

GEOCHEMICAL AND STRUCTURAL REPORT  
ON THE BOW CLAIMS  
STEWART, BRITISH COLUMBIA  
SKEENA MINING DIVISION  
NTS 104A/5W  
Latitude 56°31'  
Longitude 129°41'

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**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

FILE: BOW90

**20,089**

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JEK

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in back pocket

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## SUMMARY

The Bow Claims are located approximately 50 kilometers north-northeast of Stewart, British Columbia along Todd Creek in the Skeena Mining Division.

The Bow Claims are underlain by favourable gold and copper bearing volcanic and sedimentary units of the Unuk River, Betty Creek and Salmon River Formations of the Hazelton Group intruded by various granitic rocks. The claims lie within a belt of rocks referred to as B.C.'s "Golden Triangle" which encompasses the Iskut River Gold Camp to the west, the Unuk River Camp to the east, and the Stewart Gold Belt to the south. Besides the recent Eskay Creek area, the "Triangle" has two producing gold mines and at least three more in the process and a recently discovered porphyry copper-gold deposit.

During February-March 1990, E.R. Kruckowski Consulting Ltd. personnel carried out a geochemical program and airphoto interpretation on the Bow Claims. The geochemical program consisted of analyzing 149 rock and 456 silt samples collected during 1987 and 1988 programs. These samples were analyzed for copper, lead, zinc, arsenic, antimony and mercury.

The airphoto interpretation was prepared from a 1:20,000 orthophoto covering the claim area.

The geochemical program indicated numerous anomalous sites for copper, lead, zinc, arsenic, antimony and mercury.

The airphoto interpretation showed numerous north, northwest and northeast striking lineaments. Of particular interest are the north trending faults as they appear to host mineralized zones in the vicinity of the Bow Claims. According to the interpretation study, the north trending groups may be the youngest fault group. Gold mineralization on the surrounding properties is apparently associated with quartz-sericite along the shear zones.

The potential of encountering mineralized quartz sulphide veins, quartz-carbonate-sericite-pyrite altered zones and/or mineralized shear zones on the claims is considered good in the light of the anomalous 1987 silt sample BGS-KK-09 which assayed .188 ounces per ton gold and anomalous 1988 rock samples TCGR-4 which assayed .100 ounces per ton gold and TCRF-9 which returned assays of 270 ppb gold and 66.00 ounces per ton silver. Sample TCGR-4 was a sample from rusty quartz in an area that is in all likelihood underlain by the Mt Dilworth formation (host for the Eskay Creek deposit).

The claims are adjacent to the known Todd Creek gold-copper property held in joint venture between Golden Nevada Resources and Noranda. Recent drilling intersections returned assay values varying from 0.117 - 0.348 ounces per ton gold and 0.23% - 1.50% copper over widths up to 38 feet.

Further work on the Bow Claims is recommended for 1990. The work should include the following:

- detailed silt geochemical sampling in the area of TCGR-4,
- prospecting in the areas of anomalous sites and along interpreted structures,
- trenching of located showings,
- geological mapping,
- diamond drilling.

## INTRODUCTION

This report is based on data obtained from analyzing previously collected samples from the Bow Claims located in northern British Columbia approximately 50 kilometers by air north-northeast of Stewart, B.C., situated on the west side of Bowser Lake along the headwaters of Todd Creek. It is also based on an airphoto interpretation enlarged to 1:50,000 by Optimum Mapping of Vancouver.

E.R. Kruchkowski Consulting personnel carried out a geochemical program and airphoto interpretation in February-March 1990. The results of this work are presented within this report. Geochemical analyses were performed by Loring Laboratories Ltd. of Calgary, Alberta.

### Location, Access and Physiography

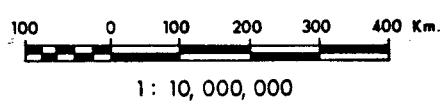
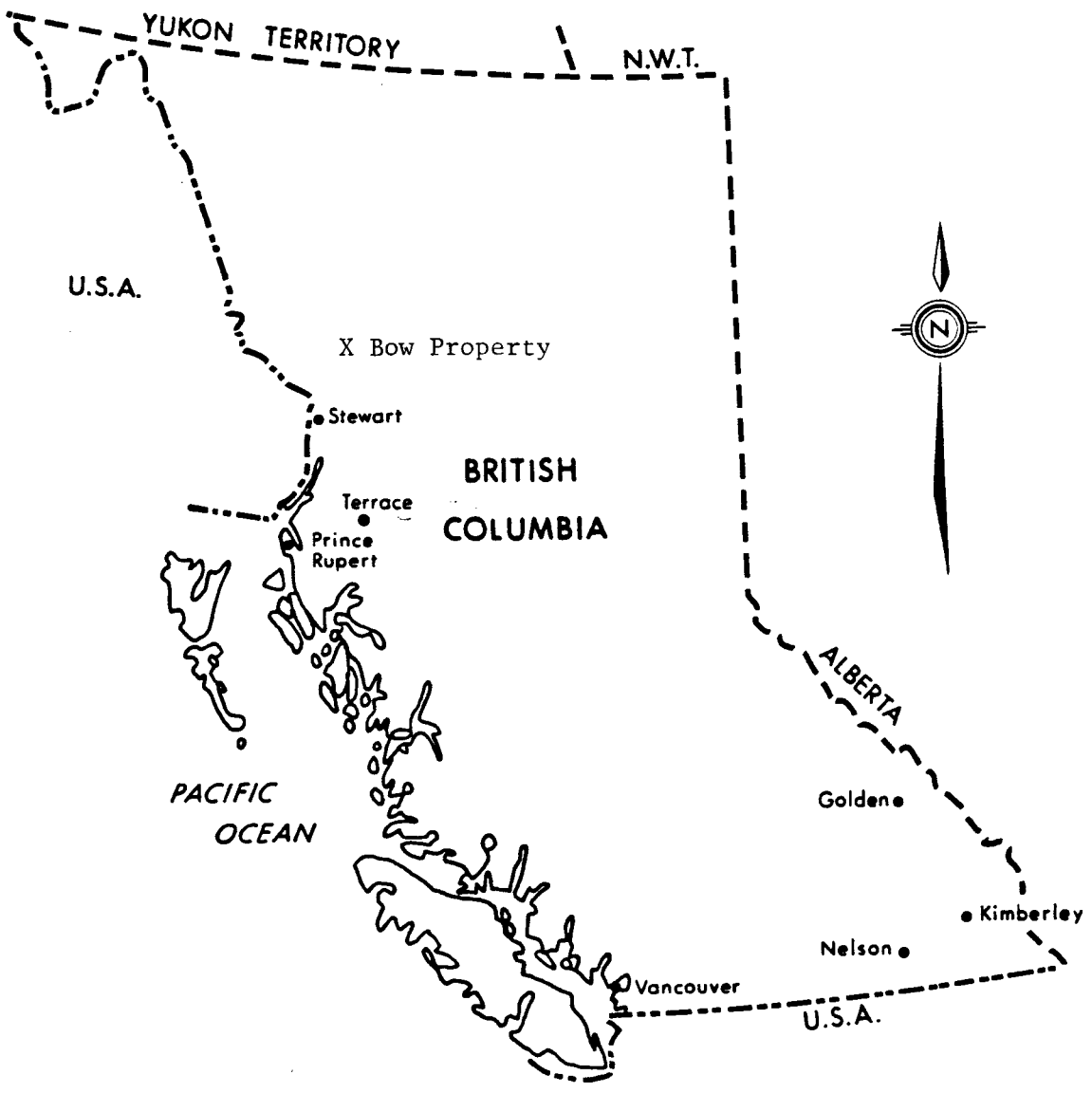
The Bow Claims are located in northwestern British Columbia, 50 kilometers north of Stewart, British Columbia, in the Skeena Mining Division, NTS 104A/5W (Figure 1).

The property is situated on the west side of Bowser Lake along the headwaters of Todd Creek at latitude 56°31', longitude 129°41'.

At present access is by helicopter based in Stewart, British Columbia. A 38 kilometer summer road extending to the Tide Lake Airstrip from Stewart, B.C. can be used to reduce mobilization/demobilization expenses (approximately 22 km southwest of the headwaters of Todd Creek).

A newly constructed winter road cuts through the property. This road extends from Cassiar-Stewart highway, east of Bowser Lake to the Newhawk Mining Camp, west of Brucejack Lake. The road has yet to be tested by the author.





**BRUCEJACK GOLD LTD.**

**PROPERTY  
INDEX MAP**

The terrain is extremely rugged and steep with elevations ranging from 1300 feet to 7000 feet. Treeline is at 4000 feet.

Vegetation at the lower elevations consists of fir, hemlock and spruce while at upper elevations vegetation is limited to thin brush and minor hemlock.

Water supply is plentiful as several glacial run-off streams drain into Bowser River and Todd Creek.

### Property Ownership

The Todd Creek property consists of 678 units (Figure 2).

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Record Date</u>
Bow 1	6001(3)	20	March 19, 1987
Bow 2	6002(3)	20	March 19, 1987
Bow 3	6003(3)	20	March 19, 1987
Bow 4	6004(3)	20	March 19, 1987
Bow 5	6005(3)	20	March 19, 1987
Bow 6	6006(3)	20	March 19, 1987
Bow 7	6007(3)	20	March 19, 1987
Bow 8	6008(3)	16	March 19, 1987
Bow 9	6009(3)	12	March 19, 1987
Bow 10	6010(3)	12	March 19, 1987
Bow 11	6011(3)	16	March 19, 1987
Bow 12	6012(3)	20	March 19, 1987
Bow 13	6013(3)	20	March 19, 1987
Bow 14	6014(3)	20	March 19, 1987
Bow 15	6015(3)	20	March 19, 1987
Bow 16	6016(3)	16	March 19, 1987
Bow 17	6017(3)	16	March 19, 1987
Bow 18	6018(3)	16	March 19, 1987
Bow 19	6019(3)	16	March 19, 1987
Bow 20	6020(3)	20	March 19, 1987
Bow 21	6021(3)	20	March 19, 1987
Bow 22	6022(3)	20	March 19, 1987
Bow 23	6023(3)	20	March 19, 1987
Bow 24	6024(3)	8	March 19, 1987
Bow 25	6025(3)	12	March 19, 1987
Bow 26	6026(3)	12	March 19, 1987
Bow 27	6027(3)	12	March 19, 1987
Bow 28	6028(3)	12	March 19, 1987
Bow 29	6029(3)	18	March 19, 1987
Bow 30	6030(3)	18	March 19, 1987
Bow 31	6031(3)	5	March 19, 1987

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Record Date</u>
Bow 32	6032(3)	15	March 19, 1987
Bow 33	6033(3)	20	March 19, 1987
Bow 34	6034(3)	20	March 19, 1987
Bow 35	6035(3)	20	March 19, 1987
Bow 36	6036(3)	20	March 19, 1987
Bow 37	6037(3)	20	March 19, 1987
Bow 38	6038(3)	9	March 19, 1987
Bow 39	6039(3)	15	March 19, 1987
Bow 40	6919(7)	12	July 29, 1988
Bow 41	6920(7)	10	July 29, 1988

The claims are held by E.R. Kruchkowski on behalf of Brucejack Gold Ltd. (30%), Catear Resources Ltd. (50%) and Marlin Developments (20%). Marlin has the right to earn up to 50% of the property.

#### History

The property history is relatively recent as follows:

1960 Newmont Mining Corporation conducted an exploration program consisting of diamond drilling (1150 feet), surface trenching and packsack drilling.

1969 Wilf Christians staked 6 claims for Kerr Addison Mines to cover the Newmont showings. No known work was conducted. Kerr Addison Mines transferred the claims to Wilf Christians who, in turn, transferred title to C.S. Powney. Trenching was carried out to fulfil assessment work.

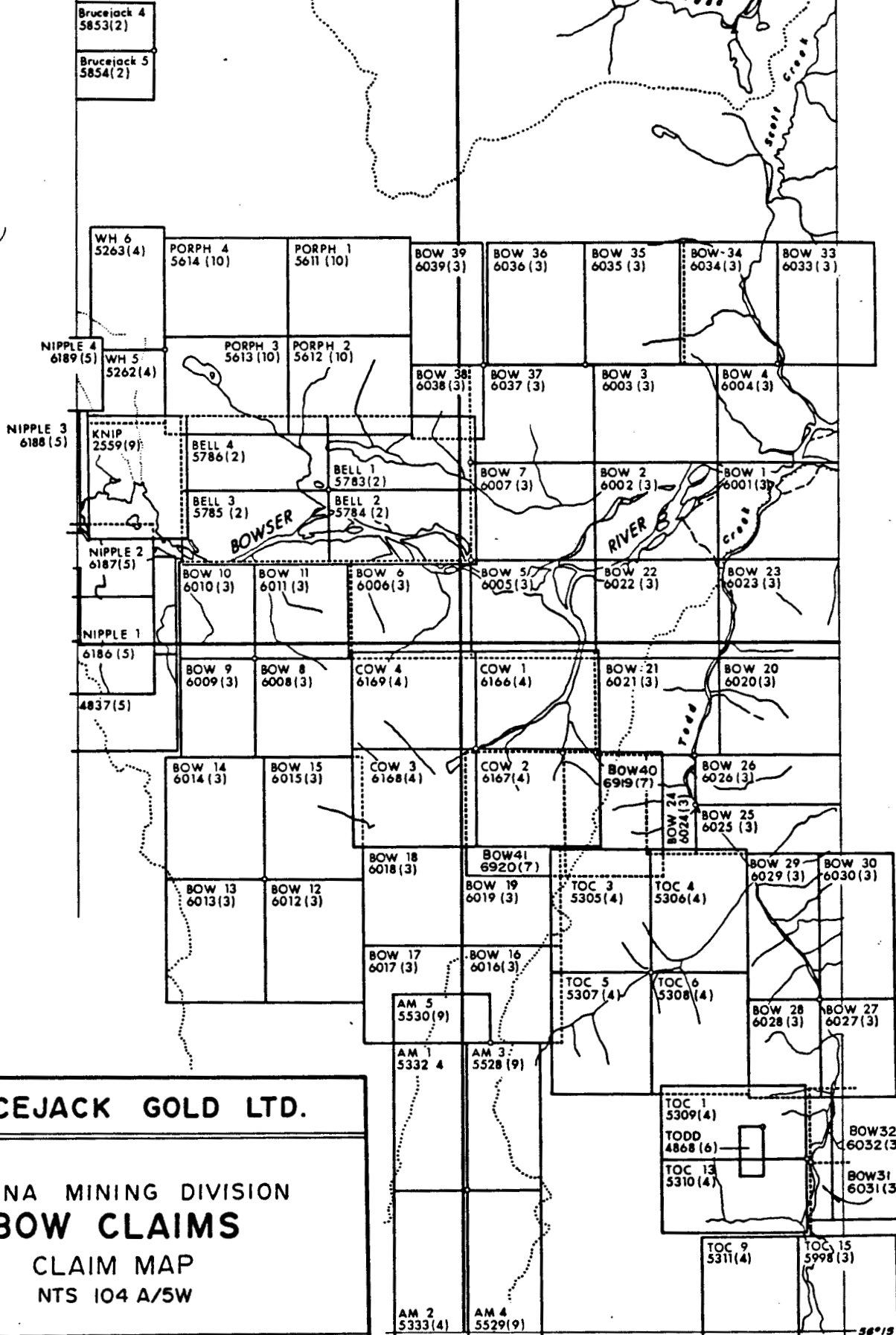
1971 A.G. Hodgson conducted a two day geological mapping and sampling program. Values up to 2.0% copper and 0.25 oz/ton gold across narrow widths were obtained.

1981 60 units were staked by Dennis Gorc and transferred to Riocanex Incorporated. Detailed mapping, prospecting, silt sampling and rock sampling programs were carried out. These claims were later dropped and picked up by Noranda.

1987 Golden Nevada Resources Inc. entered into an agreement with Noranda Exploration to acquire 50% interest in the Todd Creek property. Surface trenching and diamond drilling programs were conducted. Surface trenching returned values of 0.214 oz/ton gold over 14.7 feet. Drill results returned values up to .348 oz/ton gold over 5.7 feet.

Brucejack Gold Ltd. conducted an exploration program consisting of rock geochemical sampling, stream sediment sampling

130°00' 129°45' 56°30' 56°30'



**BRUCEJACK GOLD LTD.**

SKEENA MINING DIVISION  
**BOW CLAIMS**  
 CLAIM MAP  
 NTS 104 A/5W

FIGURE : 2

Scale 1:125,000

Date : June 6/89

129°45'

and prospecting. Slightly to strongly anomalous gold values were found in silt sediments.

1988 Golden Nevada and Noranda conducted a drill program on their claims.

Brucejack Gold Ltd. conducted an exploration program consisting of rock and stream sediment sampling and prospecting. A gold showing was discovered with a value of .1 opt Au across 4 feet.

?

4

# TCCR-4

Where does this come from?

Personnel and Operations

1989 report describes this as

Personnel involved during the 1990 program were as follows:

1 m chip  
(radius? /  
width?? /  
or what?)

E.R. Kruckowski, Geologist  
February - March 1990

Phil Van Angeren, Geologist  
February - March 1990

G. Sinden, Geological Technologist  
February - March 1990

D. Jackson, P.Eng.  
February - March 1990

Gord Steene, P.Geol.  
February - March 1990

All project costs were incurred in Calgary.

## GEOLOGICAL SURVEYS

### Regional Geology

The Todd Creek property lies in the Stewart area, east of the Coast Crystalline Complex and within the western boundary of the Bowser Basin. Rocks in the area belong to the mesozoic, Stuhini and Hazelton Group and have been intruded by plugs of both Cenozoic and Mesozoic age.

The base of the volcanic rocks appears to be triassic in age and consists of brown, black and grey, mixed sedimentary rocks interbedded with medium to dark green, mafic to intermediate volcanic and volcanoclastic rocks. The Stuhini Group appears to be conformably overlain by the Hazelton Group.

At the base of the Hazelton Group is the lower Jurassic Marine (submergent) and non-marine (emergent) volcanoclastic Unuk River Formation. This is overlain at steep discordant angles by a second, lithologically similar, middle Lower Jurassic volcanic cycle (Betty Creek Formation), in turn overlain by an upper Lower Jurassic dacitic lapilli tuff horizon (Mt Dilworth Formation). Middle Jurassic non-marine sediments with minor volcanics of the Salmon River Formation unconformably overlie the above sequence.

The oldest rocks in the area belong to the Lower Jurassic Unuk River Formation which forms a north-northwesterly trending belt extending from Alice Arm to the Iskut River. It consists of green, red and purple volcanic breccia, volcanic conglomerate, sandstone and siltstone with minor crystal and lithic tuff, limestone, chert and coal. Also included in the sequence are pillow lavas and volcanic flows.

In the property area the Unuk River Formation is unconformably overlain by middle Lower Jurassic rocks from the Betty Creek Formation. The Betty Creek Formation is another cycle of trough-

filling sub-marine pillow lavas, broken pillow breccias, andesitic and basaltic flows, green, red, purple and black volcanic breccia, with self erosional conglomerate, sandstone and siltstone, and minor crystal and lithic tuffs, chert, limestone and lava.

The upper Lower Jurassic Mt Dilworth Formation consists of a thin sequence varying from black carbonous tuffs to siliceous massive airfall lapilli tuffs and felsic ash flows. Minor interbedded sediments and limestone are present in the sequence. Locally pyritic varieties form strong gossans.

The Middle Jurassic Salmon River Formation is a late to post volcanic episode of banded, predominately dark coloured, siltstone, greywacke, sandstone, intercalated calcarenite, minor limestone, argillite, conglomerate, littoral deposits, volcanic sediments and minor flows.

According to E.W. Grove, the majority of the rocks from the Hazelton Group were derived from the erosion of andesitic volcanoes subsequently deposited as overlapping lenticular beds varying laterally in grain size from breccia to siltstone.

Mr. Alldrick's work has shown several volcanic centres in the property area. Lower Jurassic volcanic centres in the Unuk River Formation are located in the Big Missouri Premier area, and in the Brucejack Lake area. Volcanic centres within the Lower Jurassic Betty Creek Formation are in the Mitchell Glacier and Knipple Glacier areas.

There are various intrusives in the area. The granodiorites of the Coast Plutonic Complex largely engulf the Mesozoic volcanic terrain to the west. East of these (in the property area), smaller intrusive plugs range from quartz monzonite to granite to highly felsic; some are, likely, related late phase offshoots of the Coast plutonism, others are synvolcanic and tertiary. Double plunging, northerly-trending synclinal folds (Mitre syncline, Dilworth

Syncline Spider anti-clone) of the Unuk River and Mt Dilworth Formations dominate the structural setting of the area. These folds are locally disrupted by small east-overthrusts on strikes parallel to the major fold axis, cross-axis steep wrench faults which locally turn beds, selective tectonization of tuff units, and major northwest faults which turn beds. A large fault zone extending along Harrymel Creek south to the South Unuk River has been indicated by the government survey. Figure 3 shows the regional geology of the Todd Creek property area (Grove).

#### Local Geology

The section for local geology has been drawn from the 1989 report on the Todd Creek property.

"The property area is underlain by rocks belonging to the Hazelton Group. Volcanic sediments, volcanic flows and sedimentary units of the Unuk River, Betty Creek and Salmon River Formations are encountered.

The southeastern region of the property area contains red, purple and green volcanic breccia, conglomerate, siltstone, sandstone, lithic tuff and crystal tuff. The lithic and crystal tuffs are weakly to strongly silicified along sheared or faulted zones, particularly along exposed valley bottoms. Barren milky-white quartz veins intrude these rocks of the Unuk River Formation along the southern portion of Todd Creek. Several gossanous, very well silicified zones are encountered along Todd Creek on the eastern region of the property. These pyritic, silicified gossans appear to be hosted by the Betty Creek Formation of similar description to the rocks of the Unuk River Formation.

The northeastern regions encompass siltstone, greywacke and sandstones of the sedimentary Salmon River Formation. The siltstone and argillite units are black, fissile and contain belemnites and cherty concretions. The unit locally oxidizes a limonitic orange colour.

The central region of the property area includes volcanic breccias, siltstone and sandstones of the Betty Creek and Unuk River Formations. Locally minor wedges of sandstone, siltstone and greywacke of the Salmon River Formation appear.

The western section of the property is predominately crystal and lithic tuff with volcanic breccia, sandstone, and minor



siltstone. Various small unmapped eocene feldspar porphyry plugs, stocks and dykes are encountered throughout the property.

A small wedge of schist, phyllite and semischist, sericitically altered, is located on the north valley wall of the Bowser River. The property area is sheared and offset by regional block faulting."

Large NE trending fault zones along American Creek and Todd Creek have probably caused numerous parallel faults and shears on the property.

#### Economic Geology

The Stewart area of British Columbia has been the focus of considerable mineral exploration, especially for precious metals, since the turn of the century. Currently several precious metal prospects in the area are being explored. The important developments in the area in recent years included the mining at the Granduc Mine, the start-up of the Scottie Gold Mines in 1981, the start of production on the Silbak-Premier and Big Missouri prospects by Westmin Mineral Resources and the exploration of the Sulphurets camp by Newhawk-Granduc and Catear Resources as well as the recent discovery at Eskay Creek and the Kerr copper gold deposit.

1. Silbak-Premier - During the period 1918 to 1968, 4,670,170 tons of ore were mined containing 1,804,318 ounces of gold, 40,863,280 ounces of silver, 4,083,635 pounds of copper, 54,628,047 pounds of lead and 17,468,730 pounds of zinc. The property is currently in production with Westmin Resources Ltd. as operator and majority owner.

The ore is restricted to several sulphide-rich shoots enclosed within essentially barren quartz-pyrite zones. Both the ore shoots and the surrounding barren quartz zones are enclosed by irregular zones of quartz-pyrite-sericite alteration. The ore shoots consist

of sphalerite, galena, chalcopyrite, pyrrhotite, argentite, tetrahedrite, mercury and electrum within a gang of quartz-calcite-barite.

Three types of ore occurred in the mine including: (1) stephanite native silver (2) "black sulphide" ore, and (3) lower grade siliceous ore. The surface bonanza ores (stephanite-native silver) and the black sulphide ores contained up to 5% mercury. Silver content within galena averaged 1 oz/ton but ranged up to 55 oz/ton.

In recent years, some geologists have interpreted the ore zones as volcanogenic exhalations.

2. Big Missouri - From 1927 to 1942 the Big Missouri Mine produced 847,615 tons of ore containing 58,384 ounces of gold, 52,677 ounces of silver, and 2,712 pounds of lead. The prospect is currently being explored by Westmin Resources; in 1983 this company published open pit reserves of 1.9 million tons averaging 0.1 oz/ton gold.

The ore body has been described as 200-foot fracture zone laced with quartz-calcite veinlets. The veinlets contain varying but generally small amounts of galena, sphalerite and chalcopyrite. The ore occurs within chloritic schists which have been sericitized, silicified, and pyritized. Silicification would appear to be the most persistent form of alteration. Recent talks by Harlan Meade of Westmin Resources indicate the possibility that the Big Missouri might contain a number of small lenses of exhalative sulphides with associated alteration zones.

3. Scottie Gold - The Scottie Gold Mine began operation in 1981 at which time reserves were reported as 175,000 tons grading 0.75 oz/ton gold.

Mineralization is described as consisting of erratic, discontinuous masses of sulphide mineralization occurring within siliceous

replacement bodies. Sulphides include pyrrhotite, pyrite, arsenopyrite and chalcopyrite with minor sphalerite and galena.

4. Granduc Mine - The Granduc Mine was opened by Esso Minerals Ltd. in 1980 at which time the indicated reserves were 10,890,000 tons using a cut-off of 1.79% copper. The mine closed again in 1983.

4. Cumberland-Daly - Gold-silver-lead-zinc mineralization was also found near the mouth of Sulphurets Creek, about ten kilometers east of the Esso Minerals prospects. These showings, discovered in the 1930's, include two types. One type consists of sheared fissure veins containing quartz, calcite, barite, pyrite, galena, sphalerite, stibnite, tetrahedrite, and argentite. These mineralized lenses are small and irregular but can carry high amounts of silver. The second type consists of quartz replacement zones containing pyrite, pyrrhotite, chalcopyrite, sphalerite, galena and gold. A grab sample from one of these returned 0.26 oz/ton gold, 2.4 oz/ton silver in addition to some base metals.

6. Eskay Creek (Tom MacKay) - This prospect is owned by Consolidated Stikine Silver Ltd. and Prime Resources Ltd. In 1973 the inferred reserves were reported as 107,200 tonnes using a 0.25 oz/ton gold cut-off.

