

DU PONT OF CANADA EXPLORATION LIMITED

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE LASS 1-4 CLAIMS

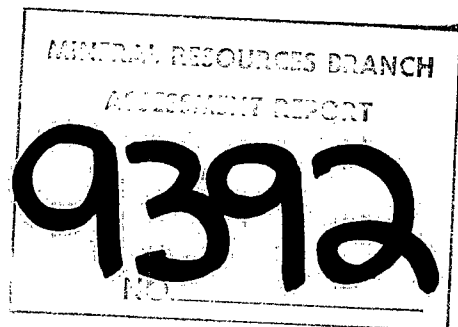
OMINECA MINING DIVISION

LAT. 57°20'N, LONG. 127°20'W

NTS: 94-E-6W

OWNER OF CLAIMS: Du Pont of Canada Exploration Limited

OPERATOR: Du Pont of Canada Exploration Limited



Author: D. M. Strain

Date Submitted: 1981 JUN 10

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Dwg. AR. 80-220	LASS - Geochemistry	"

I INTRODUCTION(a) Location and Access

The LASS Claim Group is located in the south-eastern portion of the Toodoggone River map sheet (94-E-6W), 2 km west of Lawyers Creek and 6.5 km north of Chappelle Creek.

Roads in the area are limited to tractor trails which originate to the southeast and northwest. A tractor trail runs from the termination of the Omineca Road to the Sturdee River Valley airstrip some 20 km to the southeast. The Stewart-Cassiar Highway lies approximately 150 km to the west.

(b) Claim Definition

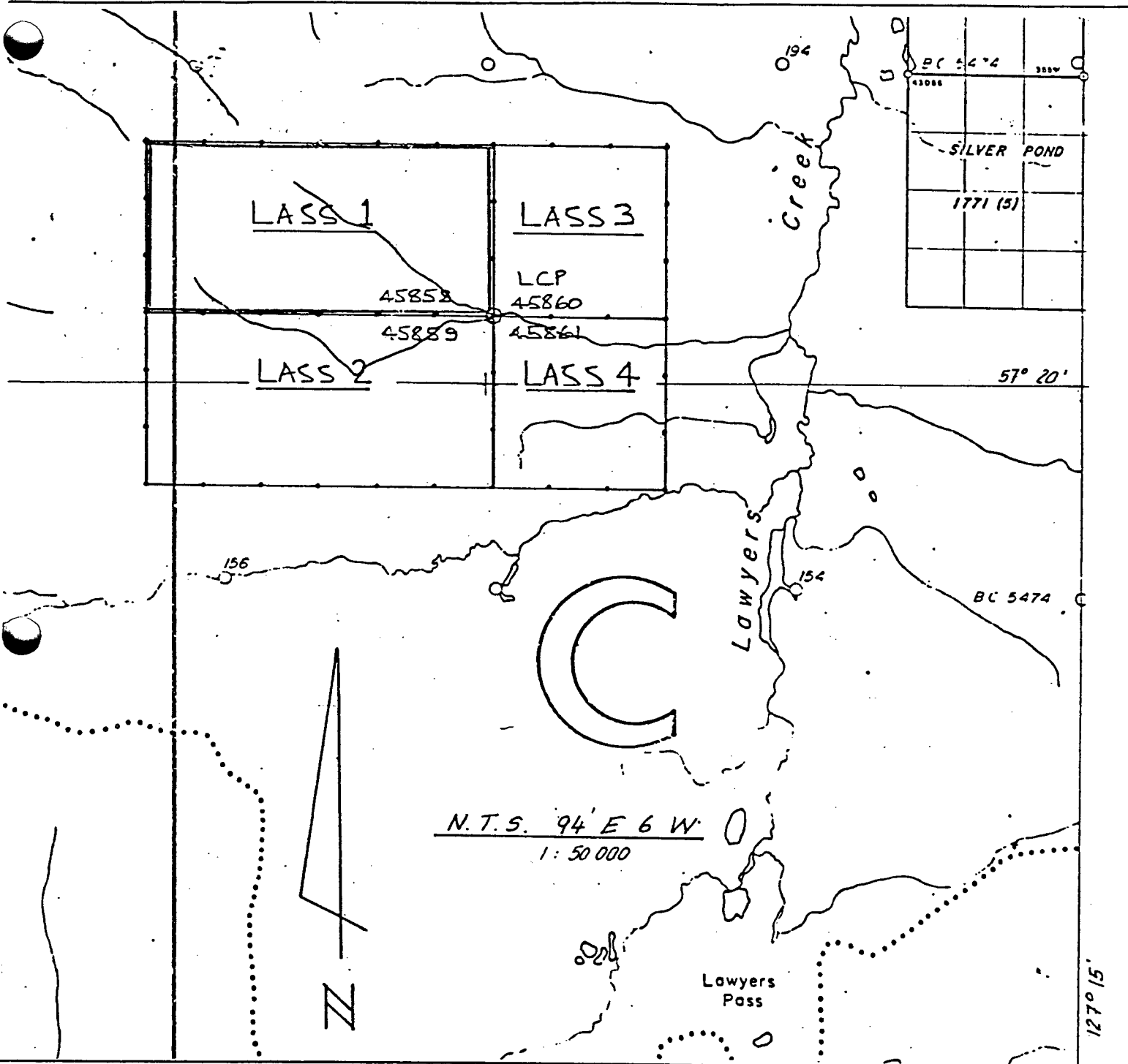
The LASS claims consist of four groups (LASS 1-4), LASS 1 and 2 comprised of 18 units each and LASS 3 and 4 comprised of 9 units each. The claims are within the Omineca Mining Division, were recorded July 25, 1980 and are currently owned and operated by Du Pont of Canada Exploration Limited.

