

LOG NO: 0119	RD.
ACTION:	
FILE NO:	

AU - 3 CLAIMS

FILMED

ISKUT RIVER - SULPHURETS MINING CAMP

Province of BRITISH COLUMBIA

NTS 104B / 10

56° 37' N
130° 40' W

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,572

Prepared for: BRAZOS PETROLEUM CORP.
3773 - 19th Street N.E.
Calgary, Alberta
T2E 6S8

Prepared by: Hughes P. SALAT, P. ENG.
5904 Dalhousie Drive N.W.
Calgary, Alberta
T3A 1T1

NOVEMBER 27, 1989

TABLE OF CONTENT

1 -	Property description	page 1
2 -	Introduction	1
3 -	Physiography and Access	3
4 -	Geological setting	3
5 -	Property geology	4
6 -	Geochemical sampling and prospection	6
7 -	Conclusions and recommendations	6
	Statement of expenditures	7
	References	8
	Figures 1 - location map	2
	2 - Geological map	5
	3 - Geochemical results (in pocket)	
	Certificate	9
	Appendices I - Thin section study	
	II - Assay results	
	III - Analytical procedures	

1 - PROPERTY DESCRIPTION

The claims under investigation are the following:

<u>claim name</u>	<u>Record #</u>	<u>Expiry date</u>	<u>Mining Division</u>
AU - 3	5712	Jan. 19, 1990	Liard

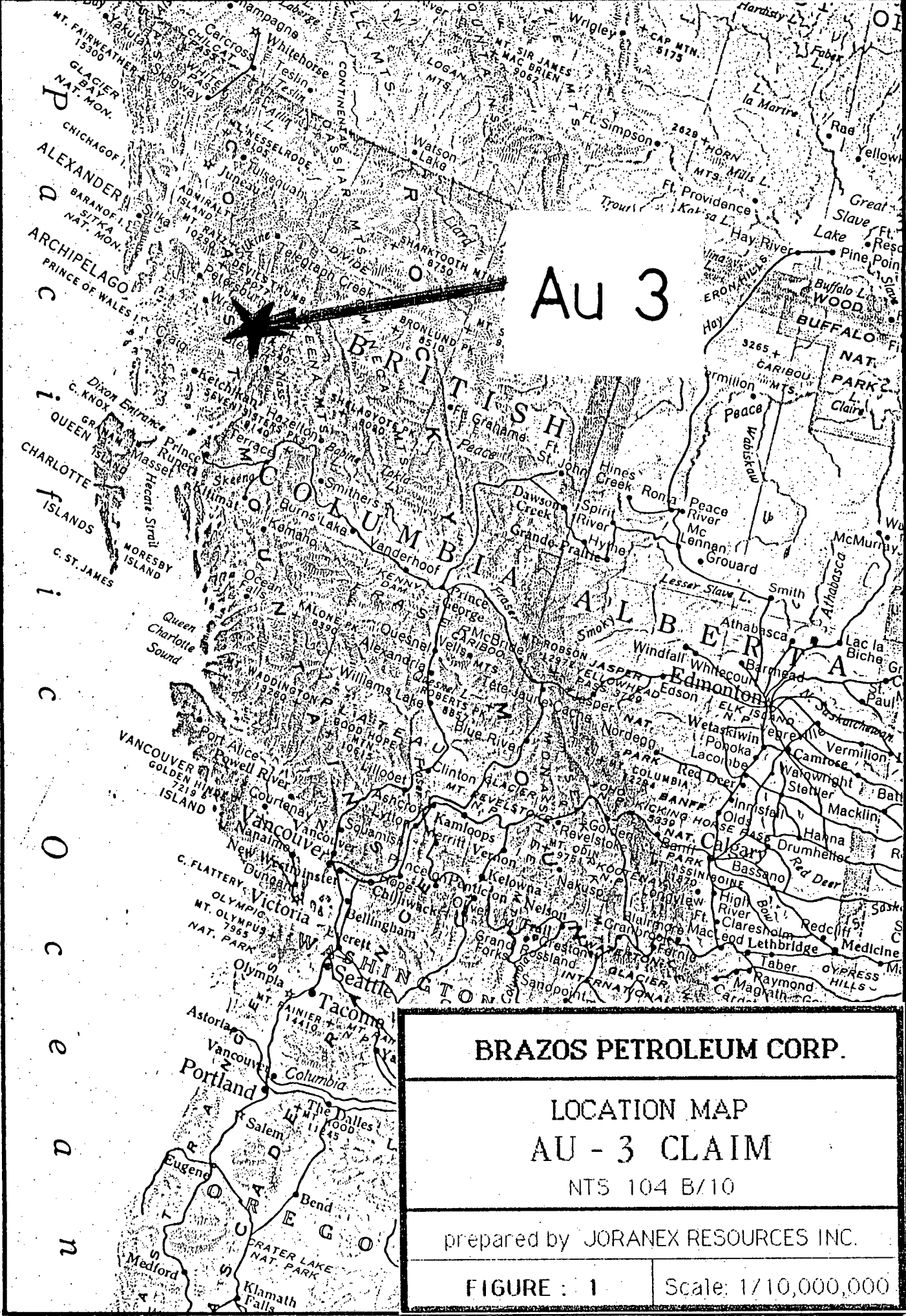
These claims are located within the presently very active Iskut River - Sulphurets Mining Camp in the Northwestern part of British Columbia (NTS 104 B /10), North of Prince Rupert and only 80 km North of the sea-port of Steward (see Figure 1).