Prior to 1988, the reported mineralization consisted of stockworks of quartz veins irregularly mineralized with pyrite, tetrahedrite, sphalerite, galena, chalcopyrite and arsenopyrite. These stockworks occur within prominent oxidized knolls or domes.

Subsequent to 1988, Consolidated Stikine Silver Ltd. and Prime Resources Ltd. discovered the Eskay Creek deposits (21B Zone). Gold and silver mineralization occurs as a stratabound sheet traced by drilling over 1000 metres and with a maximum thickness over 200 metres. Mineralization in the zone is hosted within variably sheared and schistose graphite mudstone, carbonaceous debris

breccia and rhyolite breccia of the Mt Dilworth formation. The mineralization changes from one with massive to semi-massive stibnite, realgar and orpiment in the south section to an increase of sulphides, especially pyrite and sphalerite with a relative absence of antimony and mercury-bearing minerals to the north. In addition, gold and silver values increase to the north. At present, reserves are quoted as being in excess of 4,000,000 ounces of gold equivalent.

7. Goat Ridge Mine - This mine, owned by Noradco Mines Ltd., has undergone sporadic development since 1978. In 1979 indicated reserves were estimated at between 500,000 and 1,000,000 tonnes grading 1% to 2% lead, 4% zinc and 80 gm/ton silver.

Mineralization consists of sphalerite, arsenopyrite, pyrite, galena, freibergite within three siderite-quartz-calcite veins.

8. Newhawk-Granduc - The deposits are as follows:

	<u>Present Reserves</u>	<u>Grade</u>	
		<u>opt Au</u>	<u>opt Ag</u>
<u>Newhawk West</u> (partially explored)	854,072	.354	22.94
<u>Catear Goldwedge</u> (partially explored)			
Golden Rocket	319,149	.80	1.12
Discovery	37,980	.63	1.08

The above gold-silver discoveries are structurally controlled, epithermal-mesothermal veins occurring in areas of syenodiorite intrusions and associated with areas of intense sericite (quartz-pyrite) alteration.

The close proximity of the property to known deposits, the presence of favourable geology and anomalous gold and silver in silts and rocks make the property an excellent exploration target.

Mineralization

No significant in place gold or silver mineralization has been located, at present, on the property.

During 1988 work concentrated on silt sampling, and on finding previously undiscovered quartz sulphide veins, quartz-carbonate-sericite-pyrite altered zones and mineralized shear zones using rock geochemical sampling and prospecting techniques.

1987 silt sampling has returned values as high as .188 ounces per ton gold. Rock geochemical samples in the vicinity of Golden Nevada's property produced assays up to .160 ounces per ton gold.

The 1988 rock geochemical sampling program located two new areas that require follow-up work. Assays up to 66.00 ounces per ton silver were located within a quartz-carbonate-sericite-pyrite alteration zone located northeast of Golden Nevada's South Zone on Bow 32.

An assay of .100 ounces per ton gold was recovered from a quartz rich sulphide poor zone on Bow 15.

The work program to date has assisted in delineating high priority areas.

A deposit of very similar nature occurs to the south on Golden Nevada/Noranda's Todd Creek property.

Recent results released by Golden Nevada Resources Inc. outline four mineralized zones on their Todd Creek property along a shear zone for over 3 miles of strike length. The reported gold values are in association with quartz and sericite along this shear zone.

The North Zone returned values of 0.153 ounces per ton gold across three meters in a quartz sulphide vein system. Drilling results released indicated up to .233 opt Au across 38 feet on this zone.

The Mid Zone consists of mineralized shear zones and quartz sulphide veins with values up to 0.96 ounces per ton gold. Boulders from a quartz-carbonate-sericite-pyrite alteration zone graded up to 0.845 ounces per ton gold. Some of the trench results are:

<u>TRENCH</u>	<u>WIDTH FEET</u>	<u>GOLD OZ/T</u>	<u>CU %</u>
8	19.7	0.174	0.49
10	29.5	0.109	1.20
11	14.7	0.214	0.52
13	9.8	0.128	0.23
15	9.8	0.130	0.66

Drilling on the South Zone substantiated surface assays. Grades of gold mineralization improved with depth. The zone has been outlined over 1400 feet of strike length and drill tested to a depth of 525 feet. Some of the drilling results are:

<u>HOLE NO</u>	<u>INTERSECTION FEET</u>	<u>WIDTH FEET</u>	<u>GOLD OZ/T</u>	<u>COPPER %</u>
5	181.6 - 187.3	5.7	0.348	1.50
7	200.0 - 204.9	4.9	0.117	0.70
8	190.6 - 210.8	20.2	0.200	0.23
	including			
	196.5 - 203.1	6.6	0.317	0.40
9	196.5 - 203.1	6.6	0.317	0.40
	232.8 - 265.4	32.6	0.183	0.32
	including			
	234.4 - 237.7	3.3	0.181	0.97
	244.3 - 246.5	2.2	0.160	0.28
	256.8 - 262.1	5.3	0.238	0.57

Brucejack Gold's Todd Creek property presents good economic potential citing encouraging results from Golden Nevada's property as an example of a deposit similar mineralogically and structurally. A good possibility exists that auriferous quartz sulphide

veins and auriferous quartz-carbonate-sericite-pyrite alteration zones may be discovered. The property is an excellent gold exploration target. Further work is essential to explore the Todd Creek property to determine its true economic potential.

GEOCHEMICAL SURVEYS

Rock Geochemistry

A total of 149 rock geochemical samples were analyzed for copper, lead, zinc, arsenic, antimony and mercury from the Bow Claims during February - March 1990. The samples were collected during exploration programs in 1987 and 1988.

The samples were analyzed by Loring Laboratories Ltd. of Calgary, Alberta using standard geochemical methods where they were processed (Appendix I).

Results of the program indicate anomalous copper, lead, zinc, arsenic, antimony and mercury values in the survey area. The sample sites are shown on Figure 4 to ~~22~~. 19

The rock samples were statistically treated and plotted on cumulative frequency graph paper. The lower or normal distribution values which plot as a straight line were used to determine background and anomalous values. Based on the plots in Appendix II the anomalous and background values are as follows:

<u>Metal</u>	<u>Background</u>	<u>Anomalous</u>
copper	20 ppm	35 ppm
lead	45 ppm	85 ppm
zinc	50 ppm	180 ppm
arsenic	15 ppm	50 ppm
antimony	5 ppm	30 ppm
mercury	600 ppb	1000 ppb

Using the above threshold number, weakly anomalous values are considered being 1-2 times threshold, moderately anomalous 2-3 times threshold and strongly anomalous as greater than 3 times threshold. As a result the geochemical program indicates numerous anomalies in all metals ranging from weak to strong on the property area.



Silt Geochemistry

A total of 456 silt samples were analyzed for copper, lead, zinc, arsenic, antimony and mercury during the course of the geochemical program. These samples were analyzed by Loring Laboratories Ltd. of Calgary, Alberta. The samples were analyzed using standard geochemical methods for Cu, Pb, Zn, As, Sb and Hg.

The results are plotted on cumulative frequency graph paper with the straight line plot considered the normal distribution. Using these plots indicates the following background and threshold volumes:

<u>Metal</u>	<u>Background</u>	<u>Anomalous</u>
copper	30 ppm	45 ppm
lead	20 ppm	80 ppm
zinc	115 ppm	200 ppm
arsenic	12 ppm	25 ppm
antimony	5 ppm	8 ppm
mercury	300 ppb	450 ppb

Using the above threshold number, weakly anomalous values were considered as 1-2 times threshold, moderately anomalous as 2-3 times threshold and strongly anomalous as greater than 3 times threshold.

The silt sampling program highlighted several areas worthy of followup. Numerous weak to strongly anomalous values were found on the property area in all metals.

### ORTHOPHOTO LINEAMENT INTERPRETATION

E.W. Grove in Bulletin No. 58 indicates that four fault systems were outlined during the geological work in preparation of the bulletin. These faults have dominant northwesterly, northerly and northeasterly trends.

The northerly trending fault system includes the structures which strike between 15 degrees west of north to 15 degrees east of north and have steep west to vertical dips. Northwesterly trending faults include those structures trending between 25 degrees west of north to 60 degrees west of north and generally have steep dips. The northeasterly fault system includes structures which trend from north 30 degrees east to north 50 degrees east and have steep dips.

The fault system of particular interest is the northerly trending one. The mineralization at the Golden Nevada-Noranda property is associated with sericite and quartz veins along a north trending fault zone. On the Moonlight property to the south, north trending faults have created a series of topographic benches. Reported gold mineralization is associated with quartz along these fault zones.

Based on the above information, an orthophoto interpretation was undertaken by Marlin Developments. Figure 36 shows the interpreted lineament map.

As expected, the Bow claims are criss-crossed by numerous N, NW and NE striking lineaments. Although most of these represent families of faulty joints and/or shear zones, some may define stratigraphic features.

The lineaments may be subdivided into six distinct groups: N, NW, WNW, NE, NNE and NNW. Clear age-relationships cannot be ascribed to the different groups since each appears to offset the other. The NNE family may be youngest since it is the least disrupted.

- Due N: Mostly related to stratigraphy (eg. S and SW regions.)  
Parallels fold axes and more bedding attitudes.
- DUE NW: Long, prominent, continuous (regional?) structures. Wide  
and recessive (shear zones).
- WNW: Same as above. Regional; "East Gold Fault" is example.  
Most glacial valleys follow this trench.
- DUE NE: Most abundant through centre of block. Discontinuous,  
locally anastomosing. Narrow and recessive (faults,  
joints local?)
- NNE: Seemingly late structures, uncommon. Indistinct but  
great strike lengths. (true faults often found where NE  
structures are very abundant).
- NNW: Poorly defined, uncommon, similar to NNE features.  
Narrow, recessive and anastomosing. Represents faults  
and shears rather than joints.

A complete correlation between the structures and geochemical  
values is not possible as all stream beds have not been sampled.  
It is recommended that further sampling be conducted on all  
possible structures (usually outlined by stream beds) to more  
adequately evaluate the claim areas.

CONCLUSIONS

1. The area is underlain by favourable gold and copper bearing volcanic and sedimentary units of the Unuk River, Betty Creek and Salmon River Formations.
2. The claims are adjacent to recent gold-copper discoveries to the south on the Golden Nevada Resources/Noranda joint venture. Drilling had intersected assays varying from 0.117 - 0.348 ounce per ton gold and 0.23% - 1.50% copper over widths up to 38 feet.
3. Rock geochemical samples taken while prospecting in 1988 returned values up to 0.10 ounce per ton gold and 66.0 ounce per ton silver.
4. Analyses of silt samples yielded numerous weak to strong anomalous copper, lead, zinc, arsenic, antimony and mercury values.
5. A further program consisting of prospecting, silt geochemistry, geological mapping and trenching is recommended for the property.

RECOMMENDATIONS

1. Detailed Silt Geochemistry

Sampling should be conducted every 50 meters along stream beds on the property.

2. Prospecting

All structural features on the property should be carefully prospected in order to evaluate the mineral potential. Special attention should be given to quartz sulphide veins, quartz-carbonate-sericite-pyrite altered zones and mineralized shear zones.

3. Trenching

Trenching would be conducted in areas of newly discovered mineralization to obtain fresh samples for assaying as well as evaluation for indicator minerals.

4. Geological Mapping

The property should be mapped in conjunction with silt sampling and prospecting programs. Detailed mapping would be conducted in areas of newly discovered mineralization.

STATEMENT OF EXPENDITURES

Geochemical analysis - 605 samples @ \$20/sample	12,030
E.R. Kruchkowski, sampling sorting preparation 5 days @ \$450	2,250
Orthophoto enlargement	9,250
E.R. Kruchkowski geochemical site plotting, etc. 15 days @ \$450	6,750
E.R. Kruchkowski report writing (22.2 days)	10,000
Drafting, copying, etc.	8,000
Phil Van Angeren - lineament interpretation, writing, etc.	20,000
Typing, etc.	500
D. Jackson - 5 days @ \$450	2,250
G. Steene - 5 days @ \$450	<u>2,250</u>
TOTAL	<u>\$73,280</u>

STATEMENT OF COSTS TO BE APPLIED TO CLAIM GROUPINGS

<u>Claim Group</u>	<u>Number of Units</u>	<u>% of Work to be applied</u>	<u>Cost of Work to be applied</u>
Bow 1, 2, 3, 4	80	11.43%	8,000.00
Bow 33, 34, 35 36, 39	95	13.57%	9,500.00
Bow 24, 25, 27 28, 29, 30, 31, 32	100	14.29%	10,000.00
Bow 20, 21, 22, 23, 26	92	13.14%	9,200.00
Bow 9, 10, 11, 12, 13, 14	100	14.29%	10,000.00
Bow 8, 15, 16, 17, 18, 19	100	14.29%	10,000.00
Bow 5, 6, 7 37, 38	89	12.71%	8,900.00
Bow 40, 41	<u>22</u>	<u>6.28%</u>	<u>4,400.00</u>
	678 units	100%	\$70,000.00

## REFERENCES

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- KRUCHKOWSKI, E.,; SINDEN, G., 1988  
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- WOODCOCK, J.R., 1984  
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- WORLD INVESTMENT NEWS - Volume 1 - Issue 12 - November 1987
- VANCOUVER STOCKWATCH NEWS RELEASES -  
September 11, 1987  
November 6, 1987  
November 13, 1987



CERTIFICATE

I, EDWARD R. KRUCHKOWSKI, Geologist, residing at 23 Templeside Bay, N.E., in the City of Calgary, in the Province of Alberta, hereby certify that:

1. I received a Bachelor of Science degree in Geology from the University of Alberta in 1972.
2. I have been practising my profession continuously since graduation.
3. I am a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
4. I am a consulting geologist on behalf of Marlin Development Ltd.
5. This report is based on a review of reports, documents, maps and other technical data on the property area and on my experience and knowledge of the area obtained during programs in 1974 - 1990.

\_\_\_\_\_  
Date

\_\_\_\_\_  
E.R. Kruchkowski, B.Sc.

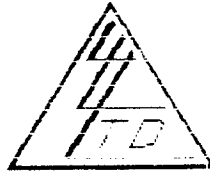
APPENDIX I  
GEOCHEMICAL DATA

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruchkowski



File No. 33385

Date May 31, 1990

Samples Pulp

File #'s 30616, 30605,  
31951 & 31952

# Certificate of Assay LORING LABORATORIES LTD.

Page # 1

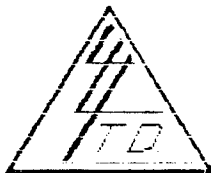
SAMPLE NO.	% Cu	% Pb	% Zn
"Assay Analysis"			
BGR-KK-14	2.04	-	-
16	.56	-	.28
18	2.69	-	-
20	1.52	-	.23
BC-BB- 19	-	.54	-
20	-	.24	-
21	-	.42	-
22	-	.67	-
24	-	.34	-
25	-	.37	-
27	-	.22	-
TCGR- 5	.22	-	-
TCRF- 5	-	.41	.52
7	-	.80	.22
11	-	.17	.20
13	-	-	.29
TCKR- 1	-	.50	.31
DK EAST GOLD	-	.28	.48

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
Pulps retained one month  
unless specific arrangements  
are made in advance.

  
Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,  
23 Templeside Bay N.E.,  
Calgary, Alberta T1Y 3L6  
 \_\_\_\_\_  
 ATTN: Ed Kruchkowski



File No. 33385  
 Date May 31, 1990  
 Samples Pulp \_\_\_\_\_  
 File #'s 30616, 30685,  
31951 & 31952

## Certificate of Assay LORING LABORATORIES LTD.

Page # 2

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
------------	-----------	-----------	-----------

Geochemical Analysis

BC -DB-01	47	65	116
02	13	54	52
04	8	47	101
08	12	65	38
12	10	51	45
16	11	46	76
BGR-QS- 1	9	48	48
2	9	26	20
3	8	46	67
4	13	26	85
5	17	66	639
8	15	50	362
9	8	43	207
10	19	46	201
11	18	115	173
12	12	30	112
13	12	49	60
14	9	28	73
15	22	76	174
16	16	64	106
BGR-KK- 1	16	54	61
2	8	42	128
3	9	43	118
4	19	50	76
5	19	39	90
6	13	56	503
7	19	43	136
8	8	42	102
9	17	43	163
10	7	40	75

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
 Pulps retained one month  
 unless specific arrangements  
 are made in advance.

  
 \_\_\_\_\_  
 Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruchkowski

File No. 33385

Date May 31, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952



## Certificate of Assay LORING LABORATORIES LTD.

Page # 3

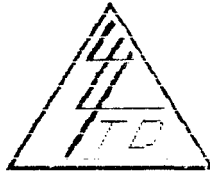
SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
BGR-KK-11	26	59	115
12	12	43	134
13	26	57	77
14	+1000	204	206
15	143	56	102
16	+1000	293	+1000
17	475	60	192
18	+1000	114	404
19	+1000	178	380
20	+1000	506	+1000
BG-BB- 02	724	47	154
03	221	46	124
04	159	29	127
05	48	53	71
06	66	56	139
07	40	43	123
08	59	57	44
09	54	52	57
10	31	44	55
11	45	34	48
12	57	16	31
13	43	35	84
14	32	32	71
15	48	29	106
16	14	34	120
17	34	34	105
18	10	50	30
19	238	+1000	572
20	78	+1000	697
21	32	+1000	810
22	114	+1000	995
23	42	172	163

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
Pulps retained one month  
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are made in advance.

  
Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,  
 23 Templeside Bay N.E.,  
 Calgary, Alberta T1Y 3L6  
 ATTN: Ed Kruchkowski



File No. 33385  
 Date May 31, 1990  
 Samples Pulp  
 File #'s 30616, 30685,  
 31951 & 31952

## Certificate of Assay LORING LABORATORIES LTD.

Page # 4

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
BG-BB- 24	26	+1000	740
25	39	+1000	440
26	35	244	330
27	23	+1000	656
28	20	48	74
29	16	62	100
30	52	51	201
31	25	44	111
32	17	28	60
33	23	30	97
34	29	33	104
35	15	26	51
36	22	28	100
37	44	42	97
38	23	29	97
39	42	35	108
40	31	28	144
41	63	41	172
42	17	57	34
43	78	37	118
44	20	38	58
45	29	30	96
46	14	39	25
47	23	27	88
48	39	28	105
49	32	34	134
50	78	22	79
51	36	34	118
52	10	42	55
53	31	28	514
54	72	89	984
55	13	22	102

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
 Pulps retained one month  
 unless specific arrangements  
 are made in advance.

*Ed Kruchkowski*  
 Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,  
23 Templeside Bay N.E.,  
Calgary, Alberta T1Y 3L6  
 \_\_\_\_\_  
 ATTN: Ed Kruchkowski



File No. 33385  
 Date May 31, 1990  
 Samples Pulp  
 File #'s 30616, 30685,  
31951 & 31952

## Certificate of Assay LORING LABORATORIES LTD.

Page # 5

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
BG-BB- 56	24	73	48
57	16	26	86
58	15	28	66
59	24	43	115
60	24	46	130
BGR-GS-17	12	49	23
18	10	36	22
19	15	38	18
20	16	95	77
21	18	49	103
22	11	27	41
23	17	116	45
24	11	55	46
25	18	38	24
26	14	27	30
27	13	22	19
BG-FL- 76	217	22	125
209	49	25	67
CP-FL-225	31	39	50
228	162	60	92
229	39	38	63
230	68	52	58
231	29	44	107
232	139	33	99
233	55	29	54
234	56	36	45
235	49	44	53
236	60	58	78
237	31	53	112
238	48	32	79
239	25	59	11
CPS-FL-245	91	47	126

I Hereby Certify that the above results are those  
 assays made by me upon the herein described samples....

Rejects retained one month.  
 Pulps retained one month  
 unless specific arrangements  
 are made in advance.

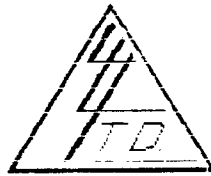
  
 Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruchkowski



File No. 33385

Date May 31, 1990

Samples Pulp

File #'s 30616, 30680,  
31951 & 31952

# Certificate of Assay LORING LABORATORIES LTD.

Page # 6

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
CPS-FL-246	94	46	121
TCAS- 1	63	46	236
2	62	47	297
3	54	39	296
4	59	34	294
5	57	37	270
6	61	33	322
7	55	34	292
8	49	23	251
9	51	32	282
10	48	31	247
11	51	38	280
12 *	NSS	NSS	NSS
13	52	54	281
14	40	33	302
15	38	34	281
16	35	37	302
17	38	35	325
TCBS- 1	21	32	137
2	51	32	138
3	16	30	129
4	18	31	117
5	17	32	139
6	19	33	129
7	16	27	123
8	17	26	106
9	20	29	119
10	39	201	847
11	40	77	639
12	32	94	618

\* NSS = NOT SUFFICIENT SAMPLE

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
Pulps retained one month  
unless specific arrangements  
are made in advance.

  
Assayer



To: E.R. KRUCHKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruchkowski

File No. 33385

Date May 31, 1990

Samples Pulp

File #'s 30616, 30685,

31951 & 31952



# Certificate of Assay LORING LABORATORIES LTD.

Page # 7

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
TCBS-			
13	38	81	528
14	29	60	510
15	34	75	503
16	35	73	501
17	35	74	524
18	36	203	895
19	35	64	502
20	32	56	426
21	31	88	604
22	34	78	597
23	37	102	620
24	42	93	638
25	36	125	653
26	40	72	607
27	40	67	632
28	31	98	601
29	37	57	483
30	35	79	607
31	29	25	122
32	28	26	119
33	32	24	122
34	27	25	118
35	28	26	119
36	28	23	106
37	29	23	117
38	30	25	115
39	37	26	113
41	22	28	93
42	26	28	87
43	24	29	89
44	23	28	86
45	24	29	93

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
Pulps retained one month  
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are made in advance.

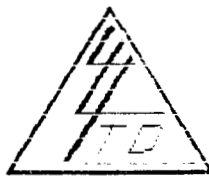
  
Assayer

To: E.R. KRUCKKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruckkowski



File No. 33385

Date May 31, 1980

Samples Pulp

File #'s 30616, 30685,

31951 & 31952

# Certificate of Assay LORING LABORATORIES LTD.

Page # 8

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
TCBS-			
46	22	25	87
47	22	32	87
48	22	20	8
49	37	27	85
50	27	27	93
51	25	28	85
52	24	31	92
53	23	24	82
54	23	22	84
TCOS-			
1	32	31	143
2	32	35	150
3	35	44	183
4	36	40	175
5	42	44	195
6	39	48	178
TCDS-			
1	25	33	81
2	27	23	81
3	29	23	225
4	29	23	319
5	25	24	162
6	23	24	100
7	25	24	90
8	19	28	82
TCGS-			
1	25	28	101
2	31	27	88
3	31	28	88
4	30	28	93
5	31	28	103
6	39	31	100
7	30	28	98
8	28	27	94
9	21	26	97

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
Pulps retained one month  
unless specific arrangements  
are made in advance.

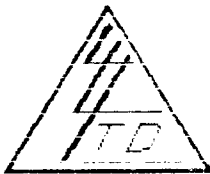
  
Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruchkowski



File No. 33385

Date May 31, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952

# Certificate of Assay LORING LABORATORIES LTD.

Page # 9

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
TCQS- 10	11	26	92
11	24	27	96
12	24	27	101
13	21	25	91
14	23	28	96
15	25	26	98
16	23	25	98
17	25	27	100
18	24	25	96
19	24	29	99
20	25	27	98
21	24	25	97
22	25	27	98
23	25	25	99
24	24	26	96
25	43	38	121
26	37	23	95
27	34	22	94
28	47	30	96
29	41	23	95
30	43	23	97
31	40	24	98
32	35	22	97
33	37	22	94
34	35	33	98
35	14	28	88
36	16	27	91
37	15	24	90
38	15	27	90
39	16	26	95
40	17	26	93
41	28	25	104

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
Pulps retained one month  
unless specific arrangements  
are made in advance.

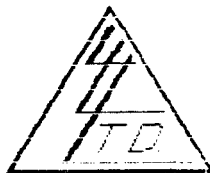
  
Assayer

To: E.R. KRUCKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruckowski



File No. 33385

Date May 31, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952

# Certificate of Assay LORING LABORATORIES LTD.

Page # 10

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
TCQS- 42	17	23	94
43	17	24	90
44	17	28	101
45	14	24	91
46	12	24	87
47	24	30	135
48	23	22	116
49	24	24	120
50	23	23	111
51	25	24	114
52	25	24	114
53	24	24	118
54	24	23	118
55	25	22	135
56	25	23	128
57	24	25	110
58	17	21	134
59	36	37	255
60	31	23	179
61	38	23	275
62	32	22	243
63	43	28	199
64	46	29	214
65	42	26	205
66	42	25	189
67	40	24	191
68	41	25	196
69	39	25	176
70	40	25	222
71	38	24	178
TCPS- 1	31	45	108
2	24	30	101

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
Pulps retained one month  
unless specific arrangements  
are made in advance.

