DU PONT OF CANADA EXPLORATION LIMITED

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE W CLAIM GROUP

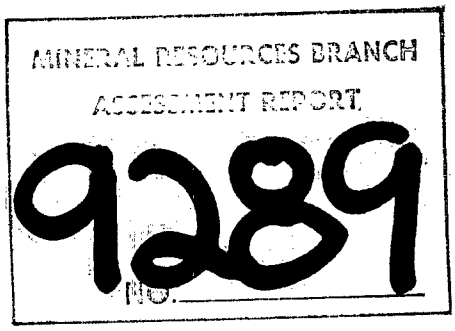
LIARD MINING DIVISION

Lat. 58°18'N, Long. 128°54'W

NTS: 104-I-7W

Owner of Claims: Du Pont of Canada Exploration Limited

Operator: Du Pont of Canada Exploration Limited



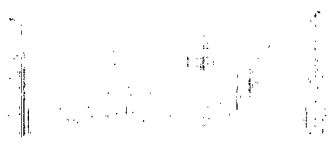
Author: D. M. Strain

Date Submitted: JUN 24 1981

TABLE OF CONTENTS

List of Figures

List of Drawings



I INTRODUCTION

(a) Location and Access

The W claim group is located in the south-central portion of map sheet 104-I-7W, approximately 70 km east southeast of Dease Lake, Figs. 1 and 2. The claims which cover the northern portion of King Mountain and the east part of Mount Shea are centered at latitude 58°18'N and longitude 128°54'W.

The Stewart-Cassiar Highway provides access to the west part of sheet 104-I. A tractor road runs east from Dease Lake to Wheaton Creek in the Turnagain River valley. Two air strips, one at Dease Lake and one at the headwaters of Kutcho Creek offer good jump off points for rotary wing aircraft.

(b) Claim Definition

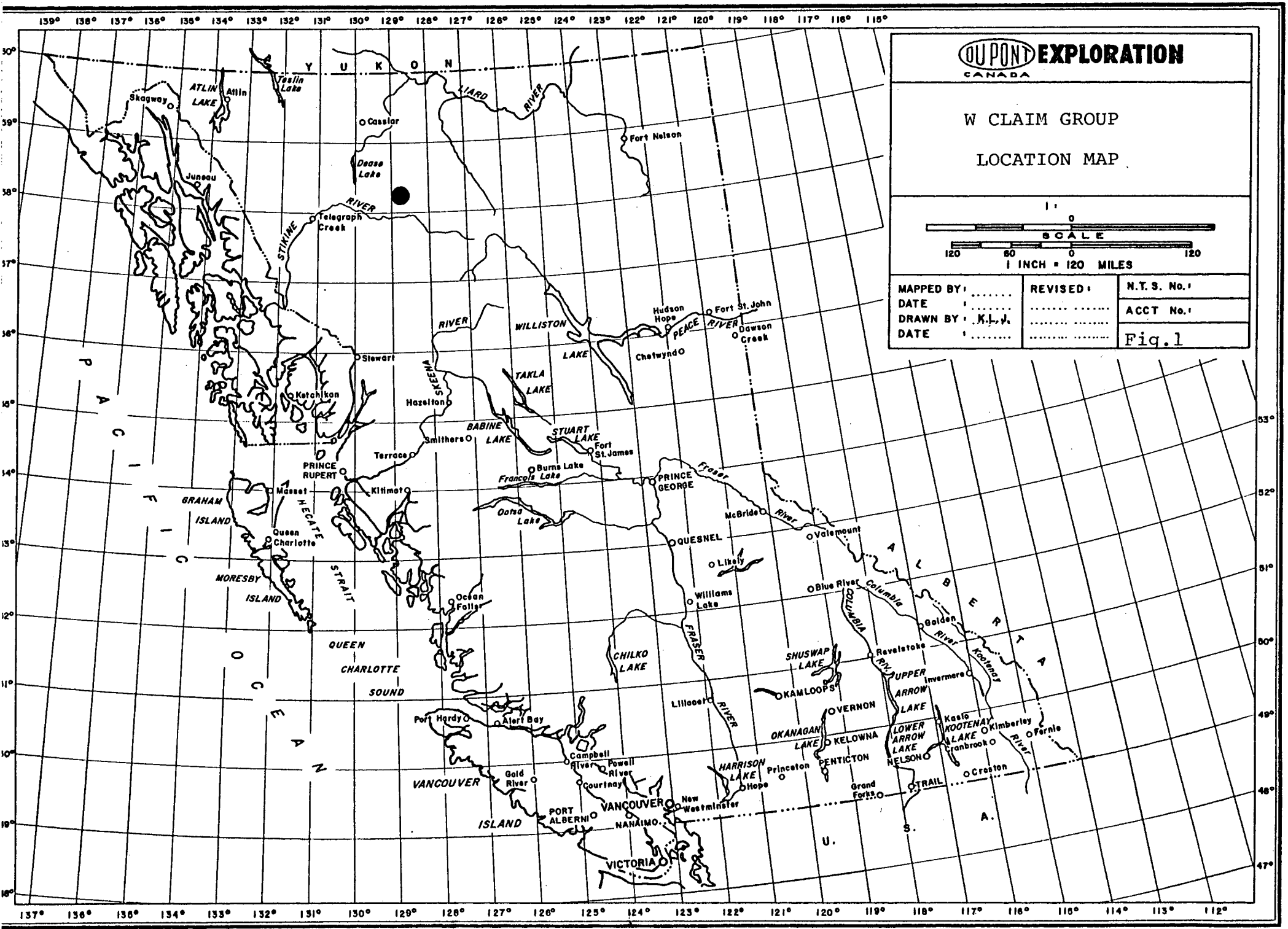
The W group consists of five claims, W-1 to 5, Fig.3. Claims W-1 to 4 consist of 20 units and W-5 consists of 16 units. The claims which are within the Liard Mining Division, were recorded June 25, 1980 and are currently owned and operated by Du Pont of Canada Exploration Limited.

