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DRILL REPORT  
CUMBERLAND GROUP  
MT. MADGE PROJECT  
SULPHURETS CREEK AREA  
NTS 104B/8  
SKEENA MINING DIVISION  
BRITISH COLUMBIA

FILMED

OWNER: RITSUKO TSURUGIDA (E.R. KRUCHKOWSKI - AGENT FOR)  
AND CATEAR RESOURCES LTD.

OPERATOR: BIGHORN DEVELOPMENT CORPORATION

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**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

DATE: FEBRUARY 7, 1988

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Part 1 of 2

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## 1.0 EXECUTIVE SUMMARY

This assessment report on the Cumberland Group of claims consisting of reverted crown grant 2-post claims lots 265 to 269 and the Corey 8, 28, 31, 32 and 35 mineral claims (97 units) is submitted to the British Columbia Ministry of Energy Mines and Petroleum Resources in partial compliance with the Mines Regulations Act pertaining to application for assessment work credit.

The preliminary field work was performed from August 1st to August 14th, 1987, subsequently the Cumberland showing was diamond drilled (six holes, 1936 feet). Work related to this drilling took place between September 19 to November 1, 1987.

The project operator, Bighorn Development Corporation commissioned E.R. Kruckowski Consulting Ltd. to direct both field programs. The primary mineralized targets were precious metals, gold and silver, that occur on three principal locations which are as follows:

- The Cumberland showing, this showing was trenched and drilled.
- The Devils Club Creek showing.
- The Silver Creek showing.

The latter two showings were prospected and sampled. They both require further more systematic investigation.

The total field program consisted of the following work:

- Soil geochemical sampling on the Cumberland, Silver Creek showings.
- Silt geochemical sampling on available drainage.
- Rock geochemical sampling in the vicinity of all showings and areas prospected.

- Trenching on the Cumberland showing.
- Diamond drilling on the Cumberland showing.

Results obtained to date indicate that further work should be done in the following areas:

- Systematic sampling, trenching and mapping should be done on the Upper reaches of Devils Club Creek to determine the extent of silver mineralization and the potential locations for old workings of the Daly showing.
- Trenching should be done on the Silver Creek showing.
- Further work on the Cumberland showing which returned low gold and silver drill hole values and patchy mineralization should be directed towards determining the structure as it relates to mineralization and trenching a gold soils anomaly above the workings.

Drilling on the Cumberland group has determined that spotty mineralization grading up to 0.35 oz/ton Au can occur. This combined with one channel sampling result of up to 0.88 oz/ton Au and some frequent channel samples in the 0.025 - 0.034 oz/ton range would indicate that the potential for discovering small high grade ore chutes and/or large sized low grade deposits in the area warrants further more intensive geological efforts.

## 2.0 INTRODUCTION

The Cumberland group of claims consist of the following reverted crown grant (2-post) claims and mineral claims Corey 8:

<u>Recording</u>	<u>Crown Grant Lot Number</u>	<u>Area (Hectares)</u>	<u>Anniversary Date</u>
5473	Cumberland L265	13.86	August 1, 1986
5474	Silver Pine L266	15.97	August 1, 1986
5475	Middlesex L267	20.85	August 1, 1986
5476	Ziphis L268	11.63	August 1, 1986
5477	Ougma L269	12.98	August 1, 1986
		<u>Units</u>	
5412	Corey 8	20	June 25, 1986
5893	Corey 28	16	February 11, 1987
5896	Corey 31	16	February 11, 1987
5897	Corey 32	20	February 11, 1987
5900	Corey 35	20	February 11, 1987

All of the above claims have been grouped into the Cumberland group of claims by a supplemental grouping notice dated January 28, 1987. The claim group layout is illustrated on Figure 3.

## 2.1 Location and Access

The principal claims are located in the Sulphurets Creek area NTS 104B/8 of the Skeena Mining Division in the vicinity of latitude  $56^{\circ}29'$  longitude  $129^{\circ}29'30''$ , approximately 1.2 kilometres east of the Sulphurets Creek Unuk River confluence. See location and access maps (Figures 1 & 2). The property is approximately 70 kilometres north-northwest of Stewart, British Columbia. Access to the claims was achieved by Bell 206 Jet Ranger helicopter. The drill was long-lined onto the drill pad by Bell 204.

During the initial phase of work the campsite was established in the vicinity of the Unuk River junction. This site was relocated to the Cumberland showing area during the later (drilling) phase of work.

During the initial phase of work a trail was blazed from the first campsite to the showing, a distance of 1.1 kilometres. This distance was deemed too great for effective drilling. Therefore, the existing chopper pad at the main showing was upgraded and a new campsite was cleared at the drillsite on the Cumberland showing on Lot 265.

## 2.2 Physiography and Topography

The property is located in very steep terrain in the vicinity of the Sulphurets Creek Canyon. The elevations vary from 214 metres (700 feet) AMSL to 1691 metres (5548 feet) AMSL on Mt. Madge.

The main tributaries feeding the drainage have their origin in the glacial tongues and icefields that typify the coast range. Below tree line the area is densely timbered with spruce, hemlock, cedar and balsam. The river areas have some cottonwood stands with dense undergrowth of alder and devils club.

The area is characterized by moderate to heavy snowfall and low winter temperatures. Summer precipitation, although less than at the immediate coast, is frequent and heavy enough to hamper geological work. The weather during the fall drilling program, which ended November 1, 1987, was foggy and damp with daily precipitation.

## 2.3 History and Ownership

The Cumberland group of claims (lots 265-269) was originally staked in 1898. The claims were subsequently sold to the Unuk River Mining and Dredging Company in 1900 and development work was done until 1903, at

which time development ceased.

In 1931 the property was purchased by a tax sale by Mr. George E. Olmsted but no further development work was done on the property.

Historical data on the claims can be reviewed in the following British Columbia reports of the Minister of Mines and the 1905 GSC Summary (Report P-51):

<u>Year</u>	<u>Page</u>
1901	994
1903	54
1906	72
1919	60
1923	87
1935	89-11

Other more recent work is included in the October, 1964 Western Miner (P-36) and Assessment Report 8769 (1980) for E & B Exploration Ltd.

The current owner of the 2-post claims is Mr. Ritsuko Tsurigida (1987 FMC 297219) who has a royalty agreement with Catear Resources Ltd. that entitles Catear to a 100% working interest. Catear Resources Ltd. of #400, 255 - 17 Avenue S.W., Calgary, Alberta is also the owner of the Corey claims. Bighorn Development Corporation of #400, 255 - 17 Avenue S.W., Calgary, Alberta is the operator on both the crown grant L265-269 (2-post claims) and the Corey claims. The operator earns an interest in the claim group through expenditures on the property. E.R. Kruchkowski is agent for all of the parties involved.



#### 2.4 Previous Work

Previous work on the showings located on lots 265 to 269 consisted of minor underground development work on the Daly and Cumberland prospects. The location of the Daly prospect has not to date been ascertained, recent work on Devils Club Creek suggests that it may be in the upper reaches, however the previously reported elevation of 1200 feet for the showing does not concur with field data. The Cumberland showing, located on lot 265, occupies a rusty gully which is quite visible from the north side of Sulphurets Creek.

The locations of the available workings are shown on enclosed maps 1, 2, and 3 and discussed in more detail in other sections of this report.

Further details on previous work is included in Appendix E and consists of summarized historical data from selected British Columbia Minister of Mines reports. All indications are that these showings were last examined in the 1960's, this is inferred by the presence of an old chopper and the 1964 Western Miner report. Nonetheless, indications are that the last serious work done is of 1935 vintage as no new trenching or blasting was noted.

### 3.0 SUMMARY OF WORK DONE AND PERSONNEL USED

The work program took place in two separate phases which consisted of a field exploration phase from August 1 to August 14, 1987 and a drilling phase from September 19 to November 1, 1987.

The personnel used were provided by E.R. Kruckowski Consulting Ltd. Their rates and days worked are itemized in Appendix A. A chart (Table 1) is provided to show the job activities and man/days that is assigned to each job function.

A brief summary of the work accompanied is as follows:

- line cutting trail from first camp to Cumberland showing, 1.1 line kilometres.
- establish Cumberland showing soils grid, 1.0 kilometres.
- map soils grid (.03 kilometres<sup>2</sup>).
- prospecting and sampling (approx. 3.0 line kilometres).
- establish Silver Creek soils grid, 0.2 line kilometres.
- prospect and sample grid (.01 kilometres<sup>2</sup>).
- trenching, 10 line metres (10 x 1.0 x 0.5 deep)
- map workings, 20 line metres.
- diamond drilling 1936 feet (590 metres).
- log core (590 metres).
- soil sampling 182 samples.
- silt sampling 10 samples.
- rock samples 72 samples.
- core samples 363 samples.
- improvements on chopper pad and campsite.

The results of the 1987 field programs are discussed in this report, maps and cross sections are provided to illustrate the established grids for soil sampling, the results of geological mapping, the location of trenches or workings and the location of core holes.

All analytical results are provided in Appendices B and C, the drill logs are included in Appendix D.

### 3.1 Regional Silt Sampling

The silt sampling was done on the available streams to determine the most likely areas to prospect for precious metals (Au, Ag). The procedure for silt sampling included the use of a pan and fly screen to size the silt sample to less than 1.0 mm. The sampling proved effective in locating areas of interest such as Devils Club Creek and Silver Creek where subsequent work resulted in obtaining in place albeit narrow quartz-carbonate vein material that assayed as follows:

<u>Location</u>	<u>Sample No.</u>	<u>Assay Ag oz/ton</u>	<u>Rock Type</u>
Silver Creek	18007	102.15 7 cm	quartz carbonate and silver sulphosalts
	9599	133.59 10 cm	
Devils Club Creek	19442	160.92 20 cm	quartz manganese carbonate and carbonate wallrock
	19443	3.62 30 cm	

On the basis of the above results derived from silt samples such as CG-08 (6.2 ppm Ag) and CG-09 (+30 ppm Ag), further silt sampling covering all of the drainage in the area is strongly recommended.

### 3.2 Soil Sampling

Soil sampling was done at two locations which are shown on Map 1 (Figure 5). They include the Silver Creek soils grid (28 samples) shown on Figure 4

and Cumberland soils grid (174 samples) shown on Map 2, Figure 6. In the case of the Silver Creek soils grid background values for Au is 5 to 10 ppb and for Ag is 0.1 ppm. Anomalous values for Au is in the order of 85 ppb (one sample) with numerous anomalous Ag samples (+1.0 ppm). The soils sampled at this location consisted of dark brown "B" horizon at depths of 20 cm - 30 cm (10 cm sample interval). In the case of the Cumberland soils grid, background values for Au is in the order of nil to 10 ppb with anomalous values of +25 ppb which occurs in the following localities:

- adit area. Baseline 0+00 to 0+30 south
- in the vicinity of the baseline and 0+75 to 1+00 south
- in the vicinity of 0+50 south and 20 west
- in the vicinity of 0+50 to 0+75 south and 20 east

The highest soils value taken directly above the upper adit returned +1000 ppb or 0.140 oz/ton. Background values for Ag on the Cumberland grid is nil to 0.2. Anomalous Ag values were considered to be +1.0 ppm. The localities for anomalous values the highest of which were 6.8, 7.7 and 8.2 ppm do not line up, show continuity or appear to be associated with anomalous gold areas.

The soil samples were taken on a leached greyish "C" horizon at depths of +20 cm. In some localities organic A and B horizon material only was present. A description of the soil type horizon and depth is annotated on the assay results included in Appendix B. The results of the sampling are plotted on Map 2, Figure 6, and Figure 4.

### 3.3 Prospecting and Geological Mapping

Stream silt sampling on Devils Club Creek resulted in prospecting up the creek bed looking for source rock containing high silver values. Preliminary work resulted in locating rounded float boulders of greenish carbonate breccia and stockwork with fine fracture fill of carbonate quartz with sphalerite pyrite mineralization containing silver.