The ground was staked as a result of an anomalous stream sediment sample and is viewed as a potential gold prospect.

(c) Summary of Work Performed

In late May, 1980 two coarse, 10 kg stream sediment samples (#1776 and #1777) were collected from what is now the LASS Claim Group. Sample #1777 contained anomalous gold (6000 ppb) and on this basis a large area covering the upstream drainage was staked.

On August 14, 1980 follow-up was conducted and consisted of 1 person day prospecting and two person days stream sediment collecting.



N.T.S. 94 E 6 W  
 1: 50 000

127° 15'

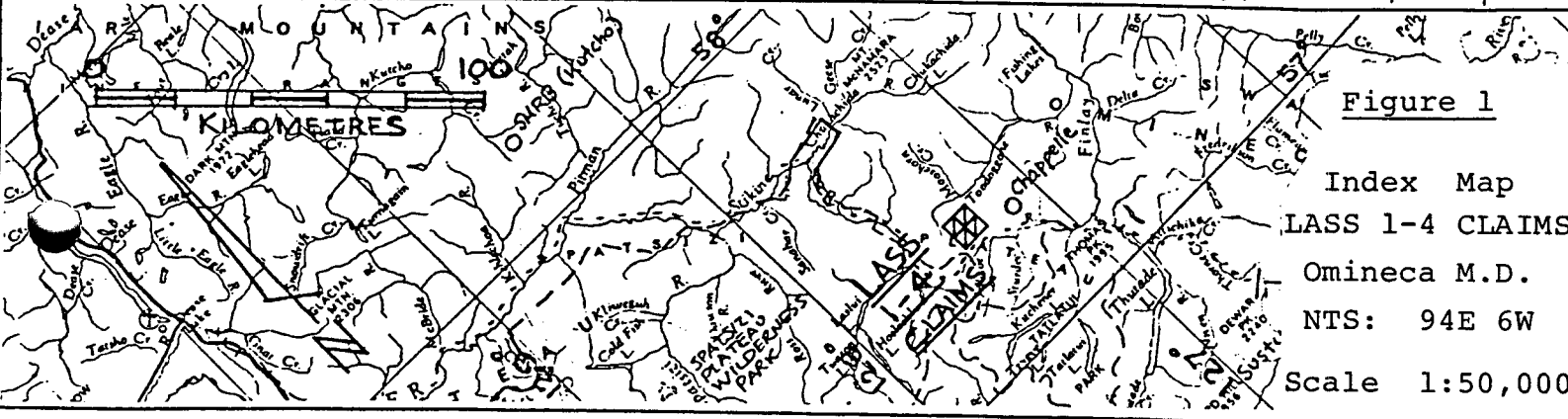


Figure 1

Index Map  
 LASS 1-4 CLAIMS  
 Omineca M.D.  
 NTS: 94E 6W  
 Scale 1:50,000

(d) Physiography and Vegetation

The LASS Claim Group is situated in the extreme southeastern portion of the Spatsizi Plateau. Topography of the claim is gentle compared to the rugged mountains to the northeast and southwest.

The main creek on the property flows eastward to Lawyers Creek with a substantial decline in volume throughout the summer. Elevation ranges from 1350 m in the east, to 1830 m in the west.

Vegetation consists of stunted shrubs, grass and moss.

II GEOLOGY

(a) Introduction

The LASS Claim Group lies on the eastern flank of the Intermontane Belt within the Cassiar Mountains.

The property straddles the contact between Lower to Middle Jurassic ("Toodoggone") volcanic rocks in the east and Tertiary and Upper Cretaceous conglomerates in the west, (GSC O.F. 306 - Geology Toodoggone River map area).

Prospecting revealed arenaceous conglomerates with thin beds of sandstone and fossiliferous flint in the west half of LASS 1 and 2. Time did not permit examination of the volcanics in the east.

(b) Claim Geology

The western half of LASS 1 and 2 is occupied by non-moraine conglomerates of the Sustut Group. These framework supported rocks are composed of poorly rounded clasts ranging from coarse sand to cobbles. The composition of the clasts is mainly granitic with minor volcanic and chert

components. Thin beds (0.5 m) of sandstone occur in a few localities and were seen to contain fossiliferous, cherty horizons. The sandstones strike at  $030^{\circ}$  and dip  $20^{\circ}$  to the southeast.

