

521530
Poison Mtn.
920/2

POISON EXAMINATION

6126 Massive to coarse, radially crystalline stibnite with minor quartz.
Sample collected from float near trenches.

Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Sb ppm
76	20.8	152	12	1083	34438

6127 Composite sample of silicified greywacke and quartz float from trench. Trace to 2% stibnite.

Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Sb ppm	As ppm
430	230.8	5963	18570	24155	6066	6341

6128 Quartz vein with 5% massive stibnite + galena. Sample collected from float in trench.

Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Sb ppm	As ppm
390	226.0	9872	18611	30409	11313	1474

6129 Green-grey, heterolithic greywacke. Rusty weathered, no visible mineralization. Sample collected from outcrop in trench.

Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Sb ppm
1	12.4	36	339	109	33

6130 Granular quartz vein with 10% massive and coarse crystalline stibnite selvages. Sample collected from loose material in trench.

Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Sb ppm	As ppm
65	3.2	38	42	656	28527	408

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR NH PH SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: OCT 14 1988 DATE REPORT MAILED: Oct. 19, 1988 SIGNED BY Bernard Chen D. TOYS, C. LBONG, B. CHAN, J. WANG; CERTIFIED B.C. ASSAYERS

LORNE X MINING CORP. LTD. PROJECT 301 File # 88-5209

SAMPLE#	Mo	Cu	Pb	Zn	Ag	W1	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Au*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM
Q 6124	1	88394	5	13764	168.0	9	45	429	1.86	12239	5	ND	1	33	165	17243	5	21	2.62	.001	2	1	.72	24	.01	10	.21	.01	.04	1	12
Q 6125	2	58	8	109	.2	12	11	959	3.26	31	5	ND	2	49	1	51	2	38	7.88	.026	2	16	.14	1592	.01	10	.44	.01	.08	1	1
Q 6126	1	152	12	1083	20.8	5	2	111	1.60	70	5	ND	1	11	5	34438	2	1	.14	.001	2	4	.01	1	.01	6	.03	.01	.02	1	76
Q 6127	3	5963	18570	24155	230.8	11	6	9041	5.11	6341	5	ND	2	30	141	6066	2	3	.05	.004	2	24	.01	27	.01	9	.15	.01	.06	1	430
Q 6128	4	9872	18611	30409	226.0	9	2	3018	2.04	1474	5	ND	1	35	144	11313	2	1	.01	.002	2	8	.01	14	.01	6	.02	.01	.01	1	390
Q 6129	1	36	339	109	12.4	9	8	658	2.93	13	5	ND	1	60	1	33	2	22	2.82	.048	23	9	.40	410	.01	9	.94	.02	.21	1	1
Q 6130	3	38	42	656	3.4	10	2	1115	1.05	408	5	ND	1	64	8	28527	2	2	.34	.002	2	10	.01	50	.01	9	.08	.01	.01	1	65
Q 6131	6	470	9340	1700	182.9	30	24	1596	4.87	387	5	ND	1	10	9	473	2	53	.14	.033	11	36	.77	102	.01	8	1.66	.01	.05	1	27
Q 6132	44	1030	48	24	9.4	8	1	88	.62	6	5	ND	1	2	1	243	48	4	.02	.004	2	8	.04	31	.01	8	.07	.01	.01	1	79
Q 6133	115	1793	54	16	8.2	7	2	74	.62	4	5	ND	1	3	1	295	42	7	.04	.007	2	7	.05	49	.01	7	.12	.01	.04	1	240
Q 6134	2197	2292	75	30	22.3	6	2	54	.79	4	5	ND	1	3	1	10	148	3	.03	.004	2	53	.01	78	.01	9	.06	.01	.02	4	885
Q 6135	2627	3537	116	36	31.2	7	2	58	.81	20	5	ND	1	2	1	474	120	3	.04	.002	2	65	.01	46	.01	7	.03	.01	.01	5	928
STD C/AU-R	18	61	44	132	7.2	67	31	1051	4.21	42	21	8	37	47	17	17	18	58	.49	.085	39	56	.92	177	.07	33	2.05	.06	.14	12	490

Assay required for correct result for Cu, Pb, Zn, As > 1%
 Ag > 35 ppm
 Sb > 1000 ppm

RECEIVED

OCT 21 1988

LORNE X - VANCOUVER

Poison Mountain

R. H. Seraphim,
R. H. Seraphim Engineering Ltd.,
Vancouver, B.C.

W. Rainboth,
Canadian Superior Exploration Ltd.,
Kamloops, B.C.

Abstract

The Poison Mountain copper-molybdenum porphyry deposit lies at 1700 meters elevation in the Camelsfoot Range. Three porphyry bodies intrude a series of northwesterly striking Jura-Cretaceous sedimentary rocks. The porphyry complex has northwesterly and northerly trends, and is emplaced 3.2 kilometers to the northeast of the northwest-striking Yalakom fault. Two porphyry bodies, the Main and the North, are zoned, with hornblende-quartz monzonite cores and biotite-quartz monzonite perimeters, and both have associated copper-molybdenum sulphides. The mineral concentrations approach ore grade in an annular zone approximately coincident with the outer part of the biotite-quartz monzonite and the inner part of the biotite-hornfelsed wall rock. The east porphyry is a relatively unaltered and uniform body of coarse-grained plagioclase porphyry, with no related mineral deposits of importance known. It is probably the youngest of the intrusions.

Introduction

LOCATION

POISON MOUNTAIN (51°08'N, 122°36'W, NTS 920/2W) is located 37 kilometers west of Big Bar, a cable ferry and post office on the east side of the Fraser River near Clinton. A road suitable for four-wheel-drive vehicles can be used from Big Bar during the summer months. An unimproved but more travelled road leads up the Yalakom River to Poison Mountain from the Lillooet-Bralorne road.

TOPOGRAPHY

Relief on the property is approximately 600 meters, from 1600 meters elevation on Churn Creek to 2200 meters on the summits of Buck and Poison mountains. The slopes are moderately steep. Timberline is at approximately 2000 meters elevation. Natural outcrop is restricted to the shoulders along the creeks and the ridge crests. Felsenmeer and talus are abundant above the timberline. Bulldozed cuts and drill holes show the rock types within the explored area.