Typical assay results for this material include values as follows:

<u>Sample No.</u>	<u>Assay oz/ton Ag</u>	<u>Description</u>
18082	Float 10.18	carbonate stockwork
18083	Float 29.66	green grey color with
18085	Float 50.46	hairline sphalerite pyrite
18086	Float 53.54	fractures and strong manganese stain.

This float type was traced up Devils Club Creek to the source area (Map 2, Figure 6) which occurs in a narrow steep gulch that contained blocks of scree of the source rock. High grade samples of this scree returned values of 346.4 oz/ton Ag and 169.38 oz/ton Ag. Some wallrock material contained up to 4.26 oz/ton Ag and in-situ 20 cm wide vein returned 160.92 oz/ton Ag. This area is now considered to be the source area for the Daly showing referenced in Appendix E. The favourable mineralization and host rock occurs frequently over a distance of 100 metres. The scree slopes are steep and bedrock exposure along the northern wall of the gulch is scarce. Indications at present are that a large area of carbonate stock host rock occurs within a fault wedge and that locally this carbonate contains wider sulphide rich vein intersections that contain appreciable silver values. Further work in this area is required to expose bedrock and sample in-situ material; some very old cabin cribbing was noted in the area. The old portal for the Daly showing is suspected to occur in an area of strong manganese stained scree directly below the cabin.

### 3.4 Trenching and Sampling Workings

Work in the form of trenching was done on the Cumberland showing in the area of the upper adit. The results of this trenching and adit sampling are shown on Table 2A. The results of sampling for the lower adit are shown on Table 2B. The locations of trenches, workings and the 1987 core holes are all shown in Map 3, Figure 7. Overall the trench sampling indicated that low gold values could be encountered with moderate frequency even though no high grade massive sulphide was encountered in the trenches and that this high grade zone showed a discontinuous nature from the mapping that was done in the upper adit.

Results of high grade samples taken from the upper adit area returned high gold values of 0.118 oz/ton (50 cm) and 0.88 oz/ton (40 cm). Subsequent resampling of this main zone returned values from 0.180 to 0.422 oz/ton Au over widths of 80 cm. Silver was ubiquitous in the high grade area of the upper adit with values varying from 1.09 to 16.58 oz/ton. The decision to drill was based on the possibility of encountering extensions of this zone at depth and in a southward direction.

### 3.5 Drilling

A fall program of 1936 feet of core drilling was completed in the upper adit area. Results of this program are detailed in Section 5 of this report.

#### 4.0 GEOLOGY AND ECONOMICS

##### 4.1 Regional Geology

The claims lie in the Sulphurets Creek area which is along the east edge of the Coast Crystalline Complex and near the boundary of the Bowser Basin. The rocks of the area belong to the Mesozoic Hazelton Group and have been intruded by plugs of Cenozoic and Mesozoic age.

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. This unit consists of green, purple and some red volcanic breccia, conglomerate, agglomerate and tuff. Also included in the sequence are pillow lavas, volcanic flows and clastic sediments. The Unuk River Formation is unconformably overlain by Lower Middle and Middle Jurassic rocks of the Betty Creek and Salmon River Formations respectively. These latter formations are interpreted to be absent in the area of the claims.

According to E.W. Grove the majority of the rocks from the Hazelton Group were derived by erosion of andesitic volcanics and subsequent deposition as overlapping lenticular beds grading from coarse breccia to siltstone. The area of the claims is located predominately in coarser sections of these overlapping sequences. Intrusive rocks in the vicinity comprise diorite and syenodiorite of Mesozoic age (Mt. Madge, Unuk River and Twin John Peaks) and monzonite of Cenozoic age, a large mass of which occurs southeast of the property.

Structurally the main belt of exposed Unuk River Formation forms a major north-westerly trending domical structure which in the Sulphurets Creek area is reflected by a simple antiform which has been fragmented by

plutonic emplacement and intense faulting.

An early Jurassic north trending anticline is interpreted by E.W. Grove to occur at the junction of the Unuk River and Sulphurets Creek.

#### 42. Local Geology

Geological mapping was done over the Cumberland grid and Devils Club Creek areas (approximately 0.5 Km<sup>2</sup>) indicates that the area contains the following rock types:

- dacite and dacitic agglomerate and andesite dacite volcanics (crystal and lithic tuff) of Lower Jurassic Unuk River Formation,
- dacitic and chert pebble agglomerate of Lower Jurassic Unuk River Formation,
- black argillite with minor pyrite also interpreted to belong to the Lower Jurassic Unuk River Formation,
- carbonate stockwork of Lower Jurassic Unuk River Formation.

The mapping did not distinguish finer lithological subtleties such as the presence or absence of red chert (jasper) and the degree of fragmental versus massive volcanic nature of the andesitic/dacitic units.

Regional prospecting and mapping was also done along the cliff face below the upper and lower adits. The rock types in this rusty gossan like area consist of andesite and or intermediate flows and fragmentals with minor pyrite and strong jointing and/or fracturing. Traverses were also done down Devils Club Creek to the junction of Sulphurets Creek. Some intermediate



to felsic tuffaceous wedges were noted in proximity to Sulphurets Creek. Sampling in this area returned low Au, Ag values (nil, 0.2) as shown for samples 9595 and 9696. A sample of rusty tertiary gravel at Sulphurets Creek sample 9598 returned 65 ppb Au. The geological reconnaissance mapping did not encounter any strong quartz veining or sericitic mineralization zones such as those encountered on Mt. Madge and the Brucejack Lake area, the latter of which is undergoing underground mine development work for lode gold and silver.

#### 4.3 Structural Geology

Structural geological data such as shearing, jointing intense fracturing is plotted on Maps 2 and 3. The area of Devils Club Creek is interpreted to be a major fault zone that splays from the Sulphurets Creek Canyon which in turn is interpreted to occupy a major fault zone.

Slickensided boulders and some in-situ slickensides were noted in Devils Club Creek (Figure 6) in the same area a secondary fault zone is indicated by a lithological discontinuity in a narrow gulch in the upper reaches of Devils Club Creek. The north-east wall of the gully contains a carbonate stockwork and the south-west side contains dacitic agglomerate.

In the Cumberland showing area (Figure 7) two major shearing trends prevail, one is roughly parallel the Sulphurets Creek Canyon Az 210-220 and conjugate shearing at Az 330-340. The downthrow blocks are towards Sulphurets Creek. At the Cumberland showing in the upper adit small scale ripple plunge structures can be noted adjacent to the mineralized zone. These structures also steeply ( $75^{\circ}$ ) plunge towards Sulphurets Creek.

The drilling which was done in the fall encountered gouge zones, highly

fractured rusty zones and quartz healed hairline fracture zones which indicated a complex history of shearing and fracturing. Also regional work in the area to the north suggests some fault related drag folding.

#### 4. Economic Geology

In the Sulphurets area, gold and silver mineralization appears to be of epithermal vein type origin that is structurally controlled and visually in close association with volcanic rocks. The veins commonly consist of quartz and carbonate with up to 20-30% sulphides within complex vein/shear zones or stockworks. Common associated minerals are pyrite, sphalerite, galena, tetrahedrite, arsenopyrite, electrum, pyrargyrite and barite. At the Cumberland showing the massive sulphide zone consisted of pyrite, sphalerite, galena, chalcopyrite and barite with some silver sulphosalts? and associated gold. This assemblage is more consistent with the high barite gold association that is more commonly encountered in the Kitsault area and is interpreted to be a replacement vein deposit which only constitute 5% of the mineral deposits in the Stewart complex but comprise more than 90% of the total gold, silver, lead and zinc mined. These low gold replacement vein types such as at the Tobrit and Alice Arm deposits consist of discordant lenses comprised of banded quartz, barite, jasper, feldspar, carbonates. The ore shoots include sulphides and native silver that along with the main vein material formed partly by emplacement within fractures and partly by replacement of wallrock. The mineral assemblance and discontinuous ore shoot nature (steeply plunging) of the Cumberland showing closely resembles the above replacement vein model.

In the Devils Club Creek area "Daly" showing consists of a carbonate breccia stockwork with some narrow 10-20 cm wide vein intersections. The mineral assemblage is pyrite sphalerite and silver rich with notably low gold values.

## 5.0 DIAMOND DRILLING

D.W. Coates Enterprises Ltd. completed a total of 1936 feet (590 metres) of coring to intersect the mineralization noted on the Cumberland adits. The drilling was done with a JKS 300 hydraulic wireline core rig. The core diameter was 41.28 (BDGM). The core was split for sampling and logged at the drillsite. The remaining (now split core) and half core is cross racked in five (5) foot wooden core boxes at the site and is readily available for further investigative work.

The sample section of split core (commonly a five foot interval) was bagged, tagged and sent to Loring Laboratories Ltd. of Calgary, Alberta for either gold, silver assay or rock geochemical analysis.

### 5.1 Drill Hole Locations and Data

Six (6) holes were drilled from one drill station located as shown on Map 3 (Figure 7). The specifics of the drill hole fan directions are as follows:

<u>Drill Hole</u>	<u>Inclination</u>	<u>Direction Az.</u>	<u>Purpose</u>	<u>Total Depth Feet</u>
BH-1	44.5 <sup>o</sup>	Az 070	Intersect zones	416
BH-2	60 <sup>o</sup>	Az 070	of mineralization	334
BH-3	75 <sup>o</sup>	Az 070	on upper and	459
BH-4	45 <sup>o</sup>	Az 110	lower adits	239
BH-5	60 <sup>o</sup>	Az 110		209
BH-6	46 <sup>o</sup>	Az 081		279

The ground drilled was blocky with frequent jointing at low angles to the core axis which lead to frequent small losses of circulation and difficulties in removing the core from the barrel due to wedge binding.

Core recoveries overall were excellent (95%).

Mineralization was noted in core holes BH-1, 2 and 6. Core holes BH-3, 4, 5 did not intersect mineralization which indicates that the zone is not continuous. Data to date suggests that the mineralized zones occur as shoots and are of a fissure replacement type.

Interpretations of the data are included on Map 3 (Figure 7) and cross sections 070, 110 and 081 (Figures 8 to 10). The analytical results and core descriptions are included in Appendix C and D.

### 5.2 Discussion of Core Description

The core descriptions are included in Appendix D. The primary units given in the general order that they were encountered are as follows:

- Andesite/dacite. This unit consisted of light grey to dark green mafic to intermediate massive volcanic rock with common 1mm or less sized mafic amphibole phenocrysts or crystal fragments. Pyrite and/or pyrrhotite was generally ubiquitous in amounts (Tr to 5%) and is typically fine grained and located along the margins of white hairline quartz-carbonate fractures typically 15 - 45° to the core axis. Alteration consisted of limonitization along open fractures some epidotization and silicification.

- Dacitic fragmental/silicified greenstone. This unit consisted of light green to light grey silicified fragmental or brecciated intermediate volcanic with some quartz feldspar eyes (up to 5 mm size 20% of unit). The fragmental nature was exhibited by round and angular fragments or clasts up to 2 cm size and frequent crystal fragments of felsic affinity. This unit also contained frequent pyrite and/or pyrrhotite along hairline quartz and quartz carbonate fractures as previously described. The predominate mineralized zones occur within this unit and consist of a barite rich massive sulphide zone that is greyish in colour and contains minor sphalerite,

galena and tetrahedrite, and pyrrhotite chalcopyrite massive sulphide stringers up to 30 cm wide that combined are described as the pyrrhotite chalcopyrite zone, see figure 8.

