

87-581-16250  
6/88

ASSESSMENT REPORT ON THE  
TREATY 3 to 7 CLAIMS  
TREATY CREEK AREA NTS 104B/9E  
SKEENA MINING DIVISION  
LATITUDE 56° 36' 37"  
LONGITUDE 130° 04' 30"

FILMED

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**16,250**

(OWNER: ) Catear Resources Ltd.  
(OPERATOR: ) ~~Bighorn Development Corporation~~  
AUTHOR: E. Horne  
DATE: August 30, 1987

TABLE OF CONTENTS

	<u>Page No.</u>
1.0 EXECUTIVE SUMMARY . . . . .	1
2.0 INTRODUCTION . . . . .	2
2.1 LOCATION AND ACCESS . . . . .	2
2.2 PHYSIOGRAPHY AND TOPOGRAPHY . . . . .	2
2.3 HISTORY AND OWNERSHIP . . . . .	2
2.4 SUMMARY OF WORK DONE AND PERSONNEL USED . . . . .	3
3.0 DETAILED TECHNICAL DATA AND INTERPRETATION. . . . .	6
3.1 PREVIOUS WORK . . . . .	6
3.2 GENERAL GEOLOGY . . . . .	6
3.3 PROSPECTING & GEOLOGICAL RESULTS . . . . .	7
3.4 ECONOMIC GEOLOGY . . . . .	8
3.5 SILT GEOCHEMICAL RESULTS . . . . .	9
3.6 ROCK GEOCHEMICAL RESULTS . . . . .	10
4.0 CONCLUSIONS AND RECOMMENDATIONS . . . . .	12
4.1 CONCLUSIONS . . . . .	12
4.2 RECOMMENDATIONS . . . . .	12
5.0 STATEMENT OF QUALIFICATIONS . . . . .	14
5.1 STATEMENT OF QUALIFICATIONS (AUTHOR) . . . . .	14
6.0 REFERENCES . . . . .	15

FIGURES

Figure 1	Location Map	1:2,000,000
Figure 2	Claim Location Map	1: 50,000
Figure 3	General Geology	1: 100,000
Figure 4	Table of Formations	
Figure 5	Regional Structures	1: 250,000

MAPS (INCLUDED IN FOLDER)

MAP A Stan and Treaty Claims, combined Stan & Treaty Groups  
Geological Map NTS 104B/9, scale 1:10,000

MAP B Stan and Treaty Claims, combined Stan & Treaty Groups  
Geochemical Map NTS 104B/9, scale 1:10,000

APPENDICES

APPENDIX A Analytical Results

APPENDIX B Rock Sample Descriptions  
(Geochemical analyses)

APPENDIX C Itemized Cost Statement

## 1.0 EXECUTIVE SUMMARY

This assessment report is submitted to the Department of Energy, Mines and Petroleum Resources of British Columbia for application of assessment work credit for the work performed on the Treaty 3 to 7 claims. The work was completed under the direction of E.R. Kruckowski Consulting Ltd. from the 11th to the 18th of June 1987. The field program consisted of geological mapping, prospecting and both rock and stream sediment geochemical sampling for the purpose of outlining gold and silver mineralization targets for subsequent more detailed work programs.

The area of the Treaty 3 to 7 Claims is underlain by Middle Jurassic sediments of the Salmon River Formation and volcanic breccia and conglomerate of the Betty Creek Formation. The potential of encountering mineralized zones of phyllite and schist within the volcanics in the south end of the claim block is considered good in light of positive results obtained from silt sampling as follows:

<u>Sample Number</u>	<u>Type</u>	<u>Ppb Gold</u>
T4-1	silt	870
T4-5	silt	85
T4-3	silt	50
T4-1	silt	25
T4-4	silt	1000(0.106 oz/ton)

Known deposits in the vicinity of the claims include Treaty Creek (Ag, Pb, Zn) and the Treaty Creek (Au, Ag, Cu) properties. Further work on the property is recommended for the Fall of 1987. The work should include the following:

- establishment of a baseline grid in the present anomalous areas.
- infill sampling on the grid.
- further more detailed rock and silt geochemical sampling.

## 2.0 INTRODUCTION

### 2.1 Location and Access

The Treaty 3 to 7 twenty unit claims comprising the Treaty Group are located in the Treaty Creek area NTS 104B/9 of the Skeena Mining Division. Approximate latitude  $56^{\circ}36'N$ , longitude  $130^{\circ}04'West$ . The claims comprising 100 units are approximately 85 kilometres north of Stewart, British Columbia, see Figures 1 & 2.

Access to the claims was by Bell 206 Jet Ranger Helicopter from Stewart, B.C. to a camp situated in the vicinity of Brucejack Lake (Goldwedge Property). Daily access to the claims was accomplished by helicopter from the camp which is approximately 20 kilometres south southwest of the claims. The main camp included a jet fuel depot, two framed tents and a cookhouse for a crew of ten (10) personnel.

### 2.2 Physiography and Topography

The property is located in steep terrain typical of the coast range of British Columbia. The elevations vary from 1962 metres A.M.S.L. (6,434 feet) on an arête between the Treaty and South Treaty Glaciers to 792 metres A.M.S.L. (2600 feet) at Treaty Creek, a glacial runoff stream with extensive moraine deposits. The north sector of the claim group contains some Alpine Meadow, hanging valleys, tarn lakes, and some lightly forested areas.

### 2.3 History and Ownership

The Treaty Group of claims comprise one hundred (100) units as follows:

<u>CLAIM</u>	<u>RECORD NUMBER</u>	<u>ANNIVERSARY DATE</u>	<u>NUMBER OF UNITS</u>
Treaty 3	5414	25th June 1986	20
Treaty 4	5415	25th June 1986	20
Treaty 5	5416	25th June 1986	20
Treaty 6	5417	25th June 1986	20
Treaty 7	5418	25th June 1986	20

The claims were staked by E. Kruchkowski and transferred to Catear Resources Ltd. (FMC 279758) by Bill of Sale dated May 1st, 1987. The claims were grouped into the Treaty Group in August, 1987.

Previous work in the general area was done by operators of two separate deposits called "Treaty" which are discussed further in the report.

#### 2.4 Summary of Work Done, Procedures and Personnel Used

The field work consisted of geological prospecting for gossan zones, quartz veins, pyrite and other sulphide mineralization. Other work included geological mapping of favourable host rocks (volcanic and volcanic/sedimentary sequences). Structural features such as fault and shear zones and lineaments and folds were also noted.