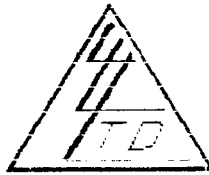
  
Assayer

To: E.R. KRUCKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruckowski



File No. 33385

Date May 31, 1990

Samples Pulp

File #'s 30616, 30635,  
31951 & 31952

# Certificate of Assay LORING LABORATORIES LTD.

Page # 11

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
TCPS-			
3	27	30	98
4	28	30	98
5	25	30	95
6	27	30	95
7	28	29	103
8	28	29	97
9	27	29	90
10	26	29	98
11	27	28	104
12	30	30	106
13	28	30	102
14	27	29	95
BESS-			
5	14	27	60
6	16	26	83
7	13	27	87
7 A	19	27	95
8 A	19	27	93
9	18	27	99
10 B	15	26	78
11	19	27	96
11 A	19	27	95
TC-			
160 A	19	44	95
251 A	612	21	50
390 A	28	41	176
422 A	15	49	45
TCASR-			
8	45	39	105
55	39	23	98
TCBSR-			
500	22	22	44
501	16	27	93
503	12	26	63
504	14	36	62
505	19	69	26

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Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

File No. 33385

23 Templeside Bay N.E.,

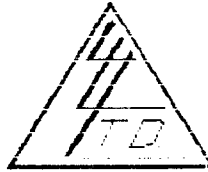
Date May 31, 1990

Calgary, Alberta T1Y 3L6

Samples Pulp

ATTN: Ed Kruchkowski

File #'s 30616, 30685,  
31951 & 31952



# Certificate of Assay LORING LABORATORIES LTD.

Page # 12

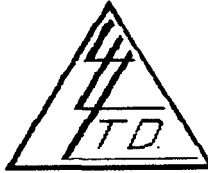
SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn
TCBSR- 506	12	31	72
507	17	83	588
TCOSR- 240	14	32	69
TCDSR- 40	19	29	80
240	38	26	24
325	75	35	148
TCGR- 1	14	27	63
2	67	101	74
3	26	42	62
4	44	45	60
5	+1000	23	62
BEGR- 1	27	32	108
2	21	38	89
3	22	28	73
BESSR- 142	19	43	67
200	16	26	46
TCRF- 1	17	25	85
2	53	51	89
3	13	32	127
4	13	38	93
5	65	+1000	+1000
6	28	69	78
7	87	+1000	+1000
8	25	292	218
9	39	777	143
10	14	60	45
11	30	+1000	+1000
12	30	607	321
13	37	337	+1000
TCKR- 1	32	+1000	+1000
2	210	922	348
DK EAST GOLD	222	+1000	+1000

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Assayer

To: E.R. KRUCKOWSKI CONSULTING LTD.,  
23 Templeside Bay N.E.,  
Calgary, Alberta T1Y 3L6  
ATTN: Ed Kruckowski



File No. 33385-1  
Date June 8, 1990  
Samples Pulp \_\_\_\_\_  
File #'s 30616, 30685,  
31951 & 31952

## Certificate of Assay LORING LABORATORIES LTD.

Page # 1

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
------------	-----------	-----------	-----------

Geochemical Analysis

BG -DB-01	125.9	3.7	1700
02	19.9	1.5	1300
04	5.5	1.1	440
08	9.9	0.3	780
12	137.5	7.2	1700
16	47.4	2.6	1100
BGR-GS- 1	4.6	0.1	460
2	6.5	1.7	220
3	2.8	0.3	170
4	10.6	0.7	300
5	7.3	0.6	560
8	13.0	3.3	470
9	19.0	0.6	310
10	11.4	1.1	520
11	77.4	11.4	960
12	13.4	0.1	290
13	8.9	2.3	560
14	4.9	0.7	150
15	10.8	6.0	700
16	31.9	6.6	750
BGR-KK- 1	9.2	0.8	650
2	2.7	1.8	330
3	3.4	1.1	290
4	2.1	1.0	180
5	87.6	3.9	240
6	27.4	3.2	1200
7	36.0	1.7	280
8	2.3	0.2	190
9	2.0	0.4	100
10	2.4	0.4	110

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\_\_\_\_\_  
Assayer

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23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

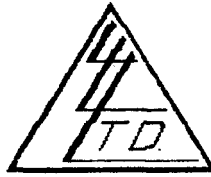
ATTN: Ed Kruckowski

File No. 33385-1

Date June 8, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952



# Certificate of Assay

## LORING LABORATORIES LTD.

Page # 2

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
BGR-KK-11	3.8	2.6	180
12	18.7	1.3	350
13	28.3	3.5	560
14	142.0	9.0	1100
15	15.0	0.1	670
16	14.8	3.7	2000
17	20.1	1.7	700
18	106.4	6.4	2100
19	44.3	2.4	2000
20	43.0	4.2	1700
BG-BB- 02	5.0	0.4	2200
03	2.8	0.7	1800
04	32.9	0.7	1200
05	42.1	4.0	1300
06	110.0	3.8	4800
07	58.5	0.8	2600
08	5.7	0.3	1300
09	6.1	0.5	1500
10	15.7	1.1	1100
11	9.1	0.6	1900
12	2.2	0.5	3200
13	4.8	0.6	1600
14	13.3	2.7	800
15	5.2	0.6	1050
16	2.0	1.0	420
17	49.3	2.4	920
18	17.4	0.5	440
19	6.7	41.7	6400
20	19.1	63.2	5800
21	18.0	16.4	2000
22	27.0	29.8	4500
23	22.2	6.8	1900

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Assayer



To: E.R. KRUCKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruckowski



File No. 33385-1

Date June 8, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952

## Certificate of Assay LORING LABORATORIES LTD.

Page # 3

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
BG-BB- 24	15.1	9.5	4100
25	5.0	22.3	6500
26	4.2	29.5	2100
27	2.3	23.7	6500
28	13.0	2.3	720
29	29.9	2.4	1200
30	10.8	9.9	2100
31	4.8	1.8	700
32	5.2	0.8	780
33	4.8	1.4	320
34	9.7	0.6	1500
35	6.7	1.7	380
36	5.0	1.0	560
37	14.1	2.9	1100
38	4.0	0.4	460
39	10.6	1.0	1300
40	6.2	1.2	780
41	9.5	0.8	1100
42	1.0	0.3	370
43	32.0	1.8	1600
44	3.0	0.1	430
45	37.6	0.1	1400
46	0.8	0.1	260
47	4.1	0.2	550
48	2.9	0.6	390
49	12.3	1.9	3100
50	405.8	21.4	2300
51	18.2	5.9	1800
52	5.0	1.0	580
53	22.8	6.3	1800
54	28.8	14.0	1200
55	2.7	0.1	480

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Assayer

To: E.R. KRUCKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

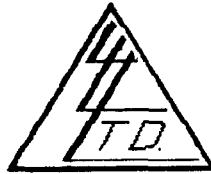
ATTN: Ed Kruckowski

File No. 33385-1

Date June 8, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952



## Certificate of Assay LORING LABORATORIES LTD.

Page # 4

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
BG-BB- 56	220.6	40.8	7400
57	31.9	3.1	1400
58	20.9	7.7	1800
59	49.7	6.8	2900
60	150.8	2.5	1300
BGR-GS-17	131.0	11.7	4100
18	81.5	5.9	2500
19	139.4	11.6	4000
20	306.3	22.3	2900
21	152.9	5.0	1100
22	43.4	3.2	2000
23	200.8	16.2	4500
24	272.8	26.7	11600
25	178.3	10.9	5400
26	12.4	1.2	600
27	23.7	1.7	280
BG-FL- 76	5.5	0.7	950
209	6.6	1.0	1100
CP-FL-225	3339.7	171.6	1500
228	94.1	4.1	1100
229	982.3	20.0	460
230	13.3	0.6	1050
231	11.6	0.6	120
232	4.9	0.3	440
233	4.2	0.3	1400
234	4.4	0.4	600
235	4.3	0.8	430
236	2.8	0.5	1400
237	29.2	2.6	1200
238	24.1	5.6	500
239	158.2	27.9	1100
CPS-FL-245	682.2	11.1	460

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assays made by me upon the herein described samples....

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Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruchkowski

File No. 33385-1

Date June 8, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952



## Certificate of Assay LORING LABORATORIES LTD.

Page # 5

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
CPS-FL-246	738.7	10.7	610
TCAS- 1	18.6	4.7	340
2	20.4	4.7	330
3	19.9	3.1	310
4	19.9	3.4	270
5	19.4	3.0	380
6	20.3	3.0	360
7	19.1	2.9	300
8	19.2	3.0	320
9	19.8	1.4	230
10	19.4	3.1	280
11	22.8	3.2	350
12 *	NSS	NSS	NSS
13	21.7	3.4	400
14	20.0	3.1	380
15	20.1	3.3	370
16	20.1	3.2	400
17	21.1	3.1	430
TCBS- 1	10.2	2.0	240
2	7.7	1.2	260
3	7.0	1.3	190
4	5.9	1.1	200
5	17.2	1.8	310
6	13.4	1.8	270
7	11.0	1.0	230
8	11.4	1.3	190
9	12.6	1.2	200
10	84.9	12.2	1300
11	74.5	10.0	1100
12	64.0	8.7	700

\* NSS = Not Sufficient Sample

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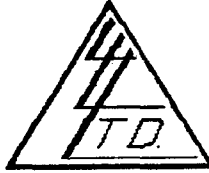
  
Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruchkowski



File No. 33385-1

Date June 8, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952

## Certificate of Assay LORING LABORATORIES LTD.

Page # 6

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
TCBS-			
13	67.5	8.2	930
14	58.6	7.7	910
15	65.3	8.7	1200
16	57.4	8.0	860
17	65.1	7.7	1100
18	74.4	8.9	1200
19	55.9	6.8	1100
20	59.5	7.3	800
21	60.9	7.9	1100
22	66.3	7.4	1200
23	71.0	7.7	1050
24	71.7	7.8	1300
25	67.1	7.8	1100
26	70.1	7.5	1050
27	54.7	5.7	1100
28	59.3	6.7	960
29	64.9	7.0	1050
30	56.1	6.4	1000
31	9.1	0.5	320
32	8.5	0.7	300
33	9.2	0.8	280
34	8.8	0.8	270
35	9.9	0.8	300
36	9.3	0.8	350
37	8.6	0.8	290
38	9.3	0.7	380
39	9.8	0.8	330
41	10.6	1.1	160
42	11.7	1.3	180
43	11.3	1.3	160
44	9.7	1.0	140
45	10.9	1.1	170

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

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To: E.R. KRUCHKOWSKI CONSULTING LTD.,  
23 Templeside Bay N.E.,  
Calgary, Alberta T1Y 3L6

ATTN: Ed Kruchkowski



File No. 33385-1

Date June 8, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952

## Certificate of Assay LORING LABORATORIES LTD.

Page # 7

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
TCBS-			
46	11.0	1.3	160
47	12.2	1.4	150
48	11.9	1.3	160
49	11.1	1.1	140
50	11.2	1.3	200
51	10.7	1.1	210
52	12.0	1.3	200
53	9.6	1.1	170
54	10.3	1.1	180
TCCS-			
1	15.0	2.1	460
2	17.3	2.0	500
3	16.0	1.9	560
4	15.3	1.9	670
5	16.6	2.1	640
6	16.0	2.2	730
TCDS-			
1	12.6	2.4	170
2	13.8	2.2	160
3	13.8	2.0	220
4	13.4	1.7	180
5	13.8	1.7	260
6	14.3	1.7	270
7	13.5	1.7	250
8	8.0	2.5	200
TCGS-			
1	5.7	1.0	200
2	7.8	1.3	210
3	3.0	0.3	160
4	8.0	1.5	170
5	7.8	1.5	200
6	15.9	2.9	230
7	8.1	1.2	180
8	7.0	1.2	220
9	5.5	1.2	250

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Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruchkowski



File No. 33385-1

Date June 8, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952

## Certificate of Assay LORING LABORATORIES LTD.

Page # 8

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
TCGS- 10	3.5	0.6	180
11	6.4	0.9	200
12	6.7	1.1	160
13	6.3	0.9	210
14	5.9	0.8	120
15	7.1	0.9	160
16	7.5	0.9	150
17	7.0	0.8	130
18	7.2	0.9	150
19	7.2	0.8	180
20	6.5	1.0	210
21	6.3	0.8	130
22	6.7	0.9	140
23	6.4	0.7	120
24	6.5	1.0	140
25	4.2	0.1	230
26	4.2	0.1	240
27	4.3	0.2	200
28	5.6	0.3	130
29	4.2	0.2	160
30	4.3	0.5	130
31	4.7	0.1	200
32	3.3	0.2	220
33	4.0	0.1	110
34	4.1	0.3	100
35	15.5	2.8	200
36	20.4	3.0	180
37	26.1	2.6	210
38	48.0	2.9	200
39	19.4	3.5	230
40	19.9	3.1	180
41	19.7	0.6	280

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Assayer

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23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

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File No. 33385-1

Date June 8, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952

## Certificate of Assay LORING LABORATORIES LTD.

Page # 9

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
TCGS-			
42	17.9	2.0	150
43	21.7	4.1	140
44	22.5	3.0	170
45	22.8	1.7	210
46	13.1	2.8	230
47	14.6	1.3	320
48	12.4	1.6	190
49	13.0	1.9	160
50	12.8	1.9	230
51	13.9	1.7	250
52	14.1	1.7	230
53	14.0	1.7	220
54	14.1	1.7	240
55	13.6	1.2	370
56	14.6	1.7	180
57	14.6	1.7	200
58	15.6	1.2	230
59	11.5	0.7	270
60	10.1	0.6	240
61	11.3	0.7	230
62	10.8	0.8	220
63	12.2	0.5	380
64	13.9	0.5	320
65	11.9	0.6	340
66	11.6	0.5	330
67	11.3	0.6	260
68	11.6	0.5	300
69	11.3	0.6	310
70	15.3	0.7	240
71	11.4	0.5	270
TCPS-			
1	10.7	1.6	280
2	10.0	1.0	380

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To: E.R. KRUCHKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

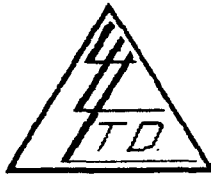
ATTN: Ed Kruchkowski

File No. 33385-1

Date June 8, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952



## Certificate of Assay LORING LABORATORIES LTD.

Page # 10

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
TCPS-			
3	8.8	1.5	260
4	10.1	1.6	310
5	8.9	1.3	350
6	9.3	1.5	330
7	9.3	1.9	260
8	10.5	1.6	310
9	9.8	2.0	330
10	8.6	1.7	340
11	9.9	2.1	380
12	9.3	2.4	360
13	10.9	2.0	360
14	10.0	1.8	350
BESS-			
5	25.6	1.3	460
6	23.7	0.1	430
7	23.8	0.7	520
7 A	21.6	1.1	440
8 A	21.1	1.2	450
9	20.4	1.1	460
10 B	23.7	1.0	520
11	20.8	1.2	480
11 A	20.3	1.0	540
TC-			
160 A	31.8	1.2	340
251 A	3.6	0.3	360
390 A	17.5	0.4	410
422 A	2.5	0.4	140
TCASR-			
8	19.9	1.4	450
55	29.3	4.5	470
TCBSR-			
500	36.6	4.4	370
501	57.5	1.8	420
503	119.7	2.3	440
504	97.1	10.2	620
505	324.2	33.5	1400

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
Pulps retained one month  
unless specific arrangements  
are made in advance.

  
Assayer



To: E.R. KRUCHKOWSKI CONSULTING LTD.,

23 Templeside Bay N.E.,

Calgary, Alberta T1Y 3L6

ATTN: Ed Kruchkowski



File No. 33385-1

Date June 8, 1990

Samples Pulp

File #'s 30616, 30685,  
31951 & 31952

## Certificate of Assay LORING LABORATORIES LTD.

Page # 11

SAMPLE NO.	PPM As	PPM Sb	PPB Hg
TCBSR- 506	106.8	2.8	620
507	807.9	26.7	1200
TCCSR- 240	8.8	0.6	380
TCDSR- 40	3.4	0.9	680
240	3.6	0.8	500
325	2.8	0.7	170
TCGR- 1	7.6	0.8	160
2	9.2	2.5	340
3	27.5	0.5	380
4	27.2	0.6	330
5	19.1	0.2	350
BEGR- 1	30.5	0.6	440
2	27.4	1.6	380
3	58.0	0.6	480
BESSR- 142	12.4	0.9	840
200	25.2	0.6	500
TCRF- 1	12.0	2.2	510
2	63.5	5.9	1100
3	3.8	2.8	250
4	2.0	3.1	200
5	8.6	55.2	19000
6	28.0	9.5	620
7	17.2	83.8	4500
8	579.7	36.1	2700
9	67.7	58.2	3000
10	39.6	3.1	540
11	70.3	21.6	10400
12	19.4	20.0	1500
13	7.7	26.3	8600
TCKR- 1	190.0	26.1	8000
2	7.1	25.8	810
DK EAST GOLD	325.2	403.8	3300

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

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are made in advance.

  
Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

File No. 33414

400, 255 - 17th Avenue S.W.,

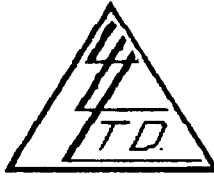
Date June 13, 1990

Calgary, Alberta T2S 2T8

Samples Silt

ATTN: Ed Kruchkowski

Old File #'s 30615 &  
30681



# Certificate of Assay LORING LABORATORIES LTD.

Page # 1

SAMPLE NO.

%  
Zn

"Assay Analysis"

BGS-DB-19

.12

I Hereby Certify that the above results are those  
assays made by me upon the herein described samples....

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Assayer

To: E.R. KRUCKOWSKI CONSULTING LTD.,

File No. 33414

400, 255 - 17th Avenue S.W.,

Date June 13, 1990

Calgary, Alberta T2S 2T8

Samples Core

ATTN: Ed Kruckowski

Old File #'s 30615 &  
30681



# Certificate of Assay LORING LABORATORIES LTD.

Page # 2

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
------------	-----------	-----------	-----------	-----------	-----------	-----------

### Geochemical Analysis

30401	63	28	176	8.5	0.3	730
30402	50	26	181	7.7	0.3	720
30403	56	29	187	27.5	0.5	580
30404	29	23	134	24.9	0.3	380
30405	52	23	143	18.8	0.4	620
30406	47	22	164	8.5	0.1	540

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Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

File No. 33414

400, 255 - 17th Avenue S.W.,

Date June 13, 1990

Calgary, Alberta T2S 2T8

Samples Silt

Old File #'s 30615 &  
30681

ATTN: Ed Kruchkowski



# Certificate of Assay LORING LABORATORIES LTD.

Page # 3

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
------------	-----------	-----------	-----------	-----------	-----------	-----------

## Geochemical Analysis

BGS-DB- 3	22	44	104	24.2	26.3	450
6	21	56	96	18.1	2.9	330
7	17	34	93	16.1	3.9	380
10	35	37	649	40.0	10.4	960
11	20	22	207	20.1	4.0	400
13	19	27	99	14.2	2.5	340
14	16	27	92	20.3	3.1	550
15	19	31	119	15.2	2.5	420
17	21	46	120	17.2	3.1	520
18	23	29	112	13.9	3.0	380
19	30	43	+1000	37.3	5.9	800
20	45	32	938	51.7	11.8	510
21	19	27	116	14.8	0.9	520
22	27	25	324	25.9	4.9	360
23	45	53	253	59.3	9.3	820
24	17	30	151	28.3	2.2	450
25	18	52	133	37.5	5.5	660
26	29	64	162	52.2	7.0	800
27	17	48	154	32.7	5.0	680
28	23	60	183	72.1	11.8	950
29	27	112	221	93.7	11.3	1200
30	24	148	218	87.3	12.1	780
31	21	151	263	128.5	17.2	1200
32	15	130	177	111.8	12.3	1100
33	24	144	252	121.3	16.2	730
34	16	79	118	72.1	7.0	680
35	23	298	407	260.2	39.7	2000
36	25	441	444	429.4	70.6	2300
38	30	576	584	661.0	99.9	3600
39	26	334	403	313.3	24.5	3000

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

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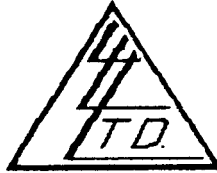
  
Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

400, 255 - 17th Avenue S.W.,

Calgary, Alberta T2S 2T8

ATTN: Ed Kruchkowski



File No. 33414

Date June 13, 1990

Samples Silt

Old File #'s 30615 &

30681

# Certificate of Assay LORING LABORATORIES LTD.

Page # 4

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
BGS-DB-40	19	35	143	38.6	5.7	450
41	23	48	150	42.8	4.4	760
42	31	64	289	98.5	4.0	540
43	14	34	163	27.4	3.9	500
44	13	34	211	32.0	3.1	330
45	10	31	106	23.9	2.6	600
46	26	46	287	28.4	3.7	1100
47	25	23	109	10.8	1.2	300
48	16	23	102	19.3	1.9	390
49	16	27	111	15.8	2.3	430
50	18	28	95	11.0	1.5	380
51	19	31	122	12.9	2.8	390
52	13	29	136	7.6	1.7	420
53	17	32	148	9.7	2.5	600
54	28	31	139	10.0	1.7	510
55	25	54	115	15.3	2.0	460
56	17	30	112	10.1	1.8	560
57	22	41	115	13.9	1.9	600
58	15	27	152	11.6	1.5	2500
59	21	34	155	20.5	0.3	430
60	26	35	130	12.1	1.7	560
61	30	43	144	21.2	2.6	830
62	36	86	251	51.8	5.5	1300
63	60	117	268	73.9	7.4	1400
64	83	141	477	NSS	NSS	NSS
65	74	196	932	NSS	NSS	NSS
81	19	25	147	16.4	2.2	880
85	29	40	149	11.2	1.8	320
89	38	26	743	54.2	6.6	1600
BGS-GS-01	24	23	137	40.0	4.0	480
02	22	26	134	56.7	4.7	400
03	19	21	127	45.8	2.6	540

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Assayer

To: E.R. KRUCKOWSKI CONSULTING LTD.,

400, 255 - 17th Avenue S.W.,

Calgary, Alberta T2S 2T8

ATTN: Ed Kruckowski



File No. 33414

Date June 13, 1990

Samples Silt

Old File #'s 30615 & 30681

# Certificate of Assay LORING LABORATORIES LTD.

Page # 5

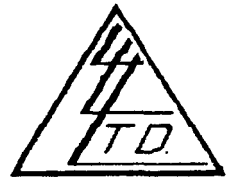
SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
BGS-GS-04	30	26	114	77.2	5.9	520
05	21	31	128	95.4	8.4	730
06	19	26	126	39.7	3.5	500
07	21	28	120	46.6	5.3	590
08	19	33	134	58.8	6.7	610
09	25	26	130	126.1	8.4	380
10	24	24	126	112.1	6.2	580
11	25	26	120	110.3	6.1	540
12	34	33	173	185.0	8.4	650
13	19	25	164	49.0	1.7	260
14	19	33	113	44.2	4.8	1100
15	18	29	137	59.6	4.9	350
16	20	29	109	57.5	4.7	680
17	19	28	104	55.7	3.4	470
18	19	29	111	65.5	4.2	520
19	19	28	109	65.5	4.9	540
20	19	29	95	56.6	5.2	630
21	18	28	100	39.9	4.9	700
22	19	28	93	40.2	5.9	1050
23	19	27	91	38.8	3.9	780
24	19	27	89	52.6	5.8	800
25	27	46	271	56.0	6.1	720
26	28	46	300	54.7	5.8	1200
27	28	56	334	58.3	5.9	1050
28	29	59	322	55.5	7.0	1200
29	28	45	309	50.2	9.2	1100
30	35	92	349	64.0	7.9	1600
31	46	80	232	79.7	19.6	2000
32	32	49	235	257.7	49.1	1500
33	31	48	227	228.5	47.2	1400
34	32	23	116	192.1	1.4	2800
35	16	46	111	38.8	3.8	540

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Assayer

TO: E.R. KRUCKOWSKI CONSULTING LTD.,  
400, 255 - 17th Avenue S.W.,  
Calgary, Alberta T2S 2T8  
 ATTN: Ed Kruckowski



File No. 33414  
 Date June 13, 1990  
 Samples Silt  
 Old File #'s 30615 &  
30681

# Certificate of Assay

## LORING LABORATORIES LTD.

Page # 6

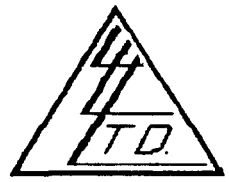
SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
BGS-GS-36	16	25	104	14.5	2.5	560
37	18	30	124	13.3	2.2	530
38	10	40	189	22.9	2.4	930
39	12	37	129	23.1	3.6	450
40	10	103	92	12.1	1.7	910
BGS-KK-01	27	35	142	16.9	3.1	560
02	30	26	121	21.8	2.8	960
03	31	29	129	21.5	0.5	900
04	32	26	122	20.2	2.5	2500
05	28	29	119	21.0	2.6	1300
06	32	32	130	22.1	2.8	1050
07	24	26	136	14.6	2.2	580
08	30	59	152	31.1	4.1	610
09	18	29	104	NSS	NSS	NSS
10	21	29	116	30.8	4.4	800
11	22	33	115	40.5	4.5	1050
12	25	36	132	26.9	3.1	760
13	28	52	92	44.9	2.7	370
14	22	27	104	17.9	2.7	400
15	131	33	116	18.5	1.9	500
16	24	24	197	NSS	NSS	NSS
17	14	24	115	8.9	1.0	380
18	33	42	204	22.6	3.4	460
19	22	102	381	75.8	6.9	880
20	44	181	698	116.0	14.0	1900
21	65	126	308	95.9	10.8	1400
22	37	84	258	41.9	6.3	1200
23	19	39	133	20.4	3.1	1100
BG-FL- 11	41	35	138	82.0	5.5	820
12	45	31	117	96.4	4.9	640
13	35	30	113	151.7	8.3	650
14	39	30	122	316.3	13.6	920

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Subjects retained one month.  
 Samples retained one month  
 unless specific arrangements  
 are made in advance.