2 - INTRODUCTION.

Exploration in the district goes back to 1893 when placer miners prospected the Unuk River and adjacent areas toward the Iskut River on their way to the Klondike Fields.

In the early part of this century, several major gold discoveries were made near Steward, in N.W. British Columbia, and along the lower reaches of the Iskut River. One of them, the Johnny Mountains Mine was subjected to some underground works. Recently, a flurry of exploration has re-opened the old working and turned the area into a major gold exploration Camp, with some promising prospects (Stikine, Inel, Eskay, Sulphuret).

The AU - 3 claims staked by Brazos Petroleum Corp. of Calgary, are located in close vicinity to these major deposits.



Au 3

BRAZOS PETROLEUM CORP.

LOCATION MAP
AU - 3 CLAIM

NTS 104 B/10

prepared by JORANEX RESOURCES INC.

FIGURE : 1

Scale: 1/10,000,000

3 - PHYSIOGRAPHY AND ACCESS.

The terrane in the North western part of British Columbia near the border with Alaska, consists of rugged mountains belonging to the Coast Ranges. Although of medium heights, heavy snowfalls and northern latitudes contribute to the large extent of glaciers capping most of mountain tops, lower reaches and stretching far into the valleys where they terminate into long moraines

Wide U-shaped valleys are the trademark of dissection by the glaciers. While larger river systems occupy broad valleys and their wide braided sandbars provide flat fluvial terraces, their tributaries flowing from snowy ranges have dissected into their glacial moraine and oversteepened their banks often into inaccessible canyons.

Vegetation consists of spruce and pine trees on lower slopes up to 1500 meters elevation where it is replaced by alpine eco-systems. In valley bottom, and especially in avalanche areas the trees are intermixed or replaced by very thick, impenetrable alders (buck-brush) and devil's club, making progress at time impossible, at best very tedious.

Access to the claims, away from trails or roads, is restricted to helicopter drop-off either on mountain ridges or at bottom of valley.

4 - GEOLOGICAL SETTING.

The rock formations underlying the ground around Iskut and Unuk rivers, are a mixture of volcanics and mostly clastic sediments making the bulk of an "euzeosynclinal" succession, ranging in age from upper Triassic to late Jurassic.

This package of rock formations constitutes the western border of "Stikinia". This term applies to an uplifted arch through which the older Triassic units are exposed within the wider Intramontane tectono-stratigraphic assemblage, which makes up the framework of the Interior Plateaus and Mountains of British Columbia.

