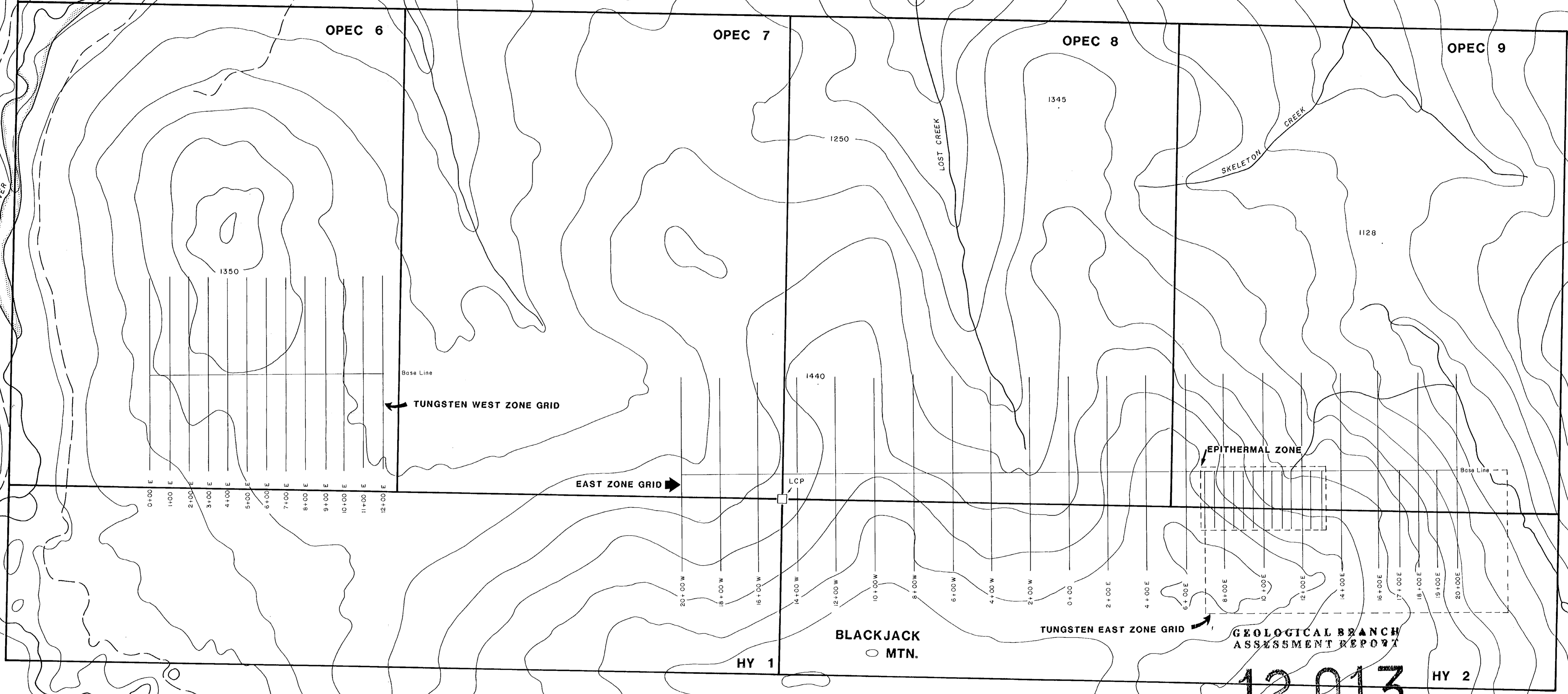
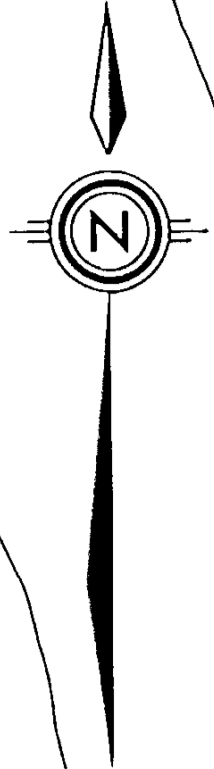
Log Interval (STDV/4): .145 No. Samples: 53

Anaconda Canada Exploration Limited Manson Creek Tungsten West Zone
 Pulverized (W-1) and unpulverized (W-2) -80 mesh B soil Horizon Results

W-2

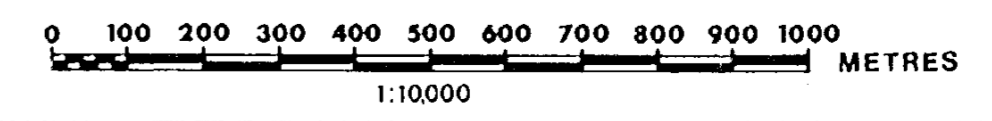
Cell	Lower Limit	Num Samp		Cell %	Cum %
1	.33	0		.0	1.9
2	.46	0		.0	1.9
3	.64	0		.0	1.9
4	.90	0		.0	1.9
5	1.26	0		.0	1.9
6	1.75	0		.0	1.9
7	2.45	6	*****	11.3	13.2
8	3.42	7	*****	13.2	26.4
9	4.78	2	****	3.8	30.2
10	6.68	2	****	3.8	34.0
11	9.33	3	*****	5.7	39.6
12	13.03	6	*****	11.3	50.9
13	18.20	4	*****	7.5	58.5
14	25.42	3	*****	5.7	64.2
15	35.51	7	*****	13.2	77.4
16	49.60	0		.0	77.4
17	69.29	7	*****	13.2	90.6
18	96.79	2	****	3.8	94.3
19	135.20	1	**	1.9	96.2
20	188.85	1	**	1.9	98.1
21	263.79	1	**	1.9	100.0
22	368.47	0		.0	100.0
23	514.69	0		.0	100.0
24	718.94	0		.0	100.0
25	1004.25	0		.0	100.0

