

9393

DU PONT OF CANADA EXPLORATION LIMITED

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE ANT 1, 2, 3 CLAIMS

OMINECA MINING DIVISION

LAT. 57°58', LONG. 127°17'

NTS: 94E/6W

Owner of Claims: Du Pont of Canada Exploration Limited

Operator: Du Pont of Canada Exploration Limited

G.A. Harron

Author: G.A. Harron

Date Submitted: 1981 JUN 10

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Drwg. No. AR. 80-252	Geology	(in pocket)
Drwg. No. AR. 80-253	Geochemistry	"

I

INTRODUCTION(a) Location

The ANT 1-3 claims are located 6 km SSE of Tuff Peak, west of Antoine Louis Creek, a tributary of the Toadog-gone River. Elevations on the property range from 1710m at the northwest corner of the ANT 1 claim to 1509m in the southwest corner of the ANT 3 claim. Thick stands of spruce occur only in the creek valley below 1520m, and approximately 90% of the property is above the tree line where vegetation consists of alpine flora, grasses, and low shrubs.

(b) Access

Access to the claims is most convenient by rotary wing aircraft from the Sturdee River airstrip; a distance of 27.2 km to the southeast.

(c) Claim Definition

The ANT 1-3 claims represent 36 contiguous units with record numbers, tag numbers, and record dates as listed below:

Claim	(units)	Record Number	Tag Number	Record Date
ANT 1	(12)	2980	45876	July 25, 1980
ANT 2	(12)	2981	45877	July 25, 1980
ANT 3	(12)	2982	45878	July 25, 1980

The current owner and operator of the claims is Du Pont of Canada Exploration Limited. The claims were staked to facilitate work on an auriferous geochemical anomaly.

(d) Economic Assessment of the Property

A portion of the claim has been previously explored by an unknown party at an unknown time, as evidenced by the remains of a tent camp located on the ANT 3 claim. No significant economic mineralization was noted during the course of the present investigation.

(e) Summary of Work Performed

A total of 23 stream sediment samples were collected from the ANT 1 and 3 claims at intervals of 200 m. Geological mapping at a scale of 1:10,000 was undertaken, using the geochemical sampling line and claim lines for control purposes. The geology of the claim is plotted on Drwg. AR80-252, and the geochemical results are plotted on Drwg. AR80-253.

II GEOLOGY

(a) Introduction

The ANT 1 - 3 claims are located in the northern portion of the Intermontane Belt. This belt is composed of Mesozoic volcanic, sedimentary, and intrusive rocks, with minor amounts of Paleozoic rocks. The eastern edge of the Late Cretaceous - early Tertiary Sustut basin is about 9 km west of the claims. Published geology maps of the region suggest that the claims are underlain by the lower/middle Jurassic Toodoggone volcanic and sedimentary rocks.

(b) Lithology

i) Porphyritic Dacite

This rock unit is either maroon or grey on both fresh and weathered surfaces. Characteristically, the rock is medium grained and contains about 25% potassic feldspar phenocrysts. The phenocrysts are euhedral, white to pink in colour, and average about 4 mm in length. Where observed, the outcrops are fractured and appear to be massive flows. Contacts between the maroon coloured and grey coloured porphyritic dacite were not observed.

ii) Maroon Conglomerate and Siltstone

This rock unit is maroon in colour and exhibits fluvial bedding features. The siltstone is fine grained, laminated, and occurs as lenses interbedded with the conglomerate. The conglomerate is clast supported, with clasts ranging in size from sand sized particles to boulders 1 m in diameter. The clasts comprise about 75% of the volume, and are mainly maroon coloured porphyritic volcanic rocks. The matrix is fine grained, maroon, and is the equivalent of the siltstone lenses.

(c) Structure

Bedding attitudes indicate that the sedimentary rocks have shallow dips (5-20°) to the north and south and trend approximately east-west. The structure exhibited by the sedimentary rocks may reflect the fluvial depositional environment more than post consolidation folding. The contact of the sedimentary rocks and the volcanic rocks was not observed, but is inferred to be a disconformity.

(d) Mineralization

All of the outcrops examined were devoid of hydrothermal alteration minerals, sulphides, and quartz veins.