Stratigraphy of the region can be divided into four major units which are from base to top:

- The **Takla Group** (upper Triassic) of conglomerate, sandstone and siltstone intermixed with some volcanic elements.
- The **Unuk River Formation** (lower Jurassic) made of volcanic breccia and tuff as well as conglomerate and sandstone
- The **Betty Creek Formation** with its pillow lavas, green and purple volcanic breccia and some sandstone and siltstone.
- The **Salmon River Formation**, clearly transgressive on older units, is composed of greywacke, sandstone and argillite.

The last three units are lumped together into the **Hazelton Group** for correlative purpose across the Province of British Columbia.

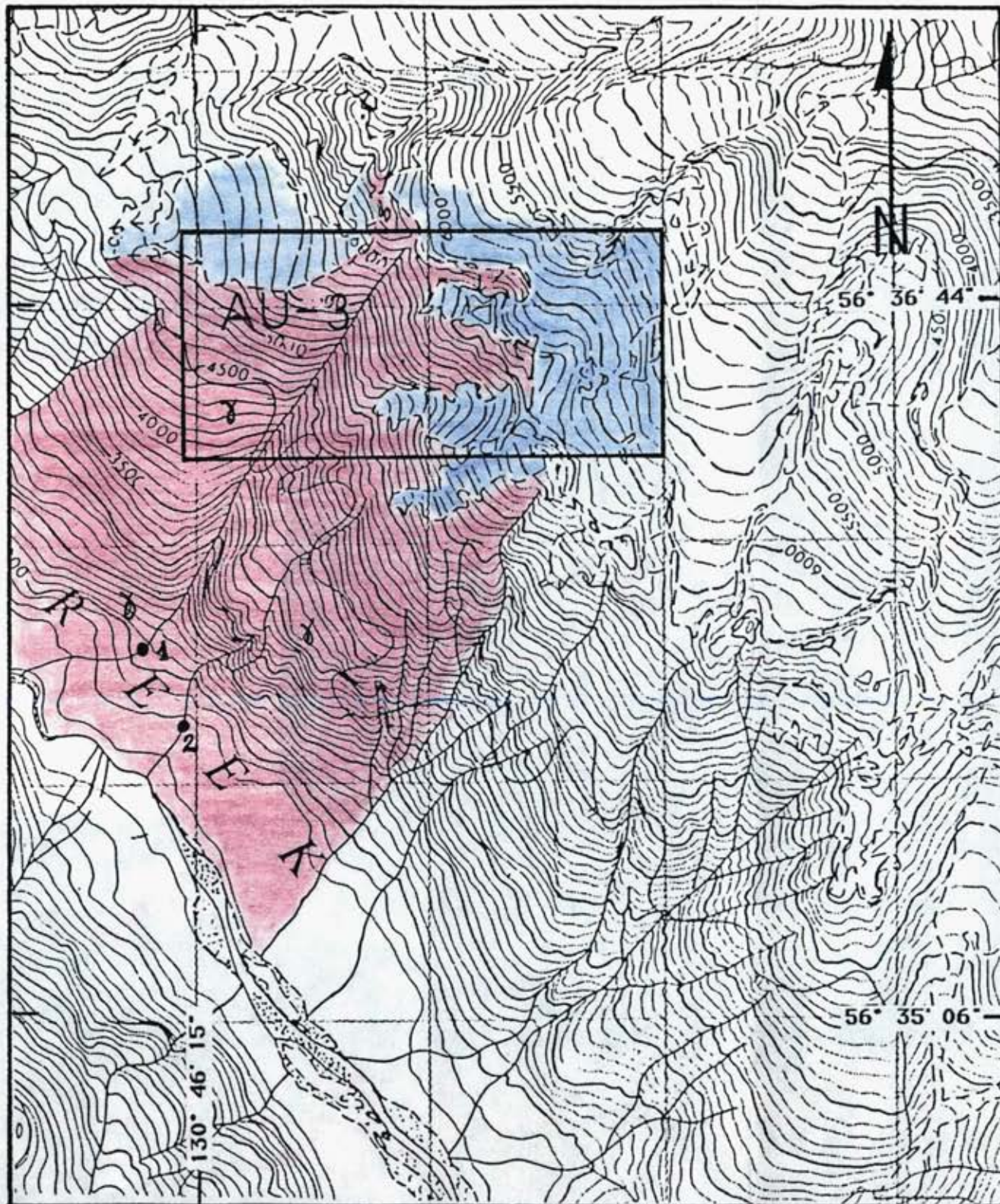
In turn, the volcanic layers and sediments have been successively intruded by granodioritic plugs from the time of middle Jurassic until the Tertiary. These local igneous intrusions are easterly expressions of the main Coast Range Batholith protruding just a little distance away to the West. The larger intrusive stocks found in the area range from monzonite to quartz diorite in composition while the smaller ones present a more basic chemistry like diorite or gabbro.

