

LOG NO. 1121	RD
ACTION:	
FILE NO:	

COMINCO LTD

EXPLORATION

WESTERN CANADA

NTS: 104K-10

3 November 1989

ASSESSMENT REPORT ON GEOLOGICAL AND GEOCHEMICAL WORK

ON THE

BRYAR MINERAL CLAIM

ATLIN MINING DIVISION, BRITISH COLUMBIA

JULY 4-5, 1989

LATITUDE: 58<sup>0</sup>37'N

LONGITUDE: 132<sup>0</sup>59'N

<b>SUB-RECORDER</b>	
RECEIVED	
NOV 17 1989	
M.R.# _____	\$ _____
ATLIN, B.C.	

REPORT BY:

SCOTT W. SMITH

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**19,326**

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EXPLORATION

WESTERN CANADA

3 November, 1989

ASSESSMENT REPORT - BRYAR CLAIM

SUMMARY

The Bryar claim was staked in July 1989 following the 1988 discovery of a boulder containing arsenopyrite which assayed 17.043 g/t Au.

Work on the property focused on prospecting and contour soil sampling in the vicinity of a gossanous outcrop suspected to be the source of the boulder. The soil lines delineated a Au and As anomaly. Rock samples and soil samples were collected while prospecting to the north. These samples yielded anomalous Au values from arsenopyrite veins found in a quartz-biotite-feldspar porphyry. Additional prospecting of the northern half of the claim is needed.

The total expenditure for work performed on the property in 1989 was \$4522.50.

INTRODUCTION

The Bryar claim, consisting of 20 units, was staked in early July 1989. Staking followed 1988 reconnaissance exploration, during which a boulder containing arsenopyrite was sampled. The sample returned values of 13000 ppb Au, 206,000 ppm As and assayed at 17.043 g/t Au.

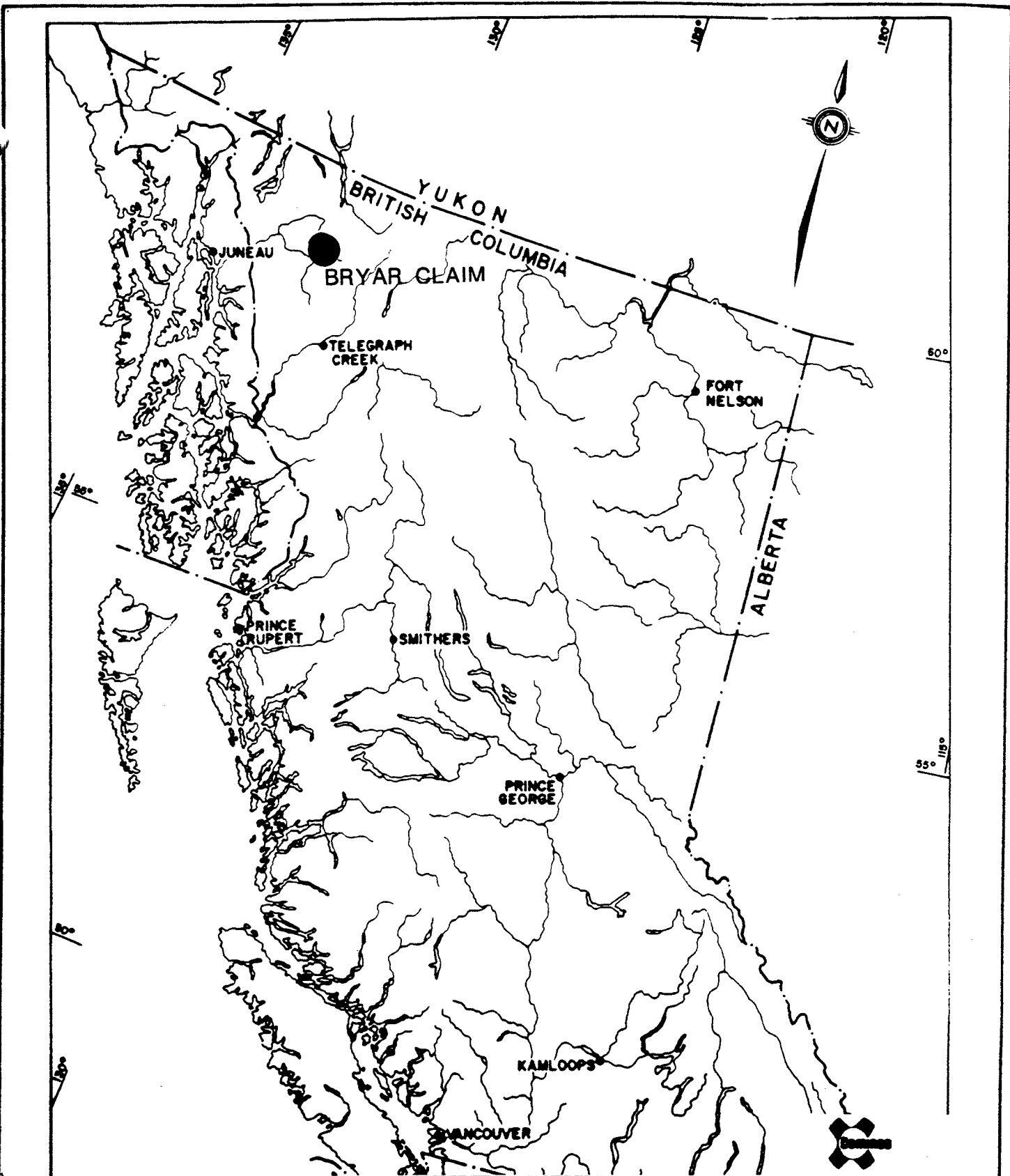
Five man days were spent prospecting and collecting soil samples in the vicinity of a gossanous outcrop suspected to be the source of the forementioned boulder. Personnel involved on the property were I.A. Paterson, M.O. B. Kellerhals, S.W. Smith and T. Frkovich.