Aerial photographs show that the mineralized area is coincident with a topographic basin formed by Copper and Fenton creeks (Fig. 2). The basin continues to the northwest across Poisonmount Creek beyond the area explored in detail.

HISTORY

The first lode claims at Poison Mountain were located in 1935. Copper showings were hand trenched prior to 1956, when H. Reynolds of Lillooet optioned the property to Granby Consolidated Mining Smelting and Power Company Ltd. Granby built an access road, trenched, and diamond drilled ten holes totalling 601 meters. New Jersey Zinc Exploration Company Ltd.

optioned the ground in 1959, and conducted magnetometer and soil surveys, followed by trenching and 610 meters of diamond drilling in fifteen holes. H. Huestis and associates acquired the property in 1961 and optioned it to American Smelting and Refining Company, who completed an induced polarization survey and further trenching. Copper Giant Mining Corporation Ltd. acquired the property in 1966 and optioned it to Homestake Mineral Development Company. Canadian Superior Exploration Ltd. became associated with Homestake in a joint venture, and the two companies have completed magnetometer, induced polarization and geochemical surveys, accompanied by 5937 meters of diamond drilling in 40 holes and 4131 meters of percussion drilling in 62 holes.

RESERVES

The mineral resource is indicated to be in the order of 175 million tonnes averaging 0.33 per cent copper, 0.015 per cent molybdenum and 0.3 g/tonne of gold, using a cutoff grade of 0.25 per cent copper. The calculated stripping ratio is approximately 0.7 tonnes of waste to 1 tonne of mineral resource.

Geology

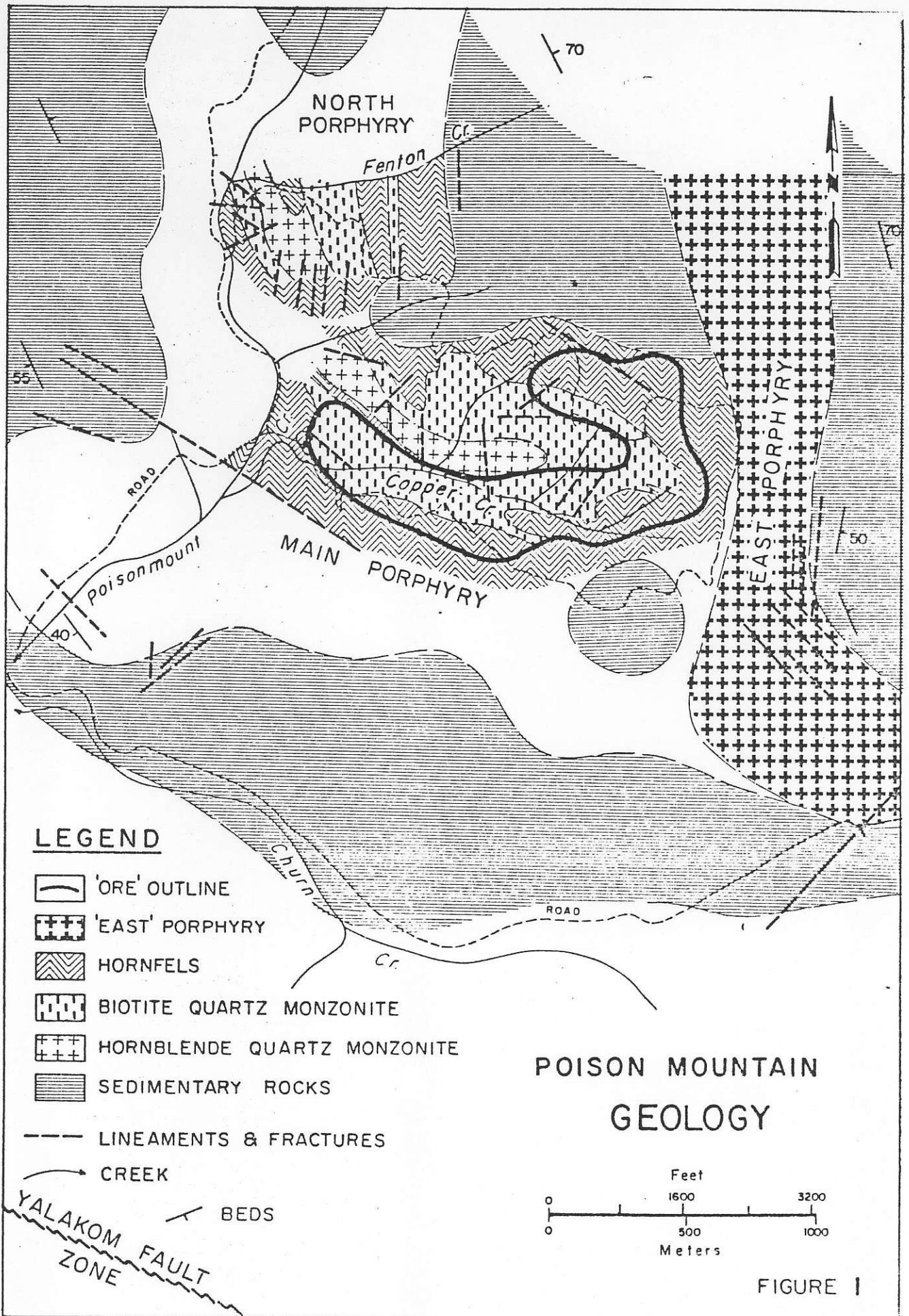
The regional geology of the area including the Poison Mountain mineral deposit has not been mapped completely. The "Taseko Lakes Area" (Tipper, 1963) includes ground to the north and west and "Geology of the Shulaps Range" (Leech, 1953) includes ground to the south and west.

The map and report show that a major northwest-trending fault, the Yalakom fault, cuts across the southwest corner of the claim group. The Yalakom fault is a right-lateral transcurrent fault that is believed to have an offset of more than 200 kilometers. Ultramafic rocks intruded by a few small porphyry plugs occupy an area of 20 by 60 kilometers in the Shulaps Range southwest of the fault. A thick sedimentary section, including greywacke, grit, conglomerate and siltstone, that is probably part of the Relay Mountain Group (Jeletzky and Tipper, 1968) is found on the northeast side of the fault. The sedimentary beds near the Poison Mountain property dip steeply, but changes in strike indicate considerable disruption produced by intrusion of the porphyry bodies.