- First Jasper Group. This unit consists of a purple/red jasper rich (+10%) mafic volcanic or volcanic/sedimentary unit which is characterized by dark color, presence of jasper, common pale green epidote and dense massive nature which resulted in poor drilling penetration rates. Pyrite cubes up to 5 mm size were noted in this unit, however, sulphide mineralization was not very common in the group overall. One analysis, BH-1 30456, resulted in a 3-foot section assaying 0.152 oz/ton. Sampling was not done on either side of this interval and future efforts will be directed to checking this area more fully.

### 5.3 Discussion of Assay Results

A summary of mineralized sections encountered during the six hole program in which only three of the holes encountered mineralization of significant but sub-economic grade is as follows:

CORE HOLE & ZONES	FOOTAGE	INTERVAL FEET	ASSAY OZ/TON		GRADE ESTIMATED	
			GOLD	SILVER	TRUE	WIDTH
BH-1	86.0 - 89.0	3.0	.043	9.60	0.157	5.35
	89.0 - 92.0	3.0	.353	2.97		
ZONE 1 (Barite Zone)	92.0 - 94.0	2.0	.034	2.56		5.6'
	94.0 - 97.0	5.0	.016	.96	0.025	0.92
	97.0 - 102.0	5.0	.034	.88		
						7.1'
ZONE 2 (Copper Zone)	171.0 - 174.0	3.0	.013	.83		
	174.0 - 180.0	6.0	.006	.09	0.013	0.35
	180.0 - 185.0	5.0	.015	.44		
	185.0 - 189.5	4.5	.002	.01		
	189.5 - 192.0	2.5	.042	.87		14.8'
ZONE 3 (New Zone)	271.0 - 274.0	3.0	0.152	--	0.152	--
						2.1'
<hr/>						
BH-2	112.0 - 115.0	3.0	.034	.38	0.034	0.39
ZONE 1 (Barite Zone)	115.0 - 118.0	3.0	.035	.30		
	118.0 - 120.0	2.0	.033	.54		4.0'
ZONE 3 (New Zone)	304.0 - 309.0	5.0	.032	--	0.032	--
						2.5'
<hr/>						
BH-6	82.0 - 84.0	2.0	.034	.85	0.031	1.02
ZONE 1 (Barite Zone)	84.0 - 86.0	2.0	.028	1.18		
						2.8'
ZONE 2 (Copper Zone)	122.5 - 124.5	2.0	.015	.59	0.014	0.46
	124.5 - 128.0	3.5	.013	.38		
						3.9'
&						
ZONE 2	147.0 - 149.5	2.5	.036	.92	0.036	0.92
						1.8'

The only substantial grade section occurs on the barite zone of BH-1 from 86.0 - 94.0 feet which is calculated to have a grade of 0.157 oz/ton gold 5.35 oz/ton silver over an approximate true width of 5.6 feet (1.7 metres). Also, a narrow zone on the same borehole at 271.0 - 274.0 feet grade 0.152 oz/ton gold over an approximate true width of 2.1 feet.

The low grades, narrow widths and structural discontinuity of the mineralized

zone are disconcerting. However, further work will continue in this zone for possible other mineralization.

Structural data suggests a cross fissure related ore shoot structural style, repetition of this type of structure in the vicinity should be investigated more fully.

Other base metal assays were selectively done on mineralized sections and are included in Appendix C. Noteworthy results are the following:

<u>HOLE &amp; SAMPLE NO.</u>	<u>FOOTAGE</u>	<u>Cu%</u>	<u>Pb%</u>	<u>Zn%</u>	<u>Sb%</u>	<u>Ba%</u>
BH-1						
30418	86.0 - 89.0	0.5	1.31	7.41	0.02	41.33
30419	89.0 - 92.0	0.23	3.62	6.08	0.02	46.02
30420	92.0 - 94.0	0.49	0.168	3.59	NOT ASSAYED	
30421	94.0 - 97.0	0.17	NOT ASSAYED		NOT ASSAYED	
30422	97.0 - 102.0	0.01	0.06	0.24	NOT ASSAYED	
BH-6						
30518	79.0 - 81.5	.06	.13	.60	NOT ASSAYED	
30519	82.0 - 84.0	.15	.18	2.50	NOT ASSAYED	
30520	84.9 - 86.0	.17	.23	1.65	Platinum	
30521	86.0 - 89.0	.02	.02	.17	-30 ppb	
30522	89.0 - 90.5	.02	.03	.26	-30 ppb	

A total of six (30) element inductively coupled plasma analyses or elemental analyses were done by Acme Analytical Laboratories Ltd. of Vancouver, B.C. The results are included in Appendix C and their results are summarized as follows:

<u>HOLE &amp; SAMPLE NO.</u>	<u>FOOTAGE</u>	<u>ZONE</u>	<u>NOTEWORTHY ELEMENTS (in ppm)</u>
BH-1			
30419	89.0 - 92.0	Barite Zone	High Cu, Pb, Zn, Ag.
30442	189.5 - 192.0	Copper Zone	Mn(650)
BH-2			
30625	115.0 - 118.0	Barite Zone	Pb(124) Zn(1245) Mn(693)
30626	118.0 - 120.0	Barite Zone	Zn(774) Mn(512) Ag(16.7)
BH-6			
30520	84.0 - 86.0	Barite Zone	Cu(1839) Zn(17959) Pb(2232) Mn(880)
30522	89.0 - 90.5	Barite Zone	Zn(2022) Mn(745)

The barium content in all cases was low, sample 30419 assayed 46.02% barium yet the elemental analysis result for the sample was only 25 ppm. Explanations for this are that barium is subject to partial digestion in aqua-regia so only a small amount will be detected due to its solubility.

#### 5.4 Costs

The overall drilling cost exclusive of transportation, fuel, helicopter costs, camp accommodation and sustenance was \$57,393.60 for 1936 core feet which is equivalent to \$29.65/foot. The total cost for the entire field program excluding assaying and report writing was approximately \$54.00/foot.



## 6.0 CONCLUSIONS

The Cumberland Claim Group is underlain by a predominantly intermediate volcanic assemblance of Lower Jurassic Unuk River Formation rocks. The area investigated and discussed in this report, Lots 265 to 269 (2-Post Claims) contains at least three separate showings as follows:

- Silver Creek showing (Silver Showing)
- Devils Club Creek "Daly" showing (Silver showing)
- Cumberland showing consisting of at least three separate zones named Zone 1 (Barite), Zone 2 (Copper), Zone 3 (New). The Cumberland showings contain both gold and some silver (Zone 1)

Work on both the Silver Creek and Devils Club Creek "Daly" is not detailed enough to substantiate the extent of mineralization. Further intensive work is required on both these silver properties to determine their economic potential.

The work done on the Cumberland Showing which included drilling 590 metres of core has established that the mineralization is of low gold/silver grade and of a patchy discontinuous nature. The Zone 1 (barite zone) is composed of discordant lenses of replacement origin along fracture plane intersections. The best grade obtained to date is 0.157 oz/ton gold and 5.35 oz/ton silver over an approximate true width of 1.7 metres. This converts to a per ton value of \$US 118.60 (gold \$500.00, Silver \$7.50) which is inadequate for narrow chute mining. This fact coupled with the discontinuous nature of the lenses and narrow widths encountered indicates that further work on the prospect should be directed towards the discovery of outlying zones or associated undiscovered mineralization. Data obtained to date also indicates that the area covered by the crown grants is structurally complex with multiple stages of shearing and fracturing.

7.0 RECOMMENDATIONS

Further field investigations on the crown grant (2-post) claims should include the following:

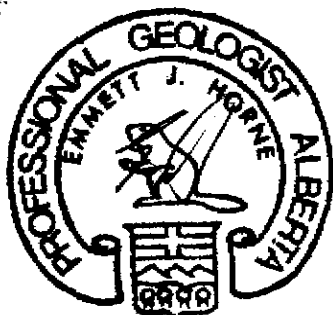
- trenching, mapping and sampling of the potential "Daly" zone, in the upper reaches of Devils Club Creek. If possible, locate the adit.
- extension of the Silver Creek soils grid and trenching, sampling and mapping in the vicinity of highly anomalous silver values obtained to date.
- sample core in the First Jasper Group previously not sampled.
- silt sample all drainage especially that draining into the valley towards the northeast.
- intensify prospecting and geological work.
- perform some VLF-EM geophysical surveys to assist in locating conductive zones.
- perform some thin section and polished section work to establish better baseline geological data.
- obtain air photo enlargements of the work areas in order to improve site locations in areas of steep terrain.

## 8.0 QUALIFICATIONS AND CERTIFICATION

I, Emmett J. Horne, of the City of Calgary, in the Province of Alberta certify the following:

- I was on the property and heavily involved with all of the field programs. To the best of my knowledge all data obtained and costs incurred are as stated in this report.
- I am a graduate geologist of the University of Saskatchewan (Saskatoon) in 1967. I attended one post graduate year in 1970.
- I am a member of the Canadian Institute of Mining and Metallurgy and the Association of Professional Engineers, Geologists and Geophysicists of Alberta (P.Geol.).
- Previous Employers and Positions are:
  - . Saskatchewan Department of Mineral Resources
  - . Ontario Department of Mines (Senior Geologist)
  - . Scurry Rainbow Oil Ltd. (Project Geologist, Supervisor)
  - . Iron Ore Company of Canada Ltd. (Senior Geologist, Supervisor)
  - . Syncrude Canada Ltd. (Senior Geologist, Supervisor)
  - . Alsands Energy Ltd. (Senior Geologist, Supervisor)
  - . Aurum Mines Ltd. (Senior Geologist)

Since 1983 I have been employed as a Contract Geologist in Canada and South America. My address is 608, 920 - 9th Avenue S.W., Calgary, Alberta T2P 2T9 (403) 262-7128.



  
EMMETT J. HORNE (P.Geol.)

9.0 REFERENCES

Grove, E.W., 1971

Geology and Mineral Deposits of the Stewart Area, B.C., British Columbia  
Department of Mines and Petroleum Resources Bulletin No. 58.

Grove, E.W., 1983

Geology and Mineral Deposits of the Unuk River - Salmon River - Anyox  
Map Area B.C. Ministry of Energy Mines and Petroleum Resources Bulletin  
No. 63.

- Replica of British Columbia Minister of Mines Annual Reports 1901, 1903,  
1906, 1919, 1923, 1935.

1980

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\_\_\_\_\_, 1985

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Mines and Petroleum Resources Information Circular 1986-1.

\_\_\_\_\_, 1982

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British Columbia". (coloured maps), B.C. Ministry of Energy,  
Mines & Petroleum Resources, Victoria, B.C.