  
 Assayer

o: E.R. KRUCKOWSKI CONSULTING LTD.,  
400, 255 - 17th Avenue S.W.,  
Calgary, Alberta T2S 2T8  
ATTN: Ed Kruckowski



File No. 33414  
Date June 13, 1990  
Samples Silt  
Old File #'s 30615 &  
30681

# Certificate of Assay

## LORING LABORATORIES LTD.

Page # 7

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
BG-FL- 15	48	26	142	399.6	19.2	1300
16	96	22	102	27.2	1.0	1050
17	27	26	141	35.9	1.7	500
18	25	26	150	35.8	2.5	830
19	21	28	141	31.9	3.6	800
21	17	26	118	29.2	3.2	820
22	22	28	128	15.9	1.5	450
42	23	23	126	19.7	2.4	1400
43	20	23	114	24.0	2.8	4800
44	20	26	110	13.8	1.9	800
45	26	26	121	NSS	NSS	NSS
46	37	26	123	12.5	1.9	560
47	25	45	112	21.6	4.7	1100
48	19	24	128	14.1	1.6	520
49	19	26	121	16.6	1.9	550
50	19	29	116	14.3	1.8	580
BGS-GS-41	19	18	93	23.6	1.5	750
42	26	22	92	38.9	3.8	850
43	34	21	94	35.5	3.3	760
44	20	17	207	26.7	4.8	400
45	15	18	99	14.3	1.7	220
46	17	16	200	22.6	4.9	380
47	17	17	202	23.6	5.5	320
48	20	18	250	21.6	3.6	280
49	20	20	315	20.2	3.4	480
50	20	18	316	19.0	3.5	450
51	20	18	353	19.4	2.8	330
52	24	16	593	34.4	6.4	270
53	39	17	927	34.5	5.3	250
54	43	35	181	14.0	1.4	300
55	22	16	99	6.6	0.7	330
56	23	17	116	10.4	0.8	380

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

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 Assayer



To: E.R. KRUCHKOWSKI CONSULTING LTD.,

File No. 33414

100, 255 - 17th Avenue S.W.,

Date June 13, 1990

Calgary, Alberta T2S 2T8

Samples Silt

ATTN: Ed Kruchkowski

Old File #'s 30615 &  
30681



# Certificate of Assay LORING LABORATORIES LTD.

Page # 8

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
BGS-GS-57	25	17	126	12.2	1.0	330
58	23	18	113	9.5	0.9	400
59	21	18	114	8.8	0.8	100
60	19	16	96	5.3	0.8	280
61	18	15	97	5.6	0.7	260
62	18	15	94	5.1	0.7	250
63	20	17	100	7.9	0.9	160
64	18	15	96	5.5	0.6	280
65	18	15	93	4.6	0.6	230
66	18	15	94	4.4	0.8	220
67	19	15	95	4.3	0.6	320
68	18	14	95	4.1	0.5	240
69	18	15	95	4.2	0.6	300
70	18	15	94	4.2	0.6	280
71	18	15	93	4.5	0.5	320
72	37	22	166	21.3	2.1	500
73	25	21	134	16.1	0.7	440
74	20	19	129	15.1	1.8	400
75	26	26	137	16.5	2.5	450
76	21	24	164	21.5	2.6	660
77	24	18	128	10.9	1.6	410
78	37	24	151	15.5	2.8	540
79	27	26	146	17.4	2.6	630
80	21	28	161	NSS	NSS	NSS
81	20	26	164	31.3	3.5	760
82	17	19	122	11.9	1.8	930
83	24	37	216	22.4	3.4	860
84	21	23	122	NSS	NSS	NSS
85	25	29	199	23.3	2.4	580
86	NSS	NSS	NSS	NSS	NSS	NSS
87	23	25	126	18.2	2.5	540
88	30	32	138	20.9	6.1	400

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Assayer

To: E.R. KRUCHKOWSKI CONSULTING LTD.,

File No. 33414

400, 255 - 17th Avenue S.W.,

Date June 13, 1990

Calgary, Alberta T2S 2T8

Samples Silt

ATTN: Ed Kruchkowski

Old File #'s 30615 &

30681



# Certificate of Assay LORING LABORATORIES LTD.

Page # 9

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
BGS-GS-89	20	31	133	19.4	2.8	430
90	23	27	134	23.4	2.9	450
91	16	22	121	24.0	2.7	360
92	15	36	165	12.4	1.7	300
BGS-DB-66	25	17	142	13.6	0.9	480
67	21	16	135	13.4	1.8	460
68	21	15	128	13.5	2.1	500
69	23	18	144	14.7	2.0	420
70	21	17	154	12.5	1.9	320
71	21	16	146	14.0	2.2	280
72	NSS	NSS	NSS	NSS	NSS	NSS
73	25	18	154	12.5	1.5	350
74	19	16	99	8.2	0.7	230
75	21	15	97	NSS	NSS	NSS
76	21	15	97	7.4	0.7	210
77	21	17	99	10.8	1.2	260
78	NSS	NSS	NSS	NSS	NSS	NSS
79	21	18	97	9.5	1.1	650
80	23	18	97	9.9	2.3	210
81	26	17	102	14.1	1.9	340
82	26	18	98	10.5	1.0	210
83	19	15	97	7.5	0.8	300
84	28	36	151	8.7	1.7	330
85	32	71	182	17.4	3.5	960
86	19	28	112	6.6	1.6	250
87	32	54	354	242.6	18.8	320
88	33	86	352	261.8	20.4	460
89	34	50	471	250.1	16.4	420
90	35	48	408	242.1	20.5	340
91	33	50	398	246.2	21.0	430
92	32	48	351	255.2	18.4	460
BGS-FL-01	18	26	107	36.2	4.0	220

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

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Pulps retained one month  
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Assayer

o: E.R. KRUCKOWSKI CONSULTING LTD.,

File No. 33414

400, 255 - 17th Avenue S.W.,

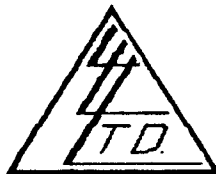
Date June 13, 1990

Calgary, Alberta T2S 2T8

Samples Silt

Old File #'s 30615 &  
30681

ATTN: Ed Kruckowski



# Certificate of Assay LORING LABORATORIES LTD.

Page # 10

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
BGS-FL-02	20	22	134	22.6	2.5	200
03	23	25	111	16.9	2.2	330
05	22	23	123	17.6	2.6	380
06	25	19	112	18.8	2.4	360
07	20	23	150	17.6	2.6	380
08	20	30	128	27.0	3.1	370
09	19	23	149	17.3	2.5	350
10	22	23	121	19.6	2.6	360
23	26	31	142	20.7	2.6	380
24	17	19	115	NSS	NSS	NSS
25	18	25	159	19.7	3.0	500
26	18	20	124	13.5	1.9	840
27	21	20	114	NSS	NSS	NSS
28	NSS	NSS	NSS	NSS	NSS	NSS
29	NSS	NSS	NSS	NSS	NSS	NSS
30	21	23	145	16.6	2.4	820
31	20	33	159	27.2	2.9	670
32	23	31	160	24.7	3.5	560
33	18	19	127	14.3	1.9	1000
34	19	23	133	15.3	2.2	600
35	25	24	122	NSS	NSS	NSS
36	24	28	128	22.0	2.6	1600
37	37	68	301	31.2	4.8	1500
38	21	36	212	32.1	3.9	1050
39	22	35	208	33.7	4.5	340
40	26	41	168	19.7	2.8	800
41	20	20	98	17.5	2.4	820
52	18	27	90	14.9	1.7	600
53	19	20	89	13.9	1.7	380
54	19	17	96	14.7	2.4	750
55	25	19	191	14.5	3.2	800
56	23	15	177	13.2	2.7	830

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
Samples retained one month  
unless specific arrangements  
are made in advance.

Assayer

To: E.R. KRUCKOWSKI CONSULTING LTD.,

File No. 33414

400, 255 - 17th Avenue S.W.,

Date June 13, 1990

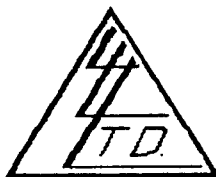
Calgary, Alberta T2S 2T8

Samples Silt

ATTN: Ed Kruckowski

Old File #'s 30615 &

30681



# Certificate of Assay LORING LABORATORIES LTD.

Page # 11

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
BGS-FL-57	25	37	162	13.0	2.2	760
58	22	21	338	23.2	2.8	200
59	23	26	361	NSS	NSS	NSS
60	25	25	177	15.5	2.4	740
61	23	23	161	14.4	2.2	600
62	20	25	113	16.6	2.0	580
64	26	24	143	16.0	2.2	540
65	NSS	NSS	NSS	NSS	NSS	NSS
66	24	25	179	13.7	3.3	600
67	24	24	169	12.7	2.5	710
69	24	22	171	10.4	2.2	740
70	23	23	194	13.9	3.0	630
71	35	40	269	17.6	2.7	730
72	26	30	269	16.2	2.4	750
73	35	54	226	18.4	2.0	930
74	27	38	246	18.1	2.5	700
75	54	75	205	15.9	2.1	740
76	24	24	168	12.3	2.2	800
77	23	34	181	13.5	2.5	910
78	33	44	152	13.0	1.8	660
79	29	33	163	13.4	2.0	460
80	53	149	209	18.6	2.3	620
81	31	52	190	10.5	1.6	400
82	33	32	132	8.7	1.6	450
83	26	42	162	8.3	1.3	540
84	54	52	267	13.8	3.0	480
85	35	41	163	8.3	1.3	380
86	33	31	162	8.9	1.6	540
87	33	38	128	9.8	1.5	610
88	35	76	190	10.5	1.6	760
89	42	104	207	16.7	2.3	800
90	46	38	160	15.1	1.9	730

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month.  
Pulps retained one month  
unless specific arrangements  
are made in advance.

Assayer

1): E.R. KRUCKOWSKI CONSULTING LTD.,

400, 255 - 17th Avenue S.W.,

Calgary, Alberta T2S 2T8

ATTN: Ed Kruckowski



File No. 33414

Date June 13, 1990

Samples Silt

Old File #'s 30615 &

30681

# Certificate of Assay LORING LABORATORIES LTD.

Page # 12

SAMPLE NO.	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Sb	PPB Hg
BGS-FL-91	44	125	231	14.9	2.2	820
92	17	31	158	19.2	3.4	540

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Samples retained one month.  
Residues retained one month  
unless specific arrangements  
are made in advance.

Assayer

APPENDIX II  
CUMULATIVE FREQUENCY PLOTS

46 8000

PROBABILITY X 90 DIVISIONS  
KEUFFEL & ESSER CO. MADE IN U.S.A.

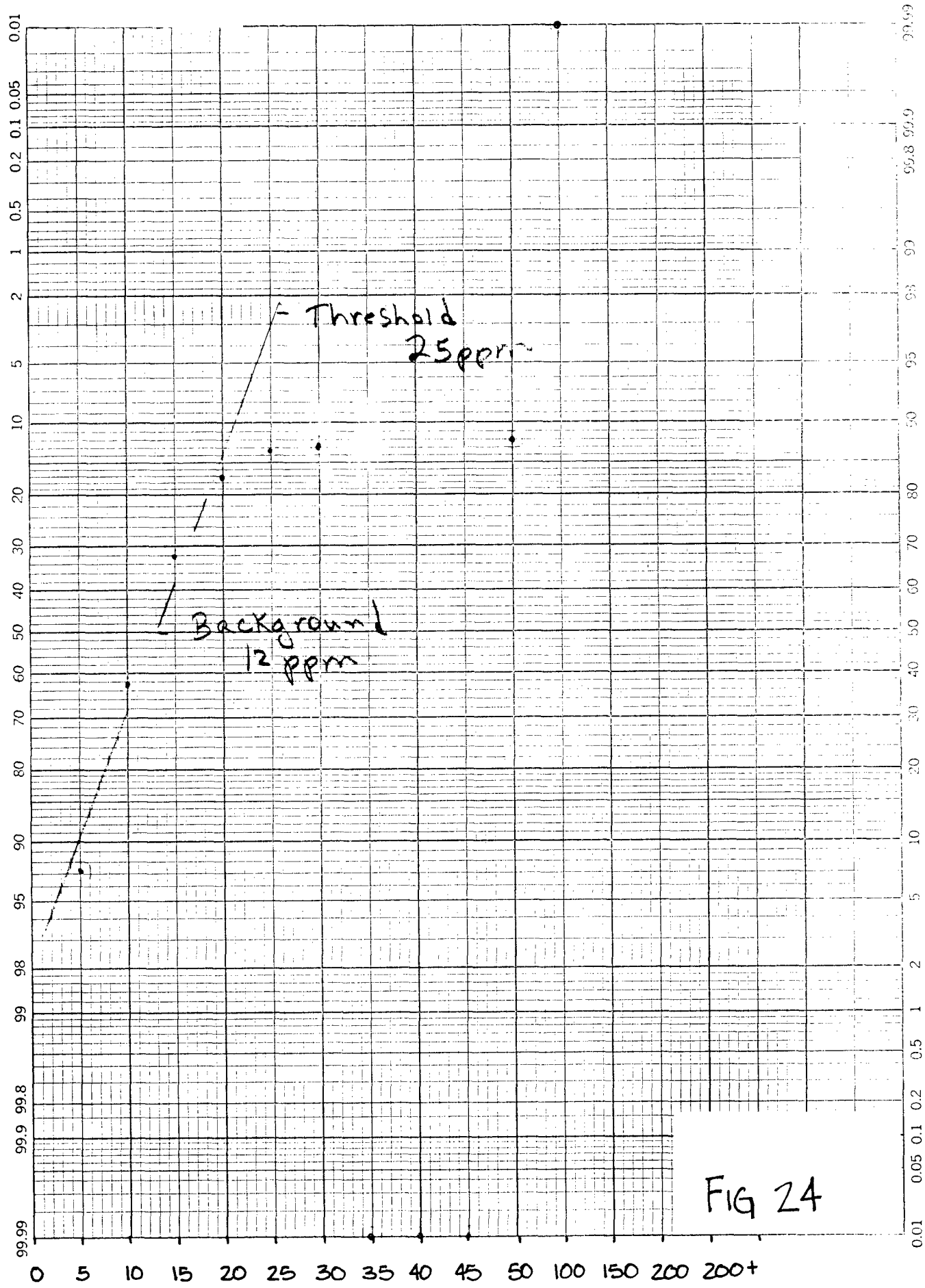


FIG 24

As-silt ppm

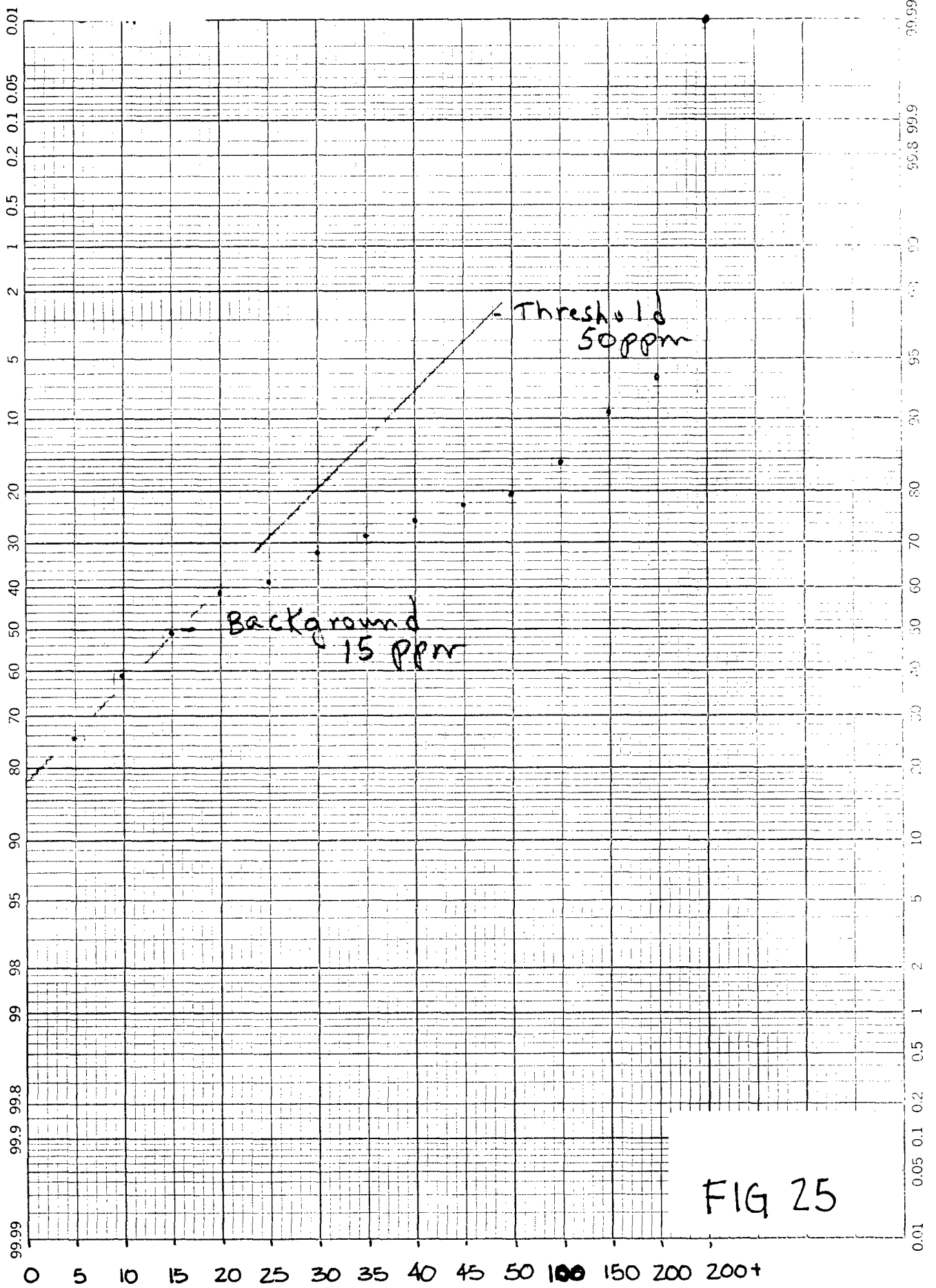


FIG 25

As-rock ppm



46 8000

PROBABILITY X 90 DIVISIONS  
KEUFFEL & ESSER CO. MADE IN U.S.A.

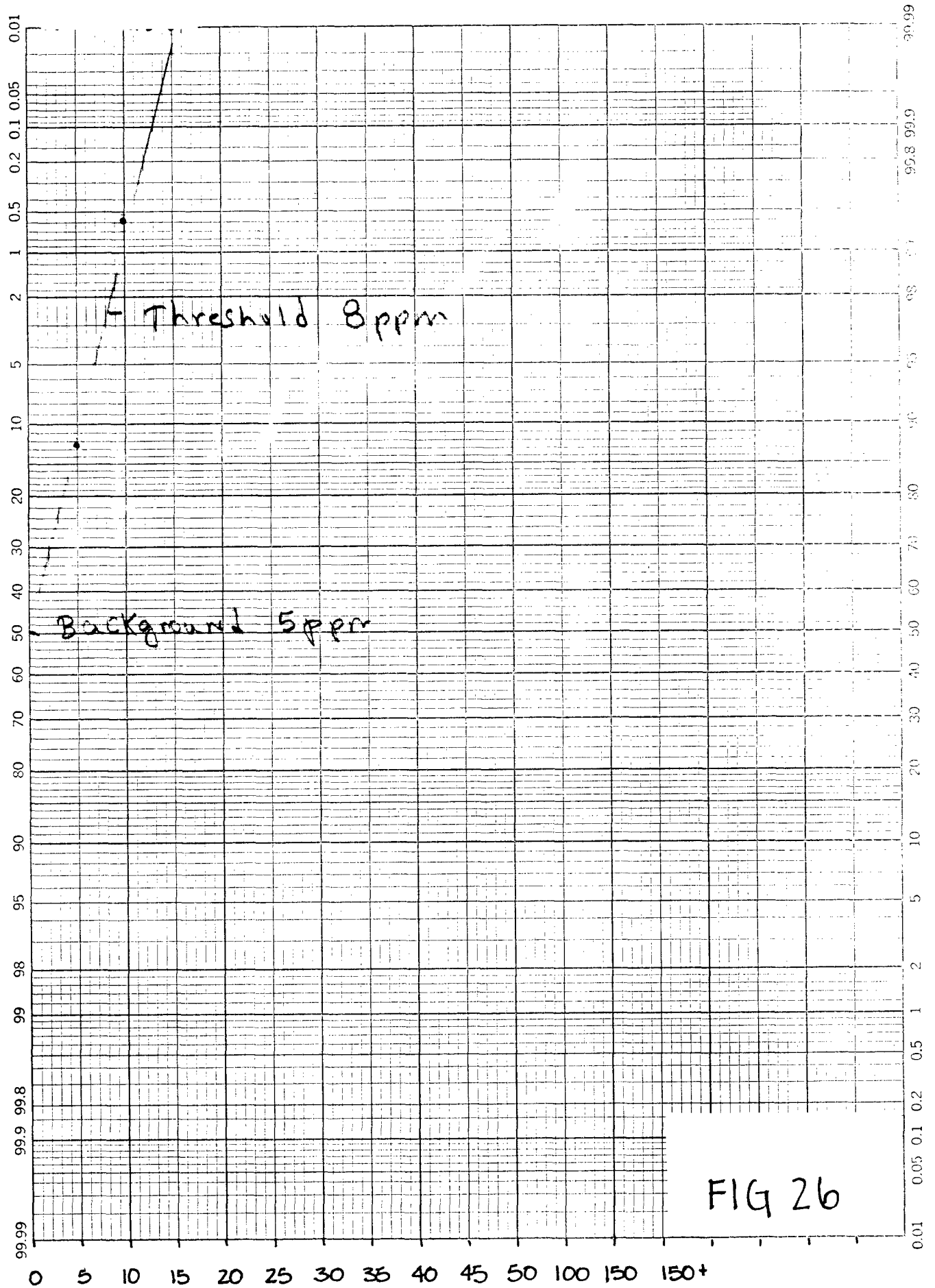


FIG 26

Sb-silt ppm

46 8000

PROBABILITY X 90 DIVISIONS  
KEUFFEL & ESSER CO. MADE IN U.S.A.

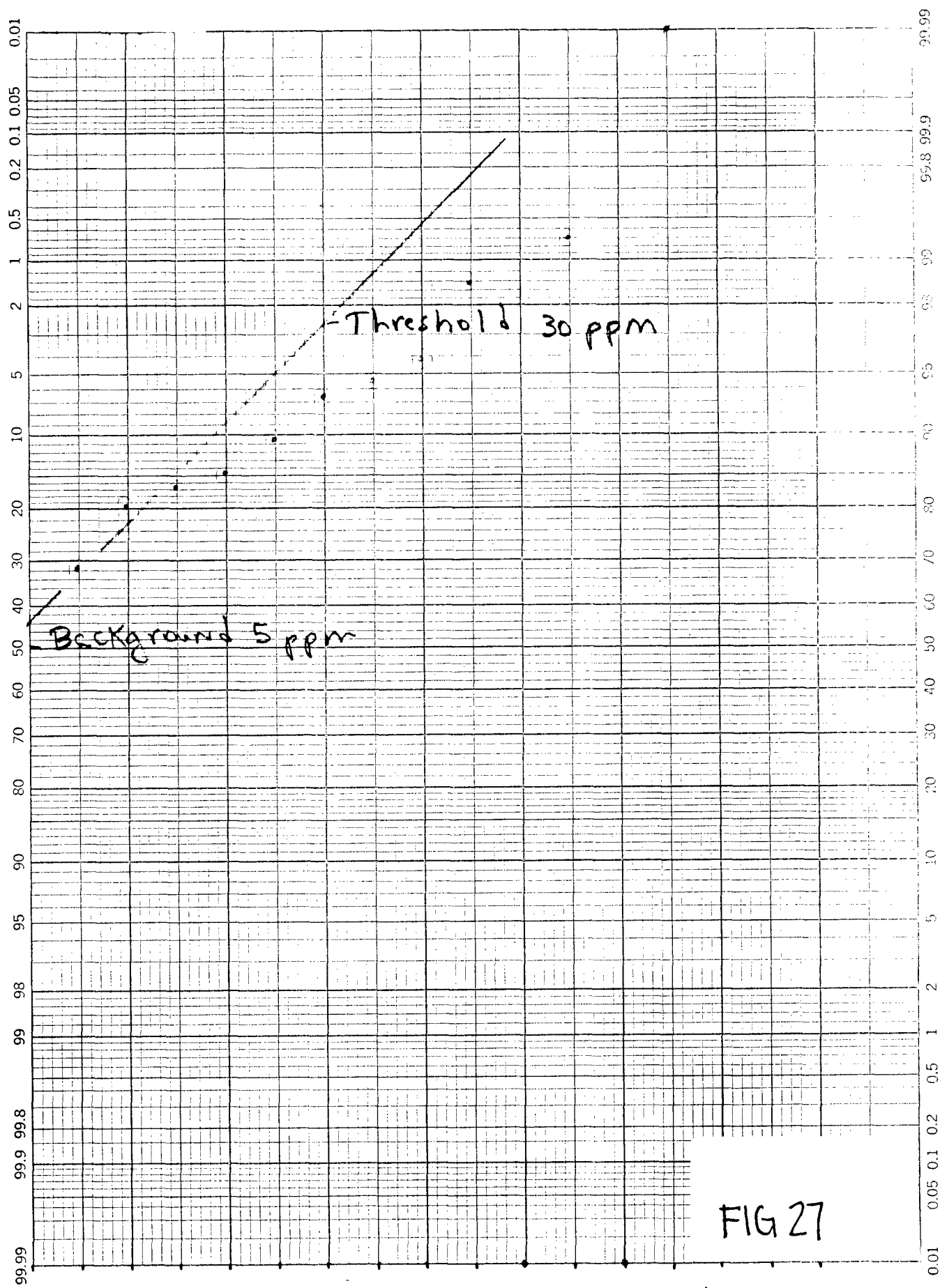


FIG 27

Sb-rock ppm

46 8000

PROBABILITY X 90 DIVISIONS  
KEUFFEL & ESSER CO. MADE IN U.S.A.