HOST ROCKS

The Jura-Cretaceous sedimentary rocks exposed near the Poison Mountain property are typical of those northeast of the Yalakom fault. Greywackes, argillites and conglomerates are interbedded and well indurated. No marker beds were identified, and no attempt has been made to trace an individual stratum through the mapped area.

The greywackes and grits are grey to green, and some strata contain a relatively large amount of feldspar and chloritized mafic minerals. Locally, the greywacke approaches andesite in bulk composition. Where the greywacke has been metamorphosed or meta-



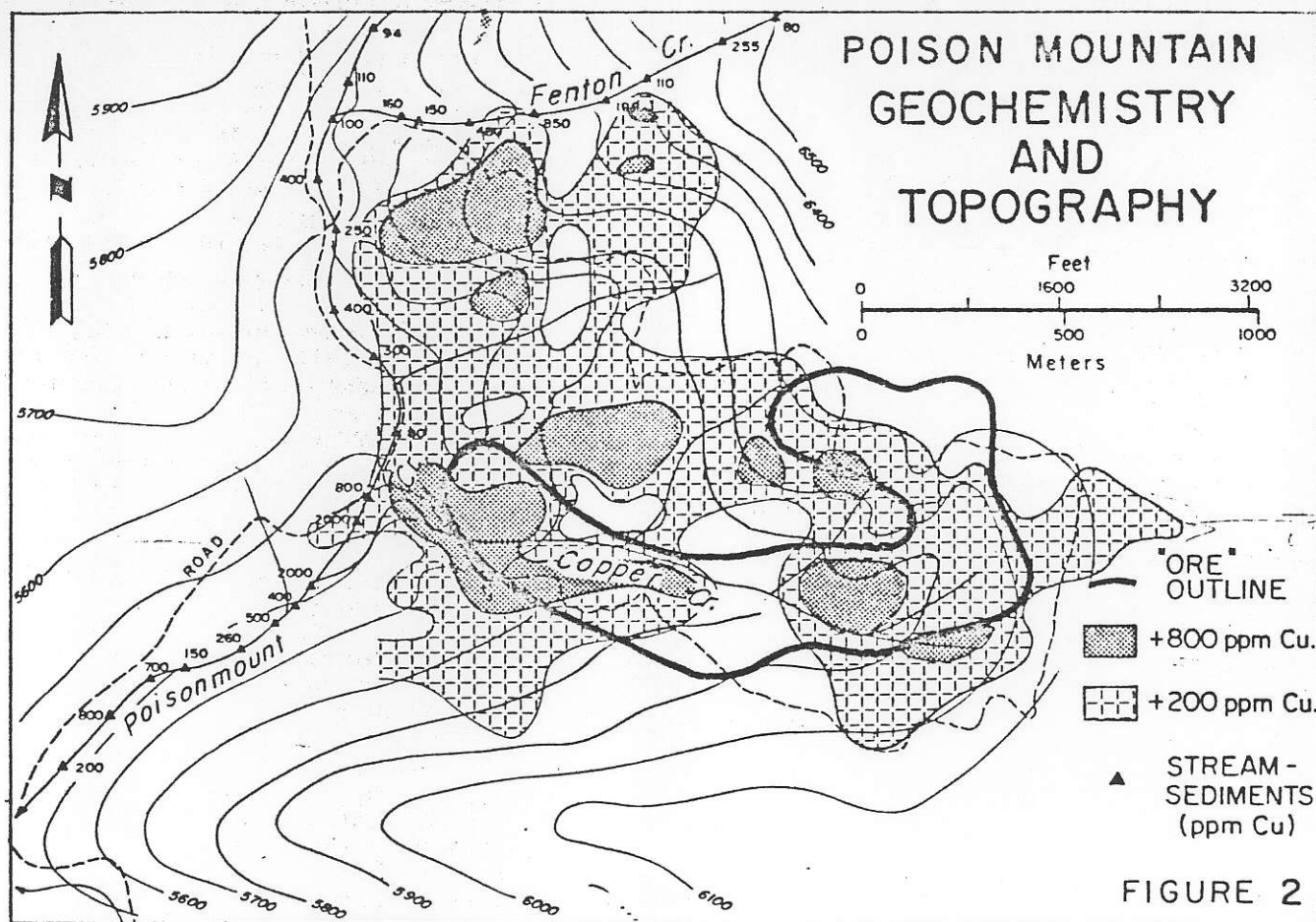


FIGURE 2—Poison Mountain geochemistry and topography.

somatized close to the intrusions, the feldspar grains have increased in size, and the mafic minerals have been recrystallized as biotite. In these places, the greywacke approaches porphyry in both composition and appearance. Small rock fragments, however, generally permit easy identification of the greywacke, even where the mottling of the feldspar porphyroblasts makes these rocks superficially similar to porphyry. Bedding was not found in many of the thick sections of greywacke.

Several siltstone members are exposed within the explored area. The siltstone is commonly grey and black, and thin bedded, with beds averaging 2 centimeters thick. The bedding invariably dips steeply and strikes from north to N 60°W.

Conglomerate crops out north and west of the mapped area. It consists of well-rounded cobbles, up to a third of a meter or more in diameter, in a greywacke matrix. Some of the cobbles are granitoid, but none are porphyry similar to that containing copper and molybdenum sulphides.

PORPHYRY INTRUSIONS

Three porphyry intrusions are found at Poison Mountain: the Main Porphyry, which contains most of the important sulphide concentrations, the North Porphyry, which is similar but smaller, and the East Porphyry, which differs in composition and is almost barren of copper mineralization. The Main and North porphyry intrusions vary locally in composition and

are irregular in configuration, and thus particularly difficult to map, so that the outlines shown on Figure 1 will undoubtedly be revised as exploration continues.