LOCATION AND ACCESS

The property is located in the Atlin Mining Division on N.T.S. Map 104K/10. The claim extends north and east from the Legal corner post located at latitude 58°37'N and longitude 132°59'W, approximately 34 km east of Tulsequah. Access is via helicopter, locally available out of Atlin 110 km to the north.

PHYSIOGRAPHY

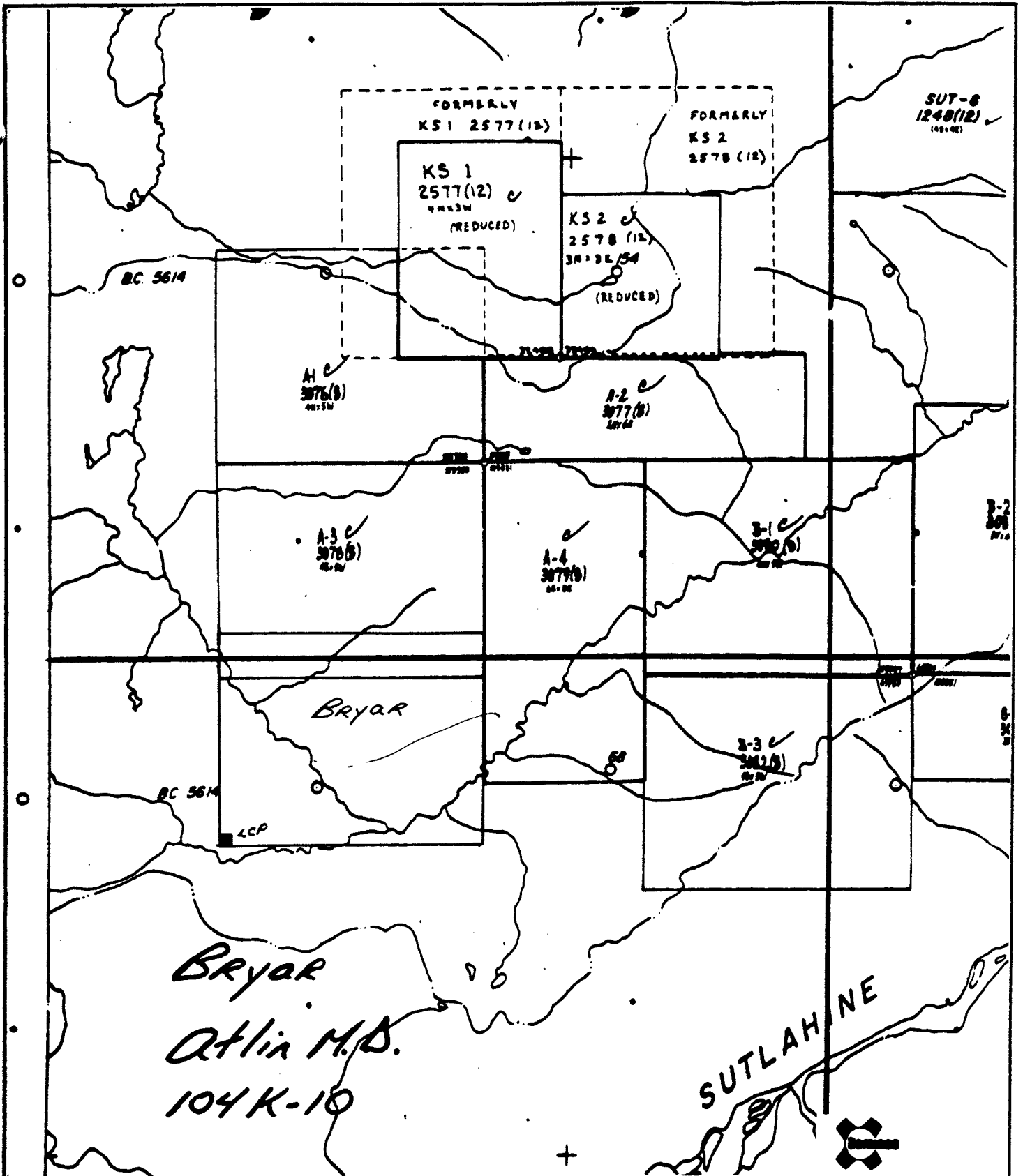
The claim is on the interior edge of the Coast Mountain Range. Topography is moderately steep with elevations ranging from 550 to 1000 m. Vegetation on the claim varies from swampland in the south to sub-alpine forest on the northern half.



Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

**INDEX MAP BRYAR CLAIM**

Scale: \_\_\_\_\_ Date: November, 1989 Figure: 1



Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

# BRYAR CLAIM MAP

ATLIN MINING DIVISION

Scale: 1:50,000

Date: November, 1989

Figure: 2

2.

### TENURE

Due Date: July 3, 1990  
Size: 20 units (4 north x 5 east)  
Record NO.: 3623  
Ownership: 100% Cominco Ltd

### GEOLOGY

Souther (1969) indicates that the northern half of the Bryar claim is underlain by a package of Jurassic sediments which are cross cut in a northwesterly direction by a number of Cretaceous or Tertiary porphyritic intrusives. The lower, southern half of the claim is underlain by Pleistocene to Recent outwash.

Examination of property geology focused on the northern half of the claim where the outcrop was most abundant. Two lithologic units were recognized on the property.

Unit 3 - is a quartz-biotite-feldspar porphyry comprised of large quartz eyes biotite flakes, and feldspar laths, with a fine grained grey matrix. Several quartz/arsenopyrite veins are present in this unit. Associated with the veins is quartz-muscovite-pyrite alteration. Samples from the veins have yielded values of 6760 to 2240 ppb Au.

Unit 2 - is a well laminated sedimentary unit of Jurassic Laberge Group comprising of siltstone and minor wackes. Bedding is best defined in the siltstone where it measures 114/15N. In close proximity to the intrusive the siltstones become hornfelsed and pyritized. A sample from the hornfels returned an anomalous Au value of 92 ppb.

### GEOCHEMISTRY

Fifty soil samples were taken along two contour lines. Eleven rock samples and 10 silt samples were also collected on the claim. All soil samples and five silt samples were analysed for Au and As. The other five silt samples and rock samples were analyzed for Au, Ag, Cu, Pb Zn, and As.

All samples taken from the Bryar were analysed at the Cominco Exploration Analytical Laboratory in Vancouver. Analytical methods are given in Appendix III.

3.

Inspection of histograms and consideration of conventional statistics were used to define the following threshold and anomaly limits for Au and As. See appendix IV for histograms and statistics.

<u>Element</u>	<u>Threshold</u>	<u>Anomalous</u>
Au	10-50 ppb	> 50 ppb
As	200-700 ppm	>700 ppm

Soil geochemical data outlined coincident Au and As anomalies in the northeast quadrant of the claim. Gold values ranged from 41 to 1030 ppb and arsenic values were consistently in the range of 227-2200 ppm.

Rock samples taken from the arsenopyrite veins yielded the highest anomalous Au values ranging from 1160 to 6760 ppb. The one slightly anomalous silt sample was found close to the arsenopyrite veins.


#### CONCLUSIONS AND RECOMMENDATIONS

Two zones with anomalous gold and arsenic values in both rock and soil samples were identified in the northeast quadrant of the claim. Gold bearing arsenopyrite veins have been identified in both of the anomalous zones. The veins occur predominantly in quartz-biotite-feldspar porphyry but are also found in adjacent sediments that have been hornfelsed by the porphyry. Veins in the porphyry show strong quartz-muscovite-pyrite alteration.

Potential for economically significant mineralization is present in the hornfelsed sediments and the cross-cutting porphyritic intrusives.

Additional prospecting and sampling around and between the two anomalous zones is recommended.

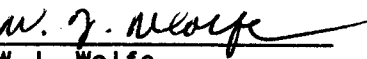
Report by:

  
S.W. Smith,  
Geologist

Endorsed by:

  
I.A. Paterson,  
Senior Geologist

Approved for  
Release by:

  
W.J. Wolfe,  
Manager, Exploration-  
Western Canada

SWS/pm  
Distribution:  
Mining Recorder  
File

A P P E N D I X     I

STATEMENT OF EXPENDITURES

BRYAR CLAIM

Cominco Ltd incurred the following expenditures during the period July 4-5, 1989.

Salaries

I.A. Paterson	1 day @ \$390/day	\$ 390	
M.O.B. Kellerhals	2 days @ \$196/day	392	
S.W. Smith	1 day @ \$190/day	190	
T. Frkovich	1 day @ \$136/day	<u>136</u>	
			\$1,108.00

Transportation

- Helicopter 2 hours @ \$615/hr = 1,230.00

Analytical Costs

11 rock samples @ \$17.75	195.25	
55 soil & silt samples @ \$10.25	563.75	
5 soil samples @ \$15.50	<u>77.50</u>	836.50

Domicile - 5 man days @ \$60/day 300.00

Report Preparation

S.W. Smith	5 days @ \$190	950	
M.O.B. Kellerhals	1/2 day @ \$196	<u>98</u>	
			<u>1,048.00</u>