No mineralization was observed in these rocks.

(c) Conclusion

Poorly sorted and poorly rounded arenaceous conglomerates occupy the western portion of LASS 1 and 2.

The volcanic rocks known to occur in the eastern portion of the claims were not traversed. Gossans occur in the eastern portion of the claims along the main creek within the volcanics.

Prospecting is required in the eastern claim groups (LASS 3 and 4) as well as more detailed examination of outcrop in the vicinity of geochemistry anomalies (see section IIIb).

III GEOCHEMISTRY

(a) Sampling Procedure, Preparation and Analysis

A total of two coarse, 10 kg stream sediment samples (1776 and 1777) and 51, 1 kg stream sediment samples were collected from the LASS Claim Group. At each collection site (200 m intervals) the specific information pertaining to the sample was recorded on a special information tag. A flag bearing the sample number was placed adjacent to the sample site.

The coarse, 10 kg samples were collected in large plastic bags, the 1 kg samples in Kraft sample envelopes. All samples were sent to Min-En Labs in North Vancouver.

The coarse samples were wet-sieved and separated into a -20 +100 mesh coarse fraction and a -100 mesh fine fraction in the field (explanation in Appendix A). At the laboratory, the coarse fraction was passed through tetrabromethane and a heavy mineral concentrate was obtained. The concentrate was analyzed for Au, the -100 mesh fraction for Au, As, Pb, Cu and Ag as outlined in Appendix A.

The 1 kg samples were sieved in the laboratory to -80 mesh or if there was insufficient -80 mesh and material, to -40 or -20 mesh and analyzed for Au as described in Appendix A.

(b) Results and Interpretation

Of the two 10 kg stream sediment samples, one, #1777 contained anomalous gold (6000 ppb). The gold in this sample reported in the coarse fraction. Silver displays somewhat elevated values in the -100 fraction for both 10 kg samples. Two other 10 kg stream sediment samples (#2285 and #2286) were taken outside the property, to the east, and also showed above background Ag values.