5 - PROPERTY GEOLOGY.-(figure 2)


The claim AU - 3 is located over the eastern steep flank of the Snippaker Valley, mapped as underlain by sediments of the Unuk River formation (Lower Jurassic).


In fact, traversing up slope along the dangerously abrupt sides of the two creeks streaming down from the glacier-clad ridges and dissecting the area covered by property, one has been able to observe only massive granitic outcropping.

Chip samples have been carved out and a short description is hereafter given, along with thin section study under the microscope. (Appendix I)



LEGEND

 Hornblend granodiorite

 Large stream sediment sample
(for heavy liquid separation)

BRAZOS PETROLEUM CORP.	
GEOLOGICAL MAP	
AU - 3 CLAIM	
NTS 104 B/10	
prepared by JORANEX RESOURCES INC.	
FIGURE : 2	Scale: 1/25,000

6 - Geochemical sampling and Prospection

Only in the lower reaches of the two above mentioned creek was it possible to gather enough materiel for analysis and heavy mineral separation (tetrabromoethane; $d = 2.96$). The results are reported in Appendix II.

The catchment area of those two creeks (see figure 2) embraces the total area of claim AU-3. If any mineralization exists on the property, it ought to show in the results, and indeed sample Au 3/1 heavies indicates flakes of gold present in that short creek. It is therefore, suspected that it comes from the higher reaches along the nearly vertical cliffs, impossible to prospect.

7 - Conclusion and Recommendations

The homogeneous appearance of the granitic stock, the lack of evidence for mineralization along accessibnle lower slopes do not bode favorably for the area. However, heavy mineral separation, has conclusively shown the existence of some mineral occurence over and in unaccessible slopes at foot of glaciers. Such location renders the potential mineralization of little interest.

On these promises, it is not recommended that any further work be pursued in the area.

STATEMENT OF EXPENDITURE

4 days works - Consultant geologist at \$400./day	\$ 1600,00
Assistant-pro prospector at \$150./day	\$ 600,00
Camp, food supply +	
travel time (4 days)	\$ 1750,00
Helicopter time 2 hours at \$625./hour	\$ 1250,00
Reporting and drafting.....	\$ 500,00
Travel expense (pro-rata).....	\$ 600,00
Analysis.....	\$ 200,00
TOTAL	\$ 6500,00

REFERENCES

- Grove, E.W. - 1971 - Geology and Mineral Deposits of the Steward Area, B.C.;
B.C. Dept Mines & Petrol. Res. Bull. 58, 219 p.
- Grove, E.W. - 1986 - Geology and Mineral Deposits of the Unuk River - Salmon
River - Anyox Area; B.C. Ministry of Energy, Mines
and Petrol. Res. Bull. 63, 152 p.
- MINFILE Map 104 B, B.C. Dept Mines & Petrol. Res. Publications. (2 maps).
- Regional Stream Sediments and Water Data, B.C. - 1987 - B.C. Open File RGS 18 /
GSC Open File 1645, MTS 104 B - Iskut River.

CERTIFICATE

I, HUGHES P. SALAT, of the City of Calgary, Alberta, certify that:


1/ My present address is 5904, Dalhousie Drive N.W., Calgary, Alberta, T3A 1T1 and my occupation is that of a consulting geologist.

2/ I am a graduate of the Ecole Nationale Supérieure de Géologie Appliquée de Nancy and of Faculty of Earth Sciences, University of Nancy (France) with a degree of M.Sc. and have completed all credit requirements for a degree of Ph.D. at the University of Southern California in Los Angeles (unwritten thesis due to military recall).