Total Expenditure     \$4,522.50



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GEOCHEMISTRY RESULTS

BRYAR CLAIM SOIL/SILT GEOCHEMISTRY 1989

LAB #	FIELD #	TYPE	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
11274	87070	SILT	10					66
11275	87071	SILT	10					40
11276	87072	SILT	10					28
11277	87073	SILT	20					118
11278	87074	SOIL	10					28
11279	87075	SOIL	10					54
11280	87076	SOIL	10					267
11281	87077	SOIL	10					66
11282	87078	SOIL	30					106
11283	87079	SOIL	10					268
11284	87080	SOIL	41					530
11285	87081	SOIL	31					308
11286	87082	SOIL	70					960
11287	87083	SOIL	90					460
11288	87084	SOIL	170					2200
11289	87085	SOIL	90					1590
11290	87086	SOIL	323					1540
11291	87087	SOIL	1030					1130
11292	87088	SOIL	616					640
11293	87089	SOIL	70					530
11294	87090	SOIL	90					319
11295	87091	SOIL	14					413
11296	87092	SOIL	30					73
11297	87093	SOIL	10					28
11298	87094	SOIL	10					18
11299	87095	SOIL	10					25
11300	87096	SOIL	10					19
11301	87097	SOIL	10					18
11302	87098	SOIL	10					10
11303	87099	SOIL	10					14
11304	87750	SOIL	10					12
11305	87751	SOIL	10					28
11306	87752	SOIL	10					23
11307	87753	SOIL	10					26
11308	87754	SOIL	10					77
11309	87755	SOIL	10					42
11310	87756	SOIL	10					63
11311	87757	SOIL	10					35
11312	87758	SILT	10					90
11313	87759	SOIL	10					6
11314	87760	SOIL	10					52
11315	87761	SOIL	10					50
11316	87762	SOIL	10					44
11317	87763	SOIL	10					1020
11318	87764	SOIL	10					540
11319	87765	SOIL	10					3800
11320	87766	SOIL	12					321
11321	87767	SOIL	10					302
11322	87768	SOIL	10					323
11323	87769	SOIL	12					360
11324	87770	SOIL	716					570
11325	87771	SOIL	70					227

BRYAR CLAIM SOIL/SILT GEOCHEMISTRY 1989

LAB #	FIELD #	TYPE	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
11326	87772	SOIL	20					460
11327	87773	SOIL	10					182
11328	87774	SOIL	10					1610
11329	87775	SOIL	15					108
11330	87776	SOIL	10					42
11339	87232	SOIL	10					251
11340	87233	SOIL	70					3870
11341	87234	SOIL	10					67
11341	87234	SOIL	10					67
11190	87338	SILT	10	.4	42	10	91	25
11191	87339	SILT	10	.4	41	9	59	37
11192	87340	SILT	10	.4	39	9	55	40
11193	87341	SILT	10	.4	36	11	73	17
11194	87342	SILT	10	.4	35	12	85	38

BRYAR CLAIM ROCK GEOCHEMISTRY 1989

lab #	field #	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
10021	PR9049	6760	11	111	7040	144	242000
10022	PR9050	100	6.3	156	108	246	3110
10023	PR9051	1160	3.8	50	244	233	24400
10024	PR9052	2240	2.4	32	278	49	85000
10025	PR9053	76	44.7	3450	349	266	1920
10107	FR9026	10	.4	23	106	132	120
10108	FR9027	10	.4	7	18	25	39
10109	FR9028	10	.4	6	19	70	15
10110	FR9029	10	.5	50	9	30	55
10088	SR9004	10	.4	60	35	74	17
10089	SR9007	92	.6	122	10	48	212

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Analytical Methods

All analyses were carried out at the Cominco Analytical laboratory in Vancouver.