Values obtained from the 1 kg stream sediment samples range from 5 ppb to 90 ppb. Visual examination of the Au values suggests a background of 10 to 15 ppb, a threshold of 25 to 30 ppb and 30 ppb as anomalous. On this basis six anomalies are apparent, five of which occur on the main creek draining the claims. All anomalies are separated by at least 1000 m and show no obvious correlation.

Detailed soil sampling and further stream sediment sampling in the vicinity of the anomalies is required.

IV COST STATEMENT(a) Wages

	<u>Rate/ day</u>	<u>Spec. dates</u>	<u>No. days</u>	<u>Cost</u>
1 field geol.	\$ 51.88	Aug. 14/80	1.0	\$ 51.88
2 field asst.	46.58	Aug. 14/80	1.0	93.16
1 jr. field asst.	39.18	Aug. 14/80	1.0	39.18
1 tech. asst.	39.18	Jan. 15-16/81	1.0	78.36
1 geologist	172.00	Apr. 21/81	1.0	<u>172.00</u>
				\$434.58

(b) Room and Board

Per diem rate of \$49.56 -  
based on 4 person days

\$198.24

(c) Transportation

General Transport - (to and from area)	\$ 324.77
Terr-Air Charter, ticket no. 930 1.1 hrs. x \$366/hr.	402.60
Terr-Air Charter, ticket no. 936 0.7 hrs. x \$366/hr.	256.20
Fuel - 54 gal. @ \$3/gal.	<u>162.00</u>
	\$1,145.57

(d) Analytical Services

Min-En Laboratories Ltd. Invoice #7349

38 stream sediments - Preparation (@ .60¢ ea.)	\$ 22.80
38 stream sediments - Au (@ \$4.25 ea.)	<u>161.50</u>
	\$ 184.30

(e) Report Preparation

	<u>Rate</u>	<u>Date</u>	<u>No. days</u>	
Drafting	\$127.00	29 Apr/81	1.0	\$ 127.00
Typing	64.80	22 Apr/81	1.0	<u>64.80</u>
				\$ 191.80

GRAND TOTAL \$2,154.49



V. QUALIFICATIONS

I, David M. Strain, do hereby certify that:

1. I am a geologist residing at #202-330 East 7th Avenue, Vancouver, British Columbia, and employed on a part time basis by Du Pont of Canada Exploration Limited.
2. I am a graduate of Cambrian College of Applied Arts and Technology (Sudbury, Ontario) with a Diploma in Geological Engineering Technology.
3. I am presently enrolled in the Geological Sciences programme at the University of British Columbia endeavoring to obtain a B.Sc. degree in geology.
4. I have practised my profession in geology for the past three years in Ontario and British Columbia.
5. Between 1980 August 14 and 1981 April 30, I executed a field programme on the LASS claims on behalf of Du Pont of Canada Exploration Limited.



David M. Strain  
1981 April 30

V QUALIFICATIONS

I, Gerald A. Harron, do hereby certify that:

1. I am a geologist residing at 2810 Sechelt Drive, North Vancouver, British Columbia and employed by Du Pont of Canada Exploration Limited.
2. I am a graduate of the University of Western Ontario with a M.Sc. degree in geology.
3. I am a registered Professional Engineer in the Province of Ontario.
4. I have practised my profession in geology continuously for the past 11 years in various provincial jurisdictions in Canada.
5. Between 1980 August 14 and 1981 April 30, I supervised/directed a field program on the LASS 1-4 claims on behalf of Du Pont of Canada Exploration Limited.

*Gerald A. Harron*

Gerald A. Harron

1981 April 30

*MIN-EN Laboratories Ltd.**Specialists in Mineral Environments*

Corner 15th Street and Bewicke

705 WEST 15th STREET

NORTH VANCOUVER, B.C.

CANADA

ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORKPROCEDURES FOR Mo, Cu, Cd, Pb, Mn, Ni, Ag, Zn, As, F

Samples are processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized by ceramic plated pulverizer.

1.0 gram of the samples are digested for 6 hours with  $\text{HNO}_3$  and  $\text{HClO}_4$  mixture.