Stream silt sampling and rock geochemical sampling was done for the purpose of establishing target zones for more detailed geological follow up work to be done in the fall of 1987.

The rock geochemical sampling was done whenever rusty/gossaniferous zones,

pyrite or other sulphide mineralization and strong silicification or sericitization was encountered. Silt sampling was done on most of the major drainage basins for purposes of establishing background data and targeting precious metal source areas. All of the samples were geochemically analysed for gold and silver by Loring Laboratories Ltd. of 629 Beaverdam Road N.E., Calgary, Alberta, T2K 4W2. The analytical results and summarized laboratory procedures used are included in Appendix A. The rock type descriptions are summarized in Appendix B. The rock geochemical samples varied from 0.5 to 1.0 kilograms in size.

The fields silt sampling procedures were as follows:

- A standard size gold pan was covered by fly screen (approximate 1.0 mm opening).
- Using a gardening trowel, sample from the stream was put onto the screen and washed until the minus 1.0 mm size accumulated on the pan bottom. This procedure was repeated until sufficient sample was obtained.
- Using the gardening trowel the sample was put into a standard kraft paper soil sample bag (13 x 90 cm) and labelled.

The labelling used was standardized as follows: silt samples were labelled with the claim number and sequential sample number, example S2-1 (Stan 2 Sample 1). The rock samples were labelled with the claim number an "R" for rock and sequential sample number ie. SR2-1. The rock samples were subsequently tagged with a series number for laboratory transmittal. The analyses sheet (Appendix A) indicate both numbers whenever applicable.

The personnel used, time and location of operations were as follows:

- E. Kruchkowski/D. Marlatt - June 11 and 12 mobilization and June 15 and 17 Treaty 4 and 5. Four (4) days each.
- E. Horne/D. Lund - June 11 and 12 mobilization and June 14 and 15 Treaty 3, 7 and 6. Four (4) days each.
- S. Stannus/J. Campbell - June 11 and 12 mobilization and June 15 and 16 Treaty 6 and 7. Four (4) days each.
- C. Campbell (cook/expediter) - June 11 to 18. Only four (4) days charged.
- G. Sinden - June 17 mobilization and pack samples. One (1) day.



### 3.0 DETAILED TECHNICAL DATA AND INTERPRETATION

#### 3.1 Previous Work

Previous work in the vicinity of the claims has been identified to be taken place in two primary localities both called "Treaty" deposits.

These two prospects are as follows:

- Treaty deposit NTS 104B/9 located on two post claims flanking the Treaty Glacier. This prospect consisting of Ag, Pb, Zn mineralization is presently only detailed in Assessment Report 8767. Teuton Resources Ltd. presently controls this block of claims.
  
- Treaty deposit 104A/12 located at latitude  $56^{\circ}35'$  longitude  $129^{\circ}41'$ . This prospect is described B.C. Ministry of Mines Reports 1929 (P102) 1930 (P110). The mineralization is described as Au, Ag, Cu. The last reported work on these sixty claims (1929) describes scattered mineral values over a large area. The values are described (1930) as to low grade considering the remoteness, and the operator (Consolidated Mining and Smelting) relinquished its option. The Comminco annual reports (year?) are reported to have some further data on this prospect.

#### 3.2 General Geology

The project area lies within argillite, calcarenite sandstone and siltstone of the Middle Jurassic Salmon River Formation and some green to purple volcanic breccia, agglomerate, tuffs and minor pillow lava of the Middle Jurassic Betty Creek Formation. The locality of rock types encountered on the claim group is shown on a 1:10000 scale geological Map A included with this report. Geological mapping was seriously hampered by heavy snow cover. Whenever possible outcrop was outlined, lithologically classified

and the structural information was measured. All of noted geological data is shown on Map A which includes data from Treaty 2 and Stan 1-4 claims.

The general geology of the surrounding area is illustrated on Figures 3, 4 and 5 which include a table of formations. This data is from the British Columbia Ministry of Energy Mines and Petroleum Resources; Bulletin 63, and is included only for reference purposes. The structure of the area is complex and includes an asymmetric slightly overturned (east) canoe shaped syncline that runs from Treaty Glacier to Bear River Ridge 60 kilometres to the south. This structure is called the Jancowski Syncline.

Other structures include low angle thrust faults at points of structural weakening along the avial plane of folds. Frequent avial plane thickening was noted in folded argillite sections. Strike slip faults (frequently east west) such as indicated by the Treaty Creek lineament are common.

### 3.3 Prospecting and Geological Results

Prospecting was done with the objectives of locating and sampling the following:

- Gossan zones and zones of rusty limonitic, blue/black manganiferous or whitish zinc sulphide weathered horizons.
- Quartz veins, stockworks and intense silicification.
- Quartz carbonate veins, shear replacement zones or stockwork.
- Sulphide mineralization, pyrite and other sulphides.
- Milonitic, cataclasite and sericite schist zones.

Rock types sampled are described in Appendix B, their locations plotted on Map A and B. The results are plotted on Map B.

The total area prospected is approximately 5.0 kilometres<sup>2</sup>. The results to date indicate that the bulk of the rusty zones are barren and no significant precious metal content was encountered except for a float sample at Treaty Creek (TR3-1).

The results of reconnaissance geological mapping done over approximately 7 line kilometres is plotted on geological Map A which also includes the structural data obtained.

### 3.4 Economic Geology

No significant in place gold or silver mineralization has been located, thus far, on the Claim Group.

Silt sampling has returned high values as follows:

<u>Locality</u>	<u>Sample No.</u>	<u>Ppb Au</u>	<u>Ppm Ag</u>
Treaty 7 <sup>↑</sup> potential	T7-4	+1000	3.8
Treaty 7 lineament	T5-6	70	0.7
Treaty 7 <sub>↓</sub>	T7-5	65	0.3
Treaty 7	T3-7	40	0.5
Treaty 4	T4-1	870	0.9
Treaty 4	T4-5	85	0.5
Treaty 4	T4-3	50	0.6

One rock geochemical sample from float taken from the vicinity of silt sample T5-6 returned 180 ppb Au and 4.2 ppm Ag.