3/ I have been practising continuously my profession of geologist since 1968 in Canada and Europe.

4/ I am a member of the Association of Professional Engineers, Geologists and Geophysicists of the Province of Alberta, of the Geological Association of Canada and of the Canadian Institute of Mining and Metallurgy.

5/ I have no interest either directly or indirectly, nor do I expect to receive any interest in the property covered in this report.



Hughes P. Salat
Consulting Geologist.



APPENDIX I

THIN SECTION STUDY

Samples collected along the lower slopes near edge of AU - 3 claims are all identical . One thin section was made and described here-after.

- Macroscopic = whitish grey, slightly greenish, medium-grained, isotropic, crystalline rock.
- Microscopic =
 - Texture = granoblastic, xenomorphic, 1 to 4 mm size with tendency to porphyric texture.
 - Modal composition = 25% quartz, few are intact, show strain and recrystallization.
 - 40% medium size, orthoclase, well visible twinning.
 - 20% plagioclase, some large phenocryst but mostly altered to damourite. Only few measurements giving An 50-55.
 - 10% hornblend, replaced by chlorite.
 - a few leucoxene grains.
- Type = Hornblend granodiorite.

APPENDIX II

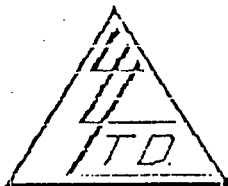
ASSAY RESULTS

To: MR. HUGHES SALAT,
104 Dalhousie Drive N.W.,
Calgary, Alberta
C/A 1T1

File No. 32814-1

Date November 3, 1989

Samples _____



Certificate of Assay LORING LABORATORIES LTD.

SAMPLE NO.	% By Weight	PPB Au	PPM Cu
Heavy Liquid Separation			
Au 3/1 -80+200 Sink	10.37	+1000	NSS
Float	89.63	NIL	28
Au 3/1 -200 Sink	<.1	15	NSS
Float	100	NIL	57
Au 3/2 -80+200 Sink	3.35	20	21
Float	96.65	NIL	33
Au 3/2 -200 Sink	1.2	10	NSS
Float	98.8	NIL	68

* NSS = Non Sufficient Sample.

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

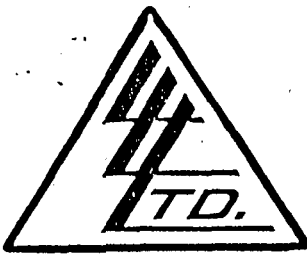
Residuals retained one month.
Pulps retained one month
unless specific arrangements
are made in advance.



ANABLE

APPENDIX III

ANALYTICAL PROCEDURES



629 Beaverdam Rd. N.E.
Calgary, Alberta T2K 4W2

LORING LABORATORIES LTD.

Phone 274-2777

Preparation Procedures for Geochemical Samples

1 - Soil And Silts:

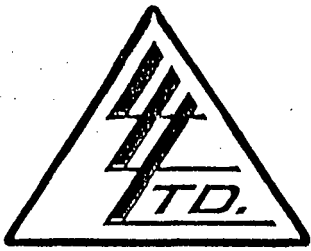
- a) The soil sample bags are placed in dryer to dry at 105°C.
- b) Each sample is passed through an 80 mesh nylon seive. The +80 mesh material is discarded.
- c) The -80 mesh sample is placed into a coin envelope and delivered to the laboratory for analysis.

2 - Lake Sediments:

- a) The sediment sample bags are placed into the dryer at 105°C until dry.
- b) The dried material is transferred to a ring and puck pulverizer and ground to -200 mesh.
- c) The -200 mesh pulp is then rolled for mixing, placed into a coin envelope, and taken to the laboratory for analysis.

3 - Rocks and Cores:

- a) The samples are dried in aluminum disposable pans at 105°C.
- b) They are then crushed to 1/8" in jaw crusher.
- c) the 1/8" material is mixed and split to sample pulp size.
- d) The sample is then pulverized to 100 mesh, using a ring and puck pulverizer.
- e) The -100 mesh material is rolled on rolling mat and transferred to sample bag. The sample is then sent to the laboratory for analysis.