After cooling samples are diluted to standard volume. The solutions are analyzed by Atomic Absorption Spectrophotometers.

Copper, Lead, Zinc, Silver, Cadmium, Cobalt, Nickel and Manganese are analysed using the  $\text{CH}_2\text{H}_2$ -Air flame combination but the Molybdenum determination is carried out by  $\text{C}_2\text{H}_2$ - $\text{N}_2\text{O}$  gas mixture directly or indirectly (depending on the sensitivity and detection limit required) on these sample solutions.

For Arsenic analysis a suitable aliquote is taken from the above 1 gram sample solution and the test is carried out by Gutzeit method using  $\text{Ag CS}_2\text{N} (\text{C}_2\text{H}_5)_2$  as a reagent. The detection limit obtained is 1. ppm.

Fluorine analysis is carried out on a 200 milligram sample. After fusion and suitable dilutions the fluoride ion concentration in rocks or soil samples are measured quantitatively by using fluorine specific ion electrode. Detection limit of this test is 10 ppm F.

*MIN-EN Laboratories Ltd.*

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Corner 15th Street and Bewicke

705 WEST 15th STREET

NORTH VANCOUVER, B.C.

CANADA

ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORK

PROCEDURE FOR GOLD GEOCHEMICAL ANALYSIS.

Geochemical samples for Gold processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

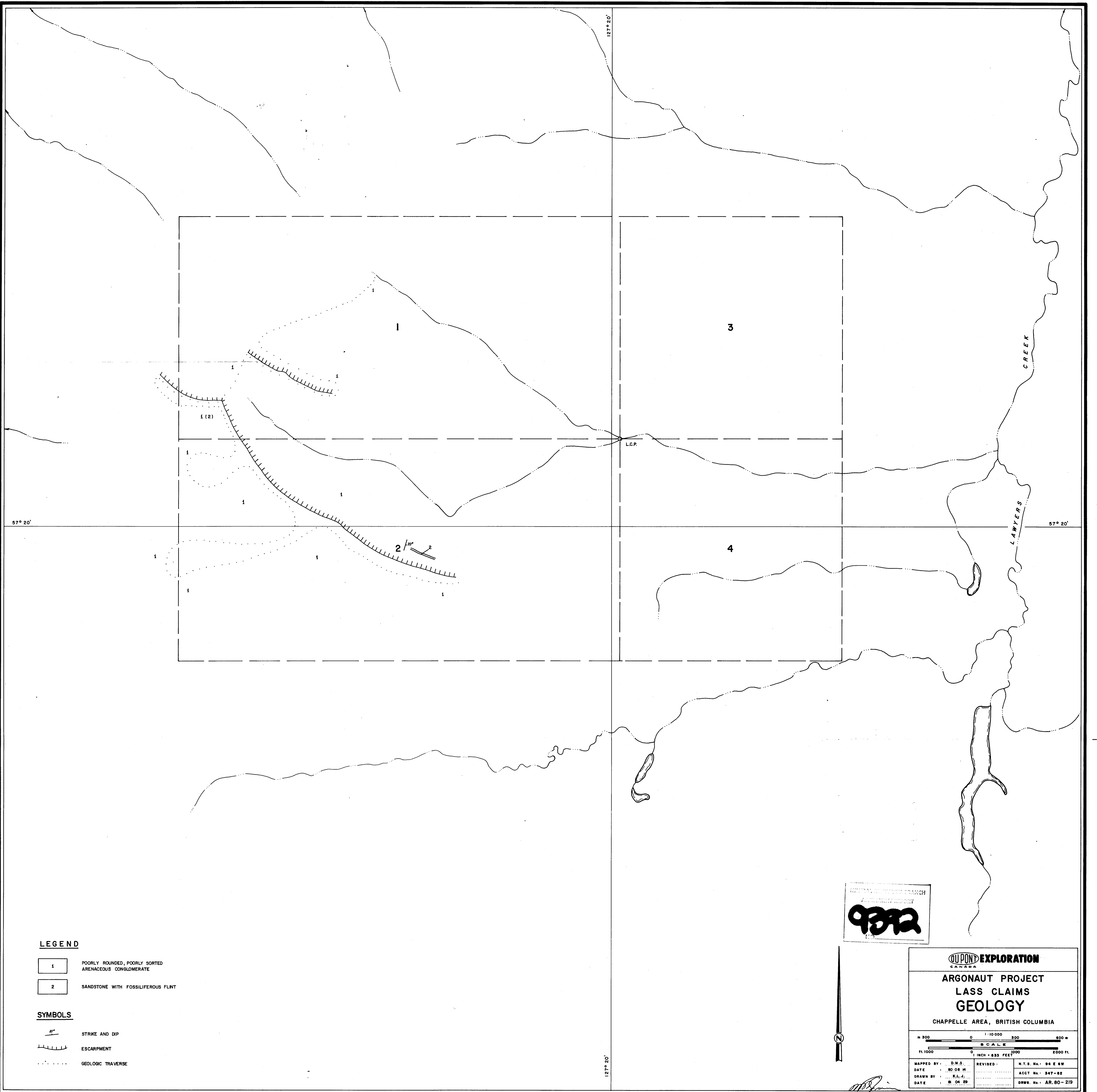
A suitable sample weight 5.0 or 10.0 grams are pre-treated with  $\text{HNO}_3$  and  $\text{HClO}_4$  mixture.