FIGURES



Province of British Columbia  
Ministry of Energy, Mines and Petroleum Resources

### PRELIMINARY MAP NO. 64 GOLD IN BRITISH COLUMBIA

Scale 1:200,000  
NAD 83

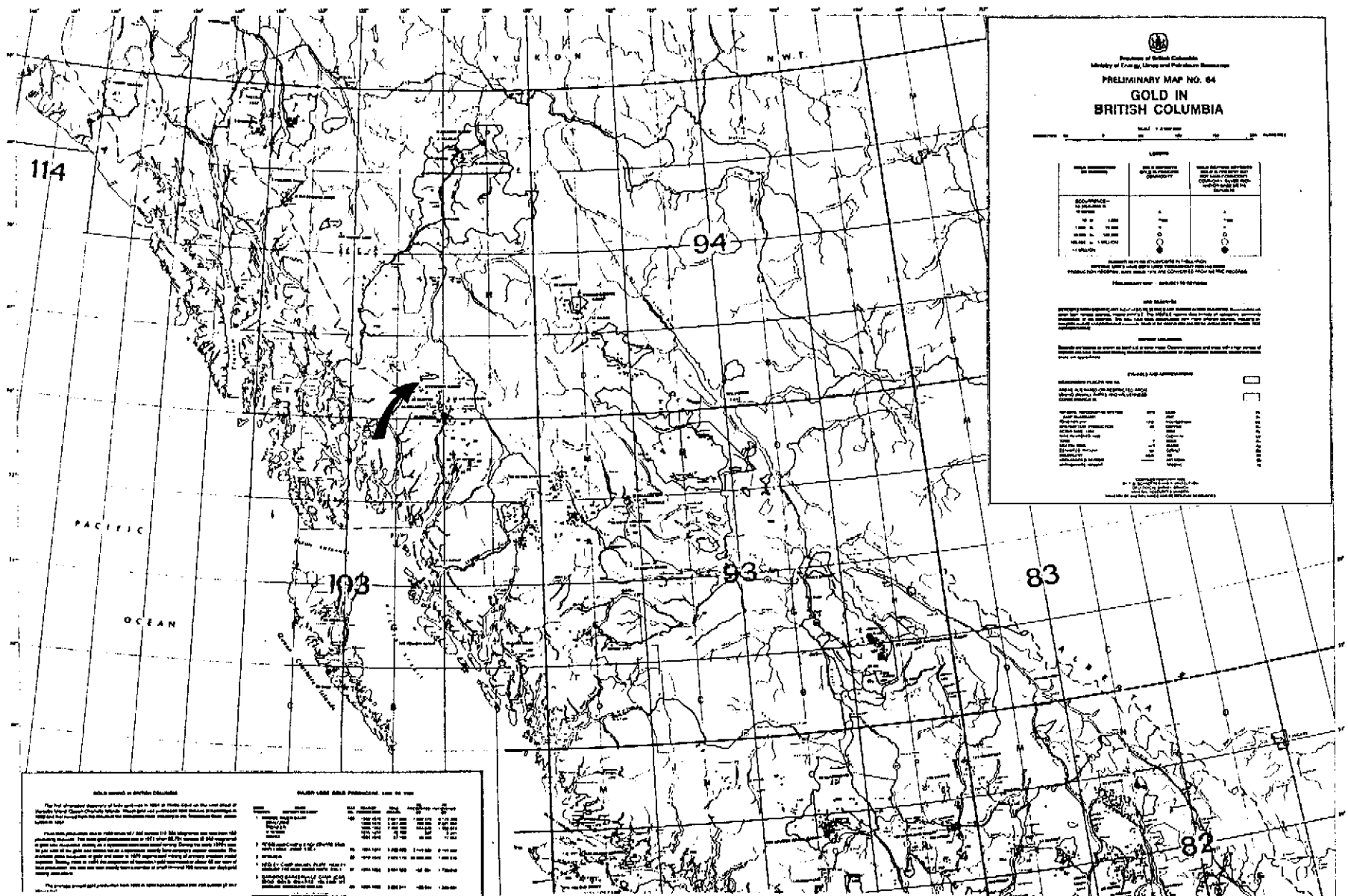
Symbol	Legend
●	Known Gold Occurrences
○	Historical Gold Occurrences
○	Historical Silver Occurrences
○	Historical Lead Occurrences
○	Historical Zinc Occurrences
○	Historical Copper Occurrences
○	Historical Platinum Occurrences
○	Historical Uranium Occurrences
○	Historical Manganese Occurrences
○	Historical Nickel Occurrences
○	Historical Vanadium Occurrences
○	Historical Bismuth Occurrences
○	Historical Silver-Gold Occurrences
○	Historical Lead-Zinc Occurrences
○	Historical Copper-Gold Occurrences
○	Historical Uranium-Gold Occurrences
○	Historical Manganese-Gold Occurrences
○	Historical Nickel-Gold Occurrences
○	Historical Vanadium-Gold Occurrences
○	Historical Bismuth-Gold Occurrences
○	Historical Silver-Copper Occurrences
○	Historical Lead-Copper Occurrences
○	Historical Zinc-Copper Occurrences
○	Historical Uranium-Copper Occurrences
○	Historical Manganese-Copper Occurrences
○	Historical Nickel-Copper Occurrences
○	Historical Vanadium-Copper Occurrences
○	Historical Bismuth-Copper Occurrences

Legend  
Known Gold Occurrences  
Historical Gold Occurrences  
Historical Silver Occurrences  
Historical Lead Occurrences  
Historical Zinc Occurrences  
Historical Copper Occurrences  
Historical Platinum Occurrences  
Historical Uranium Occurrences  
Historical Manganese Occurrences  
Historical Nickel Occurrences  
Historical Vanadium Occurrences  
Historical Bismuth Occurrences  
Historical Silver-Gold Occurrences  
Historical Lead-Zinc Occurrences  
Historical Copper-Gold Occurrences  
Historical Uranium-Gold Occurrences  
Historical Manganese-Gold Occurrences  
Historical Nickel-Gold Occurrences  
Historical Vanadium-Gold Occurrences  
Historical Bismuth-Gold Occurrences  
Historical Silver-Copper Occurrences  
Historical Lead-Copper Occurrences  
Historical Zinc-Copper Occurrences  
Historical Uranium-Copper Occurrences  
Historical Manganese-Copper Occurrences  
Historical Nickel-Copper Occurrences  
Historical Vanadium-Copper Occurrences  
Historical Bismuth-Copper Occurrences

Notes  
1. This map is a preliminary map and should not be used for legal purposes.  
2. The symbols on this map are for information only and do not represent any official position of the Government of British Columbia.  
3. The symbols on this map are for information only and do not represent any official position of the Government of British Columbia.  
4. The symbols on this map are for information only and do not represent any official position of the Government of British Columbia.

Scale  
1:200,000  
NAD 83

Map of British Columbia showing Gold Occurrences



114

94

103

93

83

82

**Notes on Symbols**

The list of symbols of this map is in 1991. It is the result of the work of the Gold Occurrence Survey, which has been completed in 1991. The symbols are based on the Gold Occurrence Survey, which has been completed in 1991. The symbols are based on the Gold Occurrence Survey, which has been completed in 1991.

Symbol	Description
●	Known Gold Occurrences
○	Historical Gold Occurrences
○	Historical Silver Occurrences
○	Historical Lead Occurrences
○	Historical Zinc Occurrences
○	Historical Copper Occurrences
○	Historical Platinum Occurrences
○	Historical Uranium Occurrences
○	Historical Manganese Occurrences
○	Historical Nickel Occurrences
○	Historical Vanadium Occurrences
○	Historical Bismuth Occurrences
○	Historical Silver-Gold Occurrences
○	Historical Lead-Zinc Occurrences
○	Historical Copper-Gold Occurrences
○	Historical Uranium-Gold Occurrences
○	Historical Manganese-Gold Occurrences
○	Historical Nickel-Gold Occurrences
○	Historical Vanadium-Gold Occurrences
○	Historical Bismuth-Gold Occurrences
○	Historical Silver-Copper Occurrences
○	Historical Lead-Copper Occurrences
○	Historical Zinc-Copper Occurrences
○	Historical Uranium-Copper Occurrences
○	Historical Manganese-Copper Occurrences
○	Historical Nickel-Copper Occurrences
○	Historical Vanadium-Copper Occurrences
○	Historical Bismuth-Copper Occurrences