0 5 10 15 20 25 30 35 40 45 50
 % Of Samples In Class Interval

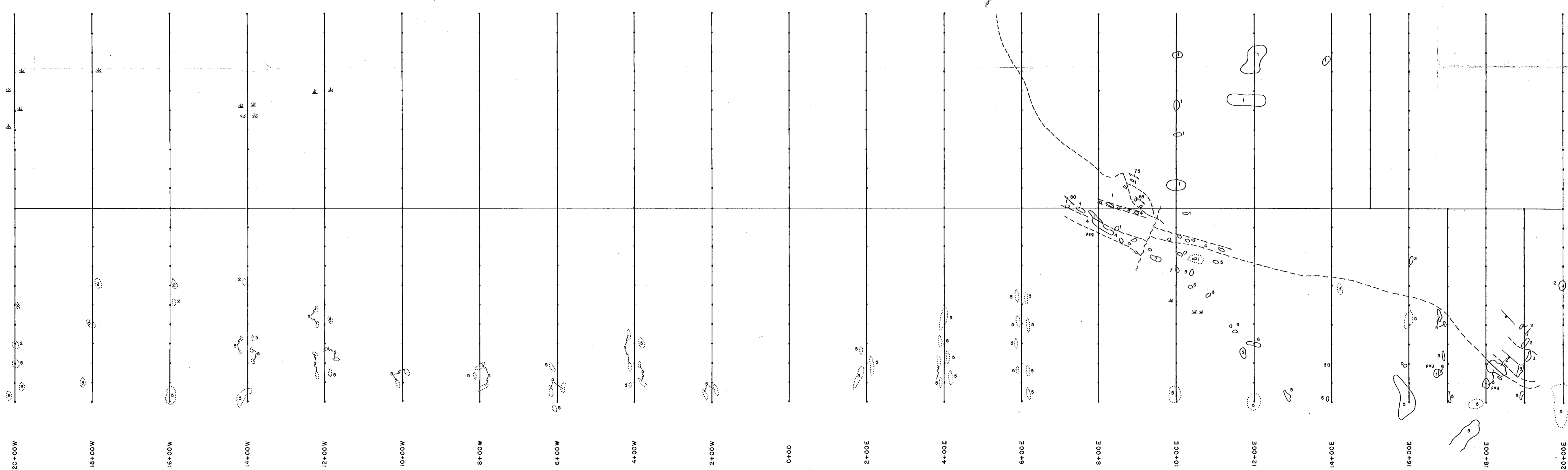


12 013
 ANACONDA canada exploration ltd. 4

MANSON CREEK PROJECT
**OPEC/HY CLAIMS &
 GRID LOCATIONS**



compilation:	scale: 1:10,000	date: JAN' 84
drawn: E.B.W.	nts: 93N/9W,10E	drawing no. ___ of 4



5+00 N
4+00 N
3+00 N
2+00 N
1+00 N
BASELINE
1+00 S
2+00 S
3+00 S
4+00 S
5+00 S

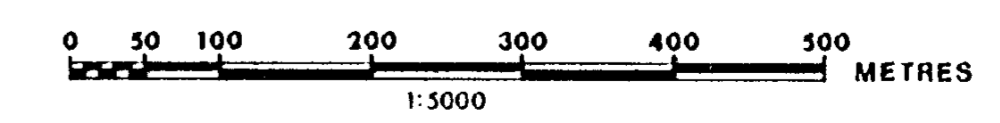


**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,013

Legend:

- 7 Muscovite Granite
- 6 Biotite Granite
- 5 Biotite - Muscovite Granite
- 4 Silicified Zone (Epithermal Zone)
- 3 Skarn
- 2 Quartz - Biotite Schist
- 1 Quartz - Muscovite Schist
- peg Pagmatite
- Outcrop
- Rubble
- ↗ Schistosity
- ↖ Layering
- - - Contact defined, assumed
- ~ Fault



ANACONDA Canada Exploration Ltd.		
MANSON CREEK		
EAST ZONE GEOLOGY		
geology by: L.R.	drawn by: E.B.W.	date: FEB' 84
scale: 1:5000	n.t.s. 93 N/9W	fig./proj. no. 5

GEOLOGICAL BRANCH ASSESSMENT REPORT

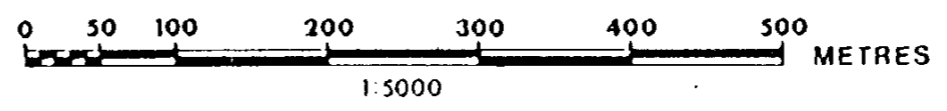
12,013



Legend:

25083 - Sample location number
N.S. - No sample

	7+00 E	8+00 E	9+00 E	10+00 E	11+00 E	12+00 E	13+00 E	14+00 E	16+00 E	17+00 E	18+00 E	19+00 E	20+00 E						
B. L.	18920	18947	25312	N.S.	25949	25976	25363	25996	25997	25935	25390	25975	25901	25341	25257	25429	25061	25498	B. L. 25083
0+50S	18928	N.S.	N.S.	18949	25950	25975	25971	25995	25998	25936	N.S.	25976	25902						25082
1+00S	18929	18946	25188	18950	25951	25974	25362	25994	25999	25937	25342	25977	25903	25339/40	25320	25446	25062	25499	25082
1+50S	18930	18945	18966	18155	25952/3	25973	25978	25993	26000	25938	25930	25978	25904						
2+00S	18931	18944	25364	18956	25954	25972	25360/61	25979	26000/7	25939/40	25343	25979/20	25905/6	25338	25321	25489	25063	25500	25081
2+50S	18932	18943	18965	18957	25955	25970	25979	25990	26003	25941	25931	25921	25907						
3+00S	18933	18942	25365	18958	25956	25969	25359	25989	26004	25942	25344	25922	25908	25337	25322	25490	25064	25501	25080
3+50S	18934	18941	18964	18959	25957	25968	25980	25988	26005	25943	25932	25923	25909						
4+00S	18935	18940	25366	18960	25958	25967	25358	25987	26006	25944	25346	25924	25910	25336	25323	25491	25065	25502	25079
4+50S	18936	18939	18963	18961	25959	25966	25981	25986	26007	25945	25933	25925	25911						
5+00S	18937	18938		18962	25960	25965		25985	26008	25946	25345	25926	25912	25335	25324	25492	25066	25503	25078
					25961	25964	25182	25984	26009	25947	25934	25927	25913						
					25962	25963		25983	26010	25948		25928	25914	25334	25325	25493	25067	25504	25077
														25333	25326	25494	25068	25505	25076
														25332	25327	25495	25069	25506	25075
														25331	25328	25496	25070	25507	25074
														25330	25329	25497	25071	25508	25073



ANACONDA Canada Exploration Ltd.

MANSON CREEK PROJECT

TUNGSTEN EAST ZONE
SOIL SAMPLE LOCATIONS

Geology by	P.F.M.	Drawn by	E.B.W.	Date	JAN '84
Scale	1:5,000	Sheet	93N/9W	Page number	6



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,013

TUNGSTEN + TIN | TUNGSTEN ANALYZED
ANALYZED BY | COLORIMETRICALLY
DCP

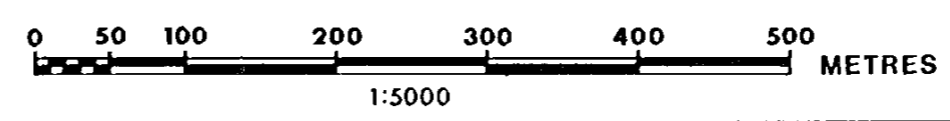
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B.L.	4,2	2,4		4,7	1,5	1,2	1,2	4,3	2,5	12,1	2		
	10,9	N.S.		8,3	12,5	4,4	2,2	2,1	12,5	12,1			
0+50S	16,3	4,4		2,1	1,3	8,2		12,3	16,2	8,2	8,6	12,1	6
	8,1	4,2	4,1	4,1	1,2	12,4	4,2	4,1	2,1	8,5	4,4	8,5	12,4
1+00S	4,3	4,4		4,3	2,4	4,5		16,5	16,4	4,4		8,5	8,3
	1,3	12,7	4,2	2,4	2,3	2,2	4,3	4,2	2,1	2,3	2,4	4,3	8,7
1+50S	16,4	4,2		8,5	1,4	4,2		2,1	4,3	3,6		2,5	2,3
	2,4	4,7	1,3	4,4	1,2	8,6	4,6	4,3	8,3	2,3	1,4	4,3	4,5
2+00S	2,5	4,7		4,7	8,4	4,7		4,2	12,4	2,4		4,3	12,4
	2,6	2,11	4,3	4,4	8,2	4,4	4,5	2,3	4,1	2,4	4,3	2,1	4,1
2+50S	2,5	2,5		8,3	4,3	8,1		4,3	2,2	8,6		2,1	2,3
				2,2	4,2			1,5	4,2	8,5	8,5	4,3	2,3
3+00S				8,1	4,5			2,4	8,1	12,3		4,1	2,4
3+50S													
4+00S													
4+50S													
5+00S													