(e) Conclusions

The area of the claims traversed was found to be underlain by porphyritic dacite flows overlain disconformably by fluvial sediment derived from the underlying volcanic rocks. Bedding attitudes in the sediments are thought to reflect the depositional environment more than folding. No sulphide mineralization was observed.

III GEOCHEMICAL SURVEY

(a) Sample Collection, Preparation, and Analyses

A total of 23 stream sediment samples were collected from the bed of the main stream which traverses the ANT 1 and 3 claims. Sample intervals of 200 m were measured with a "hip-chain" and the sample line followed the course of the stream. The starting point for the sampling was a small pond located 250 m east of the western claim boundary. At each sample site, a metal scoop was used to collect about 500 gms of silt-sand sized material from the stream bed and placed in a wet-strength soil sample envelope. The sample was numbered, and specific information describing the sample and the stream characteristics was recorded on a data card. A flag bearing the sample number was placed at the collection site.

The stream sediment samples were sent to Min-En Laboratories in North Vancouver for preparation and analysis for Au. The samples were oven dried and sieved to -20, -40, or -80 mesh in order to obtain enough sample for analyses. These recovered fractions were analyzed for Au according to the procedures outlined in Appendix A.

Further analyses for Ag, Cr, Cu, Mo, Pb, and Zn were performed on the pulps by Riocanex, using standard analytical techniques equivalent to those listed in Appendix A.

(b) Results and Interpretation

Drawing Ar.80-253 shows the sample numbers, locations, and the values for Au, Ag, Cr, Cu, Mo, Pb, and Zn obtained. The following table summarizes the results obtained:

<u>No. of Samples</u>	<u>Element</u>	<u>Range</u>	<u>Units</u>
23	Au	5.0-15.0	ppb
23	Ag	0.0-0.6	ppm
23	Cu	7.0-15.0	ppm
23	Pb	6.0-19.0	ppm
23	Zn	48.0-102.0	ppm
23	Mo	0.0-2.0	ppm
23	Cr	5.0-21.0	ppm

Visual interpretation of the results indicates that none of the elements analyzed occurs in anomalous concentrations in the area sampled. The values for gold did not substantiate the 3500 ppb value obtained in the original heavy mineral sample (#0818).

IV COST STATEMENT(a) Wages

	<u>Daily Rate</u>	<u>Spec. Dates</u>	<u>No. of Days</u>	<u>Cost</u>
1 Geologist	\$ 172.00	Aug. 21/80, Apr. 8/81	2	\$ 344.00
1 Assistant	39.18	Aug. 21/80, Feb. 16, 17/80	3	<u>117.54</u>
				461.54

(b) Room and Board

A per diem rate of \$49.56 applies to 2 person days for August 21, 1980

99.12

(c) Transportation

i) Transportation to the field area:
The total cost of transporting the field crew to the Sturdee River airstrip is \$6,170.63 and is prorated over 19 claim groups. The amount of \$324.77 applies to this claim

324.77

ii) In support of field work:
Terr-Air Invoice #935, including;
0.65 hours at \$366/hr on Aug. 21, 1980
Fuel: 19.5 gallons @ \$3/gal.

296.40
621.17

(d) Analytical Services

<u>No.</u>	<u>Type</u>	<u>Elements</u>	<u>Unit cost</u>	
23	Stream Sediments	Au	\$ 4.25	97.75
23	Preparation		0.60	13.80
23	Stream Sediments	Cu, Pb, Zn, Mo, Ag, Cr	4.75	<u>109.25</u>
				220.80

(e) Report Preparation

	<u>Daily Rate</u>	<u>Date</u>	<u>No. of Days</u>	
Drafting	\$ 147.00	May 13/81	1	147.00
Typing	62.00	May 12/81	1	<u>62.00</u>
				209.00

GRAND TOTAL

TEK
388.37
\$1611.63
2000.00

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 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 August 21, 1980 and May 14, 1981 I supervised/directed a field programme on the ANT 1-3 Claims on behalf of Du Pont of Canada Exploration Limited.

Gerald A. Harron

Gerald A. Harron

May 14, 1981

APPENDIX A*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 WORKPROCEDURE 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 HNO_3 and 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.

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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.