The work program to date has assisted in delineating high priority areas for further more detailed work on a block of favourable host rock (Middle Jurassic Volcanics) exposed on a steep high ridge between South Treaty and the Drysdale Glaciers. Presently available structural information indicates a potential for favourable structural control such as follows:

- Proximity to the west flank of the Mount Jancowski Syncline.
- Low angle thrust faulting associated with this folding.
- North east and north-north east apparent strike slip faults (right hand).
- Potential of fault zone intersections, north and north east trending faults and east-west trending faults.

### 3.5 Silt Geochemical Results

The results of the silt sampling geochemical survey are plotted on Map B (1:10000 scale) accompanying this report. Of the 25 silt samples collected the range of variability is high (nil to +1000 ppb Au and 0.2 to 3.8 ppm Ag).

The percentile breakdown is as follows:

<u>Gold Ppb</u>		<u>Silver Ppm</u>	
nil to 5	36.0%	0.2 to 0.6	64.0%
+5 to 15	16.0%	0.7 to 1.0	28.0%
+15 to 50	24.0%	+1.0 to 3.8	<u>8.0%</u>
+50 to 100	12.0%		100.0%
100 to 200	4.0%		
+200 to 500	nil		
+500 to 1000	<u>8.0%</u>		
	100.0%		

A mixed population for gold is indicated, one with a background of approximately nil to 15 ppb and another more complex one with a background of 15 to +20 with anomalous and highly anomalous values exhibited in 8 to 24% of the population.

The higher gold values plot up in two distinct areas which are:

- The west flank of the Drysdale Glacier. The drainage is from an arête elevation 6434 feet A.M.S.L. between the south Treaty and Drysdale Glaciers.

- Northerly drainage into Treaty Creek along a potential linear trend that also emanates from the vicinity of the arête between the South Treaty and Drysdale Glaciers.

Due to heavy snow cover at the time of the field program, sampling was restricted to areas of lower elevation. A fall silt sampling program should be done to comprehensively cover the drainage from this arête.

The background values for silver is 0.2 to 1.0 ppm. Only two (2) of the samples have greater than 1.0 ppm., which would indicate that the silver is fairly ubiquitous. The value of 3.8 ppm Ag in sample T7-4 with +1000 Ppb (.106 oz/ton) Au strongly suggests that the gold when present carries appreciable silver or visa versa.

### 3.6 Rock Geochemical Results

The results of the rock geochemical survey are also plotted on Map B. The range of variability for gold is Ppb (nil to 20). One float sample TR3-1 (18038) from Treaty Creek was 180 Ppb. The variability for silver is Ppm (0.3 to 1.2) except for TR3-1 (18038) with 4.2 Ppm.

Of an eighteen (18) sample population (excluding anomalous float sample TR3-1) the percentile breakdown is as follows:

<u>Gold Ppb</u>		<u>Silver Ppm</u>	
nil to 5	61.1%	0.3 to 0.6	55.6%
+5 to 15	33.3%	0.7 to 1.0	38.8%
+15 to 20	5.6%	+1.0 to 1.2	5.6%

The indications to date are that all of the rock samples perhaps excluding TR7-11 (18035) which is 20 PPb Au, reflect background gold concentrations varying from nil to 15 Ppb Au and 0.3 to 1.0 Ppm Ag. The one major anomalous float sample TR3-1 (18038) from the Treaty Creek area has no

indicated source from the presently available rock geochemical data; however the silt sampling data suggests that a source for concentrations of 180 Ppb is likely located between the South Treaty and Drysdale Glaciers and could occur along a north-south lineament extending through sample locations T3-7 (40 Ppb Au) T5-6 (70 Ppb Au) T7-5 (65 Ppb Au) T7-4 (+1000 Ppb Au). Further rock and silt sampling should be done across strike of this linear feature as well as in the vicinity (west flank) of the Drysdale Glacier. The unprospected area between the two should also be systematically sampled.

#### 4.0 CONCLUSIONS AND RECOMMENDATIONS

##### 4.1 Conclusions

Stream silt sampling has indicated anomalous gold values on the west flank of the Drysdale Glacier (Treaty 4) and the lower east flank of south Treaty Glacier (Treaty 7). These anomalous values include the following samples:

<u>Silt Sample</u>	<u>Ppb Gold</u>	<u>Ppb Silver</u>	<u>Classification</u>
T4-1	870	0.9	highly anomalous
T4-3	50	0.6	slightly anomalous
T4-5	85	0.5	anomalous
T5-1	25	0.9	slightly anomalous
T7-4	+1000 (0.106 oz/ton)	3.8	highly anomalous

The background sample values for gold and silver in stream silt samples would appear to be in the order of 10 Ppb Au, 0.6 Ppm Ag. The "anomalous" silt samples are all restricted to drainage basin areas of the volcanics (Betty Creek Formation?) located in the heavily glaciated area between the Drysdale and South Treaty Glaciers. Further work is required in this area to determine the source rock contributing to the anomalous gold values. The rock geochemical sampling to date did not outline any rock types or zones with anomalous gold and silver values.

##### 4.2 Recommendations

Further work, preferably during a fall work program when snow cover is at a minimum, should include the following:

- Further more detailed silt and rock geochemical sampling, especially in the area of volcanic rocks between the Treaty and South Treaty Glaciers.
- Establishment of a baseline grid in the presently anomalous areas.
- Further infill sampling to verify extent and preferred orientation of present anomalous values.

- Conduct VLF-EM surveys over the presently anomalous areas which are in large covered by heavy talus.
- Limited soil sampling where applicable.




5.0 STATEMENT OF QUALIFICATIONS AND CERTIFICATION

5.1 Statement of Qualifications (Author)

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

- I am a geologist residing at 608, 920 - 9th Avenue S.W., Calgary, Alberta.
  
- I am a graduate geologist of the University of Saskatchewan (Saskatoon) 1967 and one post graduate year in 1970. I have practiced my profession continually since then.
  
- I am a member of the Canadian Institute of Mining and Metallurgy and have an application for membership with The Association of Professional Engineers, Geologists and Geophysicists of Alberta as a professional geologist.
  