Au: Aqua regia decomposition followed by solvent extraction and AAS

Ag: Digestion in 20% HNO<sub>3</sub> followed by AAS

Cu: Digestion in 20% HNO<sub>3</sub> followed by AAS

Pb: Digestion in 20% HNO<sub>3</sub> followed by AAS

Zn: Digestion in 20% HNO<sub>3</sub> followed by AAS

As: Pyrosulphate fusion/colorimetric

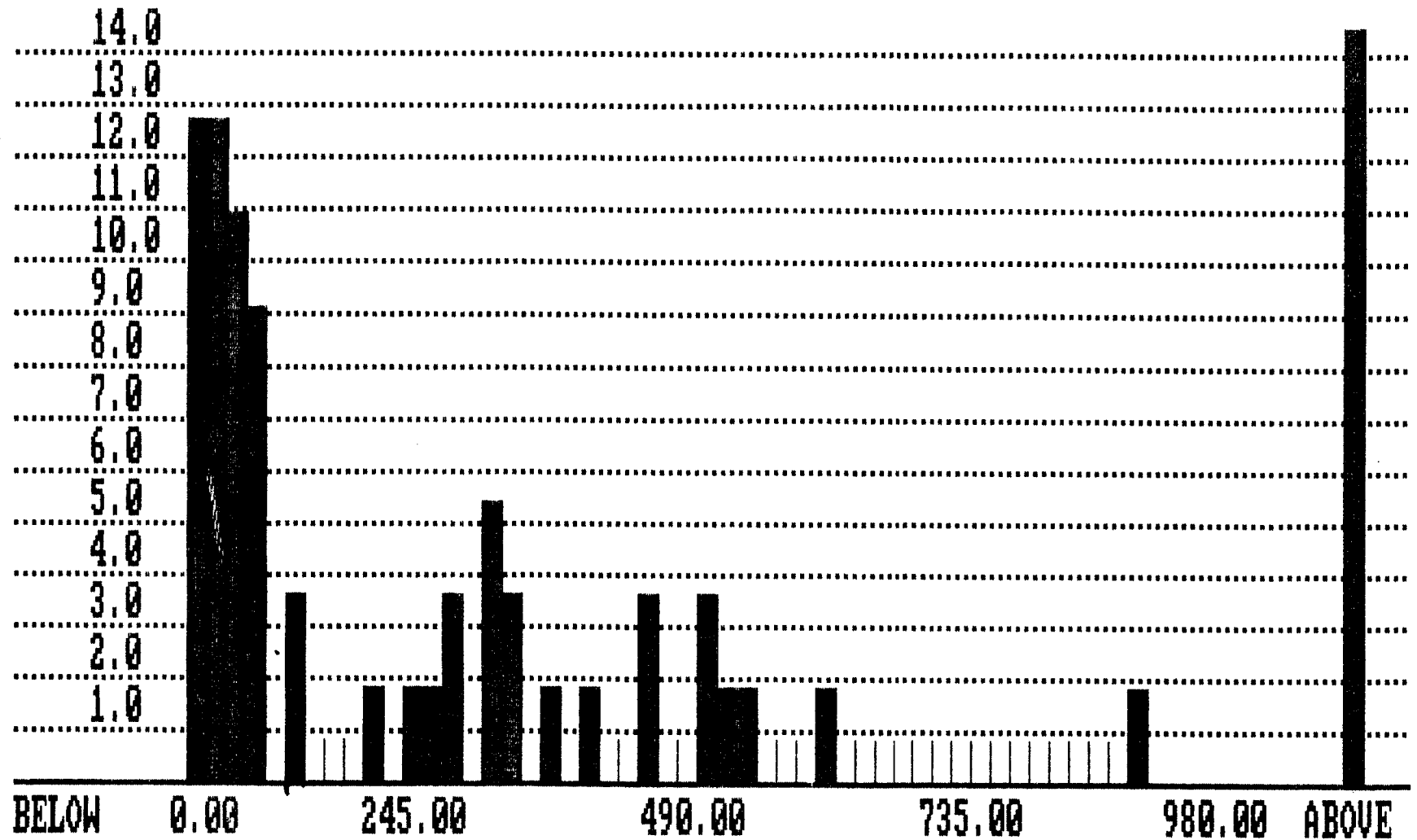
APPENDIX IV

HISTOGRAMS & STATISTICS

PERCENT OF  
TOTAL

VARIABLE : AS  
MINIMUM : 6.000  
MAXIMUM : 3870.000

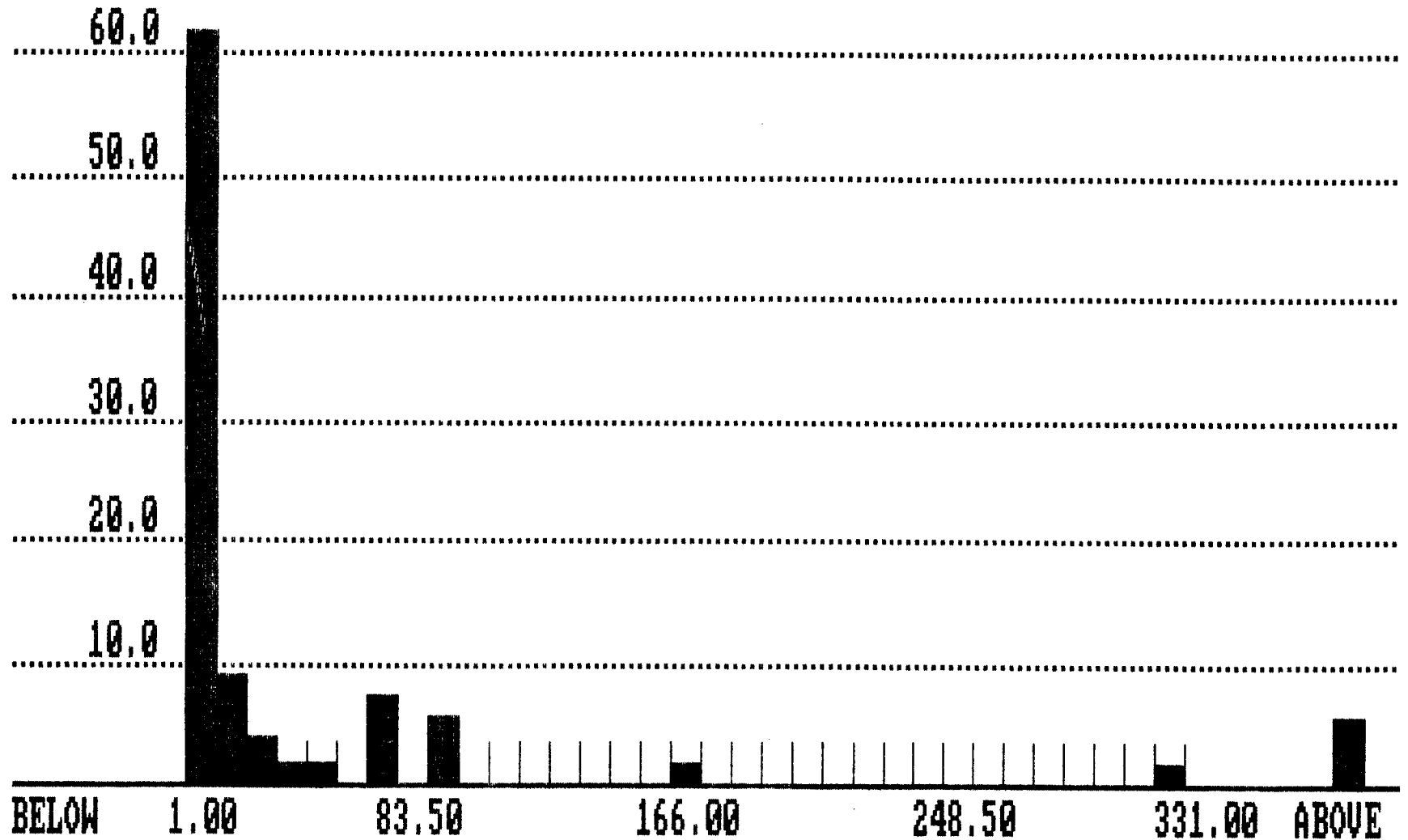
NO. OF OBSERVATIONS: 55  
MEAN : 475.000  
STD. DEV. : 813.576



PERCENT OF  
TOTAL

VARIABLE : AU  
MINIMUM : 10.000  
MAXIMUM : 1030.000

NO. OF OBSERVATIONS: 55  
MEAN : 71.818  
STD. DEV.: 185.363





VARIABLE:	AU	
NUMBER OF OBSERVATIONS:		55
MINIMUM:		10.000
MAXIMUM:		1030.000
MEAN:		71.818
STANDARD ERROR OF MEAN:		24.994
STANDARD DEVIATION:		185.363
COEFFICIENT OF VARIATION:		258.100
SKEWNESS:		3.756
KURTOSIS:		14.056

VARIABLE:	AS	
NUMBER OF OBSERVATIONS:		55
MINIMUM:		6.000
MAXIMUM:		3870.000
MEAN:		475.000
STANDARD ERROR OF MEAN:		109.703
STANDARD DEVIATION:		813.576
COEFFICIENT OF VARIATION:		171.279
SKEWNESS:		2.814
KURTOSIS:		8.194

A P P E N D I X V

ROCK SAMPLE DESCRIPTIONS

FIELD NO.	LOCATION			SAMPLE TYPE	SAMPLE/TRUE WIDTH/WIDTH	ROCK TYPE	ALTERATION	MINERALIZATION	ADDITIONAL OBSERVATIONS
	NTS	LONG. UTME	LAT. UTMW						