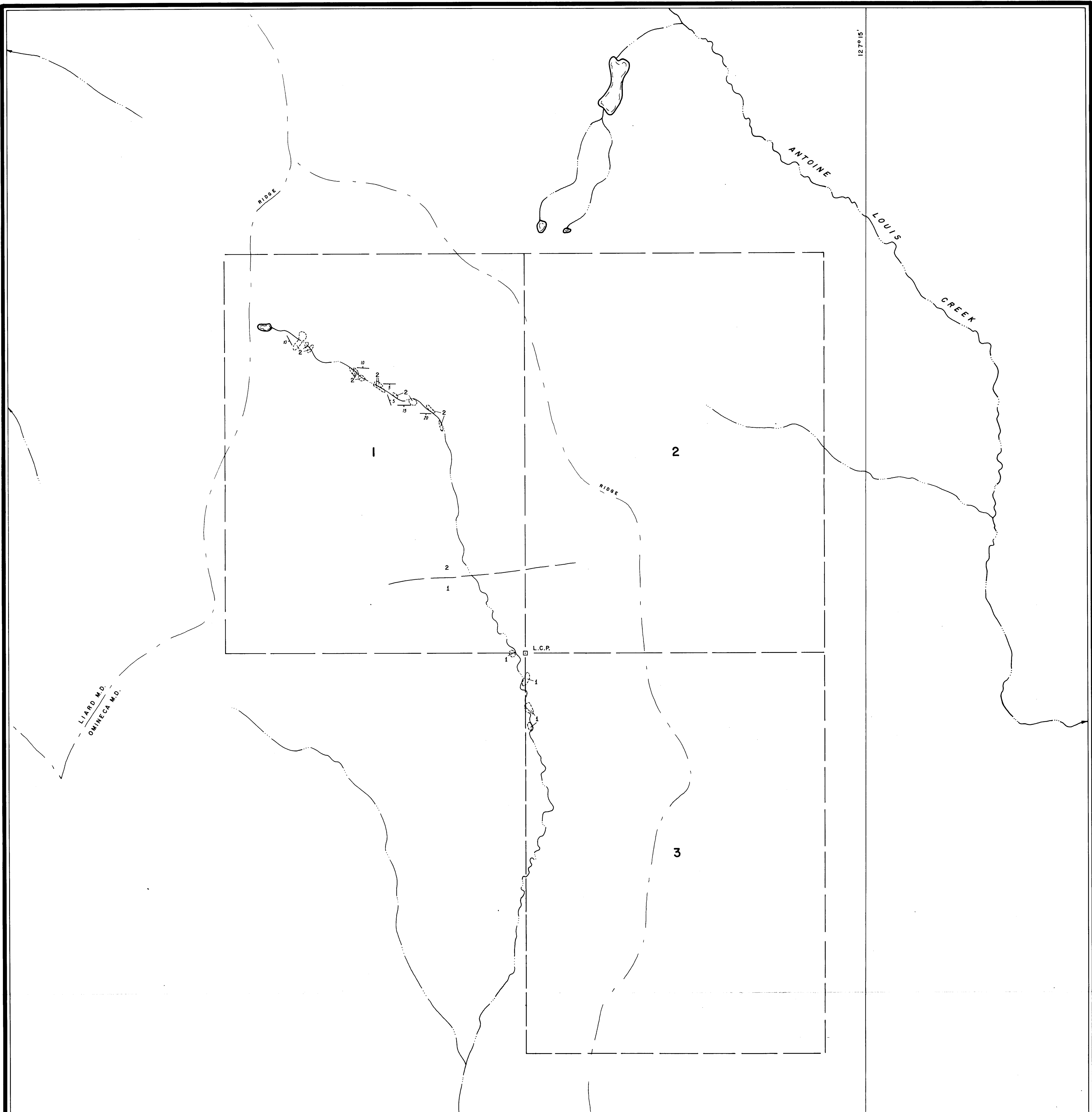
1.0 gram of the samples are digested for 6 hours with HNO_3 and HClO_4 mixture.

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 CH_2H_2 -Air flame combination but the Molybdenum determination is carried out by C_2H_2 - N_2O 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 Gutzit method using $\text{Ag CS}_2\text{N} (\text{C}_2\text{H}_5)_2$ as a reagent. The detection limit obtained is 1.2 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.