Legend:
12, 1 = W(ppm), Sn(ppm)
N.S. = No sample

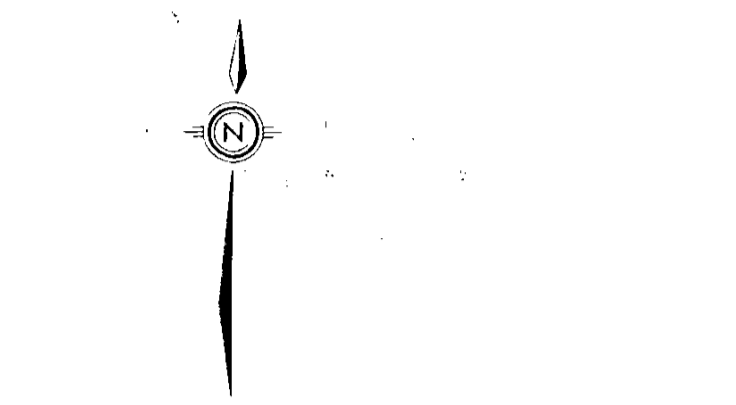
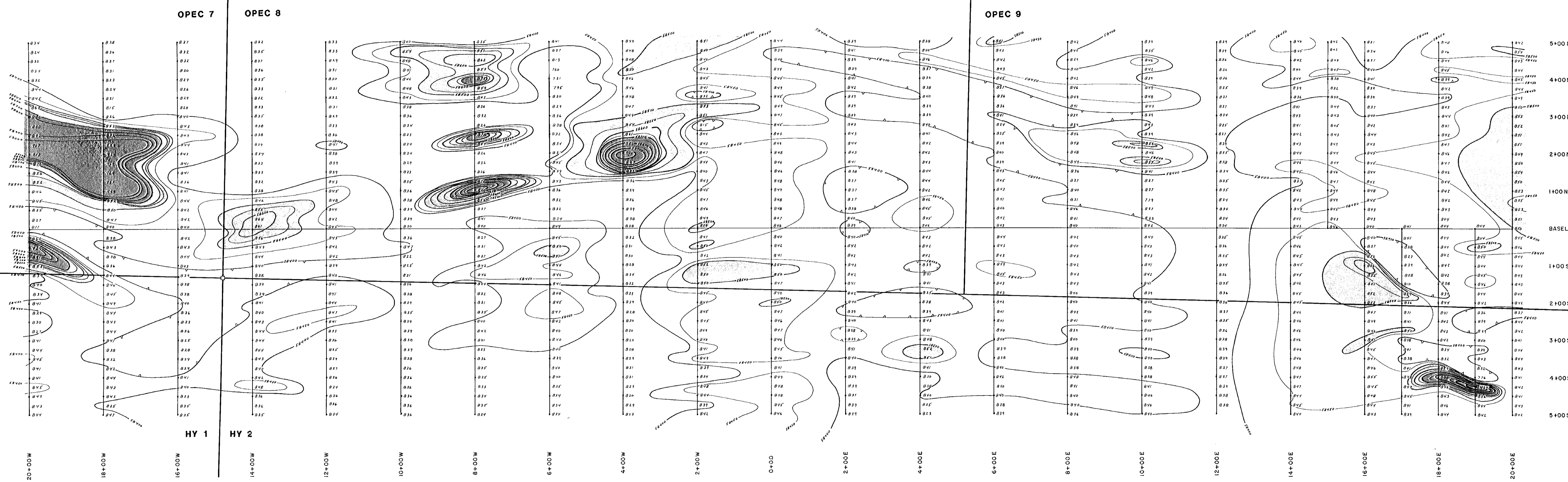
ANACONDA Canada Exploration Ltd.

MANSON CREEK PROJECT

**TUNGSTEN EAST ZONE
SOIL SAMPLE RESULTS**



geology by: P.F.M.	drawn by: E.B.W.	date: JAN '84
scale: 1:5,000	n.t.s. 93N/9W	fig/proj. no. 7

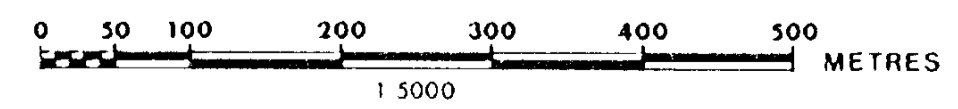


**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,013

LEGEND

- TOTAL FIELD MAGNETOMETER SURVEY
- INSTRUMENT: Unimag II Proton Precession Magnetometer
- MAGNETIC FIELD: (plotted value X10) + 50,000 gammas
- CONTOUR INTERVALS:
- 100 gammas (58400 - 59000)
- 50 gammas (58450 - 58850)
- >58700 gammas
- 58500 - 58700 gammas



ANACONDA Canada Exploration Ltd.

MANSON CREEK PROJECT

EAST ZONE

MAGNETOMETER SURVEY








geology by	A.S.	drawn by	D.M.C.	date	JAN, 84
scale	1:5000	n.t.s.	93 N/9W	log. proj. no.	8




GEOLOGICAL BRANCH ASSESSMENT REPORT

12,013

Legend:

- 19084 Chip sample number and location
-  Area of quartz veining, silicification and quartz flooding
-  3 Aplite, pegmatite; minor silicified schist
-  2 Biotite ± muscovite granite
-  1 Muscovite - quartz schist
- Py Pyrite; Sb - stibnite
-  Outcrop
-  Schistosity
-  Joint: vertical, inclined
- x 19081/120 = Sample No/Au Value in (ppb)