PR9049	104K/10	Bygon		chip	5cm		musc.	aspy + py.	5cm wide - host rock bt + feld + qtz porph.
PR9050	"			chip	20cm	bt, feld + qtz II	musc + limonite	py ± aspy.	Wall rock to above vein
PR9051	"			chip	10cm		musc + qtz	aspy + py.	10cm vein with clumps of massive py aspy
PR9052	"			float	10cm	qtz vein		aspy.	10cm qtz vein with 2 bands aspy
PR9053	"			selected			musc	aspy.	qtz + aspy vein cuts greened II.
SR9 004	104 K/10			o/c	20cm 20cm	sedim near	silicified	py, aspy	surrounding sediments have been hornfels
007	104 K/10			o/c	.5m 3m	hornfels	silicified	py, aspy?, mg	in gossan cliff
026	104K/10			ocp	20 x 20m	porphyry		10% hornfels 1-2% pyrite	
FR89027	104K/10			ocp	20 x 30m	porphyry	rusty	10% hornfels 3-4% pyrite 8-10% pyrite	bleached
028	104K/10			ocp	30 x 30m	porphyry	light rusty	2-3% fine arsenopyrite?	
029	104K/10			ocp		porphyry	rusty	pyrochlore 2-3% biotite	concentrated in veins

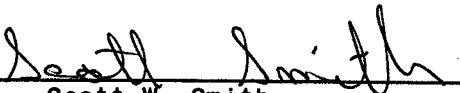
A P P E N D I X VI

CERTIFICATE

I, SCOTT W. SMITH, of 2986 Point Grey Road, Vancouver, British Columbia, Canada, declare:

1. I am a Geologist, residing at the above address.
2. I am a member in training of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
3. I graduated from the University of Alberta with a Bachelor of Science (Geology) degree in 1988.
4. This report is based on my personal field examination of the property.