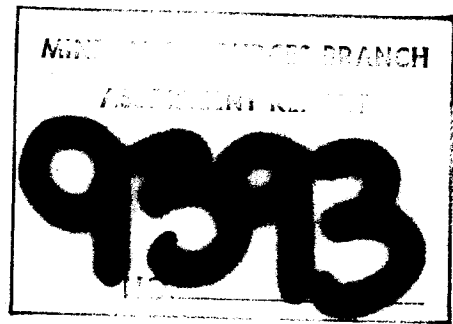


LEGEND

- LOWER / MIDDLE JURASSIC
"TOODOSSONE GROUP"
- 2 MAROON CONGLOMERATE AND SILTSTONE
 - 1 PORPHYRITIC DACITE

SYMBOLS

- OUTCROP
- GEOLOGIC CONTACT
- STRIKE AND DIP OF BEDDING
- CLAIM BOUNDARY AND LEGAL CORNER POST



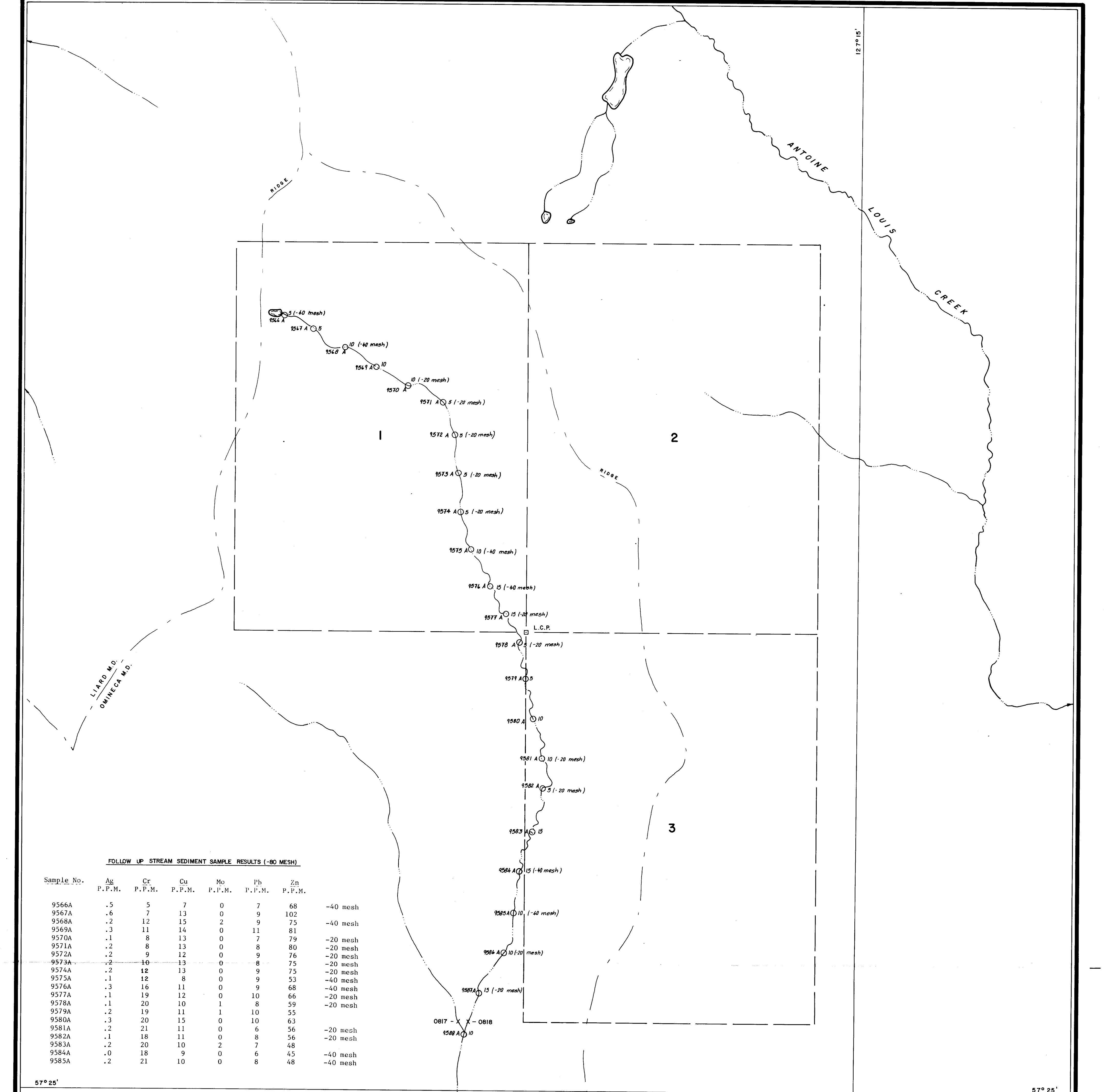
**ARGONAUT PROJECT
ANT CLAIMS
GEOLOGY**

CHAPPELLE AREA, BRITISH COLUMBIA

SCALE
1 INCH = 833 FEET

MAPPED BY: G.A.H.	REVISED:	N.T.S. No.: 94 E 6W
DATE: 80 08 21		ACCT No.: 347-67
DRAWN BY: K.L.J.		DRWG. No.: AR.80-252
DATE: 81 08		





FOLLOW UP STREAM SEDIMENT SAMPLE RESULTS (-80 MESH)

Sample No.	Ag P.P.M.	Cr P.P.M.	Cu P.P.M.	Mo P.P.M.	Pb P.P.M.	Zn P.P.M.	
9566A	.5	5	7	0	7	68	-40 mesh
9567A	.6	7	13	0	9	102	
9568A	.2	12	15	2	9	75	-40 mesh
9569A	.3	11	14	0	11	81	
9570A	.1	8	13	0	7	79	-20 mesh
9571A	.2	8	13	0	8	80	-20 mesh
9572A	.2	9	12	0	9	76	-20 mesh
9573A	.2	10	13	0	8	75	-20 mesh
9574A	.2	12	13	0	9	75	-20 mesh
9575A	.1	12	8	0	9	53	-40 mesh
9576A	.3	16	11	0	9	68	-40 mesh
9577A	.1	19	12	0	10	66	-20 mesh