The Main and North porphyry intrusions are separated by hornfels at the surface, but may be joined at depth. They are both zoned and consist of similar core and border phases. The cores are composed of hornblende-quartz monzonite porphyry. Pale grey to cream-coloured plagioclase phenocrysts, up to 3 mm long, constitute approximately 55 per cent of the rock. The phenocrysts have strong to moderate oscillatory zoning, with anorthite content ranging from 40 to 55 per cent. Hornblende needles up to 3 mm long constitute 15 per cent of the rock. The grey matrix is composed of: quartz (up to 20 per cent of the total rock); sphene (4 per cent); opaques, consisting predominantly of magnetite and/or ilmenite with minor pyrite (4 per cent); and minor amounts of apatite, chlorite, carbonate, muscovite, epidote and rutile.

The porphyry in the core is generally fresh, with only limited replacement of hornblende by chlorite and a few patches of carbonate and clay-mineral alteration.

The border zones are very irregular and grade inward to the core and outward to the sedimentary host rocks. The parts which appear to be intrusive are biotite-quartz monzonite, consisting of a grey matrix in which are set irregular cream to grey plagioclase phenocrysts, up to 5 mm long, that occur locally in clusters up to 10 mm in diameter. The plagioclase phenocrysts constitute 40 to 50 per cent of the rock and have strong oscillatory zoning, with the anorthite content ranging from 20 to 50 per cent. Hornblende

FIGURE 1—(left)—Geology of Poison Mountain.

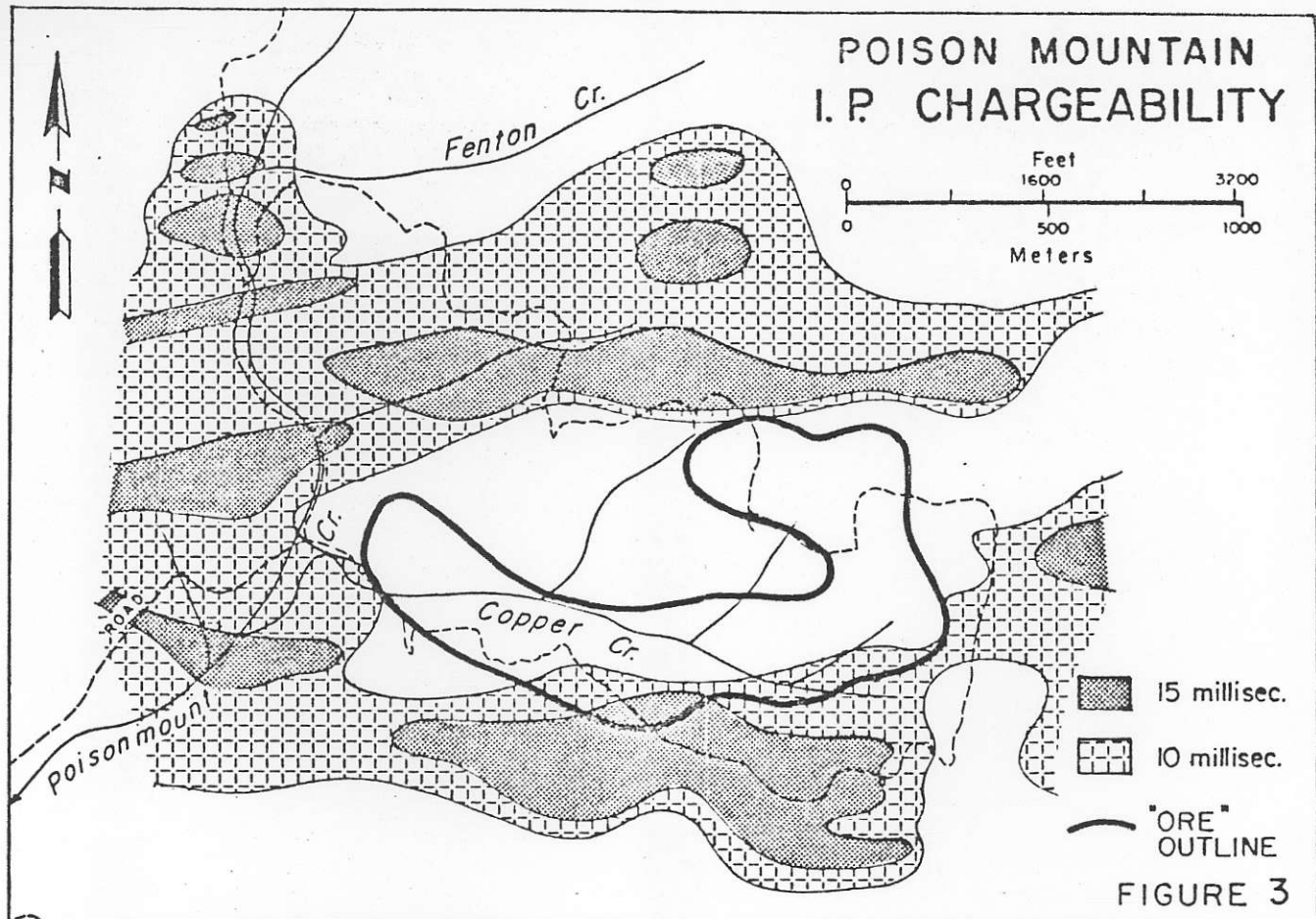


FIGURE 3 — Poison Mountain IP Chargeability.