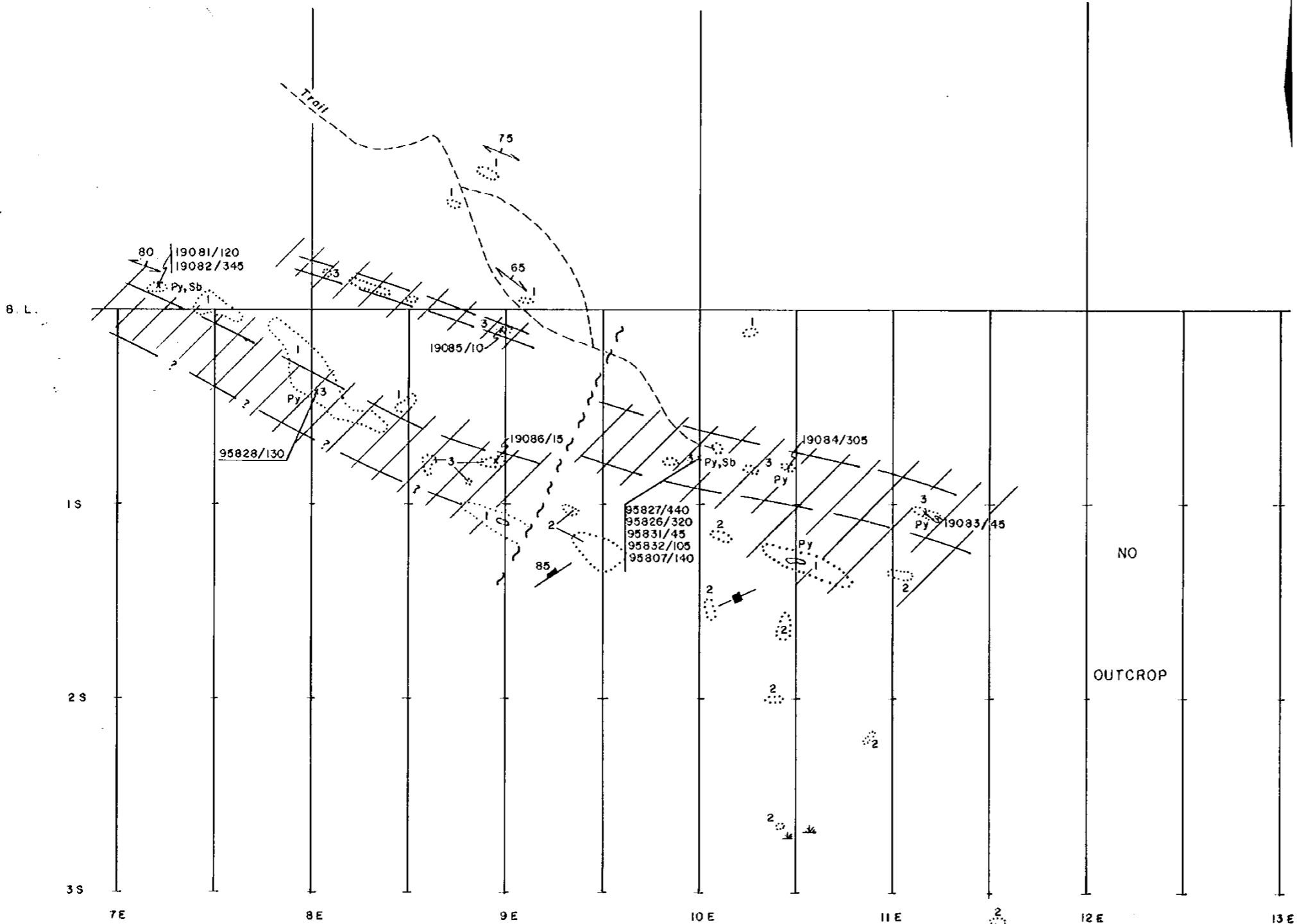


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MANSON CREEK PROJECT

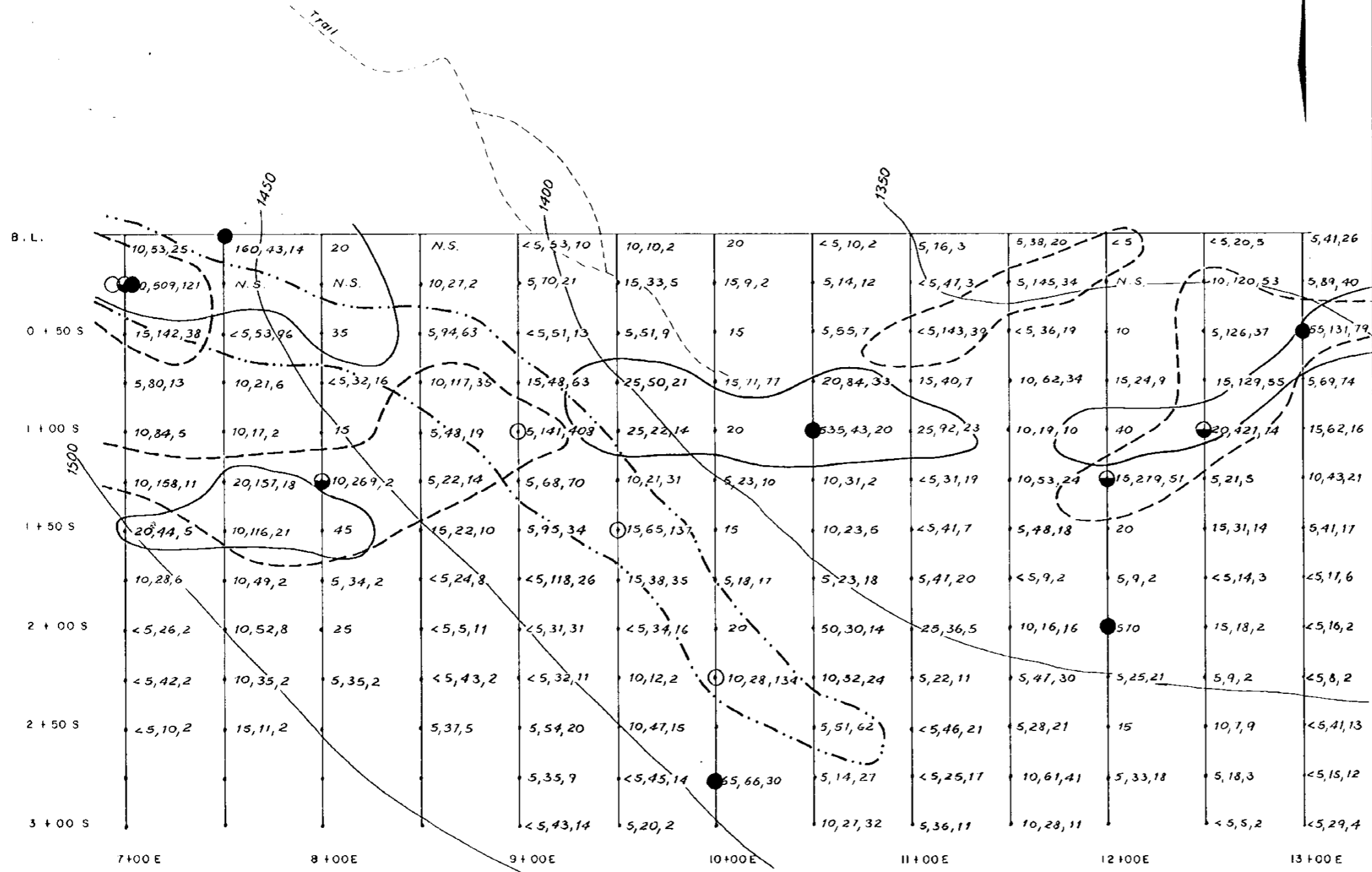
EPITHERMAL ZONE GEOLOGY

geology by	R.C.	drawn by	E.B.W.	date	JAN '84
scale	1:2,500	U.T.M.	93N/9W	fig/proj. no.	9



GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,013



Legend:

15,40,7 = Au(ppb), As(ppm), Sb(ppm)
N.S. No sample

GOLD (PPb)

- >50
- >20

ARSENIC (PPM)

- >200
- >100

ANTIMONY (PPM)

- >100
- >50



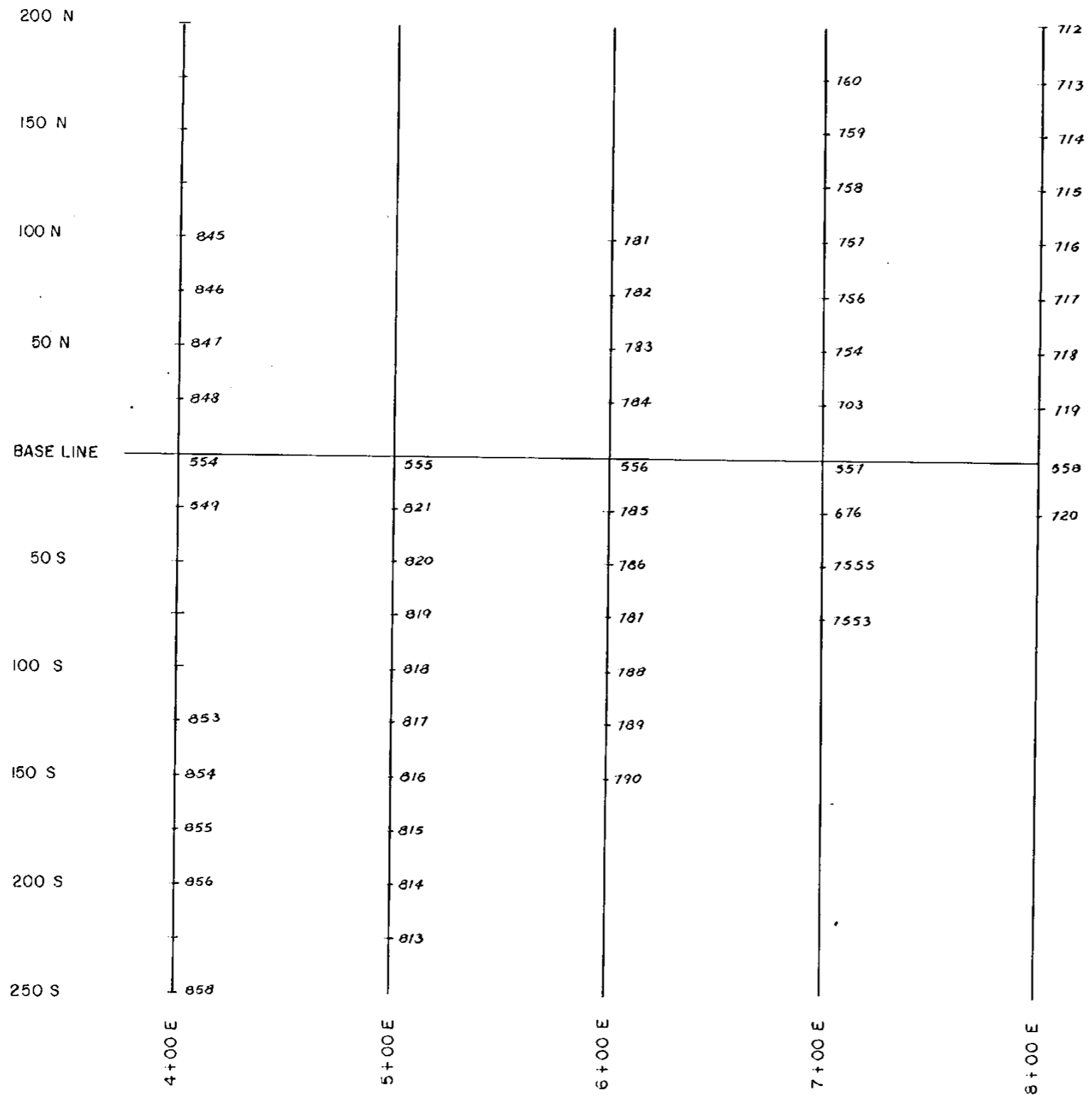
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MANSON CREEK PROJECT