9578A	.1	20	10	1	8	59	-20 mesh
9579A	.2	19	11	1	10	55	
9580A	.3	20	15	0	10	63	
9581A	.2	21	11	0	6	56	-20 mesh
9582A	.1	18	11	0	8	56	-20 mesh
9583A	.2	20	10	2	7	48	
9584A	.0	18	9	0	6	45	-40 mesh
9585A	.2	21	10	0	8	48	-40 mesh

0817 - X - 0818
1588 A 10

LEGEND

- 1566A ○ STREAM SEDIMENT SAMPLE LOCATION & NUMBER
- 15 -80 MESH VALUE FOR Au IN PPB.
- X-0818 ORIGINAL STREAM SEDIMENT SAMPLE LOCATION & NUMBER

ORIGINAL STREAM SEDIMENT SAMPLE RESULTS

Tag	Mesh	Au P.P.B.	As P.P.M.	Pb P.P.M.	Cu P.P.M.	Ag P.P.M.	Z.H.M.
0817	- 20	20					
	-100	25	9	8	16	0.7	1.80
0818	- 20	25					
	-100	3500	<1	4	20	0.6	2.51

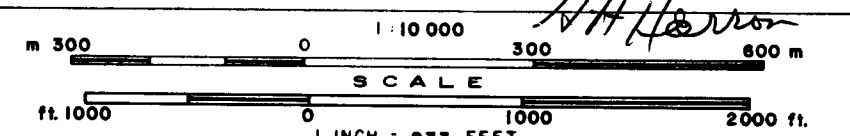
Note Regarding Original Sample Results:

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

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
9393
NO.

DU PONT EXPLORATION
CANADA

ARGONAUT PROJECT
ANT CLAIMS
GEOCHEMISTRY
Au IN PPB.
CHAPPELLE AREA, BRITISH COLUMBIA



MAPPED BY: S.A.H.	REVISED:	N.T.S. No.: 94 E 6 W
DATE: 80 08 21		ACCT No.: 347-67
DRAWN BY: K.L.J.		DRWG. No.: AR.80-253
DATE: 81 08		