SCALE 1:2000000  
Reduced

Lots 265 - 269 (2 Post) and  
Corey 8, 28, 31, 32, 53 Claims

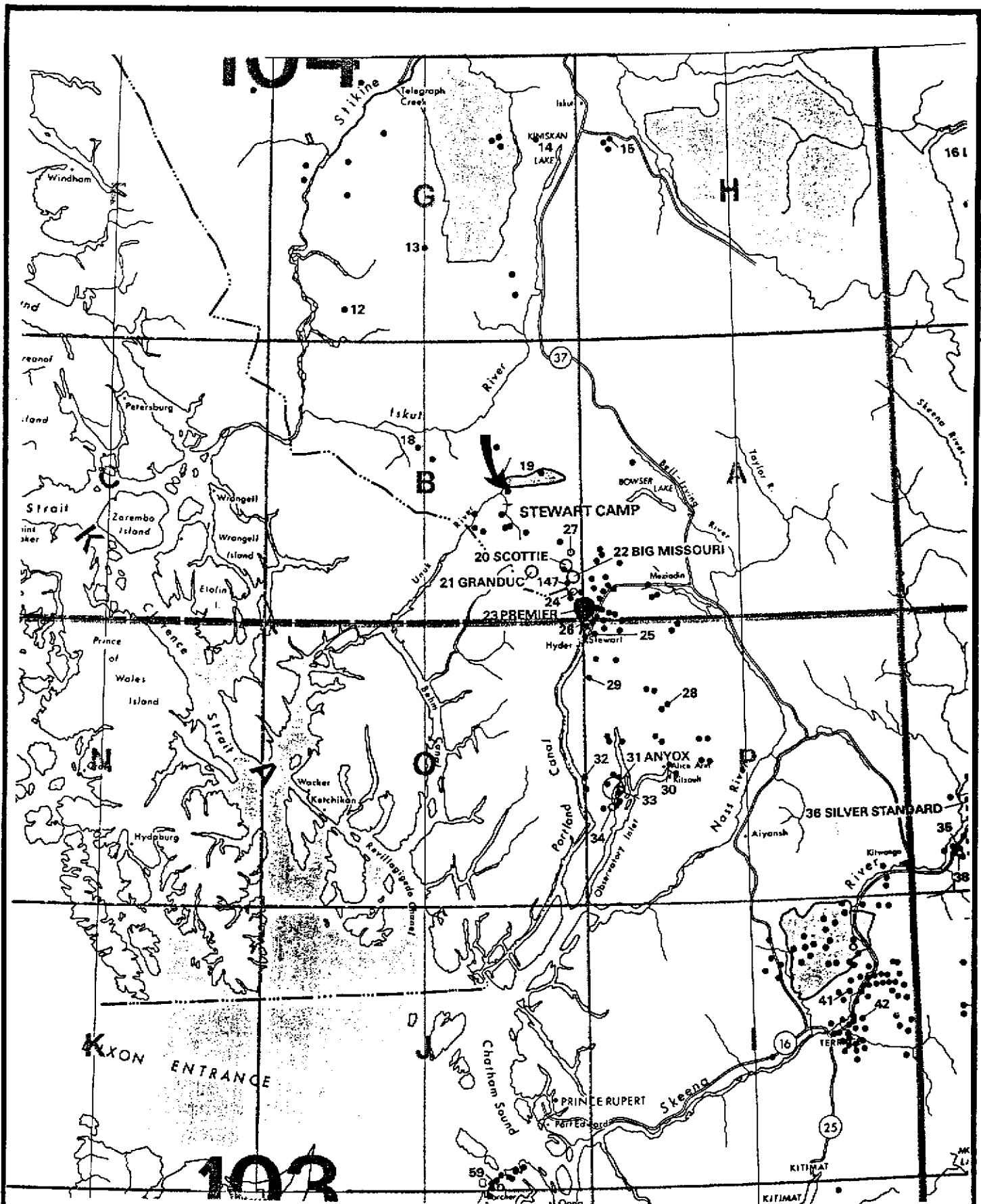
BIGHORN DEVELOPMENT CORPORATION

SULPHURETS CREEK AREA  
Skeena Mining Division

NTS 104B/8

LOCATION MAP

FIGURE 1



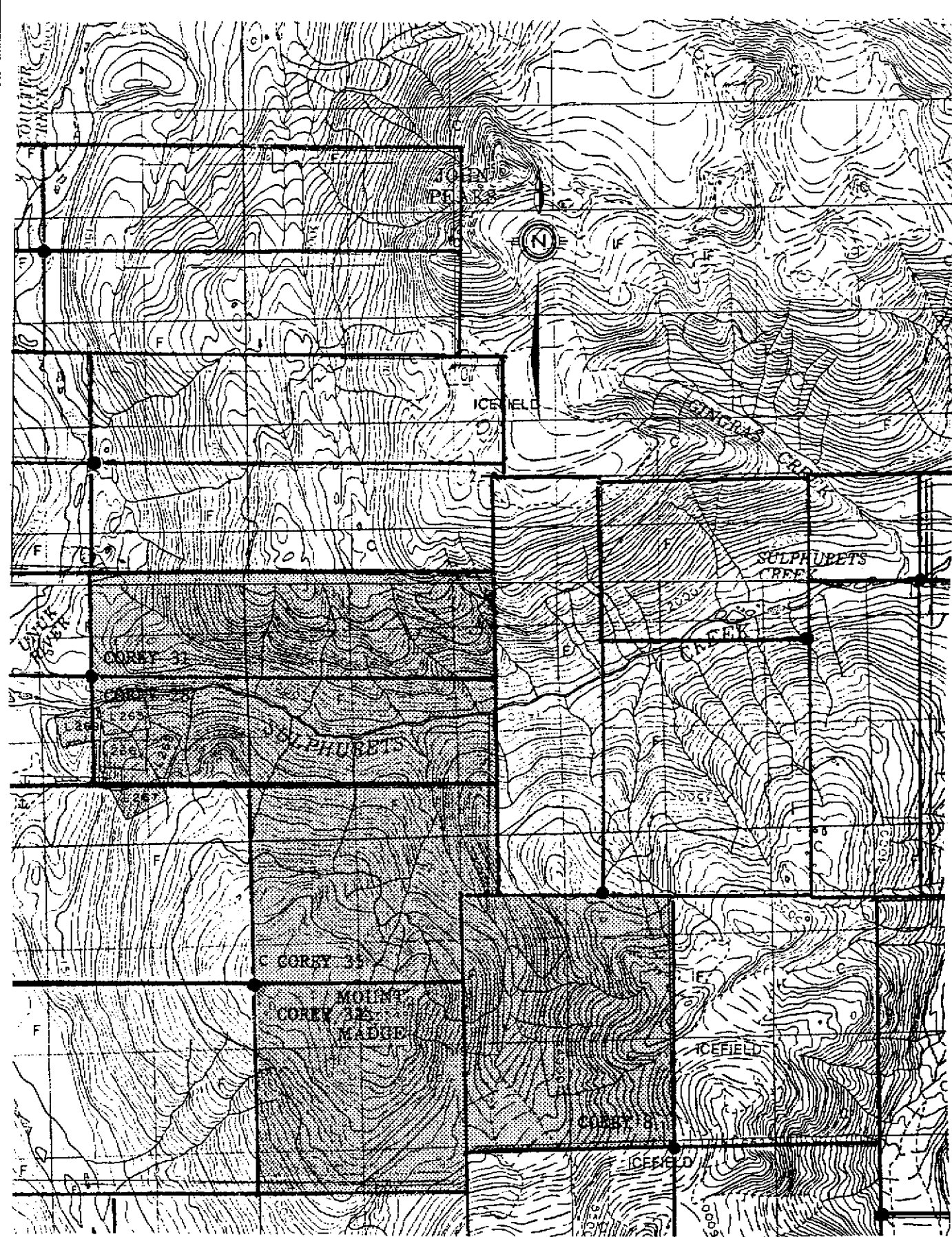
SCALE 1:2000000

SULPHURETS CREEK AREA  
 NTS 104B/8 SKEENA MINING DIVISION

ACCESS MAP

BIGHORN DEVELOPMENT CORPORATION

FIGURE 2



SCALE 1:50000

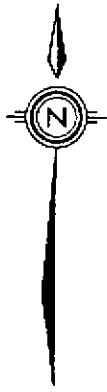
SULPHURETS CREEK AREA  
SKEENA MINING DIVISION NTS 104B/8

CLAIM MAP  
CUMBERLAND GROUP  
(SUPPLEMENTARY)

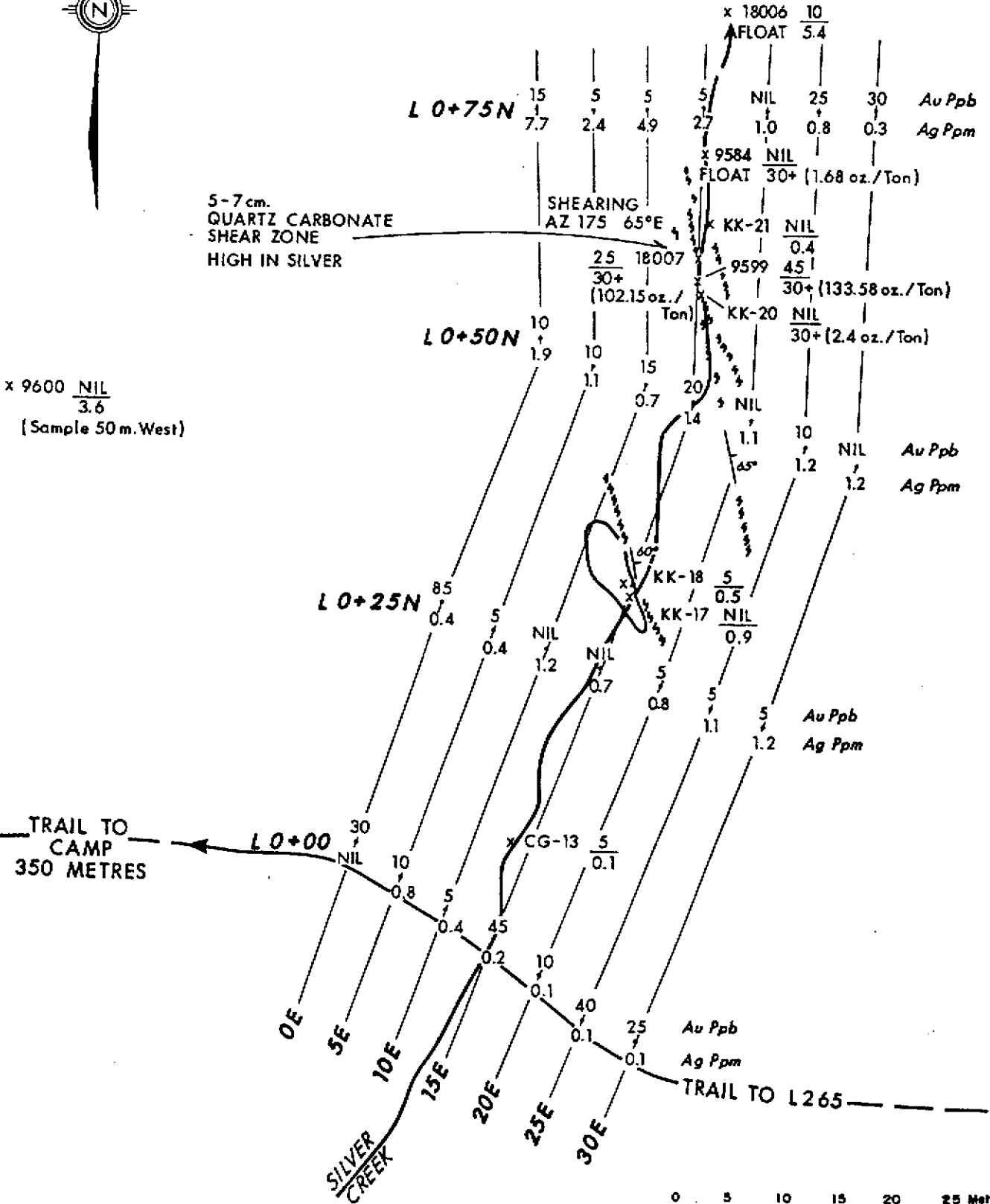
BIGHORN DEVELOPMENT CORPORATION

FIGURE 3



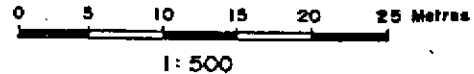


APPROXIMATELY 35 METRES  
TO SULPHURETS RIVER



x 9600  $\frac{NIL}{3.6}$   
(Sample 50 m. West)

TRAIL TO CAMP  
350 METRES



LEGEND

ROCK SAMPLE NUMBER     Au Ppb  
   Ag Ppm

**SILVER CREEK SOILS GRID  
LOT 269**  
BIGHORN DEVELOPMENT  
CORPORATION

NTS 104B/8  
SKEENA M.D.  
Figure 4

TABLES

WORK SUMMARY TABLE 1

ACTIVITY	MANDAYS WORKED													
	1st Aug			14 Aug	18 Sept		28 Sept	5 Oct			19 Oct		1 Nov	
CUTTING TRAIL ESTABLISHING GRIDS	4		4		NO WORK AUGUST 15 - SEPTEMBER 8									
PROSPECTING/MAPPING		10												
SILT SAMPLING		4												
ROCK GEOCHEMICAL SAMPLING		10												
TRENCHING		27												
SOILS SAMPLING				10										
DRILL PAD PREPARATION CHOPPER						10								
CAMP PREPARATION							8							
MOBILIZE DRILL/FUEL ESTABLISH WATERLINE							7							
DRILLING							Supervision	CREW DAYS NOT PERTINENT EXCEPT SUPERVISION 44 DAYS						
										20				

NOTE NUMBER DENOTES MANDAYS

BIGHORN DEVELOPMENT CORPORATION

CUMBERLAND GROUP  
NTS 104B/8, SKEENA MINING DIVISION

FIELD PROGRAM SUMMARY  
PHASES 1 & 2 1987.

WORK SUMMARY

TABLE 1

UPPER ADIT SAMPLES

Sample No.	Type	Interval	(Oz/Ton)		Cu %	Pb %	Zn %	Rock Type
			Au	Ag				
18076	Chip	50 cm	.118	8.62	.58	3.01	9.03	20% massive sulphides Rusty silicified gossan 20% massive sulphides Fractured andesite Massive sulphides
18077	Chip	50 cm	.054	9.77	Not assayed			
18078	Chip	40 cm	.804	5.70	.32	11.4	12.22	
18079	Chip	100 cm	.036	1.09	.29	.18	2.83	
18080	Grab	High Grade Grab	.044	4.84	.30	10.8	22.20	
18090	Chip	50 cm	.034	5.4 ppm				
18091	Chip	50 cm	.116	7.3 ppm				
18092	Chip	50 cm	.048	12.0 ppm				
18093	Chip	100 cm	.032	7.5 ppm				
18094	Chip	100 cm	0.36	8.3 ppm				
9610	Chip	65 cm	510 ppb	16.4 ppm				Andesite/Dacite with quartz hairline fractures & carbonate alteration over 15-20% of rock. 5% pyrite 10% sulphides py, cpy, sphalerite & galena.
9611	Chip	230 cm	195 ppb	2.5 ppm				
9612	Chip	250 cm	280 ppb	5.9 ppm				
9613	Grab	High Grade	.034 oz/ton	13.2 ppm				
8614	Chip	200 cm	115 ppb	nil ppm				
KKCG 265-10	Chip	150 cm	nil ppb	nil ppm				
KKCG 265-11	Chip	180 cm	nil ppb	nil ppm				
KKCG 265-12	Chip	200 cm	20 ppb	0.8 ppm				
KKCG 265-13	Chip	200 cm	nil ppb	1.1 ppm				
KKCG 265-14	Chip	160 cm	nil ppb	nil ppm				
KKCG 265-15	Chip	410 cm	nil ppb	nil ppm				Andesite/Dacite with quartz hairline fractures and carbonate alteration over 5-10% of rock, 2% pyrite.
KKCG 265-16	Chip	220 cm	5 ppb	nil ppm				
18089	Chip	30 cm	60 ppb	1.8 ppm				
18099	Chip	20 cm	315 ppb	1.98 oz/ton				
18100	Chip	30 cm	925 ppb	8.02 oz/ton				
19467	Chip	30 cm	.422 oz/ton	4.58 oz/ton	.73	6.31	23.35	
19468	Chip	50 cm	.393 oz/ton	16.58 oz/ton	.54	3.52	28.39	
19469	Chip	50 cm	.350 oz/ton	7.79 oz/ton	.34	3.58	5.70	
19470	Chip	30 cm	.180 oz/ton	7.38 oz/ton	1.42	10.73	14.61	