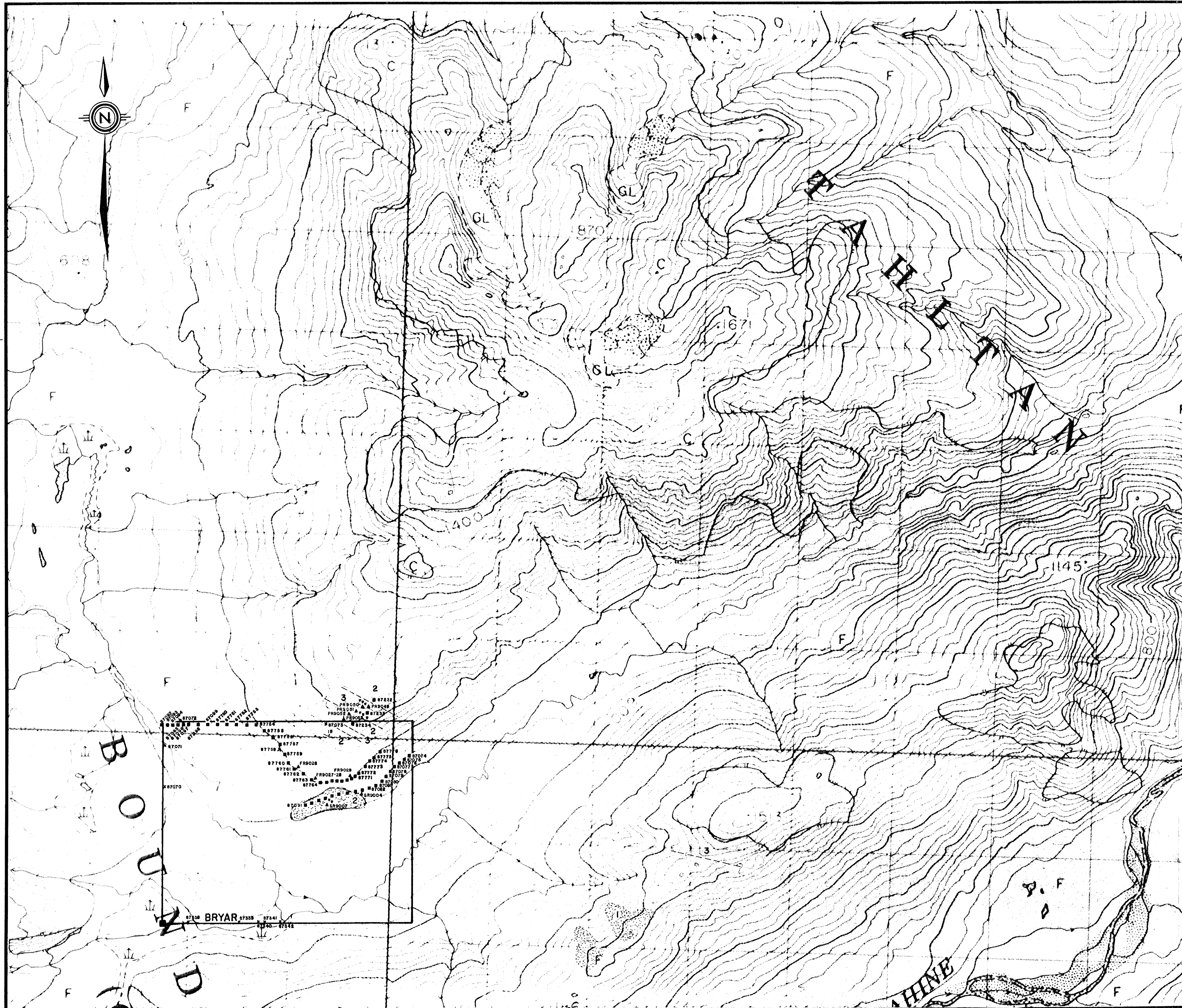
Dated at Vancouver, British Columbia, this 9 day of November, 1989.

  
\_\_\_\_\_  
Scott W. Smith,  
Geologist

A P P E N D I X VII

REFERENCES

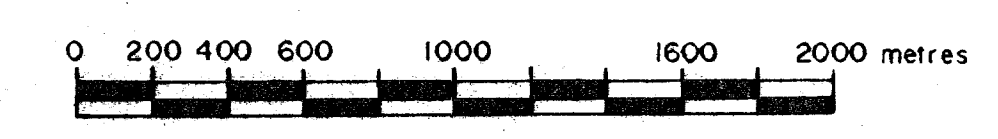
1. Souther, J.G. 1969, GSC Map 1262A, Geology of the Tulsequah and Juneau Map Sheet 104K