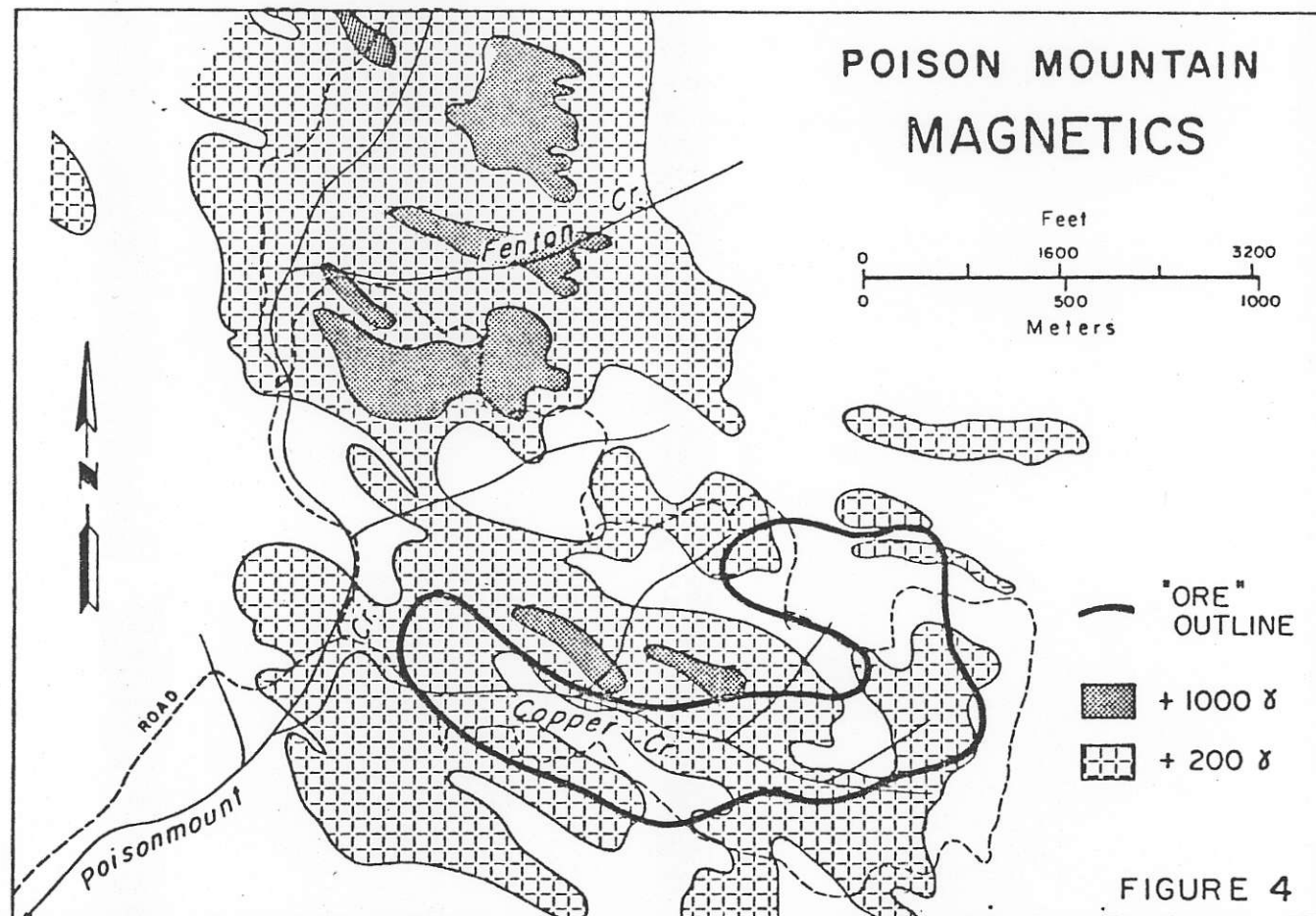


FIGURE 4 — Poison Mountain Magnetics.

is not evident megascopically; it appears originally to have formed 15 to 20 per cent of the rock, but is almost totally replaced by fine-grained green-brown biotite, minor magnetite, chalcopyrite and a few coarse grains of apatite. The grey groundmass is a fine-grained mosaic of quartz, plagioclase, magnetite, chalcopyrite, biotite and apatite. Principal alteration is that of hornblende to biotite. No K-feldspar has been identified. The plagioclase is sericitized only locally along fractures.

The East Porphyry pluton is distinctly different. It has a generally uniform composition and texture, with larger plagioclase phenocrysts and a paucity of associated copper sulphides. Phenocrysts of white plagioclase, up to 1.25 cm long, lie in a grey matrix of fine-grained feldspar, hornblende and epidote. The rock also contains pyrite, minor chalcopyrite and quartz veins where it is disrupted by the fracture system on the southeast trend of the Main Porphyry. Copper and molybdenum sulphides are too sparse to invite exploration.

Emplacement of the porphyry system has been accompanied by much shattering and minor faulting within both the perimeter of the intrusion and the surrounding hornfels. Irregular dykes of porphyry in hornfels, and hornfels breccia with a porphyry matrix are common. Fragments in the breccia invariably appear to be strongly granitized greywacke rather than originally intrusive in origin. Breccia clasts are a mosaic of quartz (40 per cent) and plagioclase (30 per cent), fine-grained biotite (15 per cent) and alkali feldspar (10 per cent). The matrix is typical biotite-quartz monzonite. Biotite, magnetite, chalcopyrite and apatite appear pseudomorphous after hornblende in both the fragments and the intrusive matrix.

Features of lithology and alteration which are uncommon are the strong biotite alteration and the lack of potash feldspar. Some fractures in and near the Main and North porphyries contain abundant gypsum. Poison Mountain is thus similar in lithology and alteration to the porphyries of the Babine Camp (Carson and Jambor, 1974) and to those of Fish Lake (Wolfhard, this volume).

AGE

No radiometric dating has been completed on the intrusive rocks. The porphyries are younger than the Jura-Cretaceous sedimentary rocks they intrude and, as they resemble the Babine porphyries, may be Eocene.

STRUCTURE

Three sets of fractures, faults and topographic lineaments are observed. The set which predominates, and which appears to control the emplacement of the Main Porphyry and the mineralization, strikes N 40°W to N 70°W and dips steeply. This set parallels the Yalakom fault (Fig. 1). The average strike of the sedimentary rocks and the elongation of the Main Porphyry intrusion are parallel. Many of the mineralized fractures and the over-all zone of mineralization also trend northwesterly. Disruption of sediments along Churn Creek indicates that a parallel zone of faulting also exists there.

A north-striking set of fractures and faults appears to control the emplacement of the North and East porphyries. This set is also evident throughout the main area of mineralization, but does not appear as important as the northwest set.

A third fracture set trending northeasterly is probably associated with the original cross jointing in the sedimentary rocks. A major northeasterly striking fault marks the south limit of the East Porphyry.

MINERALIZATION

Sulphides, in decreasing abundance, include pyrite, chalcopyrite, molybdenite and bornite. Quartz, gypsum and calcite are the main non-metallic hydrothermal minerals.