FOR LOCATION SEE MAP 3  
FIGURE 7 (Back Folder)

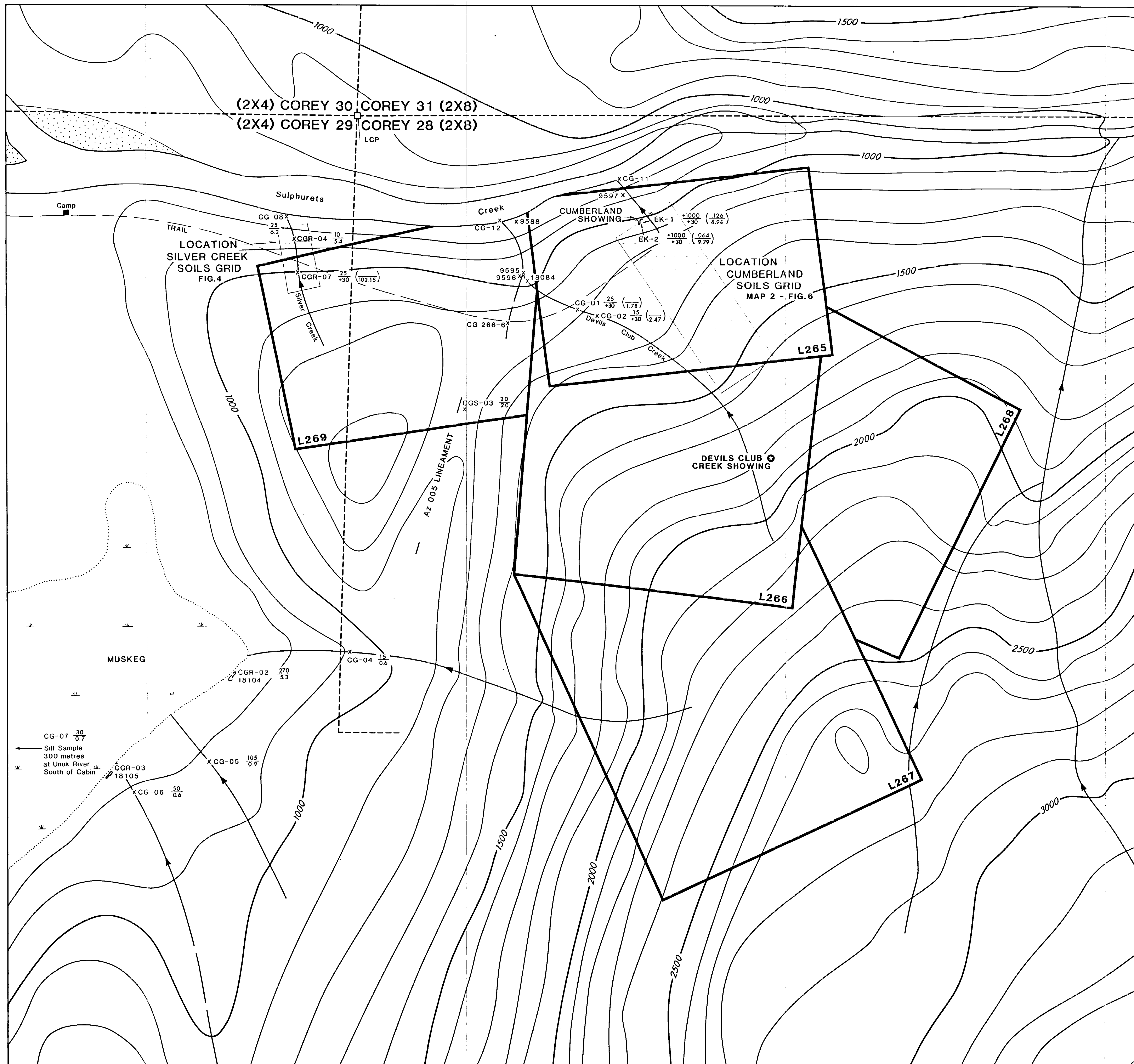
CUMBERLAND SHOWING  
TABLE 2A

LOWER ADIT SAMPLES

<u>Sample No.</u>	<u>Type</u>	<u>Interval</u>	<u>Au (ppb)</u>	<u>Ag (ppm)</u>	<u>Cu %</u>	<u>Pb %</u>	<u>Zn %</u>	<u>Rock Type</u>
18095	Grab		610	12.8				
18096	Grab		150	3.2				Andesitic rusty
18097	Grab		105	1.1				fractured gossan
9580	Chip	15 cm	0.03 oz/ton	nil				
9581	Chip	70 cm	0.032 oz/ton	1.01				Rusty fracture andesite,
9582	Chip	110 cm	930	3.05 oz/ton				carbonate alteration,
9583	Chip	80 cm	870	2.55 oz/ton				trace malachite
9601	Grab		30	110				from lower adit
9602	Grab (float)		0.52 oz/ton	3.05 oz/ton				
9603	Grab (float)		0.90 oz/ton	2.55 oz/ton				20% massive sphalerite
9604	Grab (float)		695	5.86 oz/ton				barite & minor galena
9588	Grab		5	nil				in fractured dacitic rock
9589	Grab		nil	0.4				
9590	Chip	100 cm	90	6.3				Andesitic gossan
								trace pyrite

FOR LOCATIONS SEE MAP 3  
FIGURE 7 (Back Folder)

CUMBERLAND SHOWING  
TABLE 2B



1979 MAGNETIC BEARING IS 38°16'  
EAST OF GRID NORTH WHICH IS 1°02'  
WEST OF TRUE NORTH.  
ANNUAL CHANGE IS DECREASING 2.8'.

**LEGEND**

- CLAIM LINE (TWO POST)
- - - LCP & CLAIM LINE
- ⊕ MUSKEG
- CREEK
- TRAIL

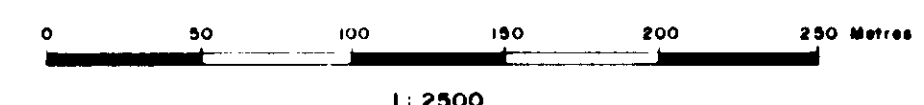
SAMPLE NUMBER	Ppm GOLD	(OZ./TON GOLD)
EK-1	$\frac{+1000}{+30}$	$\left(\frac{.126}{4.94}\right)$

SOILS SAMPLING GRID LOCATIONS MAP & FIG. 4

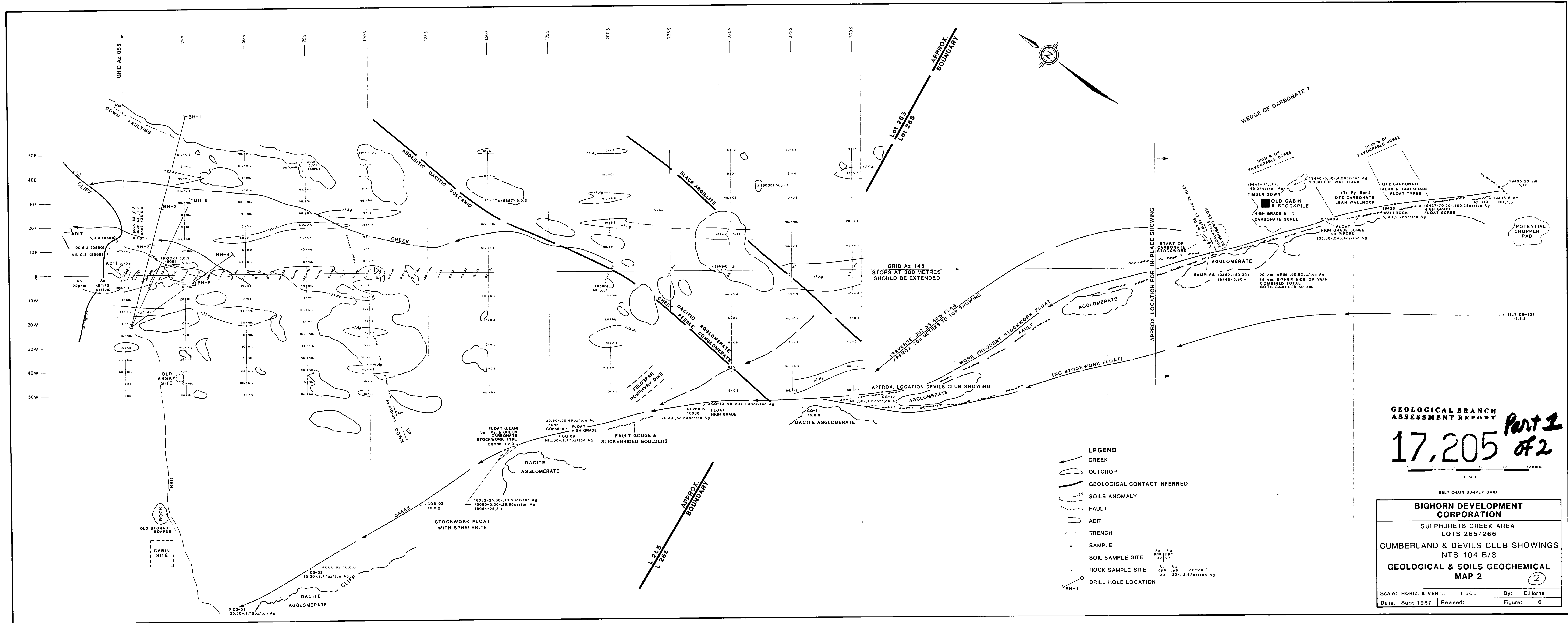
**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**17,205 Part 1 of 2**

NOTE: CONTOUR INTERVAL 100 FEET. BASE MAP PREPARED FROM 1:50,000 SCALE PHOTO ENLARGEMENT.