After pretreatments the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

At this stage of the procedure copper, silver and zinc can be analysed from suitable aliquote by Atomic Absorption Spectrophotometric procedure.

Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-Butyl Ketone.

With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit is 5 ppb.



**LEGEND**

- 1 POORLY ROUNDED, POORLY SORTED ARENACEOUS CONGLOMERATE
- 2 SANDSTONE WITH FOSSILIFEROUS FLINT

**SYMBOLS**

- 21° STRIKE AND DIP
- ESCARPMENT
- ..... GEOLOGIC TRAVERSE

9312

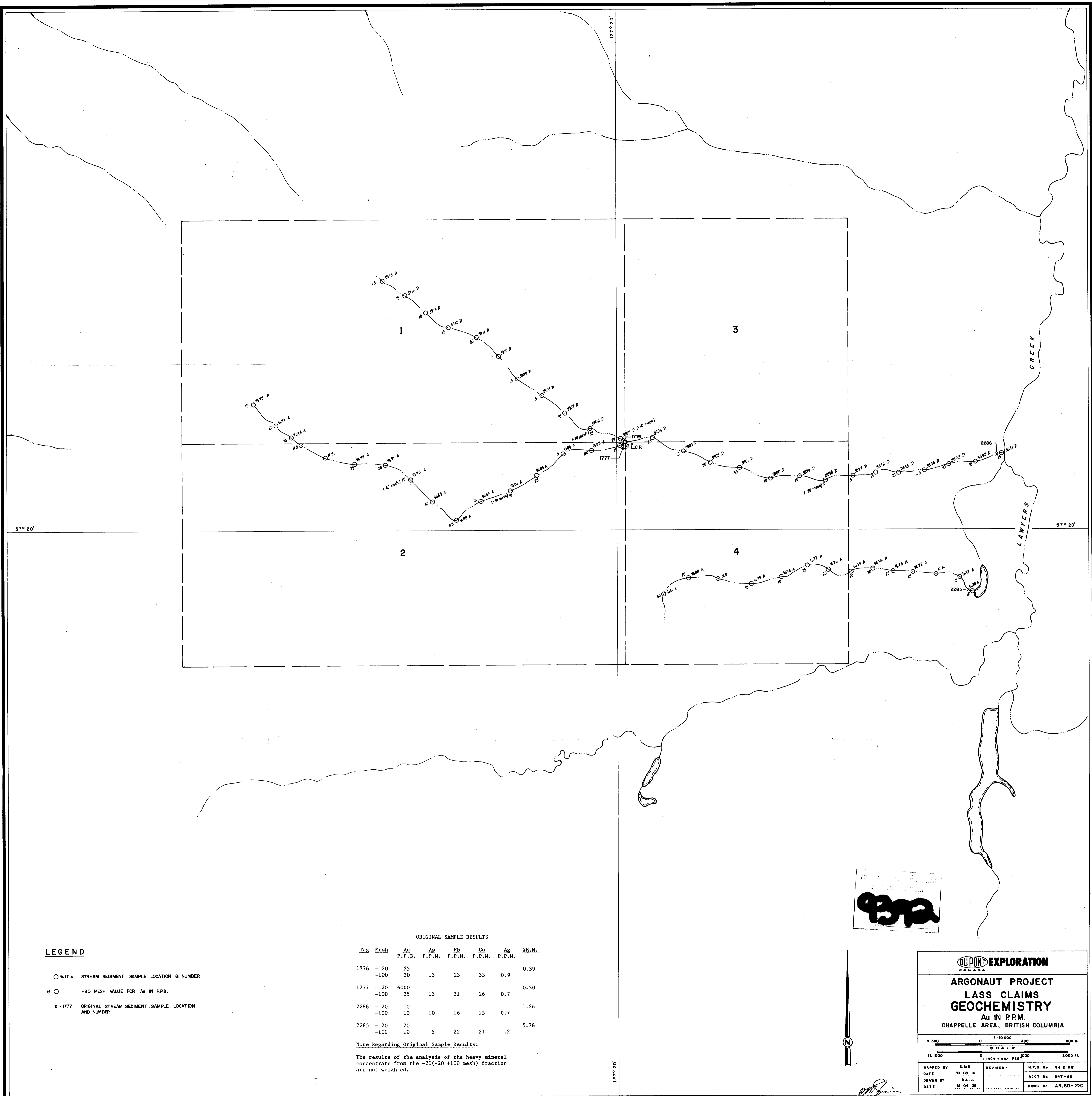
**DUPONT EXPLORATION**  
CANADA

**ARGONAUT PROJECT**  
**LASS CLAIMS**  
**GEOLOGY**

CHAPPELLE AREA, BRITISH COLUMBIA

1:10,000  
SCALE  
1 INCH = 833 FEET

MAPPED BY: D.M.S.	REVISED:	N.T.S. No.: 94 E SW
DATE: 80 08 14		ACCT No.: 547-82
DRAWN BY: K.L.J.		DRWS. No.: AR. 80-219
DATE: 81 04 29		



**LEGEND**

- 177 A STREAM SEDIMENT SAMPLE LOCATION & NUMBER