629 Beaverdam Rd. N.E.
Calgary 67, Alberta

LORING LABORATORIES LTD.

Phone 274-2777

Geochemical Analysis of Soils, Sediments and Silts.

FOR: Copper, Lead, Zinc, Nickel and Silver, and Cobalt

Sample Preparation:

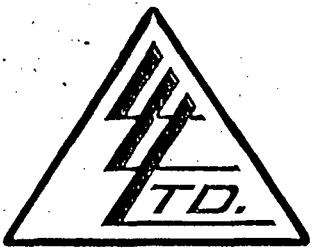
- Samples were placed in dryer overnight at 105°C.
- All samples are sieved through an 80 mesh nylon screen.
- The minus 80 is placed in pre-marked sample bag for analysis. The plus 80 portion is discarded.

Sample Dissolution:

- 1/2 gram samples are weighed and transferred to test tubes.
- One ml water added, then three mls hydrochloric (concentrated), one ml nitric acid (concentrated) are added.
- Test tubes are then placed into hot water bath 100°C and digested for three hours with occasional shaking to ensure complete digestion.
- Test tubes are removed from water bath and allowed to cool.
- Test tubes are bulked to exactly 10 mls, corked and shook.
- All samples are then allowed to settle until clear.
- The clear solutions are then aspirated through the atomic absorption spectrophotometer with appropriate standards to obtain the metal content.

Detection Limits and Precision:

<u>Element</u>	<u>Detection Limit</u>	<u>Precision at 100 ppm level</u>
Copper	1 ppm	+ - 2 ppm
Lead	2 ppm	+ - 4 ppm
Zinc	1 ppm	+ - 2 ppm
Nickel	1 ppm	+ - 2 ppm
Silver	0.2 ppm	+ - 1 ppm
Cobalt	1 ppm	+ - 4 ppm



629 Beaverdam Rd. N.E.
Calgary, Alberta T2K 4W2

LORING LABORATORIES LTD.

Phone 274-2777

Au Geochems (Soils & Sediments)

1. Weigh 10 g sample to fire assay crucible (carry blank)
 2. Place crucibles in fire assay furnace at fusion temperature for 15 minutes.
 3. Allow crucibles to cool on steel table.
 4. Add 1 tablespoon flux and 1 in quart to each crucible.
 5. Fuse for $\frac{1}{2}$ hr. at fusion temperature.
 6. Pour pots, remove slag and cupel.
 7. Place beads into 50 ml flasks.
 8. Pipette stds. and blank into 50 ml flasks.

1 ml of 10 ppm	=	1000 ppb
1 ml of 5 ppm	=	500
1 ml of 1 ppm	=	100
0 ml	=	0
 9. Add 5 mls H₂O, 3 mls HNO₃ and place on 1 switch plate for 5 minutes. Take off plate. Add 5 mls HCl.
 10. Digest until total dissolution approximately $\frac{1}{2}$ hr.
 11. Bulk flasks to approximately 25 mls with distilled H₂O. Cool to room temperature.
 12. Add 5 mls MIBK. Stopper and shake each flask for exactly 1 minute.
 13. Allow MIBK to settle.
 14. Set 1100 AA unit as follows:

mu	-	2428
slit	-	.5
lamp MA	-	3
flame	-	air-acetylene - extremely lean
- Stds. 100 ppb - 10
1000 ppb - 100
500 ppb - reading