The sulphides exist as vein and fracture fillings and as disseminations. Pyrite is widespread and forms an irregular halo in the host rocks around the Main and North intrusions as well as occurring within these intrusions. It doubtless is responsible for most of the induced polarization anomalies (Fig. 3). Chalcopyrite, bornite and molybdenite are found closer to the intrusions, principally in and near the perimeter of the biotite-quartz monzonite porphyry. The chalcopyrite and bornite mineralization is estimated to be almost equally divided between dissemination, chiefly replacing mafic minerals, and fracture filling in quartz veins and 'dry' fractures. The molybdenite observed was invariably associated with fracture fillings with or without quartz.

The outline of the better-grade mineralization is shown in Figure 1. The North Porphyry contains very similar grades locally, and on further exploration may provide some small reserves at a slightly lower cutoff grade than those of the Main Porphyry.

SECONDARY PROCESSES

Weathering and oxidation extend to only a few meters depth over most of this deposit, so that no supergene enrichment is expected or observed.

Environmental and Feasibility Studies

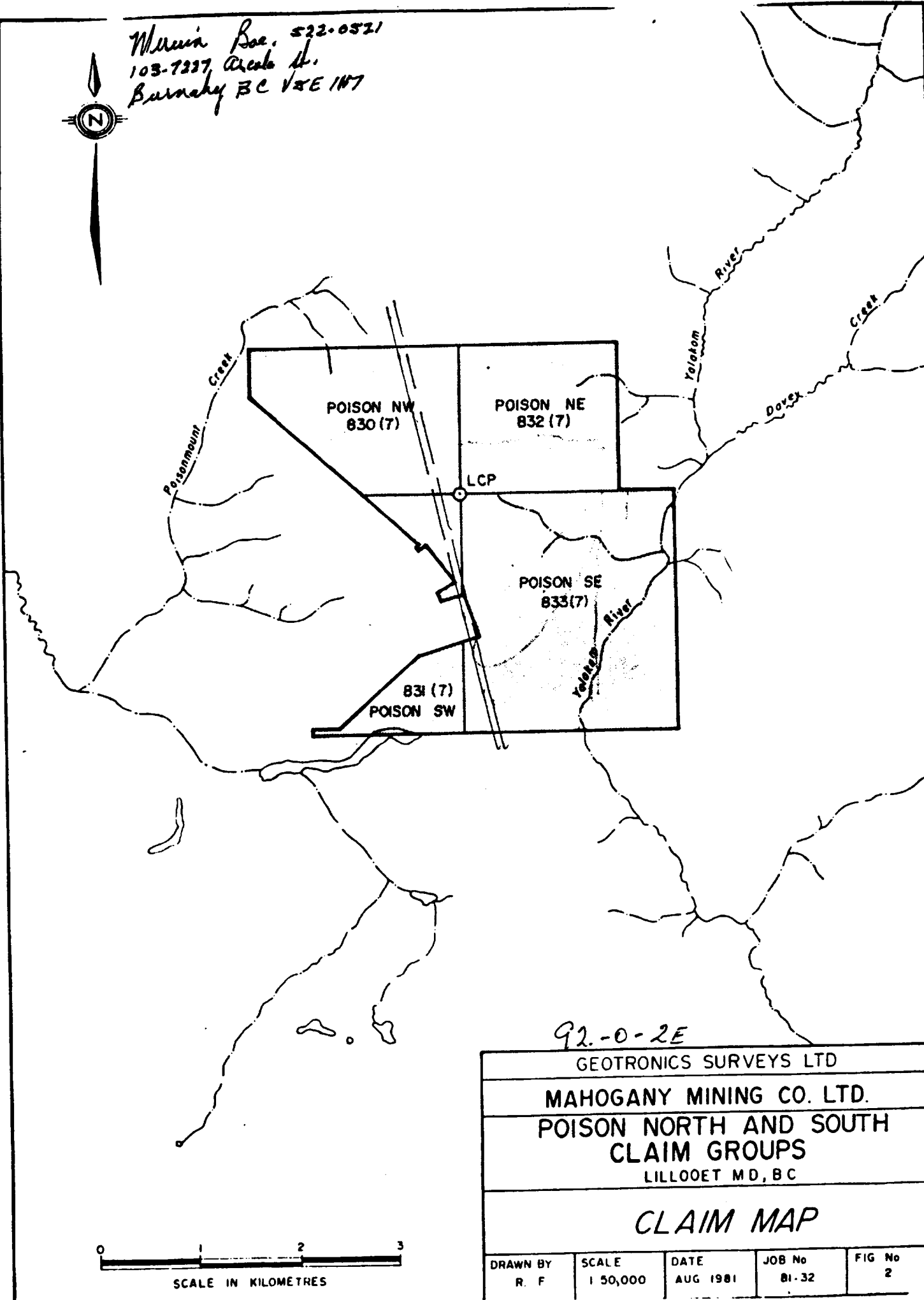
No formal feasibility study has been prepared for this deposit. Further diamond drilling will probably be required to define and confirm the outline of the better-grade mineralization prior to making such a study. No studies have been made of future production waste disposal or of the effects of exploitation of the deposit on the environment.

Geochemistry

The property was explored geochemically by stream-sediment and soil surveys. The 80-mesh fraction was analyzed by the atomic absorption method. The stream-sediment survey distinctly outlined the area of copper mineralization, with analyses rising from a background of about 50 ppm to over 2000 ppm on the creek cutting the main mineralized zone (see Fig. 2). The anomalies on Poisonmount Creek, 150 and 200 ppm copper near the confluence with Churn Creek, are surprisingly low.

The "B" horizon, where present, was soil sampled at an average depth of a half meter at 60-meter (200-foot) intervals along lines spaced 250 meters (800 feet) apart. The area of known mineralization was outlined as shown by the 200-ppm copper contour in Figure 2. The gold content of the deposit is substantiated by old placer workings in Poisonmount Creek.