EPITHERMAL ZONE

Au,As,Sb SOIL GEOCHEMISTRY

geology by	P.M.	drawn by	E.B.W.	date	JAN' 84
scale	1:2,500	n.t.s.	93N/9W	fig. proj. no.	10



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,013

LEGEND:

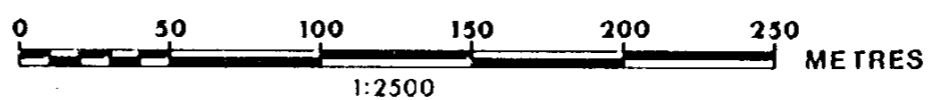
+ 712 Soil sample location number

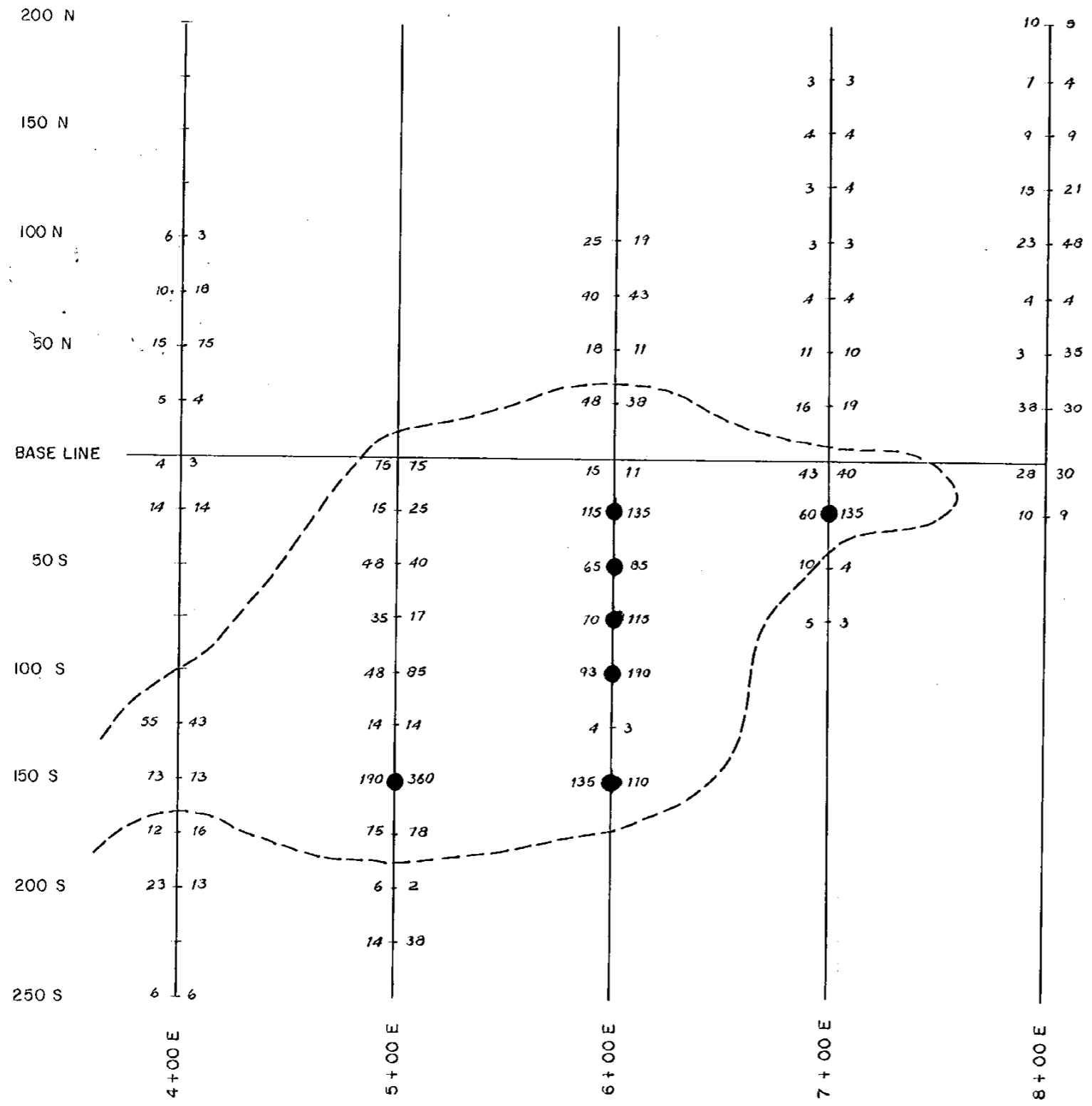
Note: ALL NUMBERS PREFIXED BY 25

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**MANSON CREEK PROJECT
TUNGSTEN WEST ZONE
SOIL SAMPLE LOCATIONS**

geology by P.F.M.	drawn by E.B.W.	date JAN '84
scale 1:2,500	nts 93N/10E	fig/proj no 12