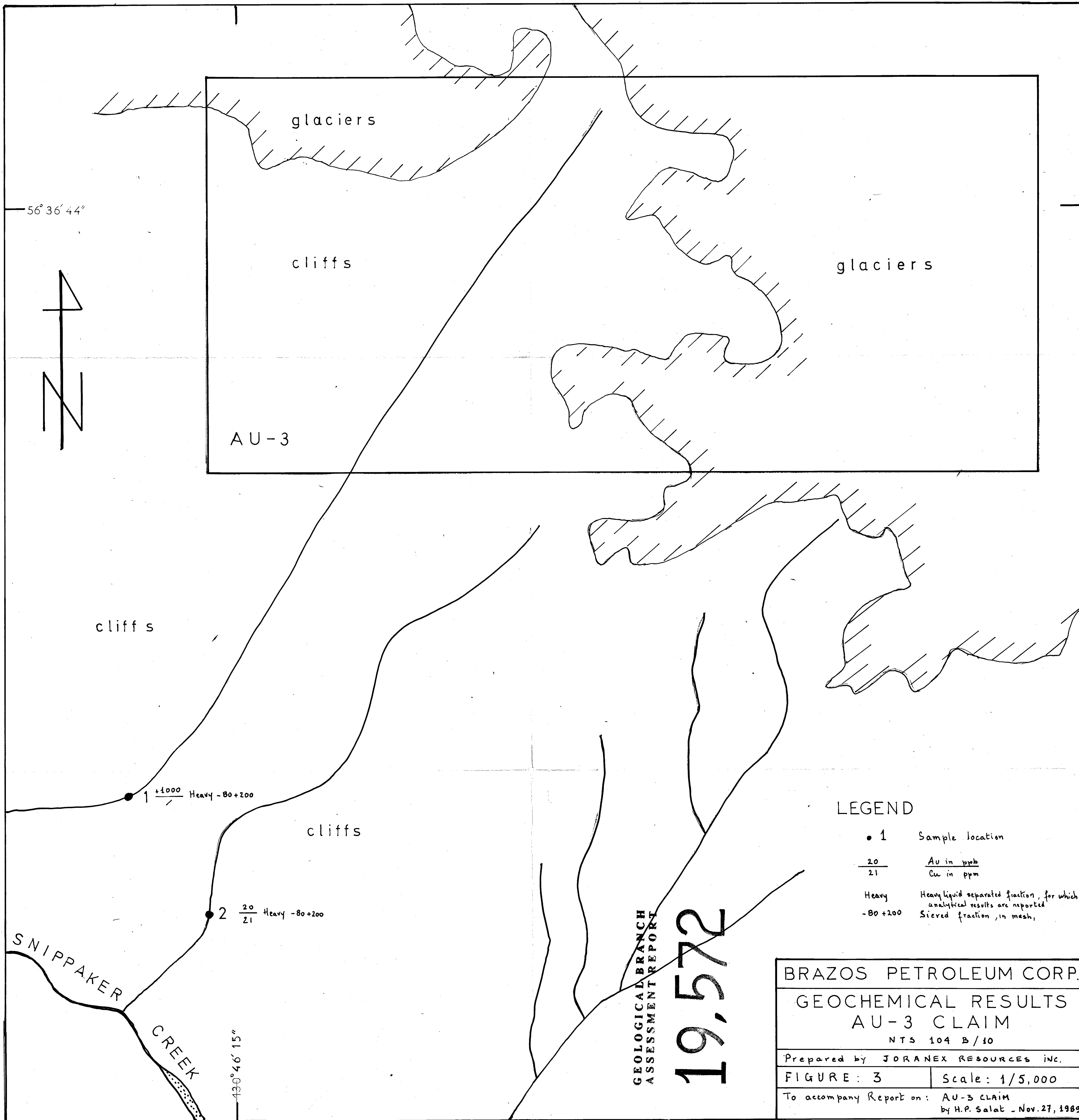
15. Report directly in ppb. Detection limit 5 ppb at reading of .5.

*-1 - for rock geochems steps 2 and 3 can be eliminated.

*-2 - it is important to maintain as closely as possible standard conditions for all samples and standards in a series.

Reagents & Material

- MIBK - 4-Methyl-2-Pentanone
- HCl - conc
- HNO3 - conc
- Flux - 2980 g PbO
777 g Na2CO3
68 g Na2B4O7
68 g SiO2
167 g Flour



BRAZOS PETROLEUM CORP.	
GEOCHEMICAL RESULTS	
AU-3 CLAIM	
NTS 104 B/10	
Prepared by JORANEX RESOURCES INC.	
FIGURE: 3	Scale: 1/5,000
To accompany Report on: AU-3 CLAIM	
by H.P. Salat - Nov. 27, 1989	