Merwin Pae. 522-0521
 103-7337, Crest St.
 Burnaby BC V8E 1W7

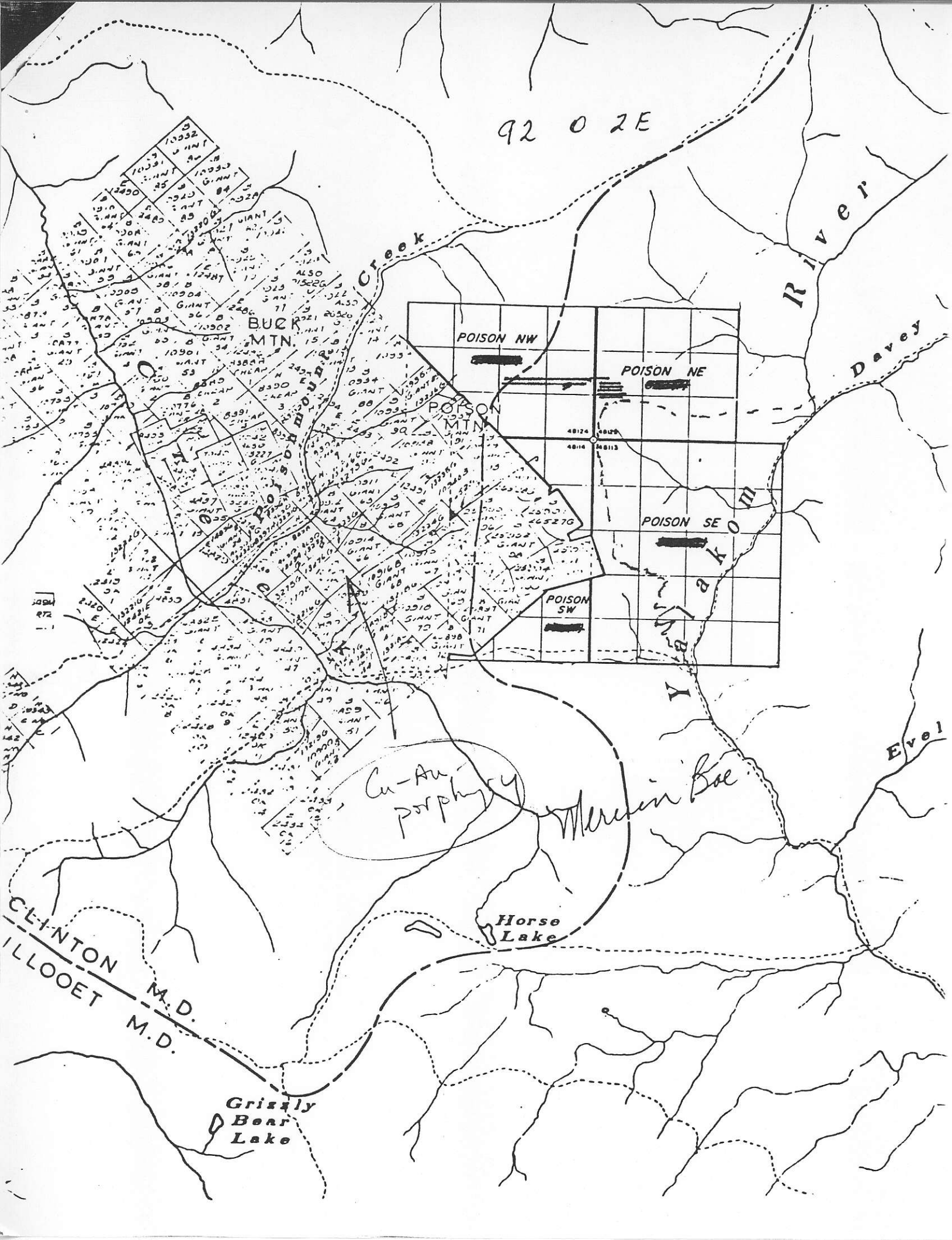


92.-0-2E

GEOTRONICS SURVEYS LTD				
MAHOGANY MINING CO. LTD.				
POISON NORTH AND SOUTH CLAIM GROUPS				
LILLOOET MD, BC				
CLAIM MAP				
DRAWN BY	SCALE	DATE	JOB No	FIG No
R. F	1 50,000	AUG 1981	81-32	2



92 0 2 E



BUCK
MTN.

POISON NW

POISON NE

POISON
MTN.

POISON SE

POISON
SW

Cu-Au
porphyry

Mercuric Boe

Horse
Lake

CLINTON M.D.
ILLOET M.D.

Grisly
Bear
Lake

Evel



CHEMEX LABS LTD.

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• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 68115
 INVOICE NO. 36036
 RECEIVED May 20/80
 ANALYSED June 4/80

TO: Mervin Boe
 #14 - 1091 Broughton
 Vancouver, B.C.
 V6G 2A9

Passion notes

ATTN:

SAMPLE NO. :	% Cu	% Pb	% Zn	% Sb	oz/ton Ag	Also on #52860.
#1 - Large				20.9		
#2 - Small	0.72	24.4	2.28	1.26	245.82	

Waf. hcp.

Sample description	Prep code	Pb %	Zn %	Sb NAA %	Ag FA oz/T	Au FA oz/T	
#1	207	0.98	0.28	DELAYED	11.46	0.012	--
#2	207	15.70	8.80	DELAYED	202.12	0.038	--

TO: Mervin Boe
 #14 - 1091 Broughton
 Vancouver, B.C.
 V6G 2A9

K.M. Poison sub.

INVOICE NO. 35754
 RECEIVED May 13/80
 ANALYSED May 15/80

ROCKS

SAMPLE NO. :	PPM Cu	PPM Pb	PPM Zn	PPM Ag	PPB Au	PPM Sb
#1 - Large	30	210	36	2.0	40	> 1000
#2 - Small	> 4000	>4000	> 4000	> 20	130	> 1000

Pass #1. PROPERTIES HELD BY MERVIN BOE, MANTIC RESOURCES LTD.
 POISON MOUNTAIN, 56 UNITS MAP 92-0- 2 E, LILLOOET M.D.

ASS. REPORTS #926,969,4139,8190.
 I.P. BY GLEN WHITE GEOPHISICS 1981
 ASSAY SAMPLES AG SB PB ZN AU CU
 245.82 20.9 % 24.6% 2.28% .1 oz .72 %
 11.46 20% .1% .29% .012oz
 202.12oz 20% 15.70% 8.80% .038oz

GEOLOGY.