**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

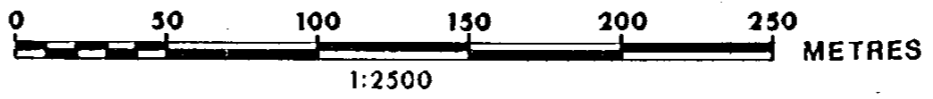
12,013

LEGEND:

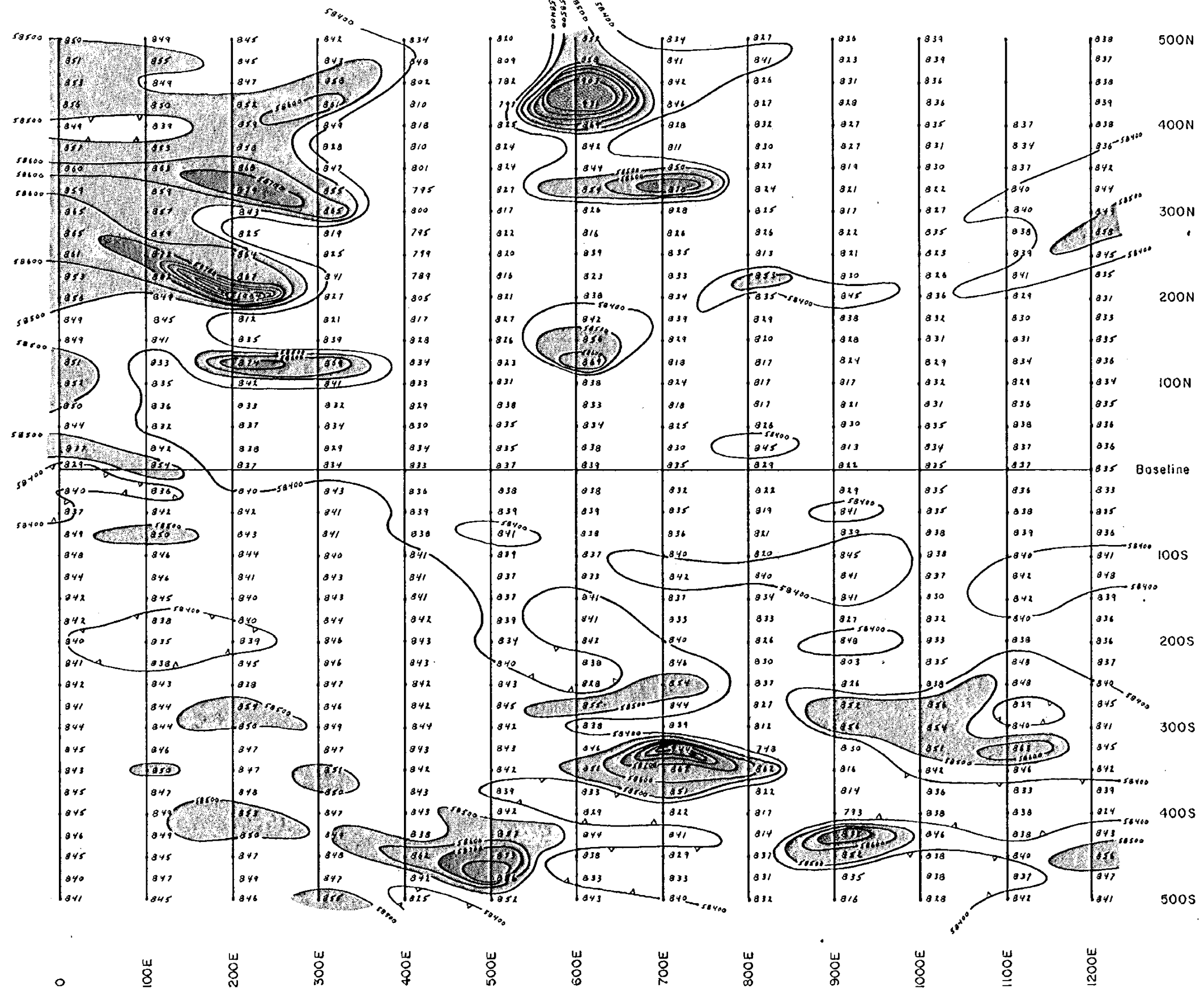
- 6 | 3 Soil sample results
 - pulverized
 - unpulverized
 - 80 mesh sample
- >40 ppm Tungsten
- >80 ppm Tungsten

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**MANSON CREEK PROJECT
TUNGSTEN WEST ZONE
SOIL SAMPLE RESULTS**



DATE: F.P.M.	DATE: E.B.W.	DATE: JAN '84
SCALE: 1:2,500	SCALE: 93N/10E	SCALE: 13



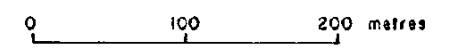
**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,013

LEGEND

TOTAL FIELD MAGNETOMETER SURVEY
 INSTRUMENT: Unimag II Proton Precession Magnetometer
 MAGNETIC FIELD = (plotted value X 10) + 50,000 gammas
 CONTOUR INTERVAL: 100 gammas (58400 - 59000)

- >58700 gammas
- 58500 - 58700 gammas



ANACONDA Canada Exploration Ltd.

**MANSON CREEK PROJECT
TUNGSTEN WEST ZONE
MAGNETOMETER SURVEY**

geology by: A.S.	drawn by: D.M.C.	date: JAN, 84
scale: 1:5000	n.t.s. 93N/10E	fig/proj. no. 14