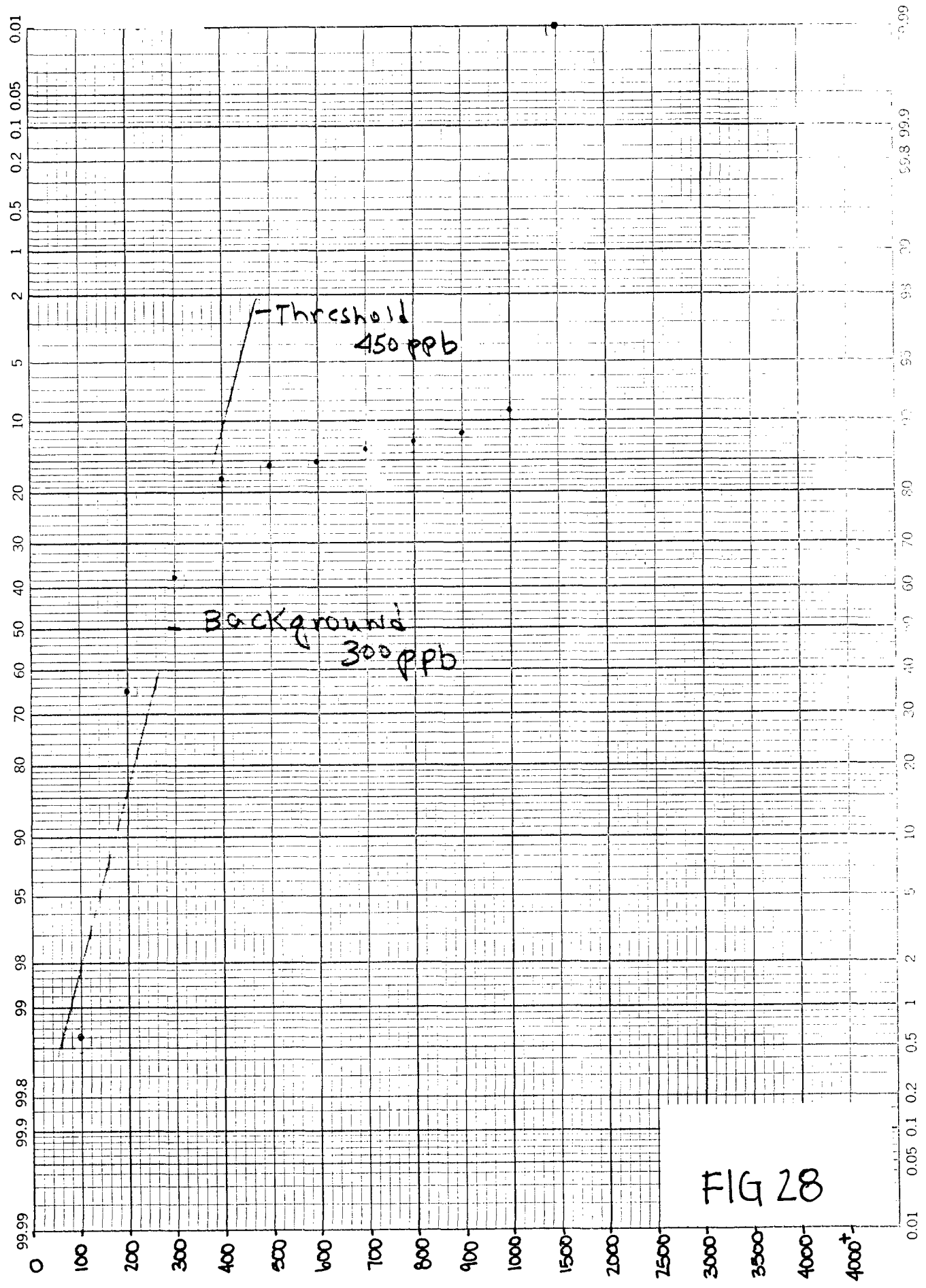


FIG 28

Hg-silt ppb

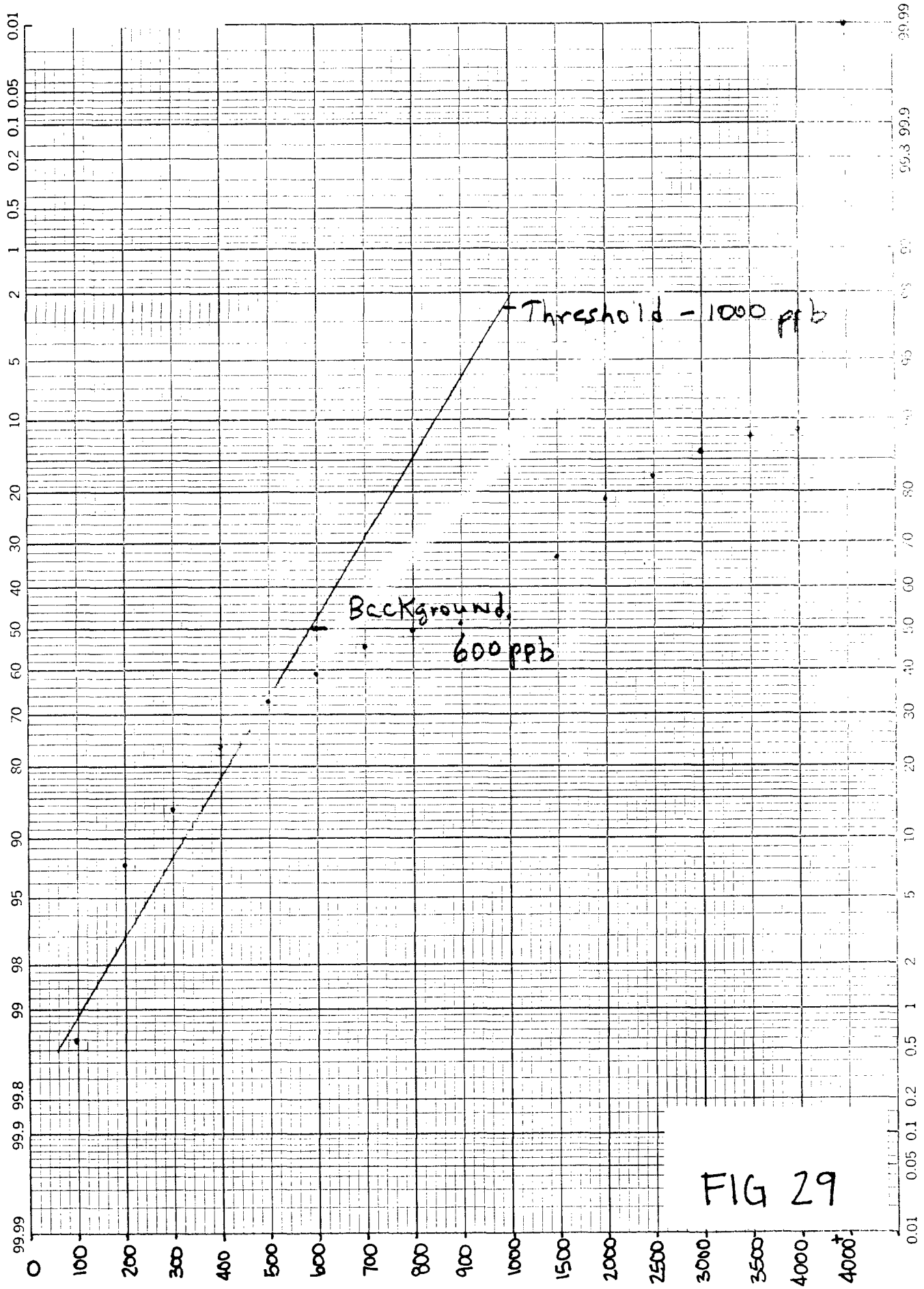


FIG 29

Hq-Rock Ppb

46 8000

PROBABILITY X 90 DIVISIONS  
KEUFFEL & ESSER CO. MADE IN U.S.A.

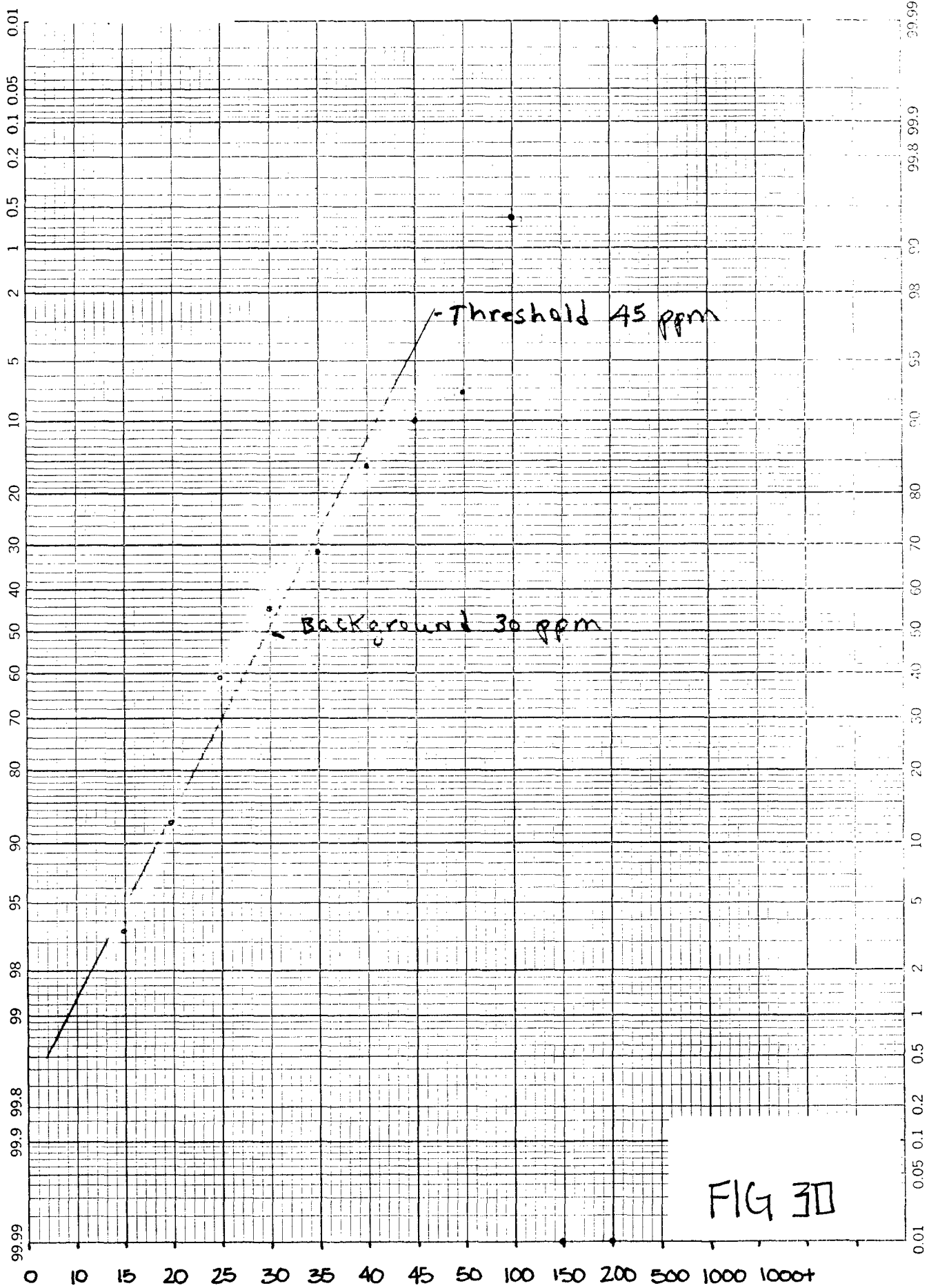


FIG 30

Cu silt ppm

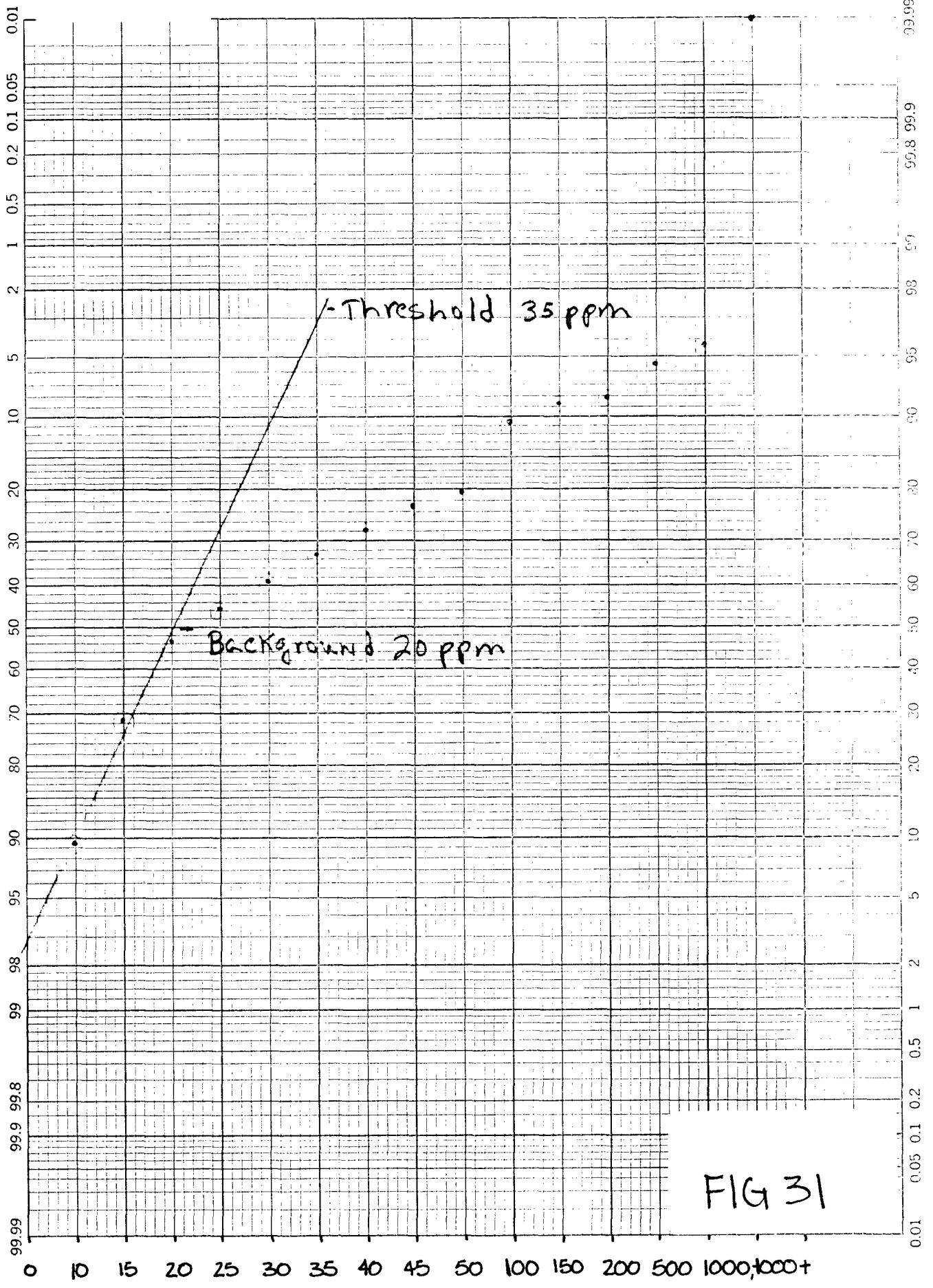


FIG 31

Cu rock ppm

46 8000

PROBABILITY X 90 DIVISIONS  
KEUFFEL & ESSER CO. MADE IN U.S.A.

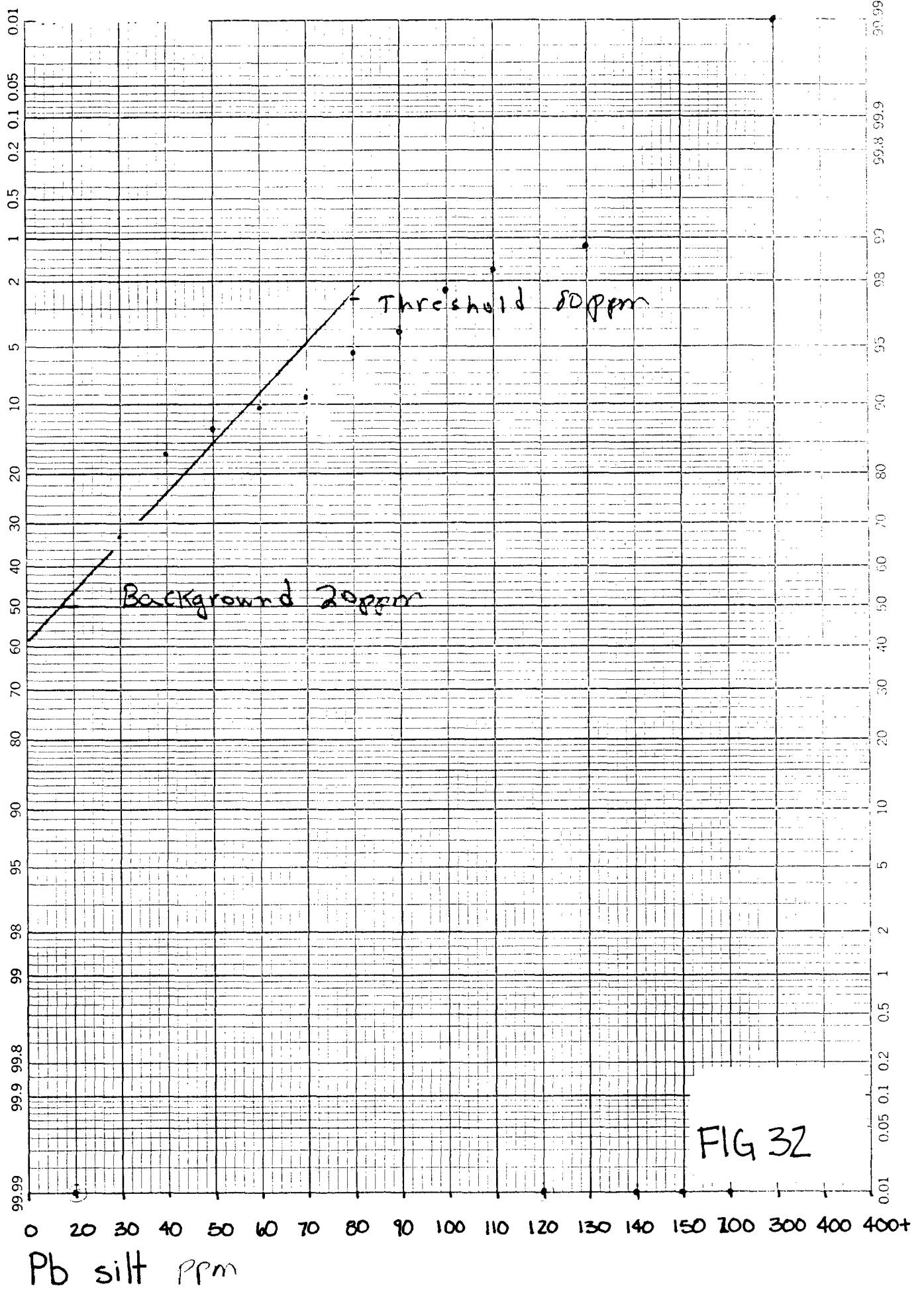


FIG 32

46 8000

PROBABILITY X 90 DIVISIONS  
KEUFFEL & ESSER CO. MADE IN U.S.A.

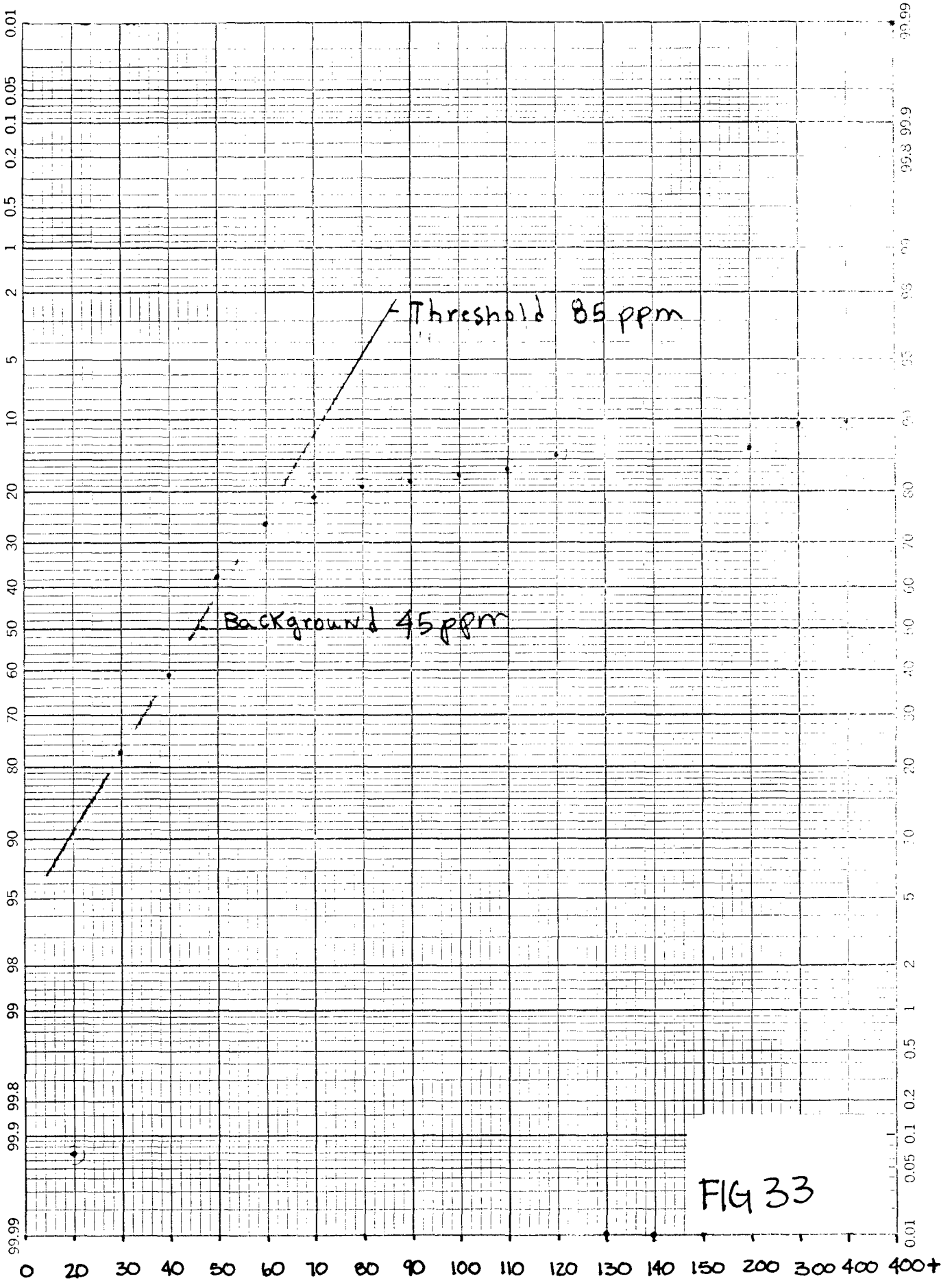


FIG 33

Pb-rock PPM



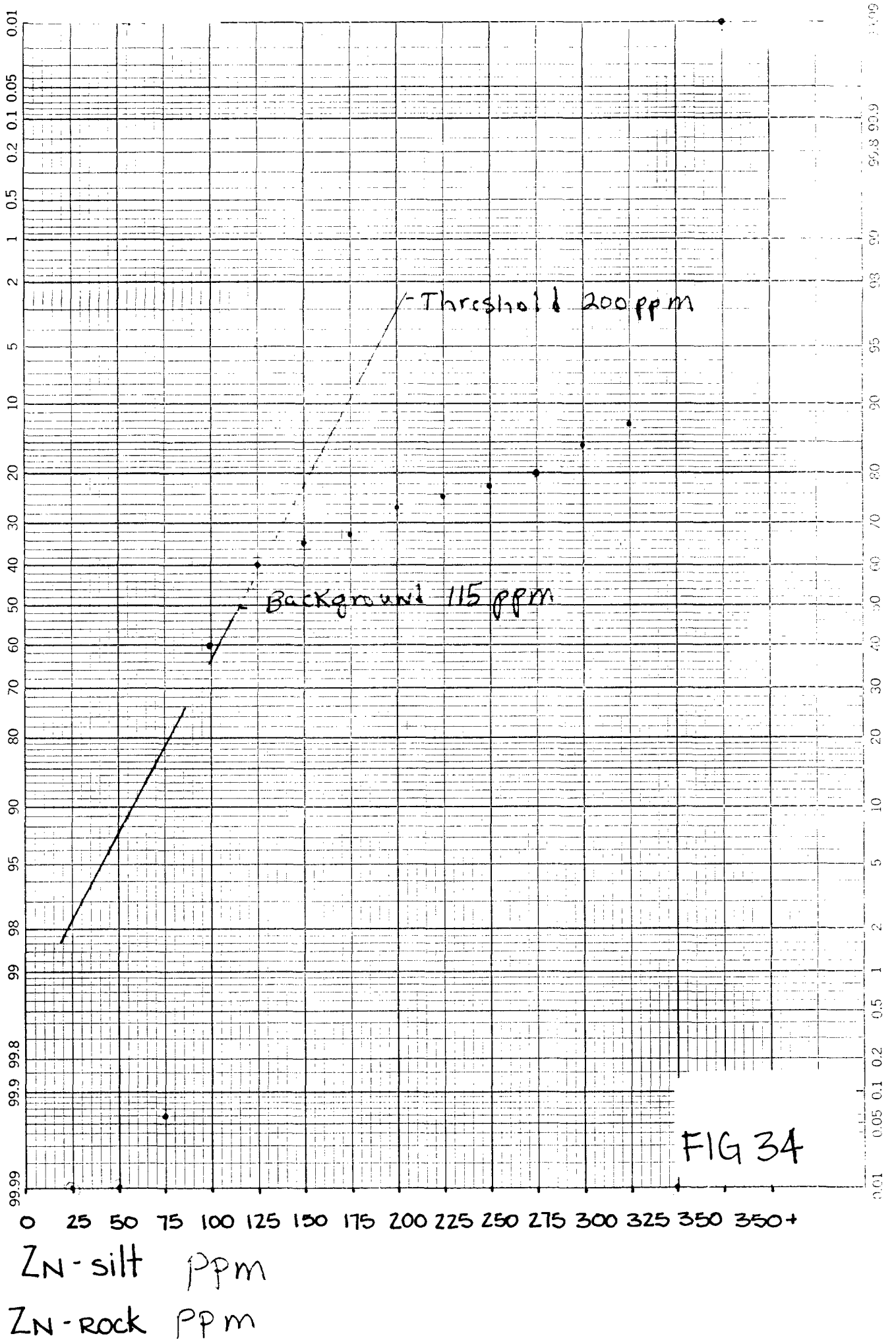
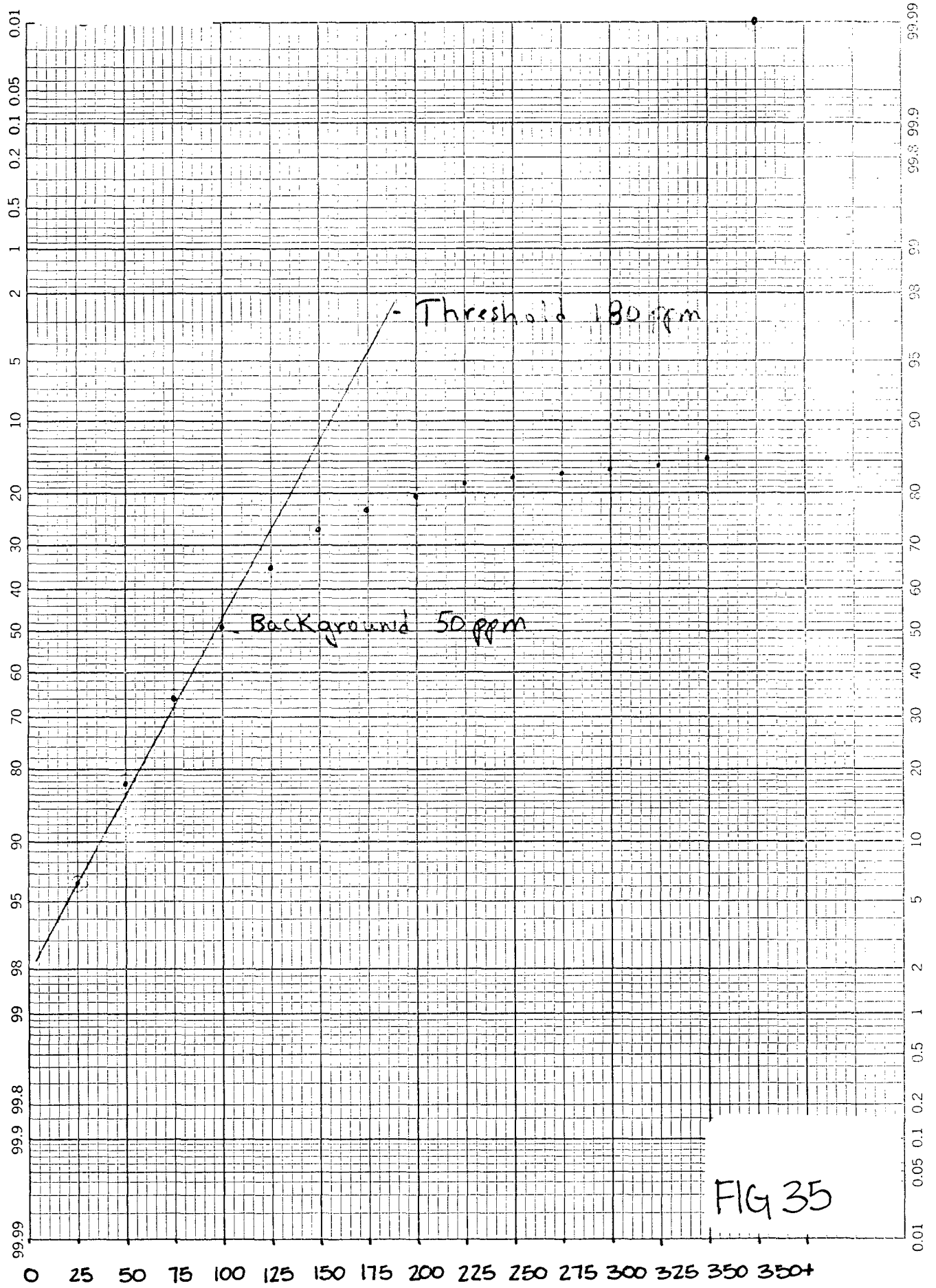


FIG 34



46 8000

PROBABILITY X 90 DIVISIONS  
KEUFFEL & ESSER CO. MADE IN U.S.A.