- Previous employers and positions are:
  - . Saskatchewan Department of Mineral Resources
  - . Ontario Department of Mines (Senior Geologist)
  - . Noranda Mines Geco Division (Staff Geologist)
  - . Scurry Rainbow Oil Ltd. (Senior Geologist)
  - . Scurry Rainbow Bolivia Ltda. (Project Geologist, Supervisor)
  - . Iron Ore Company of Canada Ltd. (Senior Geologist, Supervisor)
  - . Syncrude Canada Ltd. (Senior Geologist, Supervisor)
  - . Aurun Mines Ltd. (Senior Geologist)

Since 1983 I have been employed as a contract geologist. I have worked in Canada, South America and in the U.S.A.



---

Emmet J. Horne

6.0 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.

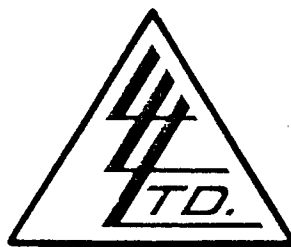
Grove, E.W., 1983  
Geology and Mineral Deposits of the Unuk River - Salmon River - Anyox  
Map Area, B.C. Ministry of Energy Mines and Petroleum Resources,  
Bulletin No. 63.

\_\_\_\_\_, 1985  
British Columbia Mineral Exploration Review B.C. Ministry of Energy  
Mines and Petroleum Resources Information Circular 1986-1.

\_\_\_\_\_, 1929 & 1930  
Replica of British Columbia Minister of Mines Annual Reports.

APPENDIX A  
ANALYTICAL RESULTS

To: BIG HORN DEVELOPMENT CORPORATION  
 400, 255 - 17th Avenue S.W.  
 Calgary, Alberta - T2S 2T8  
 Attn: Mr. Ed. Kruckowski



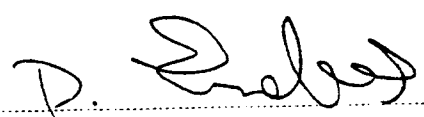
File No. 29982  
 Date July 9th, 1987  
 Samples Rock & Silt

Certificate of  
**ASSAY OF**  
**LORING LABORATORIES LTD.**

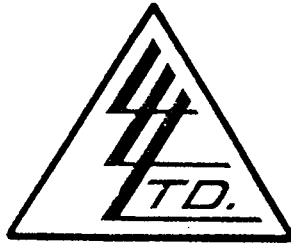
Page 1

SAMPLE No.	Au oz/ton	Ag oz/ton	
<b>ASSAYS</b> =====			
<u>Rocks</u>			
18001 EK-1	.126	4.94	
18002 EK-2	.064	9.79	
18007 CGR-07	-	102.15	
18008 C39 GR-1	-	1.58	
<u>SILT</u>			
CG-01	-	1.78	
CG-02	-	2.47	
C-39-GS-1	.038	-	OTHER
T-7-04	.106	-	TREATY
<p><b>I Hereby Certify</b> THAT THE ABOVE RESULTS ARE THOSE          ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .</p>			

Rejects Retained one month.  
 Pulp Retained one month  
 unless specific arrangements  
 made in advance.

  
 \_\_\_\_\_  
 Assayer

To: BIG HORN DEVELOPMENT COEPORATION  
 #400, 255 - 17th Avenue S.W.  
 Calgary, Alberta - T2S 2T8  
 Attn: Mr. Ed. Kruchkowski



File No. 29982  
 Date July 9th, 1987  
 Samples Rock

Certificate of  
**ASSAY**  
**LORING LABORATORIES LTD.**

Page 3

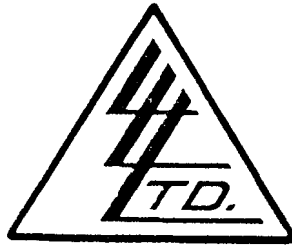
SAMPLE No.	Au ppb	Ag ppm	
<u>GEOCHEMICAL ANALYSES</u>			
18020 SR2-07	20	.7	
18021 SR2-08	25	.3	
18022 SR3-01	25	.7	
18023 SR3-02	20	1.9	
18024 SR3-03	25	1.1	
18025 ST1-GR-4F	625	3.3	
18026 SR1-1	75	2.9	STAN
18027 TR7-02	10	.7	TREATY
18028 TR7-05	5	.5	
18029 TR7-1	15	1.2	
18030 TR7-2	5	.8	
18031 TR7-06	5	.7	
18032 TR7-8	5	.6	
18033 TR7-9	Nil	.5	
18034 TR7-10	Nil	.5	
18035 TR7-11	20	.8	
18036 TR4-1	Nil	.4	
18037 TR3-04	15	.3	
18038 TR3-1	180	4.2	
<p><b>I Hereby Certify</b> THAT THE ABOVE RESULTS ARE THOSE          ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .</p>			

Rejects Retained one month.  
 Pulps Retained one month  
 unless specific arrangements  
 made in advance.

*D. E. [Signature]*

Assayer

To: BIG HORN DEVELOPMENT CORPORATION  
 #400, 255 - 17th Avenue S.W.  
 Calgary, Alberta - T2S 2T8  
 Attn: Mr. Ed. Kruchkowski



File No. 29982  
 Date July 9th, 1987  
 Samples Rock

Certificate of  
 ASSAY of  
**LORING LABORATORIES LTD.**

Page 4

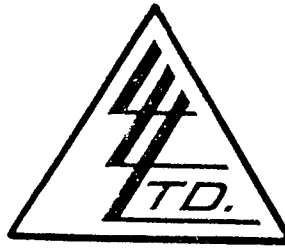
SAMPLE No.	Au ppb	Ag ppm	
<u>GEOCHEMICAL ANALYSES</u>			
18039 TR2-1	10	.7	STAN
18040 TR6-01	15	.7	
18041 TR5-1	Nil	1.0	TREATY
3042 TR5-2	Nil	.6	
18043 TR5-3	15	.6	
18044 TR5-4	15	.6	
18045 TR5-5	15	.6	
18046 TR5-6	Nil	.9	
18047 TR5-7	Nil	.8	
18048 TR5-8	40	.6	
<p><b>I Hereby Certify</b> THAT THE ABOVE RESULTS ARE THOSE          ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .</p>			

Rejects Retained one month.  
 Pulps Retained one month  
 unless specific arrangements  
 made in advance.