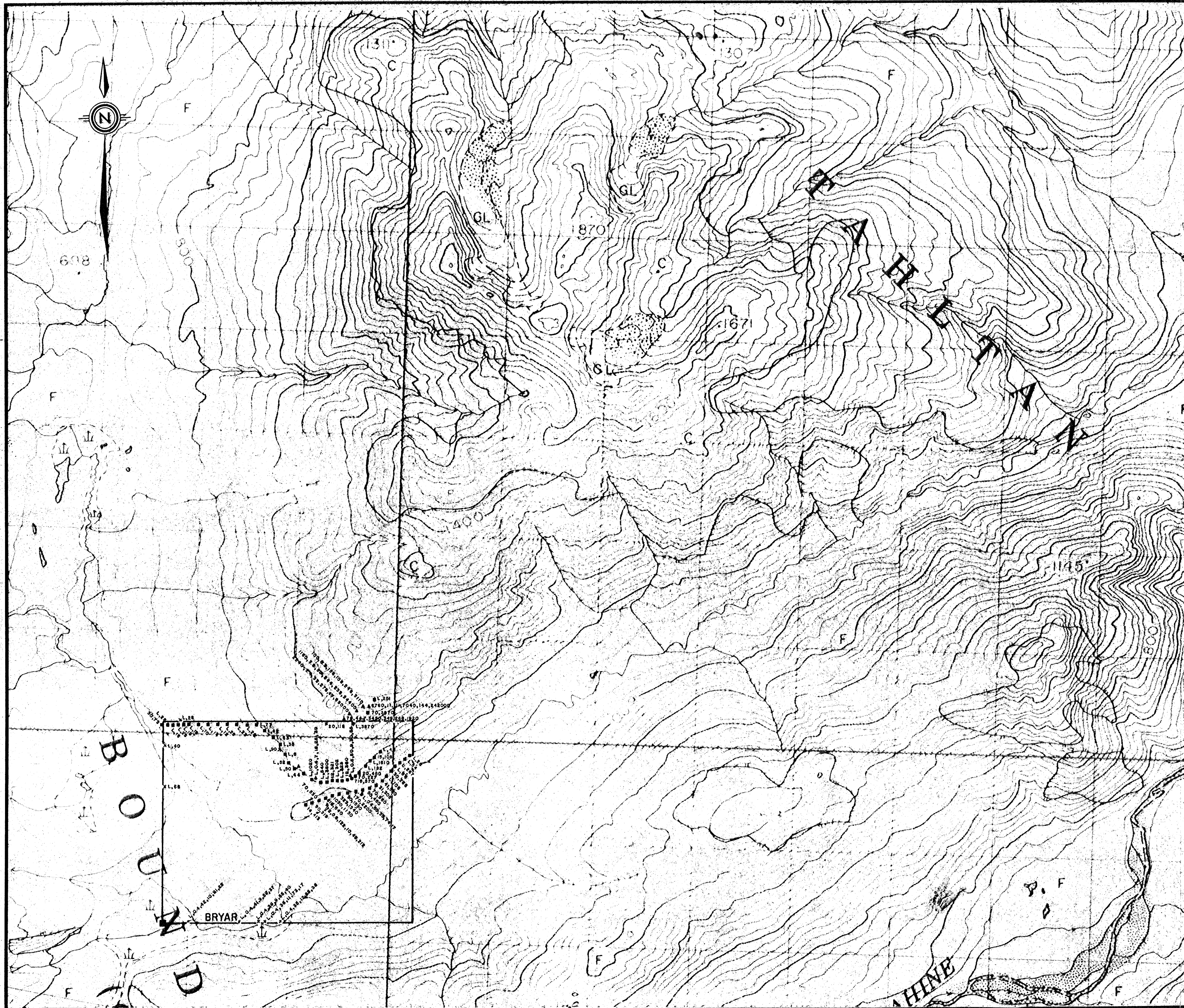
- 3 Quartz-biotite-feldspar porphyry
- 2 Laminated siltstone, locally hornfelsed and pyritized
- 1 Greywacke
- Arsenopyrite vein with quartz-muscovite-pyrite alteration
- ▲ Rock sample
- Soil sample
- x Silt sample
- Bedding orientation
- - - Geological contact

Gossan  
**GEOLOGICAL BRANCH  
 ASSESSMENT REPORT**

**19,326**



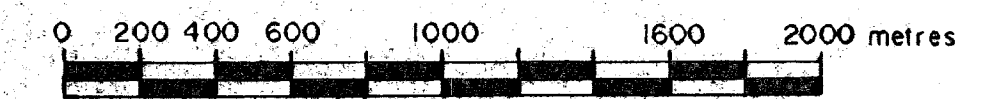
<b>BRYAR CLAIM</b>		104 K/10	
Drawn by: SWS	Traced by:		
Revised by: Date	Revised by: Date		
		<b>Sample Locations and Geology</b>	
ATLIN MD, BC		Date: OCT. 1989	Plate: 1
Scale: 1:20,000			



- ▲ rock sample
- soil sample
- x silt sample
- value less than detection limit
- 20,0,100,100,100,100 Au(ppb), Ag(ppm), Cu(ppm), Pb(ppm), Zn(ppm), As(ppm)
- 20,24 Au(ppb), As(ppm)

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,326



<b>BRYAR CLAIM</b>		104 K/10	
Drawn by: SWS	Traced by:		
Revised by: Date:	Revised by: Date:		
		<b>GEOCHEMISTRY</b>	
ATLIN MD, BC		Date: OCT. 1989	Plate: 2
Scale: 1:20,000		FORM 210 0600	