Zn-rock ppm

FIG 35

E.R. KRUCHKOWSKI CONSULTING LTD.  
23 Templeside Bay N.E.  
Calgary, Alta.  
T1Y 3L6

Via Courier

October 12, 1990

Ministry of Energy, Mines and Petroleum Resources  
Gold Commissioner  
100 Market Place  
Prince Rupert, B.C.  
V8J 1B8

Dear Sirs;

Re: Bow 1-39 Claims, Record No. 6001-6039 inclusive  
and Bow 40-41 Claims, Record No. 6919-6920  
Skeena Mining Division

Please find enclosed 2 copies of maps relating to the above reports forwarded by courier on June 14, 1990. Please note that figure 10 & 11 do not exist as all 1988 and 1989 data plots are on figures 8 & 9.

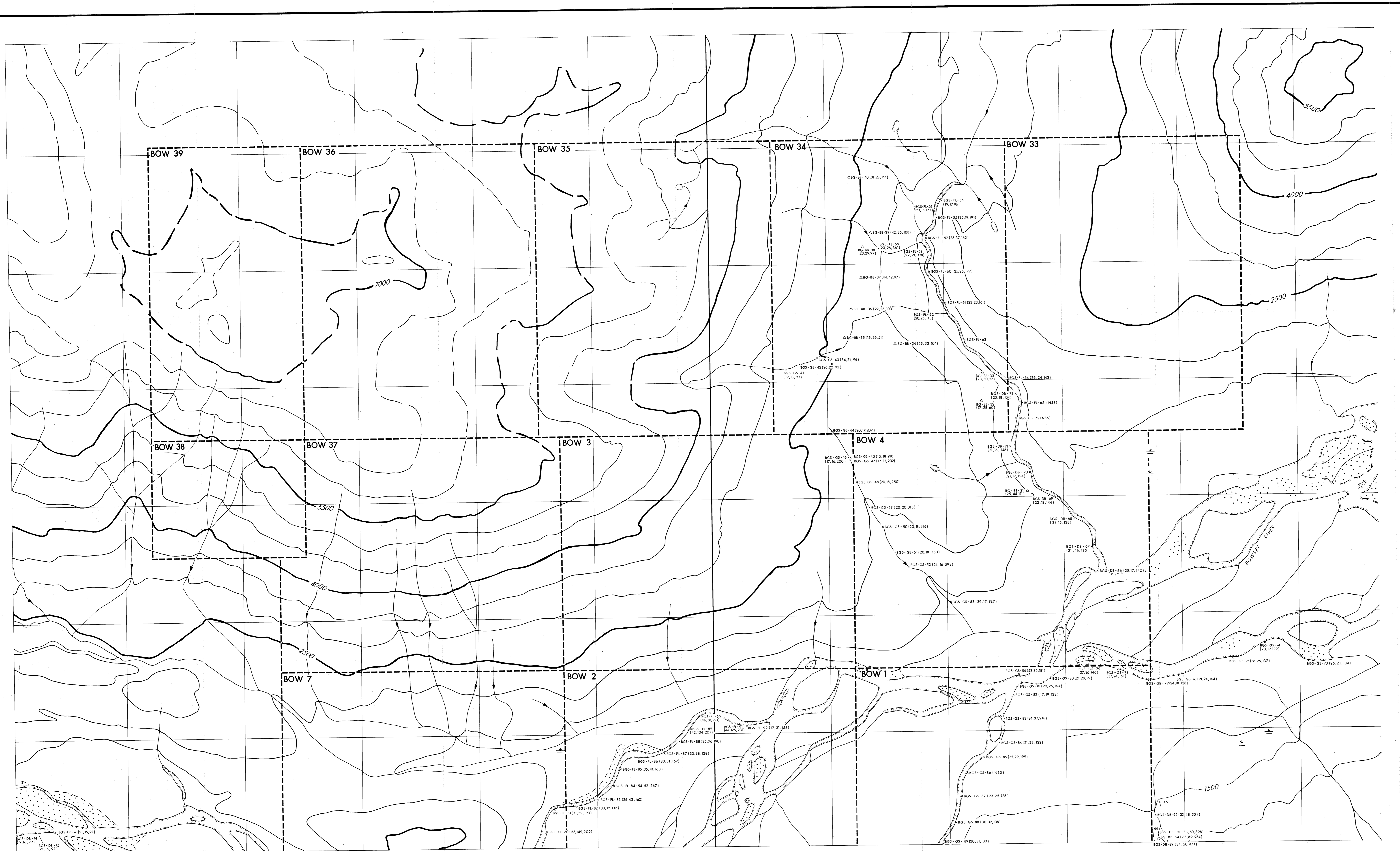
Yours Truly,  
E.R. KRUCHKOWSKI CONSULTING LTD.

E.R. Kruchkowski  
President

Encls.

RECEIVED  
OCT 15 1990

GOVERNMENT AGENT  
PRINCE RUPERT



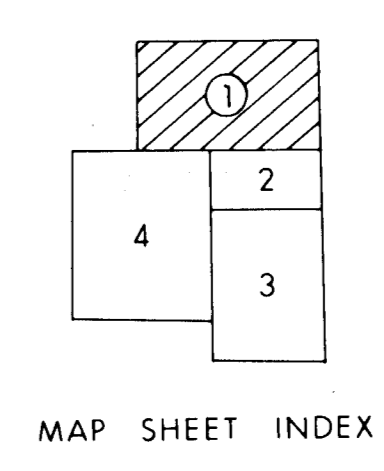
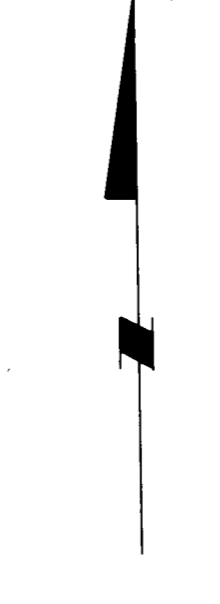
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1:10,000

**MARLIN DEVELOPMENTS LTD.**  
SKEENA MINING DIVISION  
BOW CLAIMS  
1988 SAMPLE LOCATION MAP

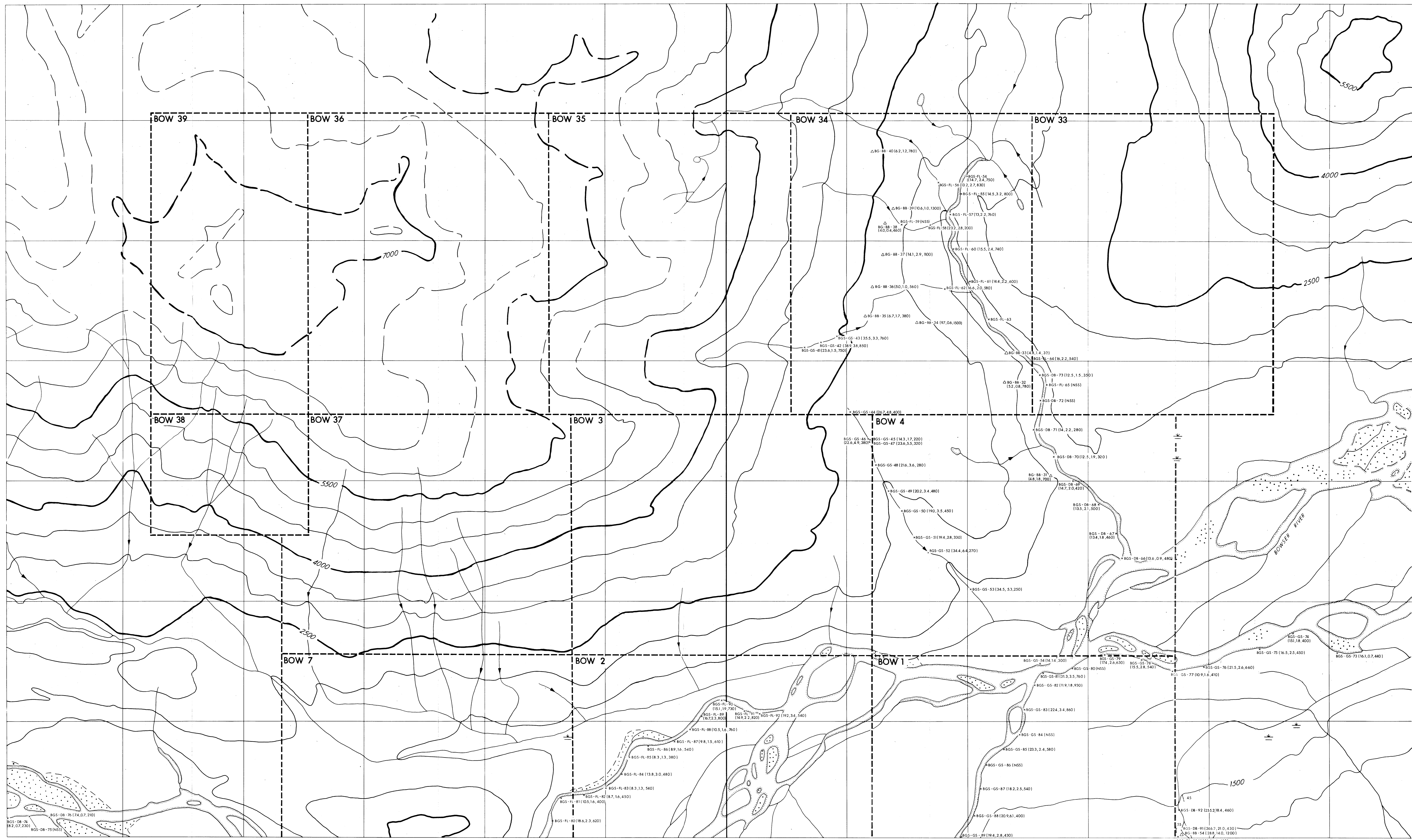
**LEGEND**  
CHEMICAL SAMPLE SITES  
x Silt  
△ Outcrop

**MAP SHOWING**  
Cu, Pb, Zn  
S

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**  
**20,089**



To Accompany Report by ER Kruckowksi & G Sinden FIGL May, 1988



MARLIN DEVELOPMENTS LTD.

SKEENA MINING DIVISION  
BOW CLAIMS  
1988 SAMPLE LOCATION MAP

LEGEND

- CHEMICAL SAMPLE SITES  
x Site  
Δ Outcrop

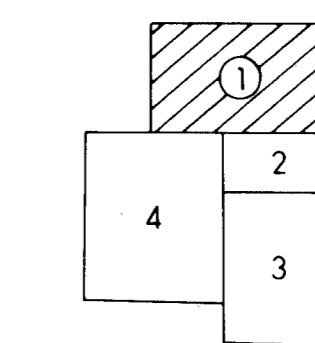
MAP SHOWING

As, Sb, Hg

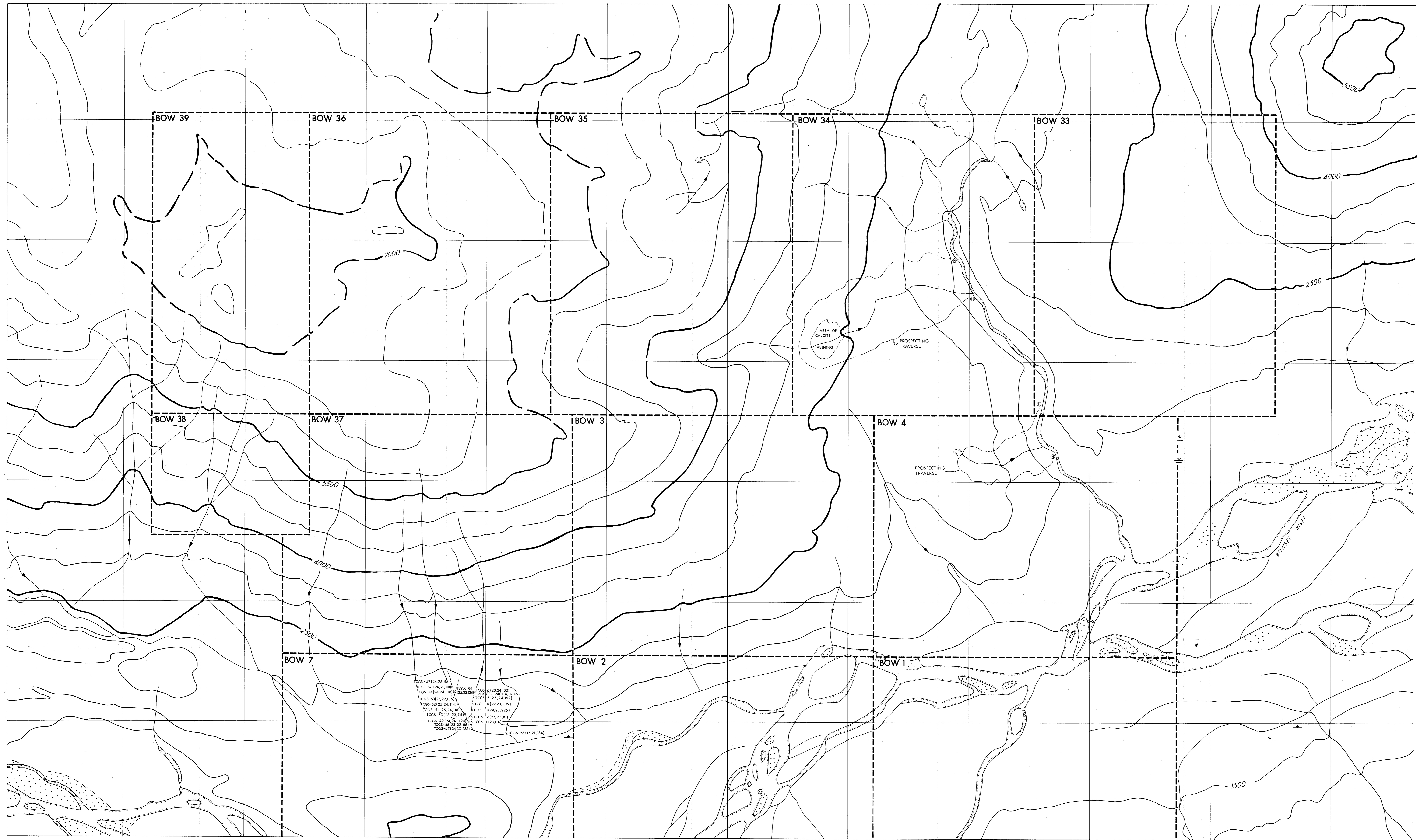
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

20,089

To Accompany Report by: *FIG 5* May, 1989  
E.R. Kruckowick & G. Sinden



MAP SHEET INDEX



TCCS-57124.23.1181  
 TCCS-56124.23.1181  
 TCCS-54124.24.1181  
 TCCS-52124.24.1181  
 TCCS-50124.24.1181  
 TCCS-48124.24.1181  
 TCCS-46124.24.1181  
 TCCS-44124.24.1181  
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 TCCS-04124.24.1181  
 TCCS-02124.24.1181  
 TCCS-00124.24.1181

**MARLIN DEVELOPMENTS LTD.**  
 SKEENA MINING DIVISION  
 BOW CLAIMS  
 1988 SAMPLE LOCATION MAP

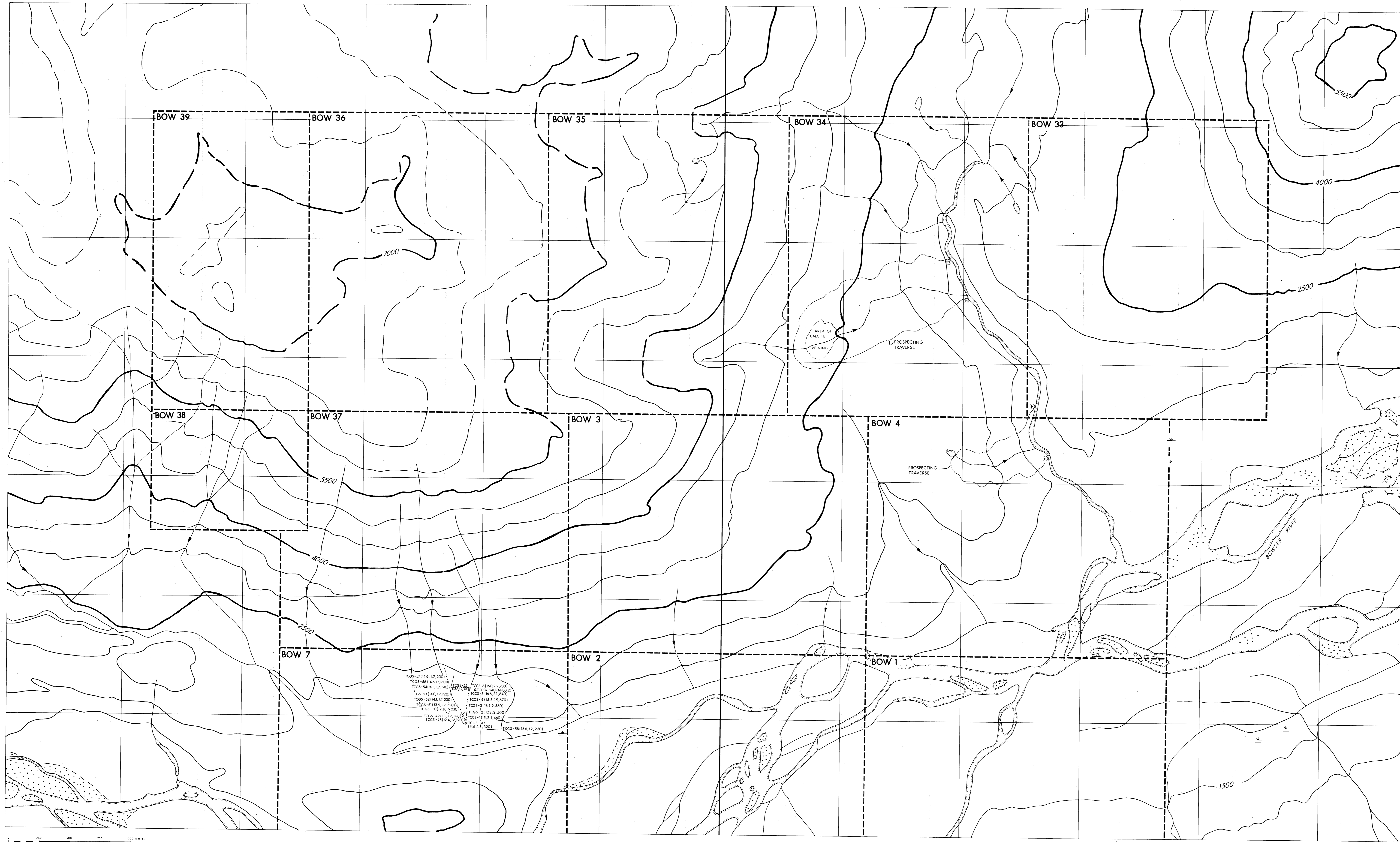
**LEGEND**  
 CHEMICAL SAMPLE SITES  
 x Silt (fines)  
 o Rock in situ (chip)  
 @ Helicopter Pad  
 Geochemical Analysis:  
 Gold (ppm), Silver (ppm)  
 unless otherwise stated

**MAP SHOWING**  
 Cu, Pb, Zn  
*S*

**GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**  
**20,089**

To Accompany Report by: *FICG*  
 E.R. Kruckowski & G. Sinden  
 May, 1988





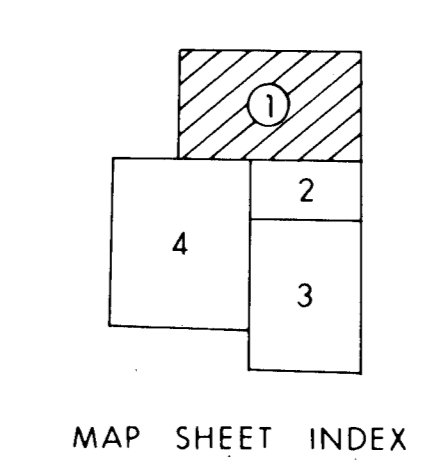
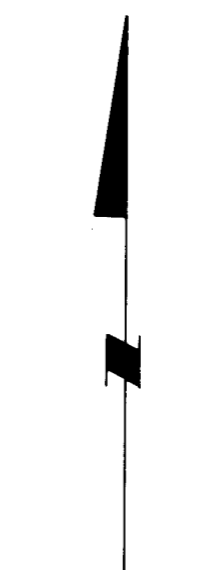
0 250 500 750 1000 METERS  
1:10,000

**MARLIN DEVELOPMENTS LTD.**  
SKEENA MINING DIVISION  
BOW CLAIMS  
1988 SAMPLE LOCATION MAP  
To Accompany Report by:  
E.R. Kruckowski & G. Sinden *F-197*  
May, 1989

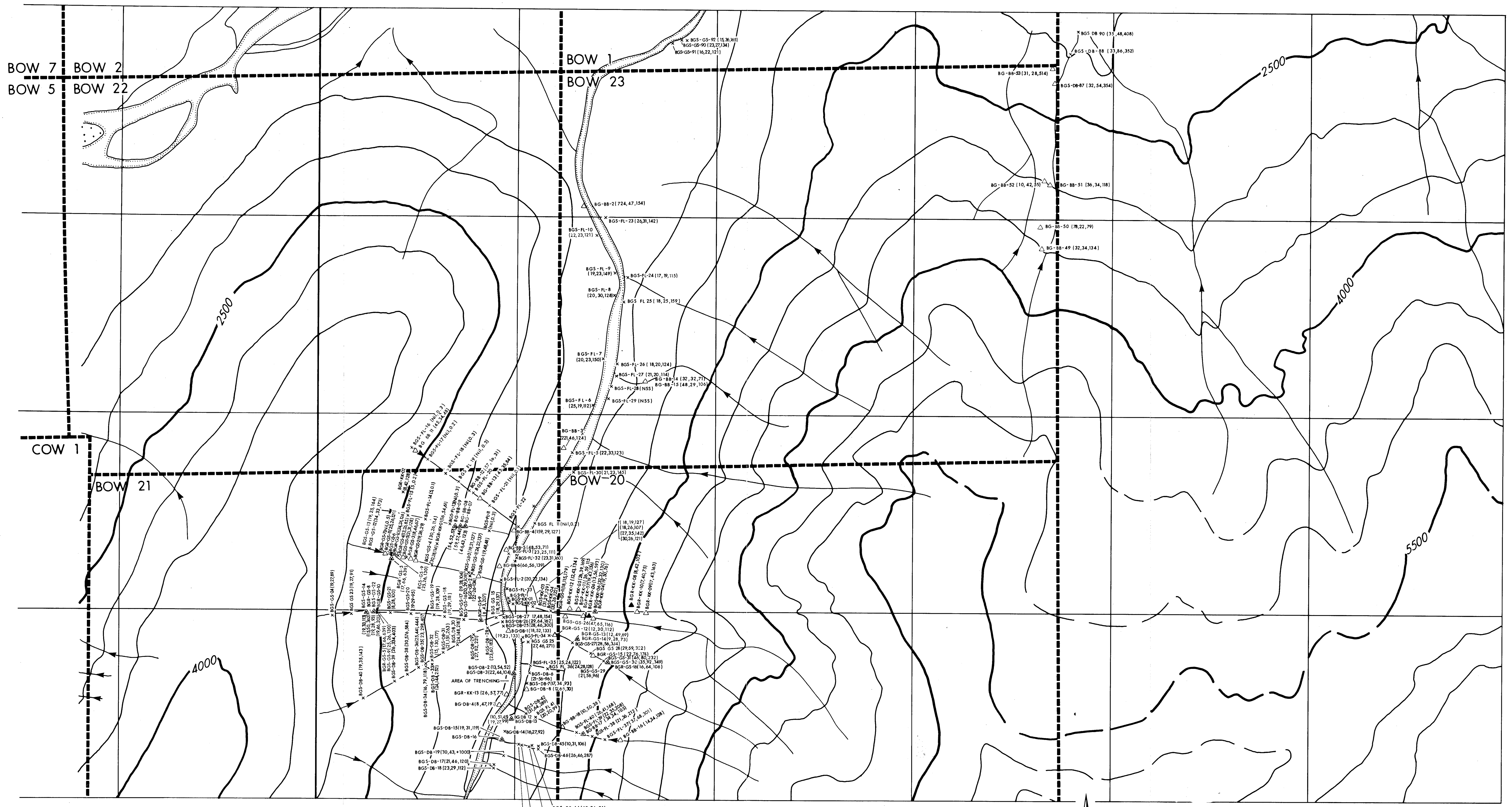
**LEGEND**  
CHEMICAL SAMPLE SITES  
x Silt (fines)  
△ Rock in situ (chip)  
⊕ Helicopter Pad  
Geochemical Analysis:  
Gold (ppb), Silver (ppm)  
unless otherwise stated

**MAP SHOWING**  
As, Sb, Hg  
*SS*

**GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**  
**20,089**



MAP SHEET INDEX



MARLIN DEVELOPMENTS LTD.