*D. Zales*

Assayer

To: BIG HORN DEVELOPMENT CORPORATION  
 #400, 255 - 17th Avenue S.W.  
 Calgary, Alberta - T2S 2T8  
 Attn: Mr. Ed. Kruchkowski



File No. 29982  
 Date July 9th, 1987  
 Samples Silt

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Page 6

SAMPLE No.	Au ppb	Ag ppm
<b>GEOCHEMICAL ANALYSES</b>		
S3-04	Nil	.4
S3-05	Nil	.5
S3-06	Nil	.5
S4-02	Nil	.5
S4-03	5	.6
S4-04	5	.6
S4-05	15	.6
T2-01	5	.6
T3-01	5	.8
T3-02	10	.6
T3-03	5	.5
T3-04	10	.6
T3-07	40	.5
T4-01	870	.9
T4-02	165	.9
T4-03	50	.6
T4-04	25	.7
T4-05	85	.5
T5-01	25	.9

STAN

TREATY

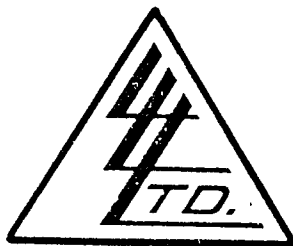
**I Hereby Certify** THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.  
 Pulp Retained one month  
 unless specific arrangements  
 made in advance.

*D. Zuehl*

Assayer

To: BIG HORN DEVELOPMENT CORPORATION  
 #400, 255 - 17th Avenue S.W.  
 Calgary, Alberta - T2S 2T8  
 Attn: Mr. Ed. Kruckowski



File No. 29982  
 Date July 9th, 1987  
 Samples Silt

Certificate of  
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Page 7

SAMPLE No.	Au ppb	Ag ppm	
<u>GEOCHEMICAL ANALYSES</u>			
T5-02	25	.4	
T5-03	5	.6	
T5-04	10	.4	
T5-05	10	1.1	
T5-06	70	.7	
T6-01	5	.4	
T6-02	15	.8	
T6-03	5	.3	
T6-04	5	.3	
T6-05	5	.3	
T6-06	Nil	.2	
T7-03	Nil	.4	
T7-04	+1000	3.8	
T7-05	65	.3	
T7-06	30	.5	TREATY
ST1-GS-05	35	.4	STAN
ST1-GS-06	Nil	.6	
ST1-GS-07	Nil	.2	

**I Hereby Certify** THAT THE ABOVE RESULTS ARE THOSE  
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.  
 Pulp Retained one month  
 unless specific arrangements  
 made in advance.

*D. Zedler*



APPENDIX B

ROCK SAMPLE DESCRIPTIONS  
(GEOCHEMICAL ANALYSES)

DESCRIPTION OF ROCK SAMPLES

<u>SAMPLE</u>	<u>LABORATORY NO.</u>	<u>CLAIM</u>	<u>DESCRIPTION</u>	<u>GEOCHEMICAL ANALYSIS</u>		
				<u>Ppb Au</u>	<u>Ppm Ag</u>	<u>Oz/Ton Au</u>
TR5-1	18041	Treaty 5	Pyrite bearing volcanic rock	Nil	1.0	--
TR5-2	18042	Treaty 5	Pyrite bearing volcanic rock	Nil	0.6	--
TR5-3	18043	Treaty 5	Pyrite bearing volcanic rock	15	0.6	--
TR5-4	18044	Treaty 7	Pyrite bearing volcanic rock	15	0.6	--
TR5-5	18045	Treaty 7	Pyrite bearing volcanic rock	15	0.6	--
TR4-1	18036	Treaty 4	Limonitic quartz carbonate stringer 5 cm	Nil	0.4	--
TR5-6	18046	Treaty 7	Fragments of andesite minor pyrite	Nil	0.9	--
TR5-7	18047	Treaty 7	Volcanic rock, andesite, trace pyrite	Nil	0.8	--
TR5-8	18048	Treaty 7	Argillite rusty zone	40	0.6	--
TR7-1	18029	Treaty 7	Argillite rusty zone	15	1.2	--
TR7-2 (TR7-02 on map)	18030	Treaty 7	Limonitic sandstone	5	0.8	--
TR3-4	18037	Treaty 3	Limonitic quartz carbonate vein 5 cm. Az 040 ~ 45%	15	0.3	--
TR3-1	18038	Treaty 3	Float quartz carbonate 2-5% pyrite, highly silicified (cherty)	180	4.2	--
TR7-5	18028	Treaty 7	1 cm quartz carbonate vein Az 060 ~ 70°N, no visible pyrite 5.0 cm chip sample	5	0.5	--
TR7-6	18031	Treaty 7	1 cm quartz carbonate vein, Az 040 @ 70°N.W., no visible pyrite 5.0 cm chip sample	5	0.7	--

<u>SAMPLE</u>	<u>LABORATORY NO.</u>	<u>CLAIM</u>	<u>DESCRIPTION</u>	<u>GEOCHEMICAL ANALYSIS</u>		
				<u>Ppb Au</u>	<u>Ppm Ag</u>	<u>Oz/Ton Au</u>
TR7-8	18032	Treaty 7	Limonitic rusty sandstone and argillite 1.0 metre chip sample	5	0.6	--
TR7-9	18033	Treaty 7	Rusty argillite, trace pyrite	Nil	0.5	--
TR7-10	18034	Treaty 7	Rusty argillite, trace pyrite	Nil	0.5	--
TR7-11	18035	Treaty 7	Rusty argillite, trace pyrite	20	0.8	--
TR6-1	18040	Treaty 6	Limonitic sandstone and quartz carbonate stringers	15	0.7	--

APPENDIX C  
ITEMIZED COST STATEMENT

C. ITEMIZED COST STATEMENT

C.1 Supervision and Wages

Personnel are charged a 50% of rate for organization, mobilization and demobilization from the 11th to 18th of June, 1987 (four days) and 50% of rate for field work from 15th to the 18th of June, 1987 (four days). The other 50% is charged to the Treaty 2 and Stan 1-4 Claims.

The rates are as follows:

<u>Name</u>	<u>Title</u>	<u>Daily Rate</u>	<u>Days Worked</u>		
E.R. Kruchkowski	Chief Geologist Supervisor	\$300.00	8	50%	1,200.00
E.J. Horne	Senior Geologist	\$250.00	8	50%	1,000.00
J. Campbell	Prospector	\$125.00	8	50%	500.00
S. Stannus	Prospector	\$125.00	8	50%	500.00
D. Marlatt	Junior Assistant	\$80.00	8	50%	320.00
D. Lund	Junior Assistant	\$80.00	8	50%	320.00
C. Campbell	Cook/Expediter	\$100.00	8	50%	400.00
G. Sinden	Geophysical Technician/ Prospector	\$120.00	2	50%	120.00
					\$4,360.00
Consultant Overhead on Salaries 10%					436.00
					\$4,796.00

C.2 Transportation

Airfare charged at 25% remainder to be split on Treaty 2 and Stan 1-4 Claims, Mt. Madge Project and Crown Grants (other projects).