Chiefly underlain by greywacke, grit & argillite belonging to the Jackass Mt Group of lower Cretaceous time. The sediments are intruded by Tertiary Quartz Monzonite or possibly Quartz Diorite.
 Two conspicuous porphyritic intensive plutons in the sediments are noted in the property. One is located at the S.W. corner of the line grid map, the other is at the central east part of the map area interpreted to be about 1500 m long & 1000 m east.
 In the N.W. corner of the property, there is an 8 cm Quartz vein disclosed by a trench that shows a mass of solid Galena & Sphalerite. This mineralized vein occurs in the sediments belonging to the Jackass Mt. group. The showings of this area are in for a considerable revision of mineralization.

SUMMARY

During the first week of July, 1981 an induced polarization (IP) survey was carried out over part of the Poison NW, SW, NE and SE claims. The claims are located 75 road km northwest of Lillooet. The geographical coordinates of the property are $51^{\circ} 08'$ N latitude and $122^{\circ} 36'$ W longitude. Access to much of the property is possible by a four-wheeled drive vehicle.

The purpose of the reconnaissance IP survey was to locate potential zones of copper sulphides.

The area is believed to be chiefly underlain by greywacke, grit and argillite belonging to the Jackass Mountain Group of Lower Cretaceous time. The sediments are intruded by Tertiary quartz monzonite or quartz diorite.

The IP equipment used was frequency-domain type. The array was dipole-dipole with a dipole length of 100 m and line spacing, 400 m. Percent frequency effect and apparent resistivity data were plotted in plan form and then contoured.

CONCLUSIONS

1. The IP survey revealed 3 significant anomalous zones that have been labelled A to C respectively.
2. The correlation of IP anomalies with soil geochemistry is not very strong with any of the 3 IP anomalies. The lack of a strong geochemical response in the IP anomalous areas

is probably due to the deep overburden found on most of the property.

3. Due to the poor geochemical response and lack of bedrock outcrop it is apparent that most of the information on potential sulphide deposits will have to be obtained from a detailed IP survey.

RECOMMENDATIONS

In the writer's opinion the results of this reconnaissance IP survey warrant the instigation of a more detailed IP survey over the anomalous areas as mentioned in this report. The detailed IP survey should consist of two phases.

PHASE 1

Lines 200W, 0W, 200E, 400E and 600E should be run from 2500S to the baseline using a dipole length of 60 m and dipole separation of $n = 1, 2, 3$.

PHASE 2

If the results from Phase 1 are good, the lines 100W, 100E, 300E and 500E should be run from 2500S to OS with the same dipole length and separations as used in Phase 1.

In the writer's opinion a more powerful transmitter is needed for the recommended survey. Use of dipole separations greater than $n = 1$ requires increased power output to produce a reliable reading. The 500 watt transmitter used in this survey was barely adequate for $n = 1$ due to high contact resistance between current stake and ground.

to creeks and the Yalakom River valley. The main water source is the Yalakom River which flows through the Poison SE claim.

Vegetation in the area varies from lightly dense forest to alpine shrubs at elevations greater than 1,900 m.

HISTORY OF PREVIOUS WORK

No documented record is available as to the history of the more than 20 bulldozer trenches found on the property.

The only other work done on the property was a soil geochemistry survey and outcrop mapping done during June-July, 1980 for Mahogany Mining Co. Ltd.

GEOLOGY

The following is based on the geological report done by H. Kim (July, 1980).

The general geology of the area is shown in a 1978 GSC Map Taseko Lakes at a scale of 1:250,000 (92-0).

The property is believed to be chiefly underlain by greywacke, grit and argillite belonging to the Jackass Mountain Group of Lower Cretaceous time. The sediments are intruded by Tertiary quartz monzonite or possibly quartz diorite.

The Yalakom River flowing southward at the southeast corner of the property coincides with a northwest-trending right lateral, transcurrent fault reported to offset the Tertiary rocks laterally over 200 km.

Two conspicuous porphyritic intrusive plutons in the sediments

are noted on the property. One is located at the southwest corner of the line grid map. The other porphyry is at the central east part of the map area, interpreted to be about 1,500 m long north and 1,000 m east.

The two porphyritics are separated by scattered small exposures of greywacke and grit at the surface, but may be joined at depth.

In the northwest corner of the property there is an 8 cm quartz vein disclosed by a trench that shows a mass of solid galena and sphalerite. This mineralized vein occurs in the sediments belonging to the Jackass Mountain Group.

INDUCED POLARIZATION

INSTRUMENTATION AND THEORY

The induced polarization equipment used was frequency-domain type manufactured by Sabre Electronic Instruments Ltd. of Burnaby, B.C. A 12-volt lead-acid battery was used for a power source to give a maximum power of 500 watts.

The transmitter output is 125, 250, 375 or 500 volts with selection by switch. The transmitter current varies up to 1,000 milliamperes. The self-potential buckout is operated manually by a 10-turn precision pot with a range of ± 1 volt.

There are basically two methods of IP surveying, frequency-domain and time-domain. Both methods are dependent upon a current flowing across an electrolyte-metallic mineral interface or an electrolyte-clay particle interface, the former being called electrode polarization and latter being called membrane polarization.

Resistivity, this is a measure of how resistive or inversely how conductive the overburden and/or bedrock is. Most often a disseminated or massive sulphide body is expressed by a resistivity low. The resistivity values in ohm-m were arrived at by dividing the receiver voltage by transmitter current and multiplying by a geometric factor used with the dipole-dipole array of dipole length of 100 m and a dipole separation of $n = 1$ (or 2 or 3 as the case may be).

The resistivity was plotted in plan form (1:5,000) and contoured. The contour interval was 100 ohm-m starting at 300 ohm-m and decreasing.

DISCUSSION OF RESULTS

The writer has labelled 3 IP anomalies which he considers to be worthy of further discussion.

IP anomaly A is up to 100 m wide and possible 400 m long. The correlation with other surveys is as follows:-

- | | | |
|----|-------------|--|
| 1. | Copper | Anomalous IP values with slightly anomalous copper values on line 200 W. |
| 2. | Lead | None. |
| 3. | Outcrop | Known outcrop of hornblende feldspar porphyry with some pyrite. |
| 4. | Resistivity | High - The resistivity low found on line 200 W is probably due to swampy surface conditions. |

The anomaly is probably due to an intrusive containing some pyrite and/or other sulphides.

Anomaly B is probably close to anomaly A and may be geologically related. The correlation with other surveys is as follows: -