SKEENA MINING DIVISION  
BOW CLAIMS

LEGEND

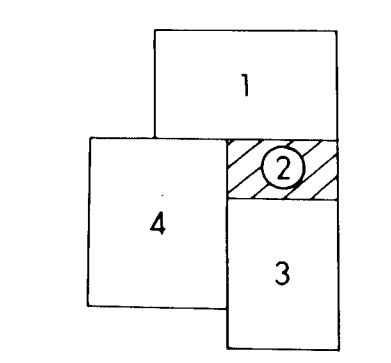
- CHEMICAL SAMPLE SITES:
- x Silt
  - △ Rock: in situ
  - ▲ Rock: float
  - x Rock and silt

MAP SHOWING

Cu, Pb, Zn

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

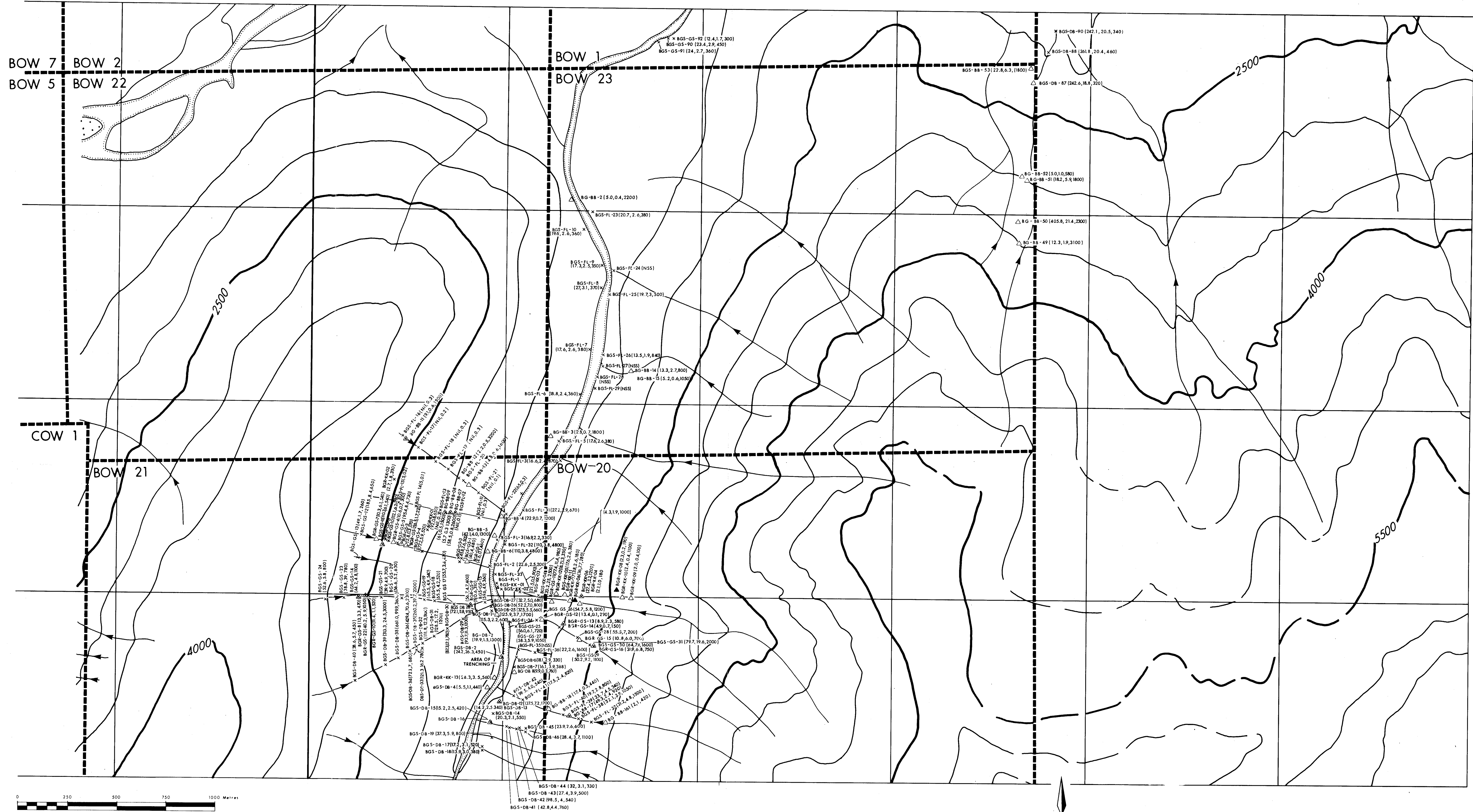
20,089



MAP SHEET INDEX

To Accompany Report by:  
E.R. Kruchkowski & G. Sinden *Fig 8* May, 1989



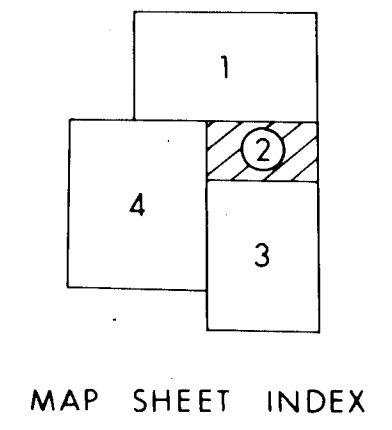
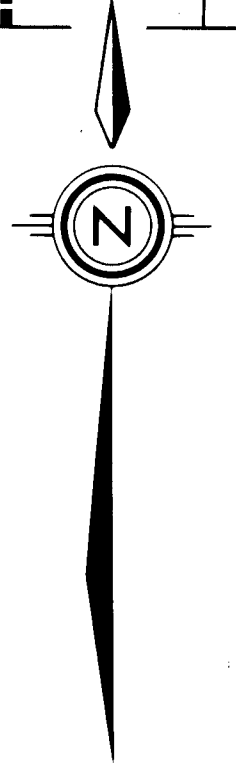


MARLIN DEVELOPMENTS LTD.  
SKEENA MINING DIVISION  
BOW CLAIMS

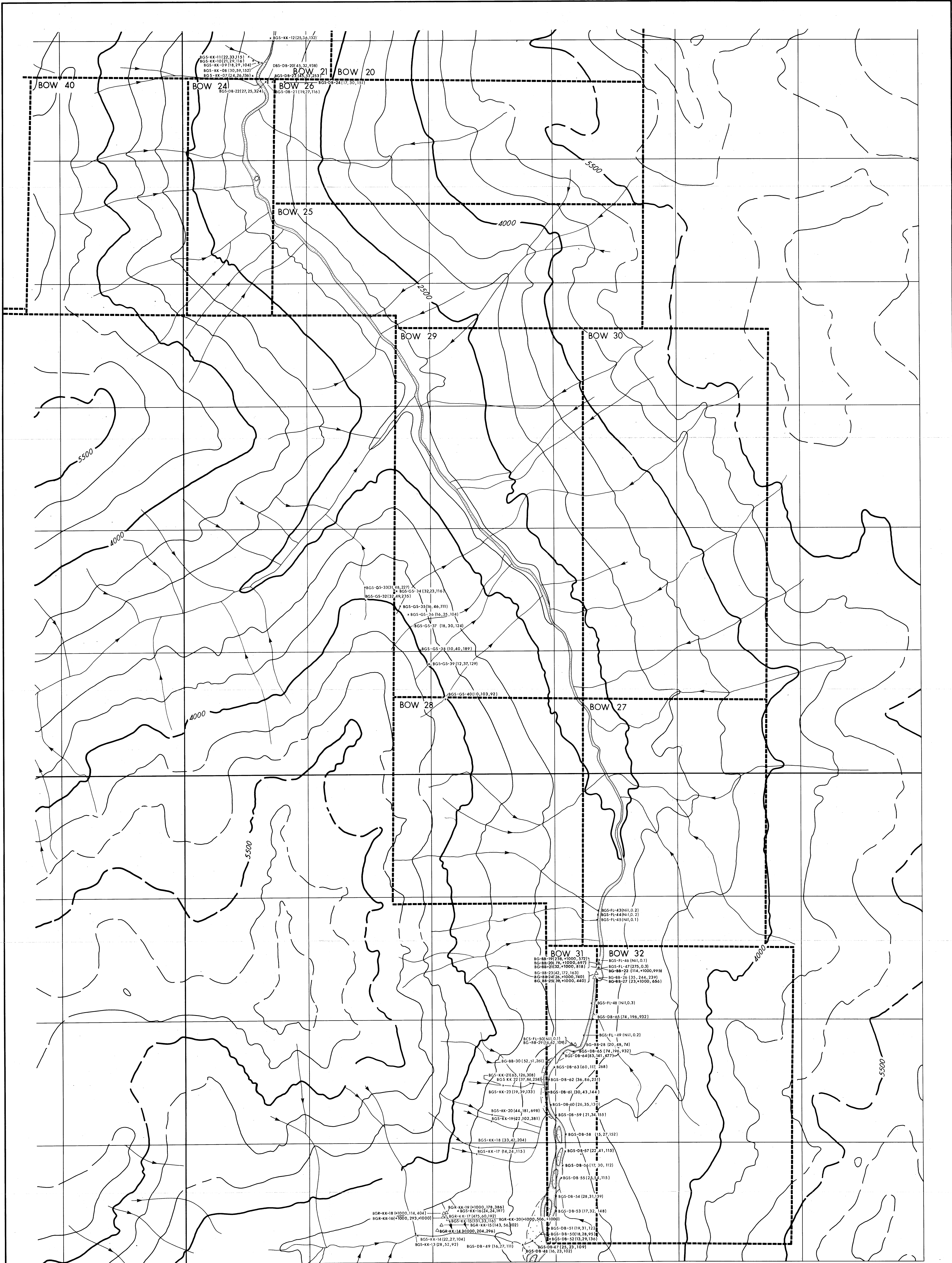
**LEGEND**  
CHEMICAL SAMPLE SITES:  
x Silt  
△ Rock: in situ  
▽ Rock: float  
⊠ Rock and silt

**MAP SHOWING**  
As, Sb, Hg  
*Sx*

**GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**  
**20,089**



To Accompany Report by:  
E.R. Kruckowski & G. Sinden *Fig 9*  
May, 1989



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

20,089

0 100 200 300 400 METERS  
1:10,000

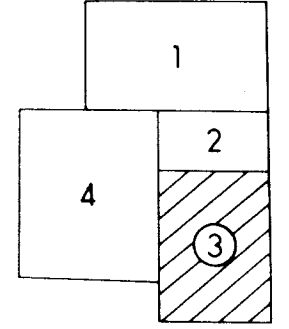
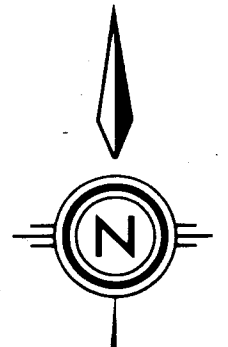
**MARLIN DEVELOPMENTS LTD.**  
SKEENA MINING DIVISION  
BOW CLAIMS  
1988 SAMPLE LOCATION MAP

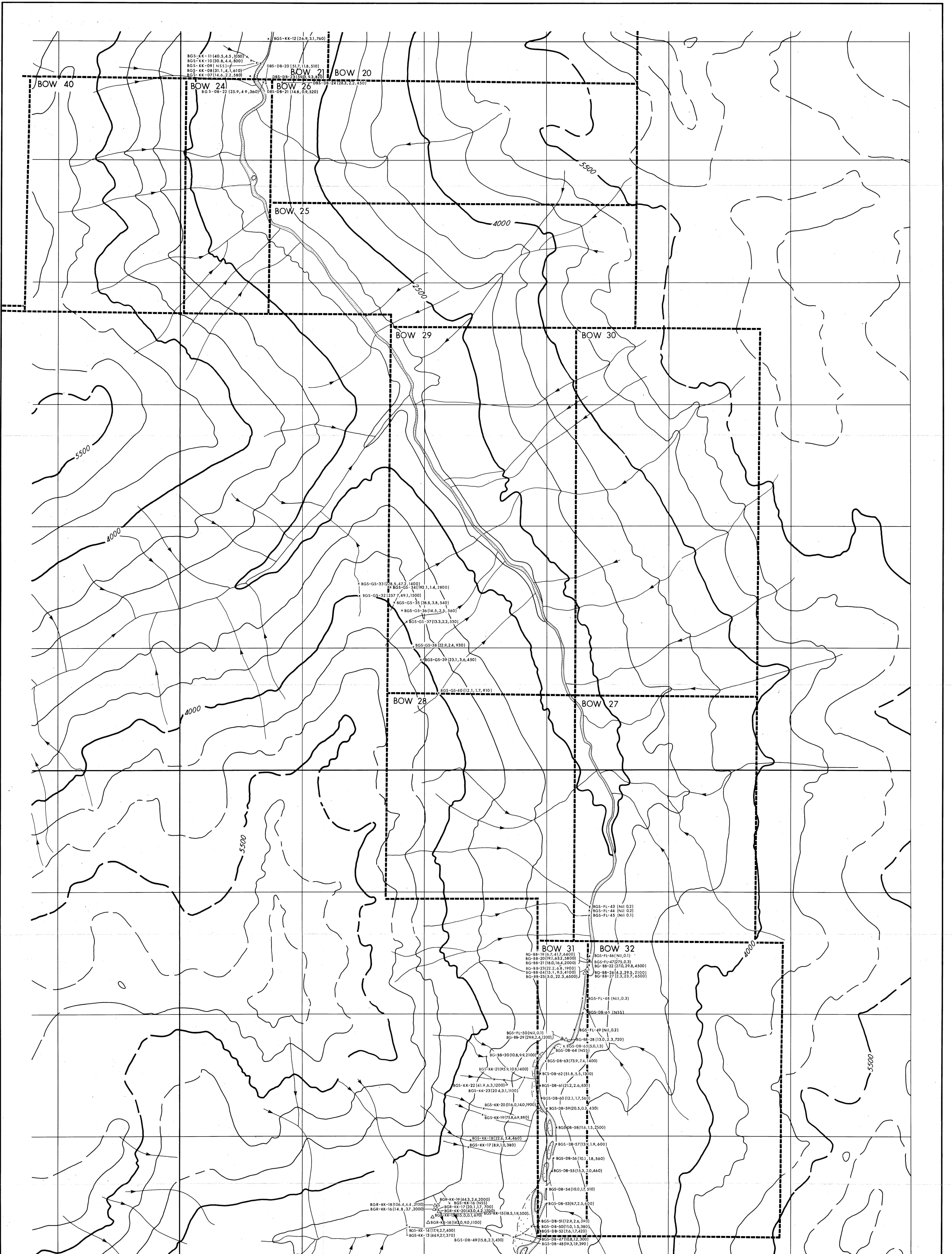
**LEGEND**

- CHEMICAL SAMPLE SITES  
x Silt  
Δ Outcrop

**MAP SHOWING**

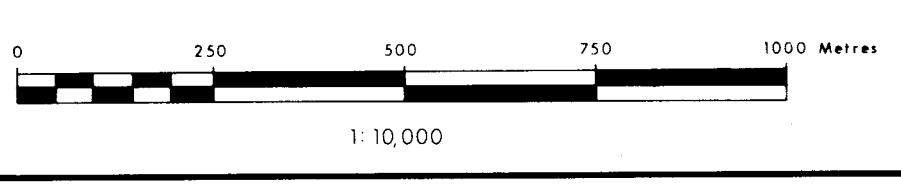
Cu, Pb, Zn





**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**20,089**

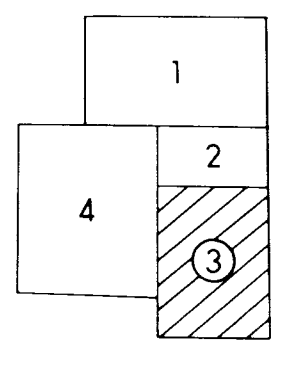


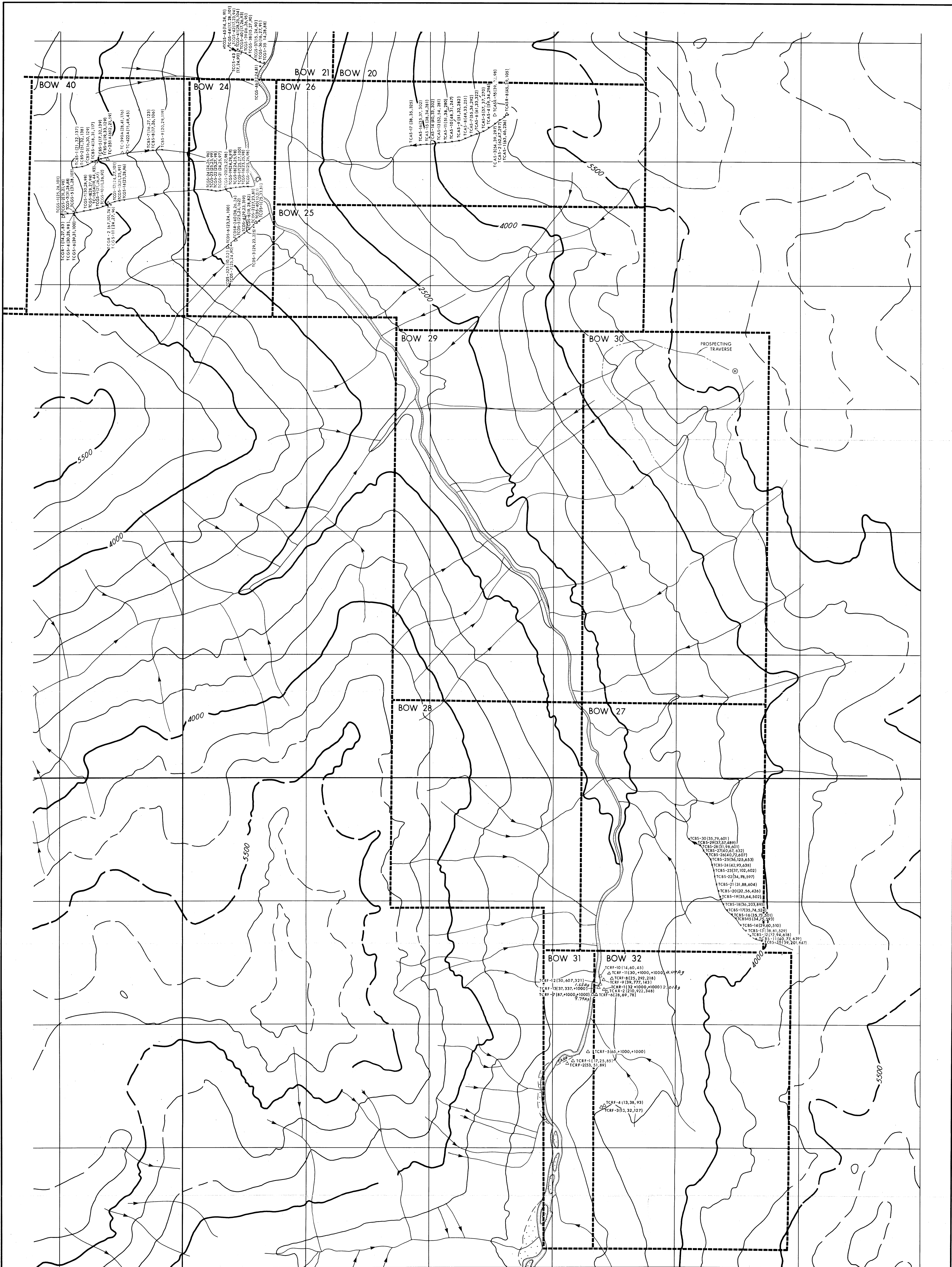
**MARLIN DEVELOPMENTS LTD.**  
SKEENA MINING DIVISION  
BOW CLAIMS  
1988 SAMPLE LOCATION MAP

**LEGEND**

x	Silt
Δ	Outcrop

**MAP SHOWING**  
As, Sb, Hg





GEOLOGICAL BRANCH  
ASSESSMENT REPORT

20,089

0 250 500 750 1000 METERS  
1:10,000

MARLIN DEVELOPMENTS LTD.

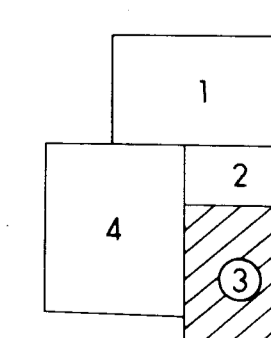
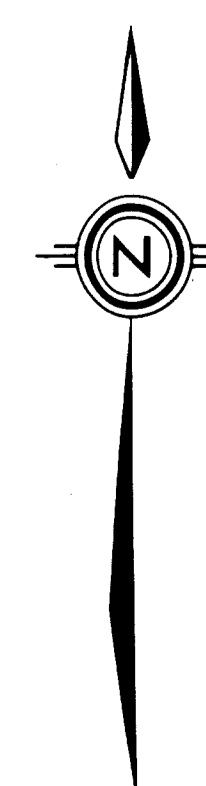
SKENA MINING DIVISION  
BOW CLAIMS  
1988 SAMPLE LOCATION MAP

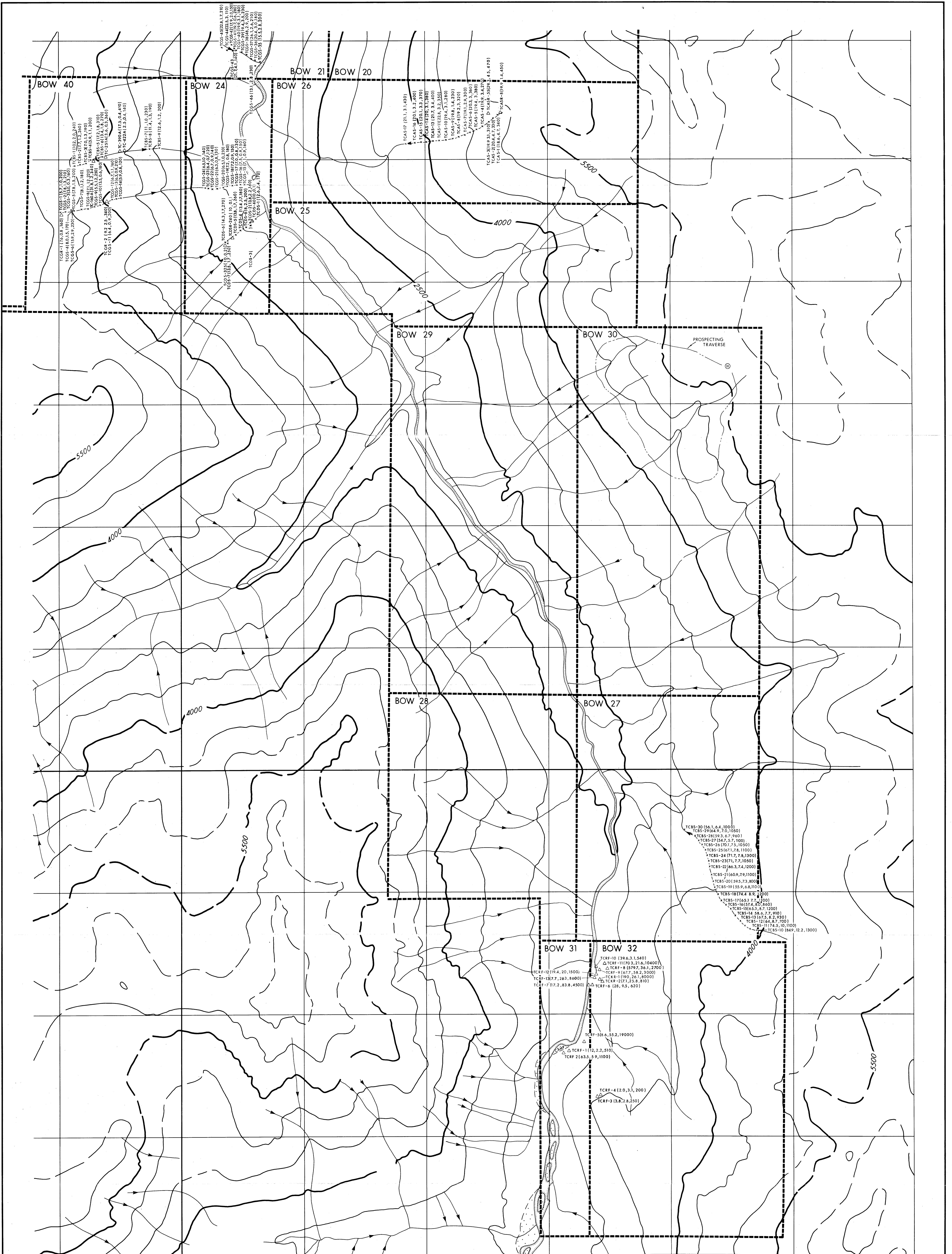
LEGEND

- CHEMICAL SAMPLE SITES
- x Silt (Fines)
- △ Outcrop (chip)
- ⊙ Helicopter Pad
- Geochemical Analysis:  
Gold (ppb), Silver (ppm)  
unless otherwise stated