- 15 ○ -80 MESH VALUE FOR Au IN P.P.B.
- X - 1777 ORIGINAL STREAM SEDIMENT SAMPLE LOCATION AND NUMBER

**ORIGINAL SAMPLE RESULTS**

Tag	Mesh	Au P.P.B.	As P.P.M.	Pb P.P.M.	Cu P.P.M.	Ag P.P.M.	Zn.M.
1776	- 20	25	13	23	33	0.9	0.39
	-100	20					
1777	- 20	6000	13	31	26	0.7	0.30
	-100	25					
2286	- 20	10		16	15	0.7	1.26
	-100	10					
2285	- 20	20					5.78
	-100	10	5	22	21	1.2	

**Note Regarding Original Sample Results:**

The results of the analysis of the heavy mineral concentrate from the -20(-20 +100 mesh) fraction are not weighted.

**9372**

**DU PONT EXPLORATION**  
CANADA

**ARGONAUT PROJECT**  
**LASS CLAIMS**  
**GEOCHEMISTRY**  
Au IN P.P.M.  
CHAPPELLE AREA, BRITISH COLUMBIA

1:10,000 SCALE  
1 INCH = 633 FEET

MAPPED BY: D.M.S.      REVISED:      N.T.S. No.: 84 E SW  
DATE: 80 08 14      DRAWN BY: K.L.F.      ACCT No.: 547-62  
DATE: 81 04 19      DATE: 81 04 19      DWS. No.: AR.80-220