<b>BIGHORN DEVELOPMENT CORPORATION</b>		
SULPHURETS CREEK AREA		
LOTS 265 TO 269 NTS 104B/8		
SKEENA MINING DIVISION		
SAMPLE LOCATION MAP 1 (REFERENCE)		
Scale: 1:2500	C.I.: 100 Feet	By: E. Horne
Date: Sept. 1987	Revised:	Figure: 5



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**17,205** *Part 2 of 2*

0 10 20 30 40 50 METRES  
1:500

BELT CHAIN SURVEY GRID

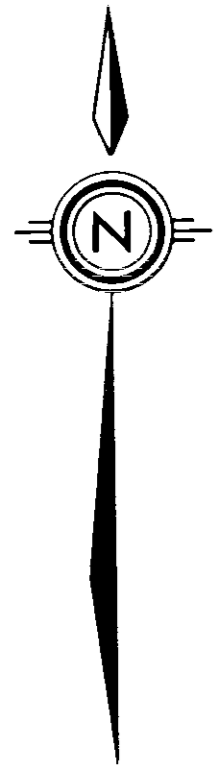
**BIGHORN DEVELOPMENT CORPORATION**

SULPHURETS CREEK AREA  
LOTS 265/266

CUMBERLAND & DEVILS CLUB SHOWINGS  
NTS 104 B/8

**GEOLOGICAL & SOILS GEOCHEMICAL  
MAP 2** (2)

Scale: HORIZ. & VERT.: 1:500 By: E.Horne  
Date: Sept.1987 Revised: Figure: 6

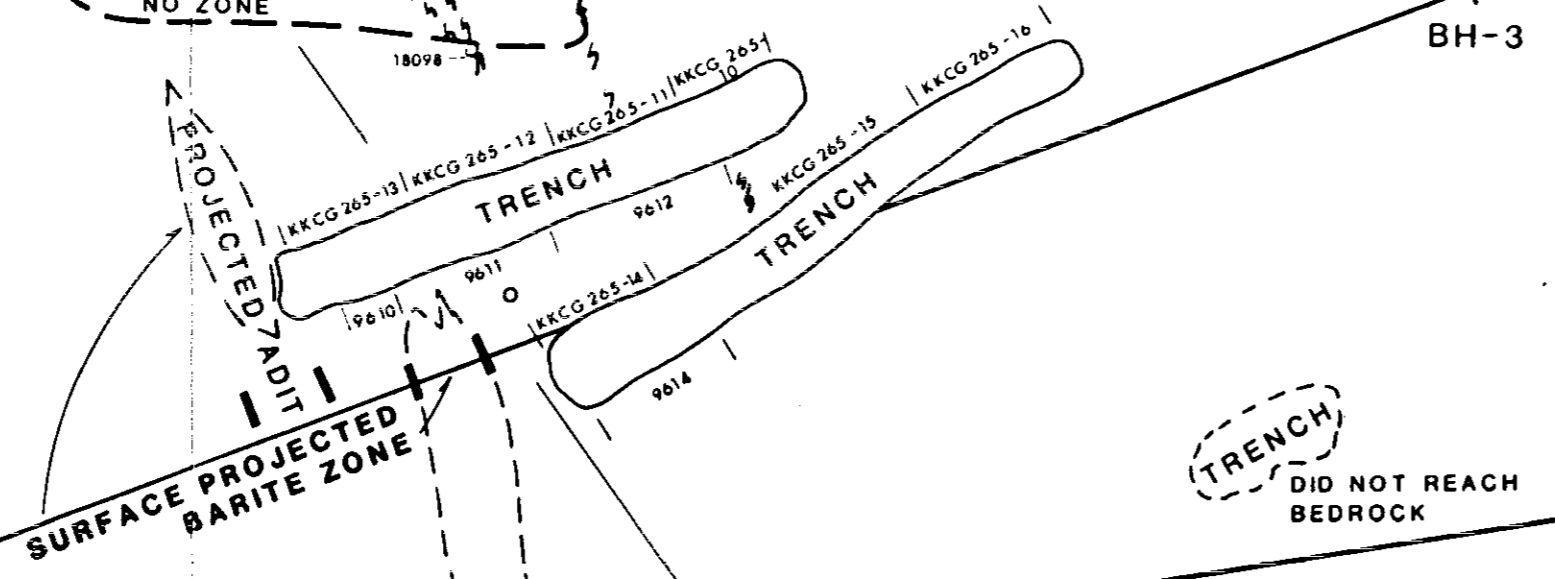
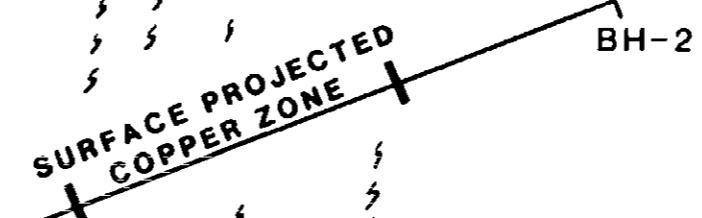
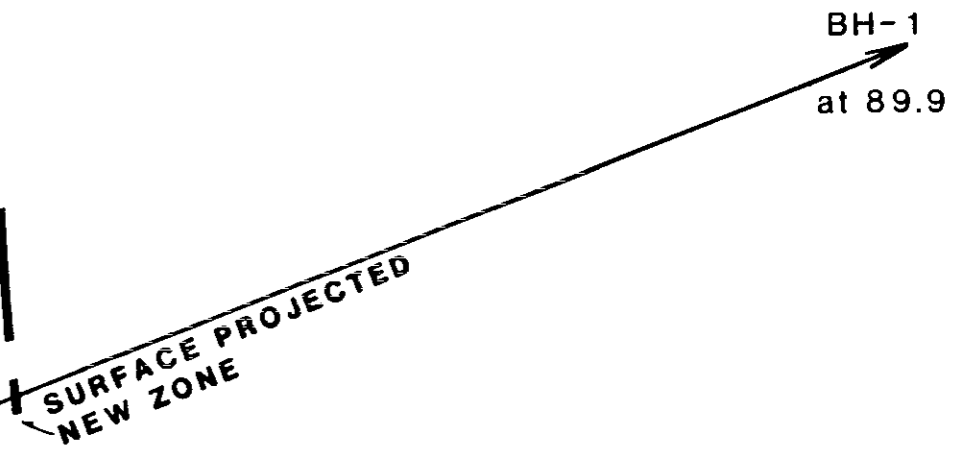
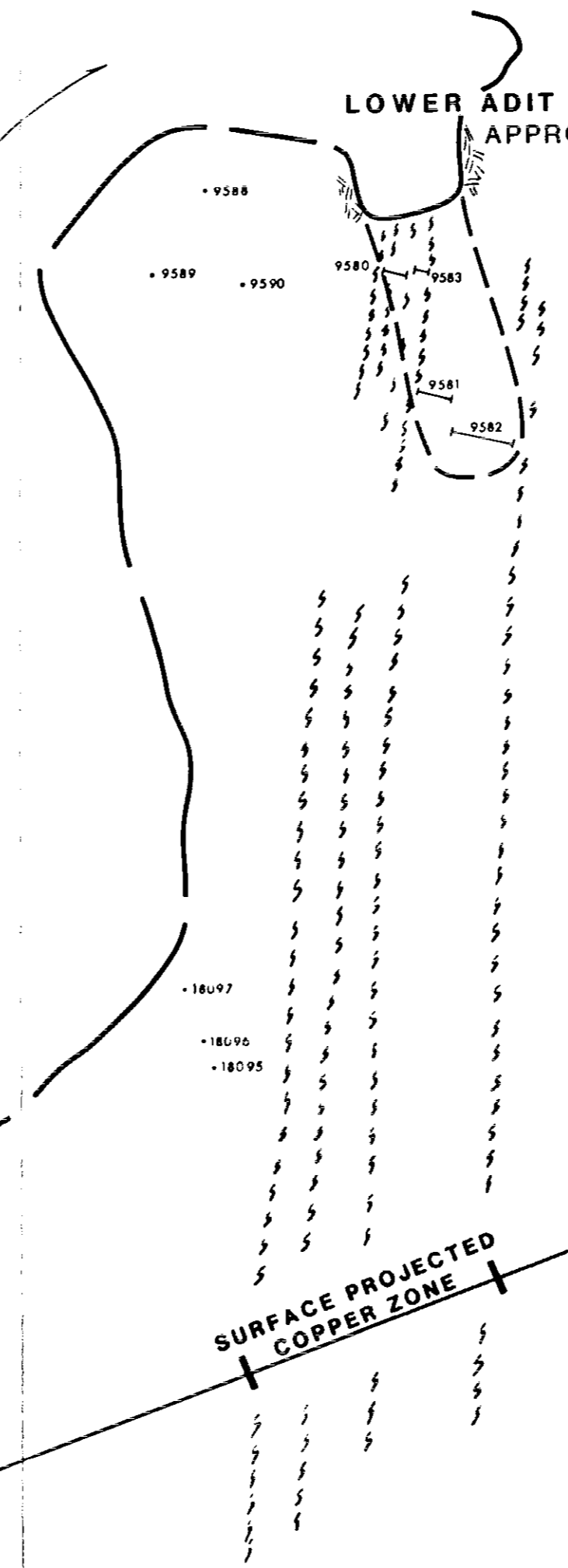
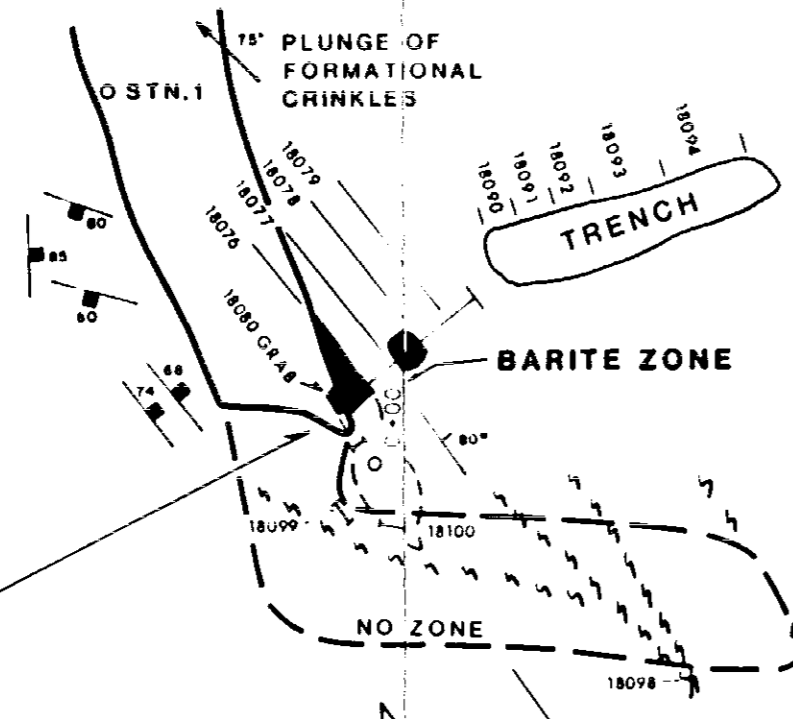
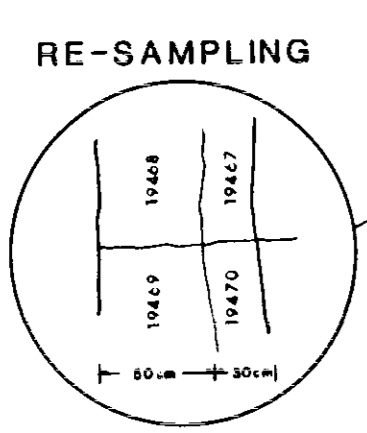


FLOAT SAMPLES BELOW ADIT INCLUDE  
SAMPLES: 9601,9602,9603,9604.