<u>Personnel</u>	<u>Destinations</u>	<u>Full Rate</u>	<u>Percent Charged</u>	
E. Kruchkowski	Calgary/Terrace	\$1,328.00	25%	332.00
E. Horne	and return			
S. Stannus	Vancouver/Prince	661.60	25%	165.40
D. Lund	George and return			
	<u>Meet Truck</u>			
G. Sinden	Calgary/Terrace	664.00	25%	166.00
	and return			

Truck Transportation (field equipment and expenses)

4 x 4 truck and trailer rental @ \$66 D/Km 2 days @ 50% 66.00

Meals and accomodation (expense accounts) 50%	131.45
Four personnel, two days, total \$262.90 @ 50%	
	<hr/>
	\$860.85

C.3 Helicopter Rental (206B)

Charged at 50% remainder to Treaty 2 and Stan 1-4 Claims.

Stewart, B.C. to Brucejack Camp slinging loads and personnel	
Fueled 9.5 hours @ \$522.70/hour	
Total charge \$4,965.70 @ 50%	2,482.85

Field work 14th to 18th July, 1987

1.7 hours (fueled) total charge \$835.55 @ 50%	417.77
1.1 hours (fueled) total charge \$540.65 @ 50%	270.33
1.5 hours (fueled) total charge \$795.00 @ 50%	397.50
2.8 hours (fueled) total charge \$1,445.50 @ 50%	722.75
1.7 hours (fueled) total charge \$901.00 @ 50%	450.50

Note: Rate differential due to use of camp versus contractor fuel.

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\$4,741.17

C.4 Food, Accomodation and Supplies

Camp & equipment rental	100.00
2 days @ \$50/day	
Groceries, field equipment, consumables	1,021.35
Field cost 15 man days @ \$68.09	
Hotel accomodation, meals, supplies,	318.08
consumables 14 man days @ \$22.72 man days	
and logistical organization costs	
	<hr/>
	\$1,439.43

C.5 Laboratory Analyses

Sample freight to Loring Laboratories Ltd.	
Calgary, Alberta	23.00
25 silt samples @ 0.80 for sample preparation	
& \$10.50 for Au, Ag geochemical analysis	282.50
18 rock samples @ \$2.50 sample preparation	
& \$10.50 for Au, Ag geochemical analysis	234.00
1 Assay for Au on samples + 1000.00 ppb	
@ \$7.50 sample	7.50
Assays for Ag on samples + 30 ppm	
@ \$7.50 sample	
	<hr/>
	NIL
	\$547.00

C.6 Report Preparation

Base map frame shot enlargement	50.00
Drafting of Maps and Figures	250.00
Typing, printing and review	100.00
Report compilation and writing	
1 geologist, 4 days @ \$250.00/day	<u>1,000.00</u>
	\$ 1,400.00
 GRAND TOTAL	 \$13,784.45

C.7 Apportionment of costs for Treaty Group of claims is as follows:

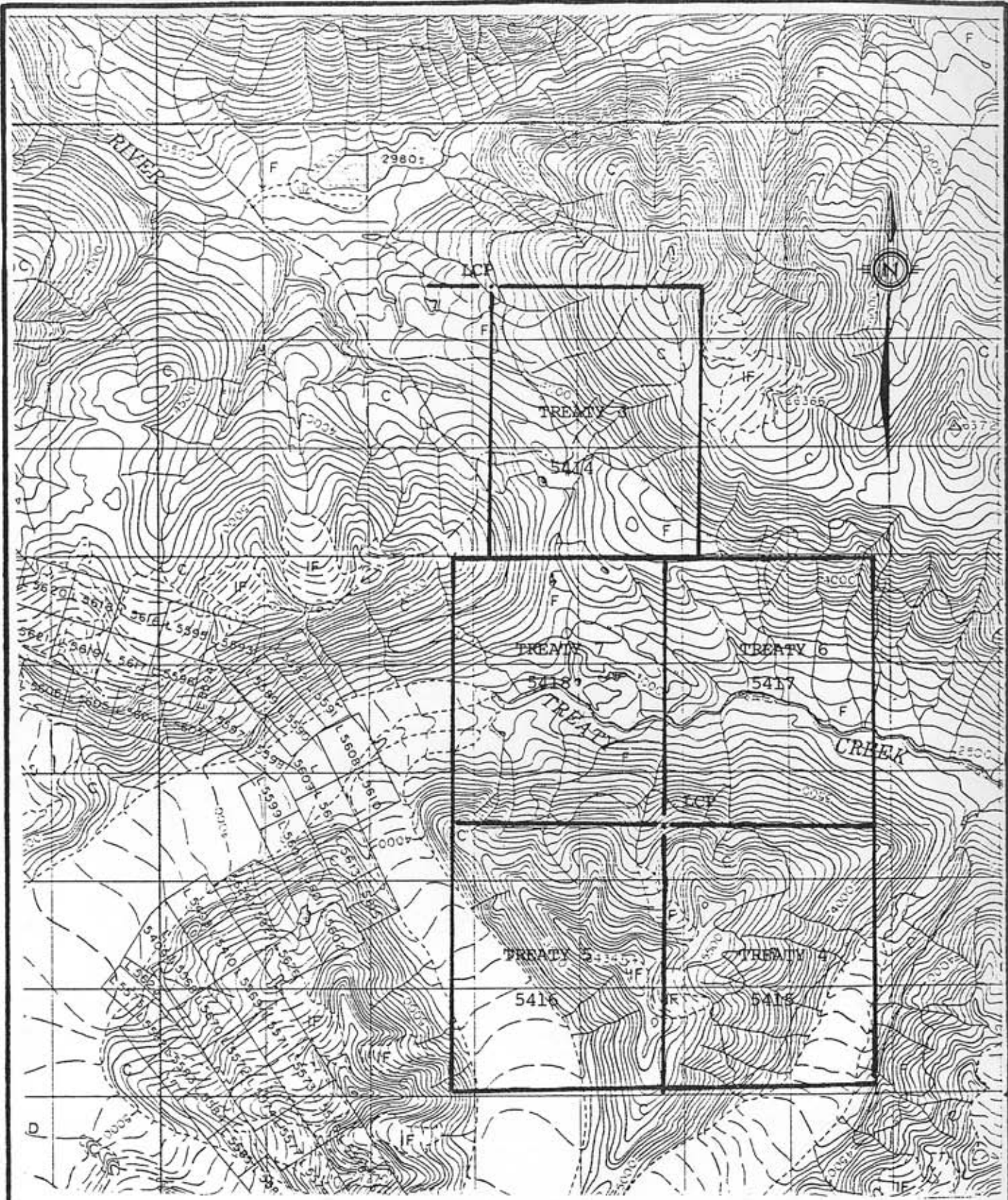
<u>Claim</u>	<u>Record No.</u>	<u>Number of Units</u>	<u>Apportionment</u>
Treaty 3	5414	20	2,000
Treaty 4	5415	20	2,000
Treaty 5	5416	20	2,000
Treaty 6	5417	20	2,000
Treaty 7	5418	20	2,000
100 Units @ \$100.00			\$10,000.00
To be credited to owner's PAC Account			
\$3,784.45	say		3,700.00