MAP SHOWING

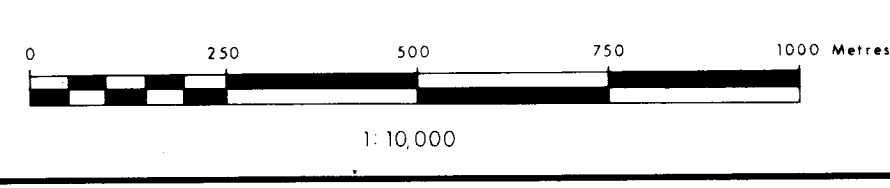
Cu, Pb, Zn





GEOLOGICAL BRANCH  
ASSESSMENT REPORT

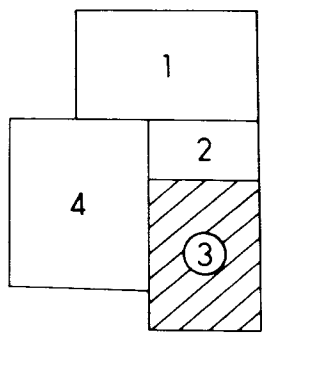
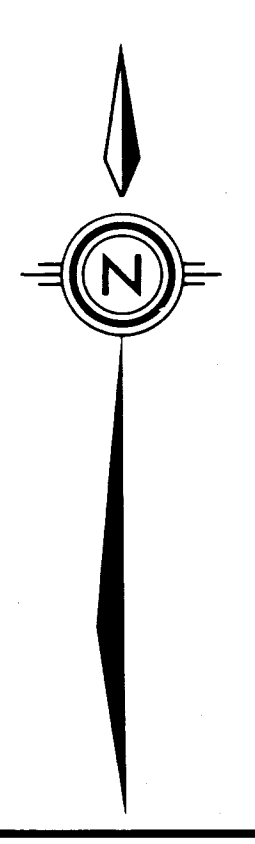
20,089

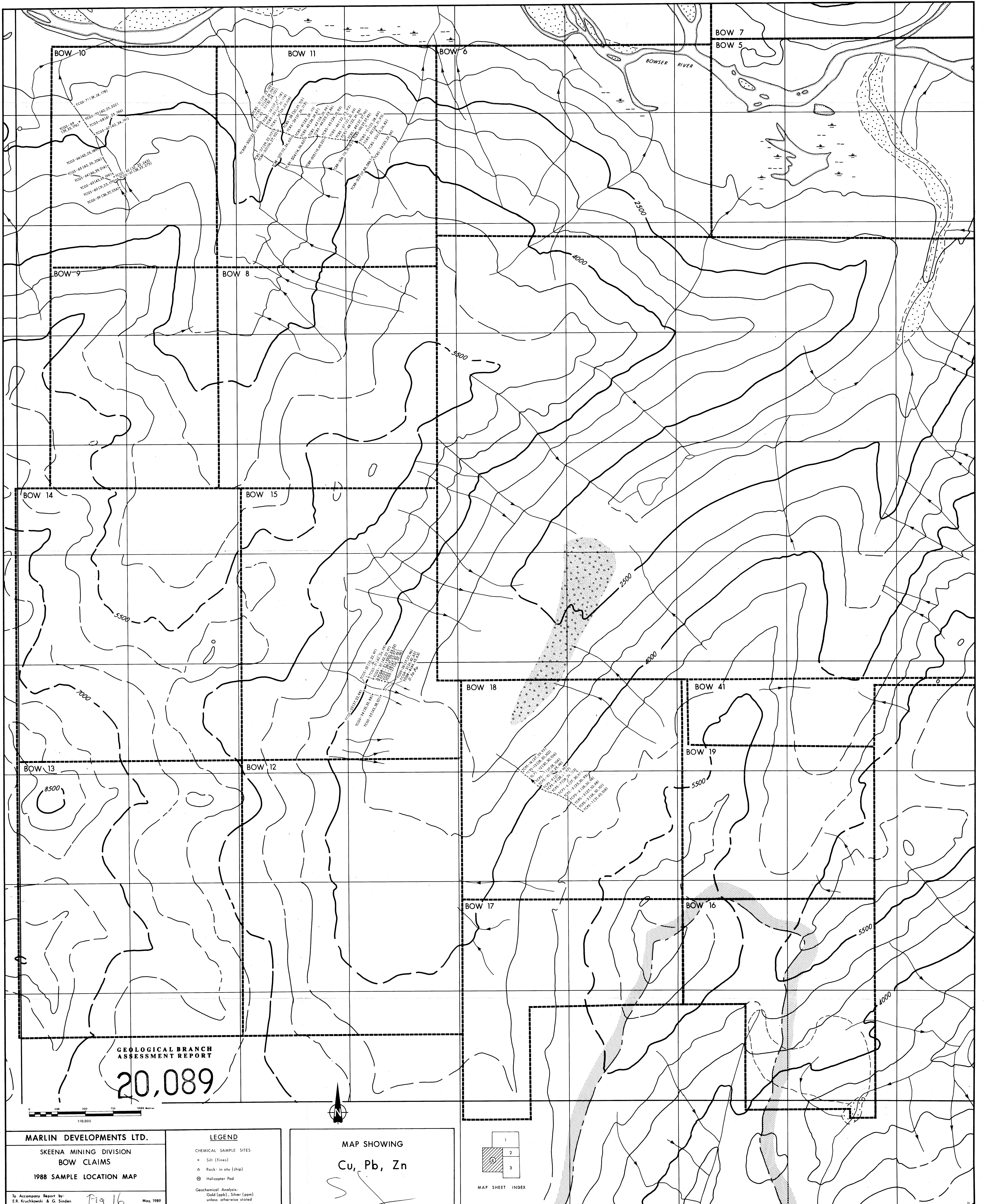


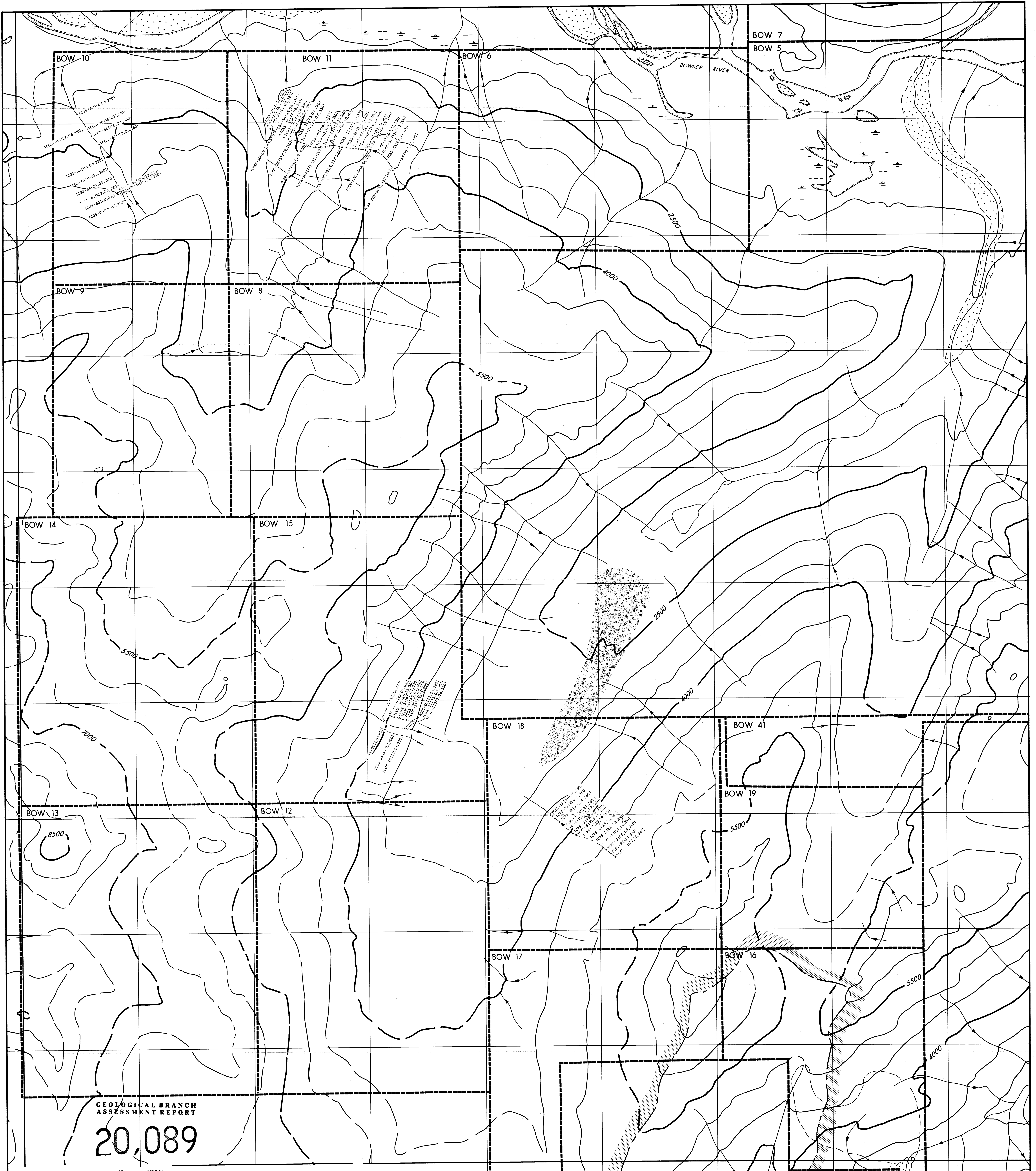
MARLIN DEVELOPMENTS LTD.  
SKEENA MINING DIVISION  
BOW CLAIMS  
1988 SAMPLE LOCATION MAP

**LEGEND**  
 CHEMICAL SAMPLE SITES  
 x Silt (fines)  
 Δ Outcrop (chip)  
 ⊕ Helicopter Pad  
 Chemical Analysis:  
 Gold (ppb), Silver (ppm)  
 unless otherwise stated

**MAP SHOWING**  
 As, Sb, Hg  
 S







GEOLOGICAL BRANCH  
ASSESSMENT REPORT  
**20,089**

**MARLIN DEVELOPMENTS LTD.**  
SKEENA MINING DIVISION  
BOW CLAIMS  
1988 SAMPLE LOCATION MAP  
To Accompany Report by:  
E.R. Kruchowski & G. Sinden  
May, 1989

**LEGEND**  
CHEMICAL SAMPLE SITES  
x Silt (finest)  
o Rock in situ (chip)  
⊙ Helicopter Pad  
Geochemical Analysis:  
Gold (ppb), Silver (ppm)  
unless otherwise stated

**MAP SHOWING**  
As, Sb, Hg

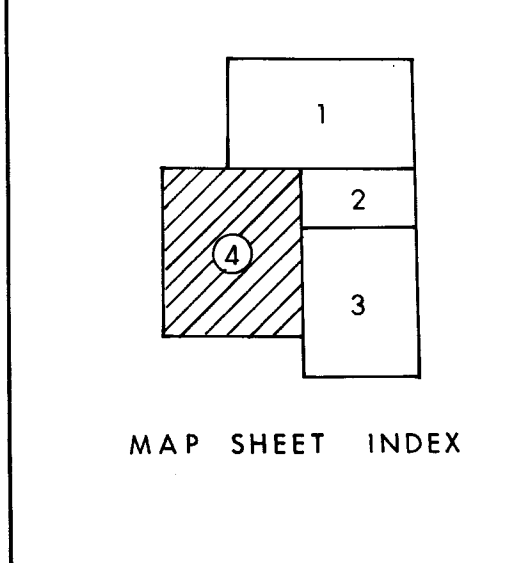
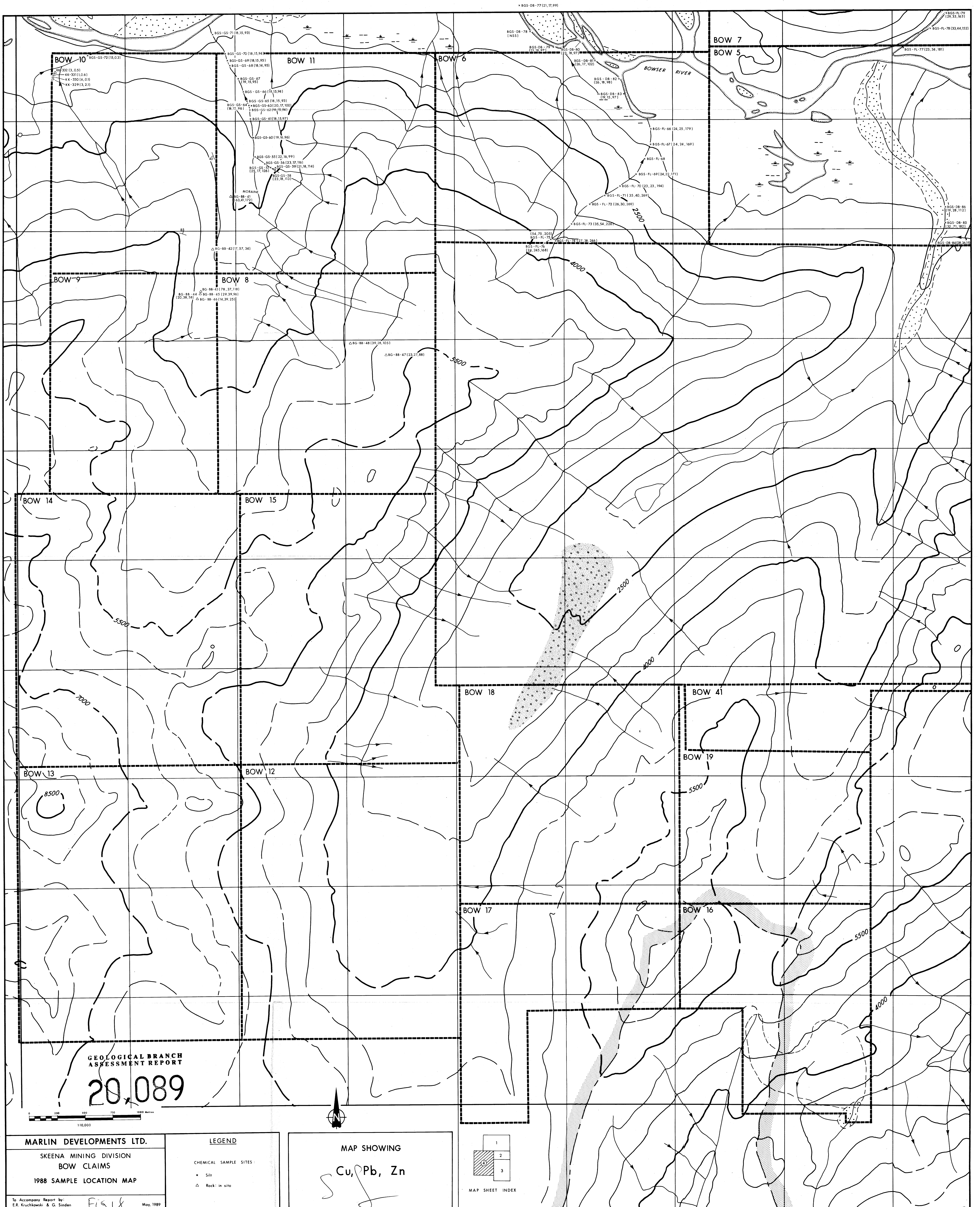


Fig 17



BOW 10  
 BGS-GS-72(15,03)  
 KK-322(13,05)  
 KK-331(10,61)  
 KK-330(16,01)  
 KK-329(15,21)

BOW 11

BOW 6

BOW 7  
 BOW 5

BOW 9

BOW 8

BOW 14

BOW 15

BOW 13

BOW 12

BOW 18

BOW 41

BOW 19

BOW 17

BOW 16

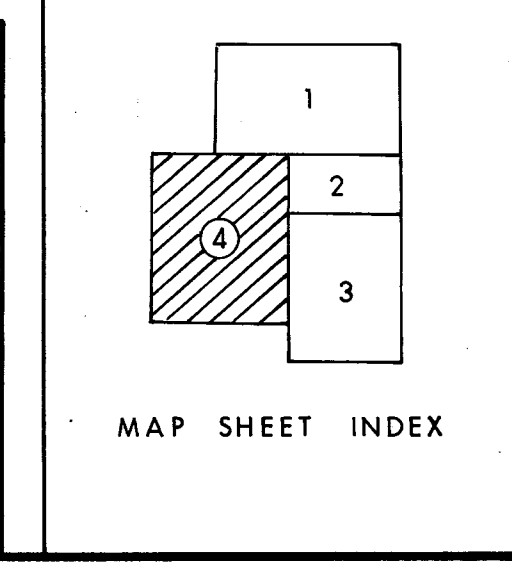
GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

20,089

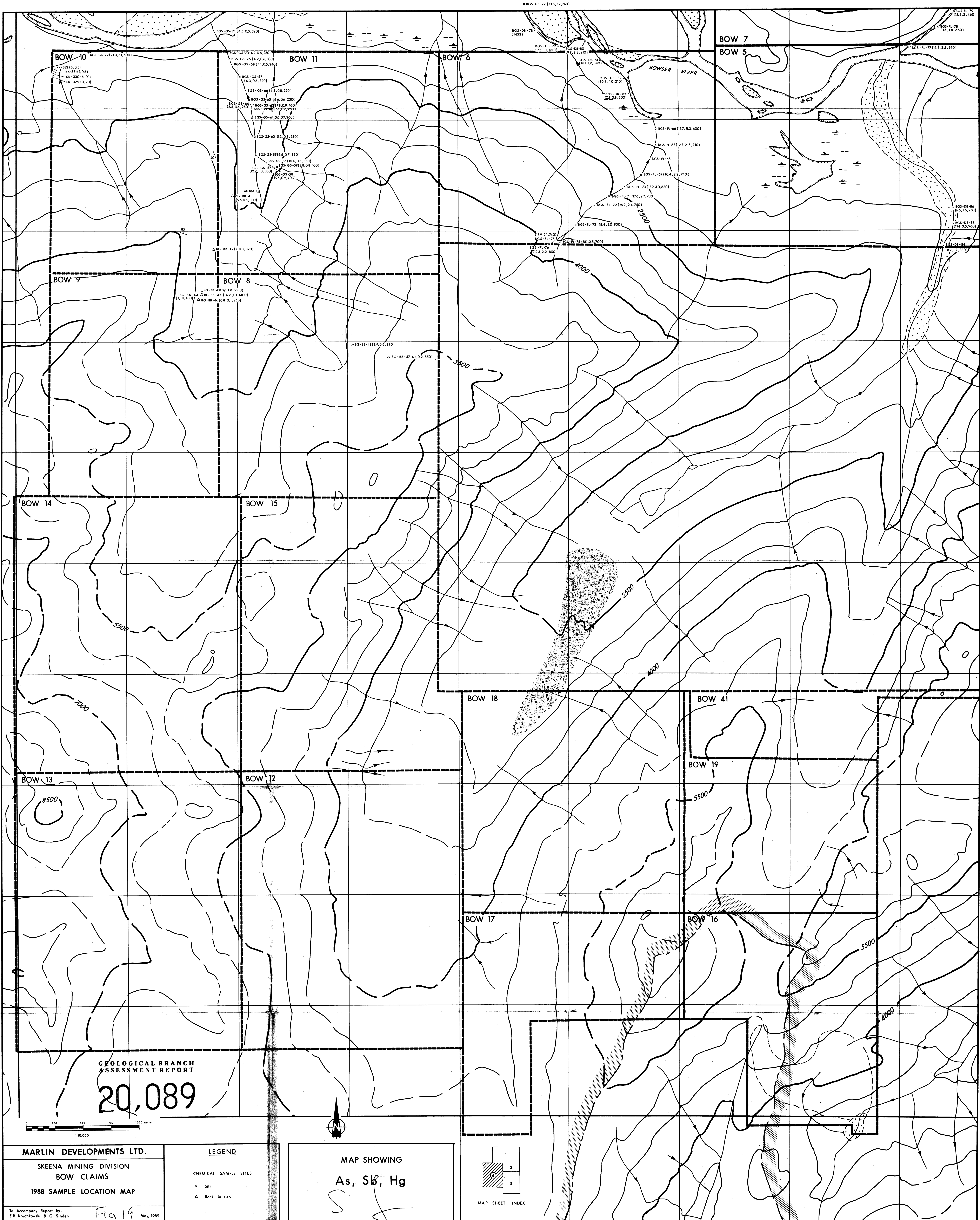
MARLIN DEVELOPMENTS LTD.  
 SKEENA MINING DIVISION  
 BOW CLAIMS  
 1988 SAMPLE LOCATION MAP

LEGEND  
 CHEMICAL SAMPLE SITES:  
 \* Silt  
 Δ Rock: in situ

MAP SHOWING  
 Cu, Pb, Zn







GEOLOGICAL BRANCH  
ASSESSMENT REPORT

20,089

MARLIN DEVELOPMENTS LTD.

SKENA MINING DIVISION  
BOW CLAIMS  
1988 SAMPLE LOCATION MAP

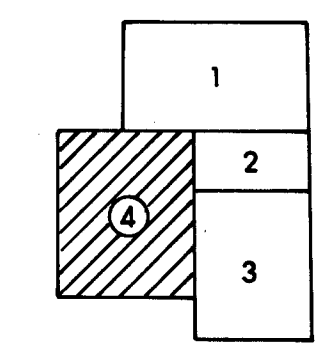
LEGEND

CHEMICAL SAMPLE SITES:

- x Site
- Δ Rock in situ

MAP SHOWING

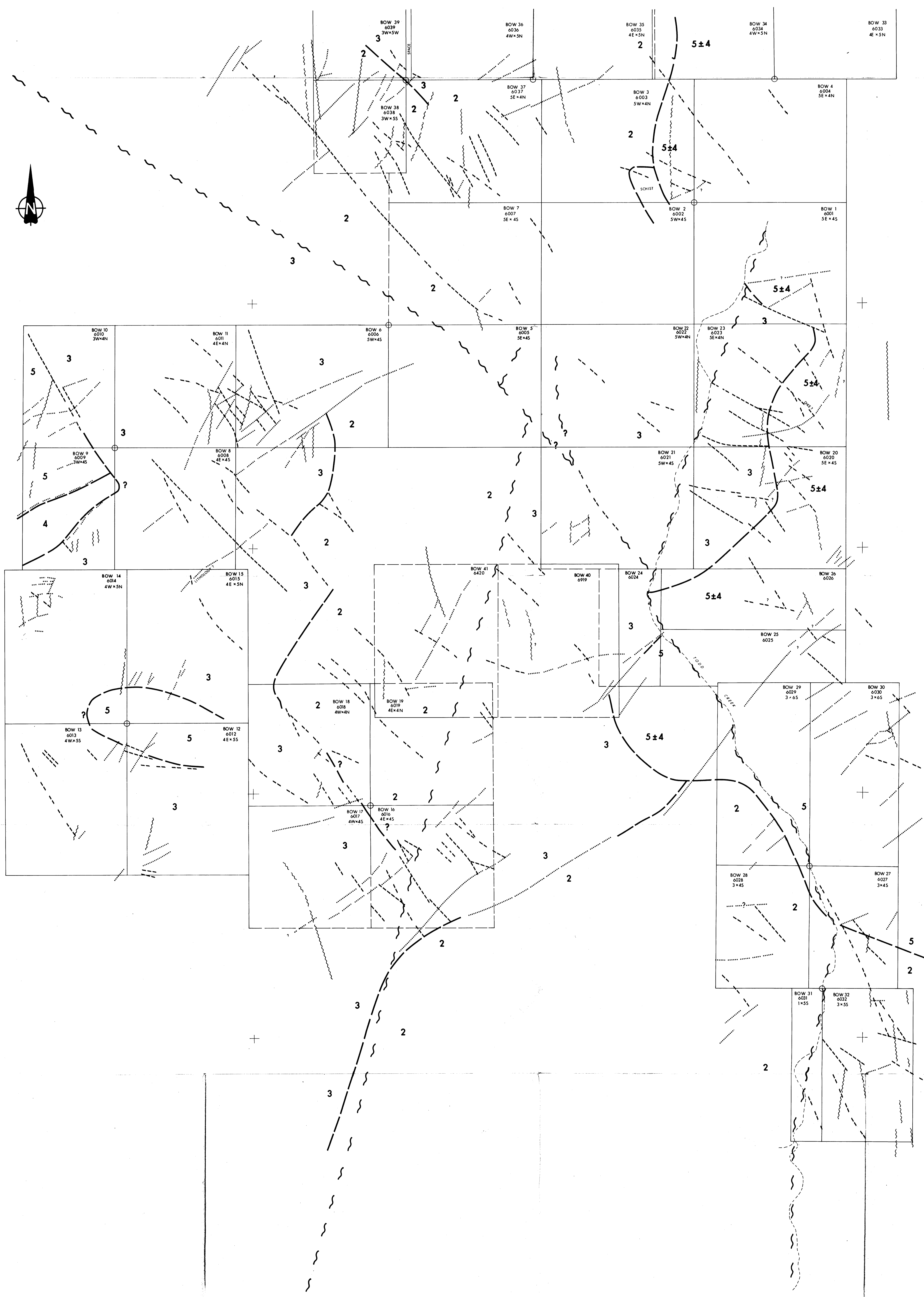
As, Sb, Hg



MAP SHEET INDEX

To Accompany Report by:  
E.R. Kruchowski & G. Sinden

Fig 19 May, 1989



**LEGEND**

[From ALLDRICK ET AL & From GROVE]

**JURASSIC & YOUNGER**

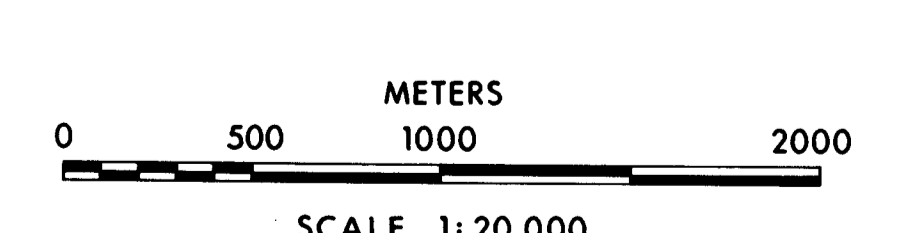
- 8 Feldspar Porphyry
- JURASSIC (HAZELTON GP.)  
SALMON RIVER FM.  
5 Carbonaceous siltstone & sandstone
- MOUNT DILWORTH FM.  
4 Felsic volcanics; tuff, breccia
- BETTY CREEK FM.  
3 Andesitic pyroclastics & greywacke
- UNUK RIVER FM. (upper)  
2 Porphyritic andesitic flows & tuffs

**SYMBOLS**

- GEOLOGICAL CONTACT (INFERRED)
- BEDDING ATTITUDE
- MINERAL LOCATION
- ZONE OF DISCOLORATION (ALTERATION ?)
- FAULT ZONE
- Py, Cr PYRITE, CHALCEDONY
- H, L MAGNETIC HIGH, LOW
- o o o o o MAGNETIC "CONTACT"
- NW (± NNW) LINEAMENT
- NE (± NNE) LINEAMENT
- ~~~~~ N, NNE & NNW LINEAMENTS

**MARLIN DEVELOPMENTS LTD.**

**ORTHO PHOTO  
LINEAMENT INTERPRETATION**



SCALE 1:20,000  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**20,089**

Fig 36  
S L