LOWER ADIT  
APPROX. ELEV. 1200'

STEEP GULLY (RUST STAINED)

UPPER ADIT  
APPROX. ELEV. 1340'



FIRST JASPER GROUP  
DACITE GROUP

BH-6

TRENCH  
DID NOT REACH  
BEDROCK

SURFACE PROJECTED  
BARITE ZONE

SURFACE PROJECTED  
BARITE ZONE

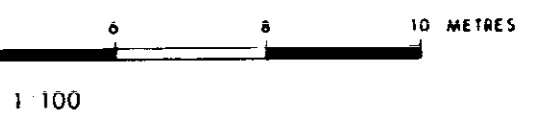
DRILL STN.  
APPROX. ELEV.  
1350'

- LEGEND**
- DRILL HOLE
  - UNDERGROUND WORKINGS
  - FAULT
  - JOINT

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

SAMPLE SITE & NUMBER  
Table 2 for assay results)

17,205 Part 1 of 2



DACITE GROUP  
FIRST JASPER GROUP

BH-5

SOILS GRID

BH-4

<b>BIGHORN DEVELOPMENT CORPORATION</b>	
SULPHURETS CREEK AREA LOT 265 CUMBERLAND SHOWING DRILL HOLE PLAN MAP 3	
Scale: 1:100	By: E. Horne
Date: Jan. 1988	Revised: Figure: 7



SECTION LOOKING SOUTHWARD, HOLE INCLINATIONS 44.5°, 60°, 75° DIRECTION AZ 070

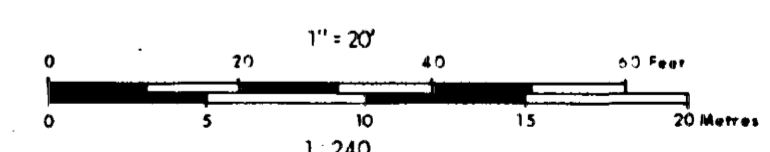


**CASING**  
 - Au Ag  
 ppp ppm  
 NIL - 0.1 Geochemical Analysis  
 .034/.05 Assay in oz./ton  
 MISSING CORE

**LEGEND**  
 MASSIVE SULPHIDES  
 HEAVY SULPHIDE DISSEMINATION  
 Py PYRITE  
 Po PYRRHOTITE  
 Cpy CHALCOPYRITE  
 SPHA SPHALERITE  
 GAL GALENA  
 BA BARITE  
 R RUSTY ZONE  
 B BLOCKY ZONE

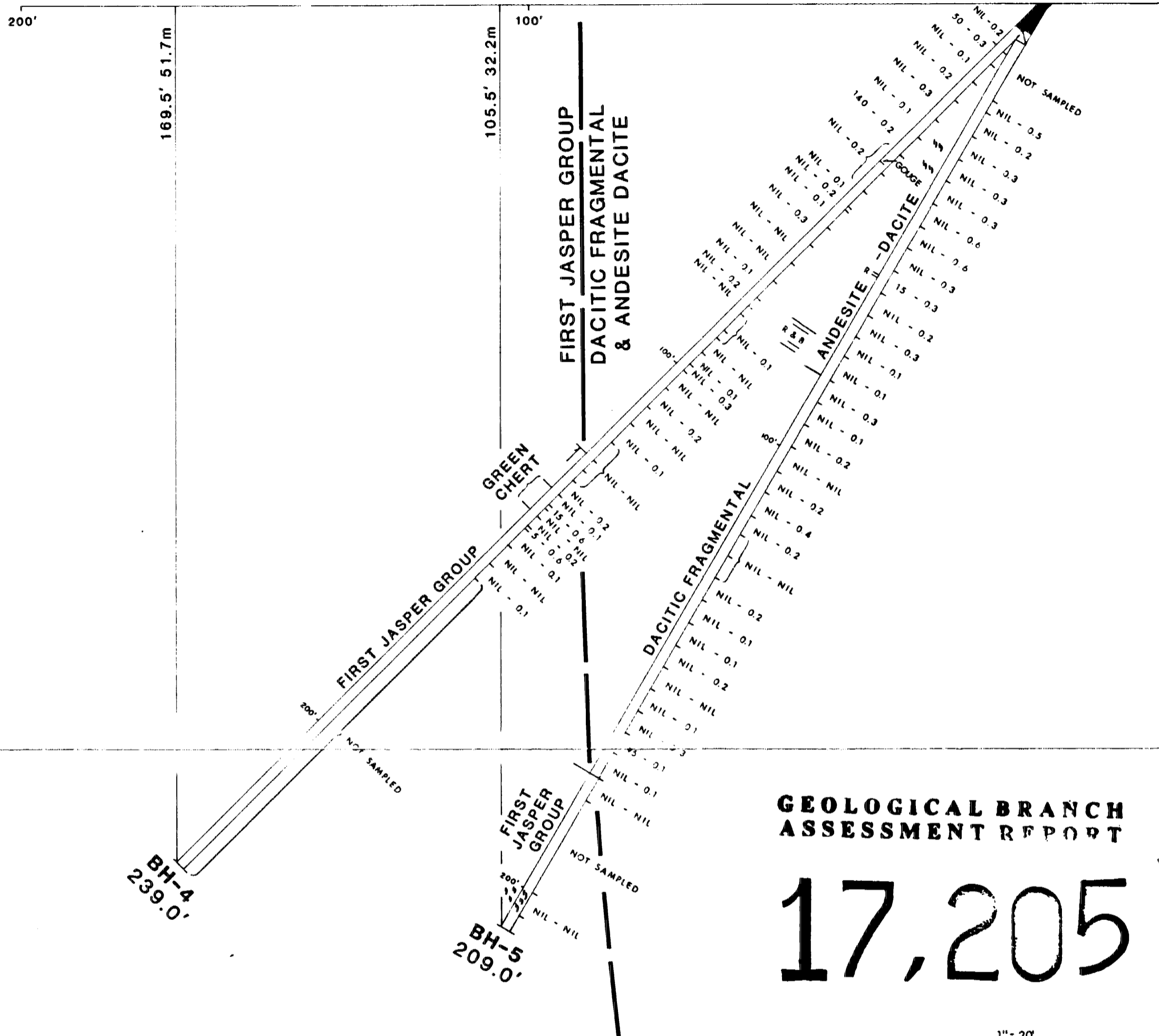
**17,205**  
*Part 1 of 2*

**GEOLOGICAL BRANCH  
 ASSESSMENT REPORT**



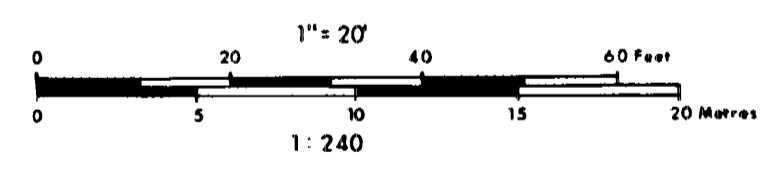
<b>BIGHORN DEVELOPMENT CORPORATION</b>		
SULPHURETS CREEK AREA LOT 265 CUMBERLAND SHOWING NTS 104 B/8 SECTION 070 (BH-1,2&3)		
Scale: 1" = 20'	By: E.Horne	(4)
Date: Dec. 1987	Revised:	
Figure: 8		

SECTION LOOKING SOUTHWARD, HOLE INCLINATIONS 45°, 60° DIRECTION AZ 110



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

17,205 *Part 1 of 2*

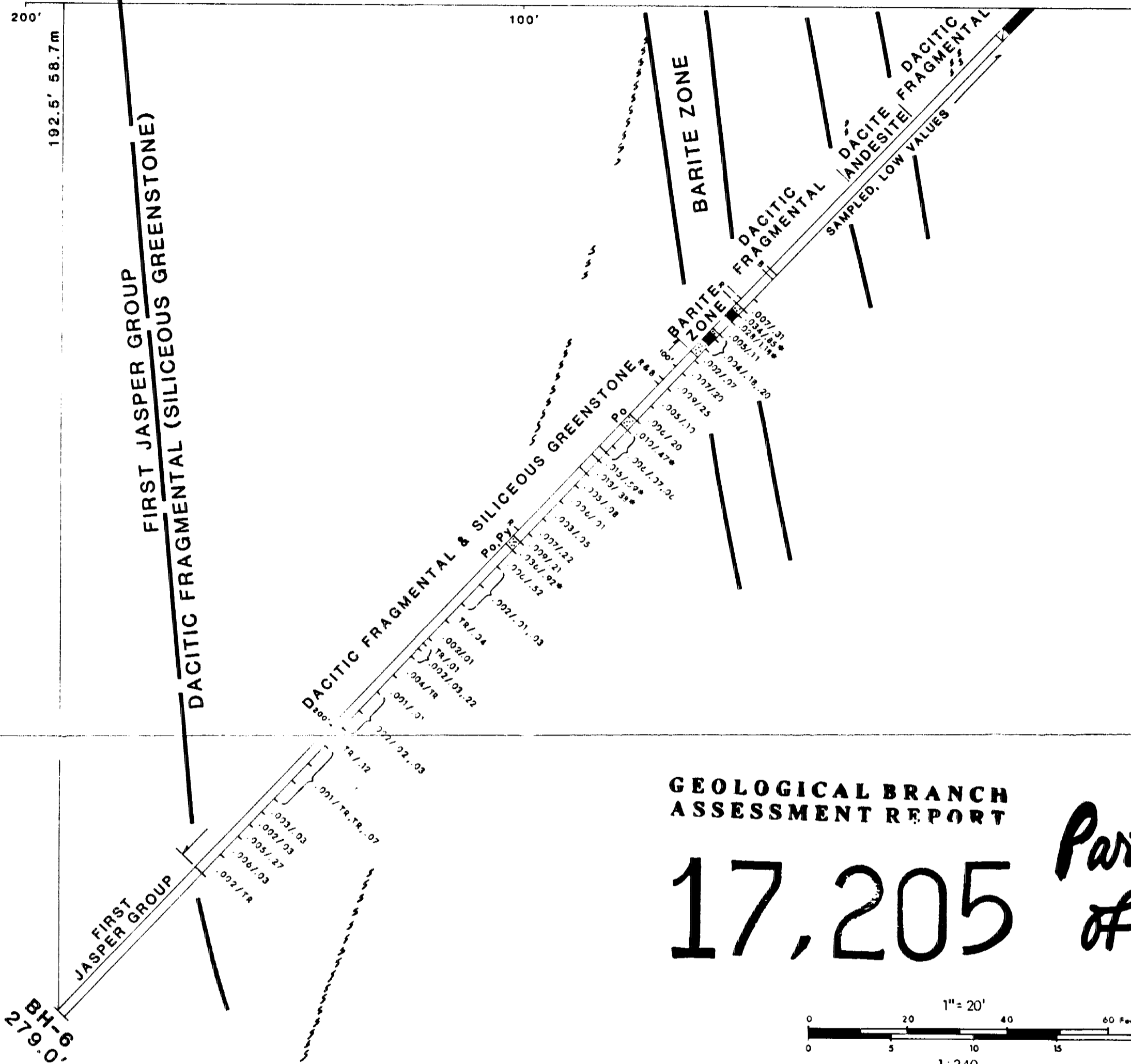


CASING  
Au ppb Ag ppm  
NIL - 01 Geochemical Analysis  
.0347.85 Assay in oz./ton  
MISSING CORE

**LEGEND**  
MASSIVE SULPHIDES  
HEAVY SULPHIDE DISSEMINATION  
Py PYRITE  
Po PYRRHOTITE  
Cpy CHALCOPYRITE  
SPHA SPHALERITE  
GAL GALENA  
BA BARITE  
\* RUSTY ZONE  
\* BLOCKY ZONE

<b>BIGHORN DEVELOPMENT CORPORATION</b>		
SULPHURETS CREEK AREA LOT 265 CUMBERLAND SHOWING NTS 104 B/8 SECTION 110 (5)		
Scale: 1" = 20'	By: E.Horne	
Date: Dec. 1987	Revised:	Figure: 9

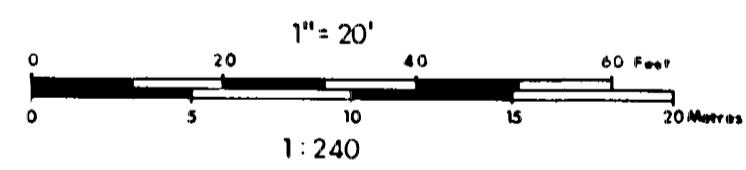
SECTION LOOKING SOUTHWARD, HOLE INCLINATION 46° DIRECTION AZ 081



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

17,205

Part 1  
of 2



**CASING**

Au Ag  
ppb ppm  
NIL - 0.1 Geochemical Analysis,  
0.034/.85 Assay in oz./ton

MISSING CORE

**LEGEND**

MASSIVE SULPHIDES  
HEAVY SULPHIDE DISSEMINATION

Py PYRITE  
Po PYRRHOTITE  
Cpy CHALCOPYRITE  
SPHA SPHALERITE  
GAL GALENA  
BA BARITE  
R RUSTY ZONE  
B BLOCKY ZONE

**BIGHORN DEVELOPMENT CORPORATION**

SULPHURETS CREEK AREA  
LOT 265  
CUMBERLAND SHOWING  
NTS 104 B/8  
SECTION 081 (BH-6) (6)

Scale: 1" = 20' By: E.Horne  
Date: Dec. 1987 Revised: Figure: 10