FIGURES

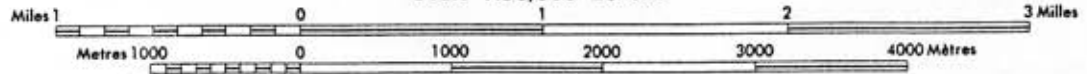
1-5







Scale 1:50,000 Échelle



<p>TREATY CREEK AREA SKEENA MINING DIVISION</p>	<p>NTS 104B/9</p>
<p>CLAIM LOCATION MAP</p>	<p>Figure 2</p>



FROM: Geology of the Unuk River-Salmon River-Anyox Map Area Bulletin 63.  
 British Columbia Ministry of Mines & Petroleum Resources

BIGHORN DEVELOPMENT CORPORATION	NTS 104B/9 1:100,000
GENERAL GEOLOGY	FIGURE 3

MESOZOIC

**MIDDLE JURASSIC**

**SALMON RIVER FORMATION**

16 SILTSTONE, GREYWACKE, SANDSTONE, SOME CALCARENITE, MINOR LIMESTONE, ARGILLITE, CONLOMERATE, LITTORAL DEPOSITS

15 RHYOLITE, RHYOLITE BRECCIA; CRYSTAL AND LITHIC TUFF

**BETTY CREEK FORMATION**

14 PILLOW LAVA, BROKEN PILLOW BRECCIA (a); ANDESITIC AND BASALTIC FLOWS (b)

13 GREEN, RED, PURPLE, AND BLACK VOLCANIC BRECCIA, CONLOMERATE, SANDSTONE, AND SILTSTONE (a); CRYSTAL AND LITHIC TUFF (b); SILTSTONE (c); MINOR CHERT AND LIMESTONE [INCLUDES SOME LAVA (+14)] (d)

**LOWER JURASSIC**

**UNUK RIVER FORMATION**

12 GREEN, RED, AND PURPLE VOLCANIC BRECCIA, CONGLOMERATE, SANDSTONE, AND SILTSTONE (a); CRYSTAL AND LITHIC TUFF (b); SANDSTONE (c); CONGLOMERATE (d); LIMESTONE (e); CHERT (f); MINOR COAL (g)

11 PILLOW LAVA (a); VOLCANIC FLOWS (b)

**SYMBOLS**

- ADIT .....
- ANTICLINE (NORMAL, OVERTURNED) .....
- BEDDING (HORIZONTAL, INCLINED, VERTICAL, CONTORTED) .....
- BOUNDARY MONUMENT .....
- CONTOURS (INTERVAL 1,000 FEET) .....
- FAULT (DEFINED, APPROXIMATE) .....
- FAULT (THRUST) .....
- FAULT MOVEMENT (APPARENT) .....
- FOLD AXES, MINERAL LINEATION (HORIZONTAL, INCLINED) .....
- FOSSIL LOCALITY .....
- GEOLOGICAL CONTACT (DEFINED, APPROXIMATE) .....
- GLACIAL STRIAE .....
- GRAVEL, SAND, OR MUD .....
- HEIGHT IN FEET ABOVE MEAN SEA LEVEL .....
- INTERNATIONAL BOUNDARY .....
- JOINT SYSTEM (INCLINED, VERTICAL) .....
- MARSH .....
- MINING PROPERTY .....

FROM: Geology of the Unuk River-Salmon River-Anyox Map Area Bulletin 63,  
British Columbia Ministry of Mines & Petroleum Resources

BIGHORN DEVELOPMENT CORPORATION	NTS 104B/9
TABLE OF FORMATIONS	FIGURE 4



FROM: Major Geological Structures and Mineral Deposits Geology and Mineral Deposits of the Unuk River-Salmon River-Anyox Area Bulletin No. 63.

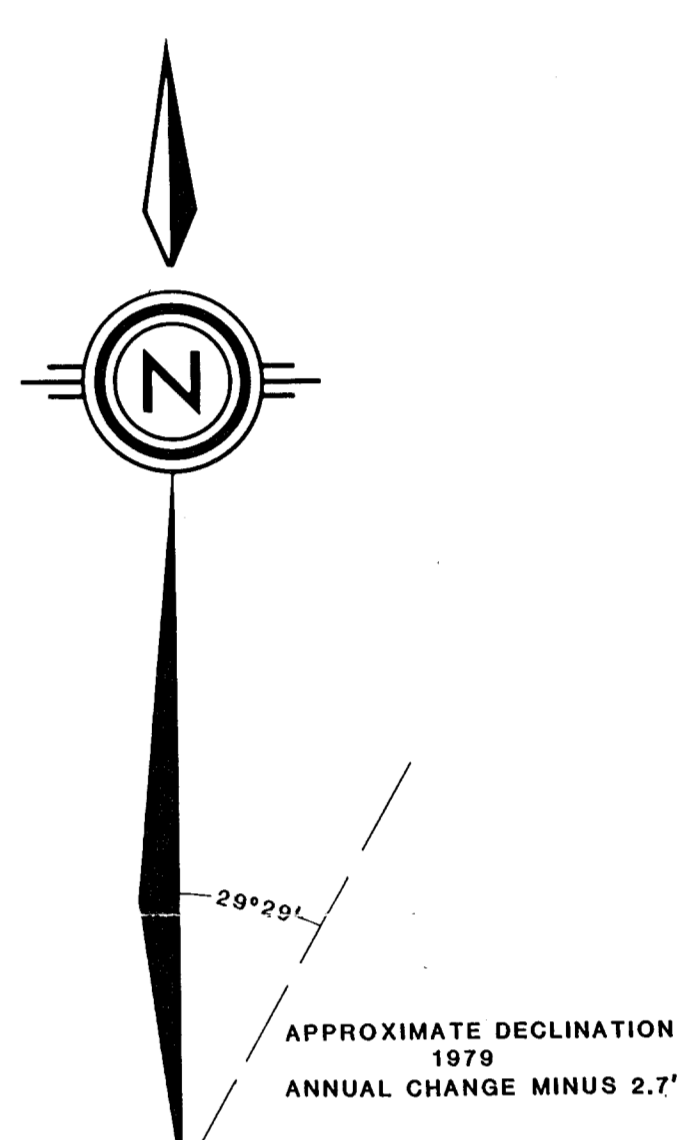
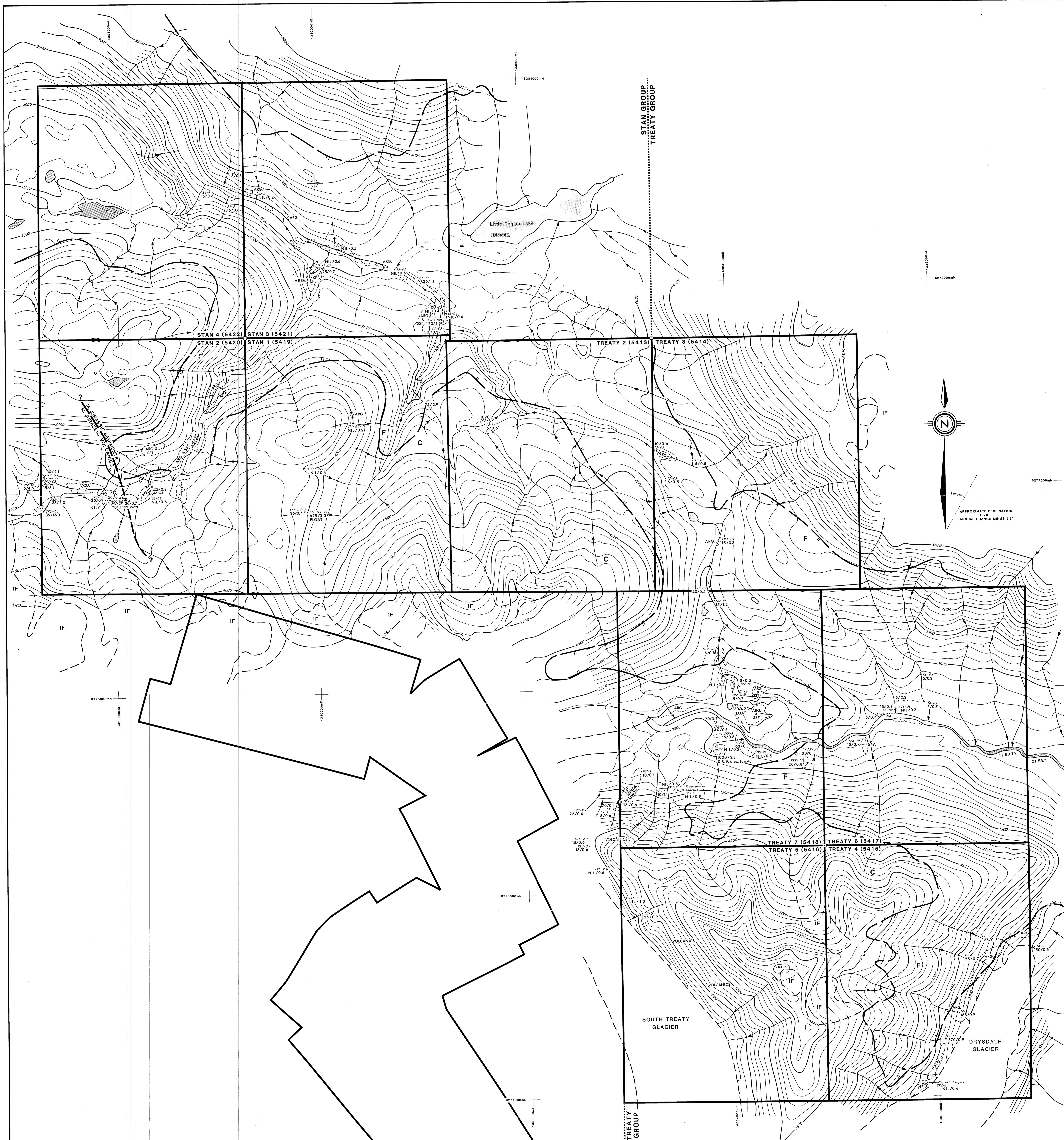
BIGHORN DEVELOPMENT  
CORPORATION

NTS 104B/9  
1:250,000

REGIONAL STRUCTURES

FIGURE 5





- TOPOGRAPHIC & CLAIM FEATURES**
- Icefield
  - Outcrop
  - Wooded Area (F-Forested C-Clear)
  - Marsh
  - Direction of Flow
  - Claim Boundary & LCP
  - Sample Site & Number
  - Gravel Bar
  - Contour (feet) Interval-100'

GEOCHEMICAL ANALYSIS 25/07 Results - Ppb Au/Ppm Ag

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**16,250**

MAP BASE: ENLARGEMENT FROM 1:50,000 TOPOGRAPHIC

**BIGHORN DEVELOPMENT CORPORATION**

STAN and TREATY CLAIMS  
COMBINED STAN and TREATY GROUPS

**GEOCHEMICAL MAP**  
(ROCK and SILT SAMPLES)  
NTS 104B/9

SKENA MINING DIVISION

Scale: 1:10,000 C.I.: 100' By: E.H. & E.K.  
Date: August 1987 Revised: Figure: MAP B