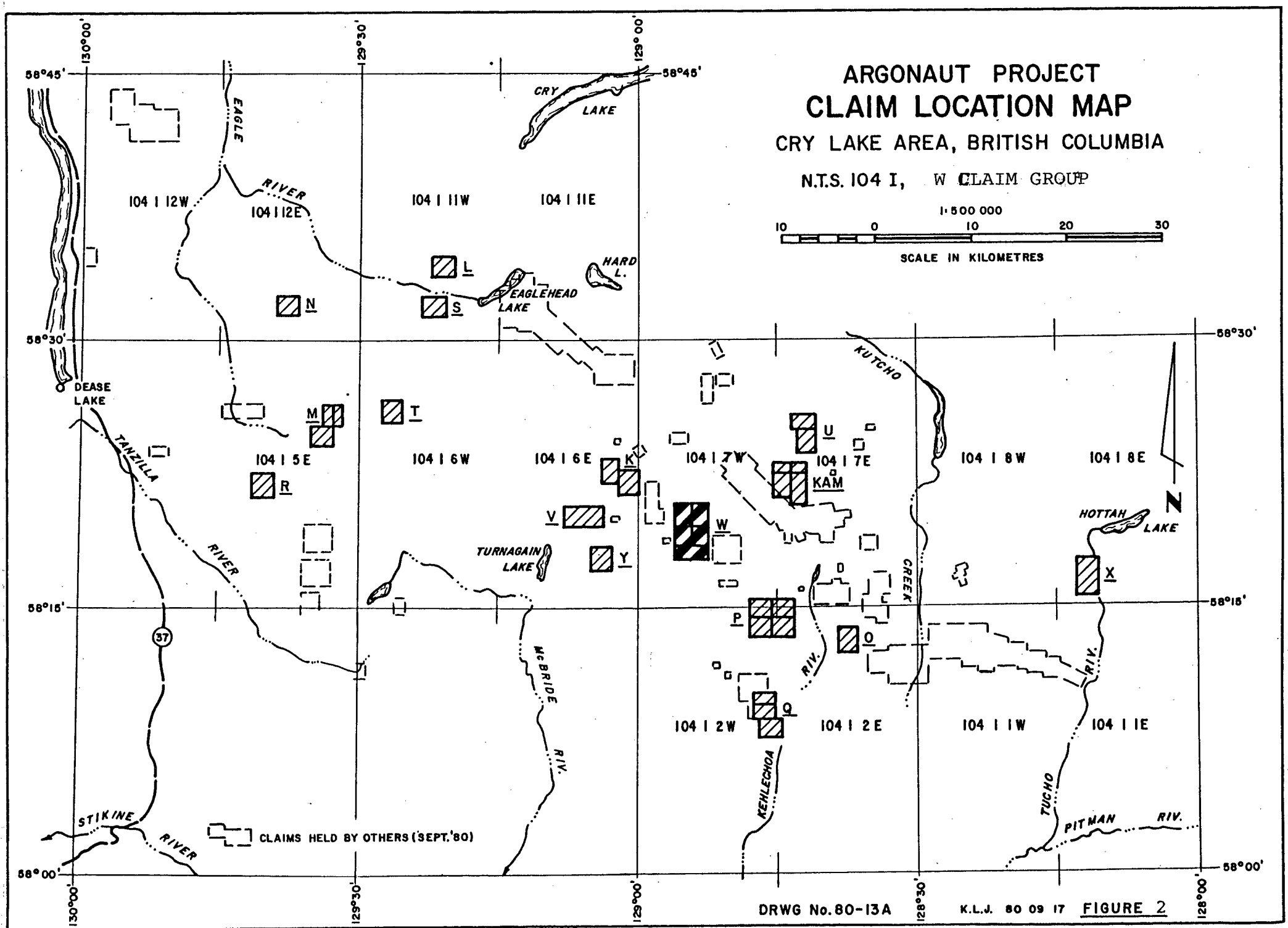
(c) Summary of Work Performed

In May 1980 a 9 kg stream sediment sample was taken as part of a regional sampling survey from the main creek draining what is now the W claim group. This particular sample, No.3152 contained 75 000 ppb Au.

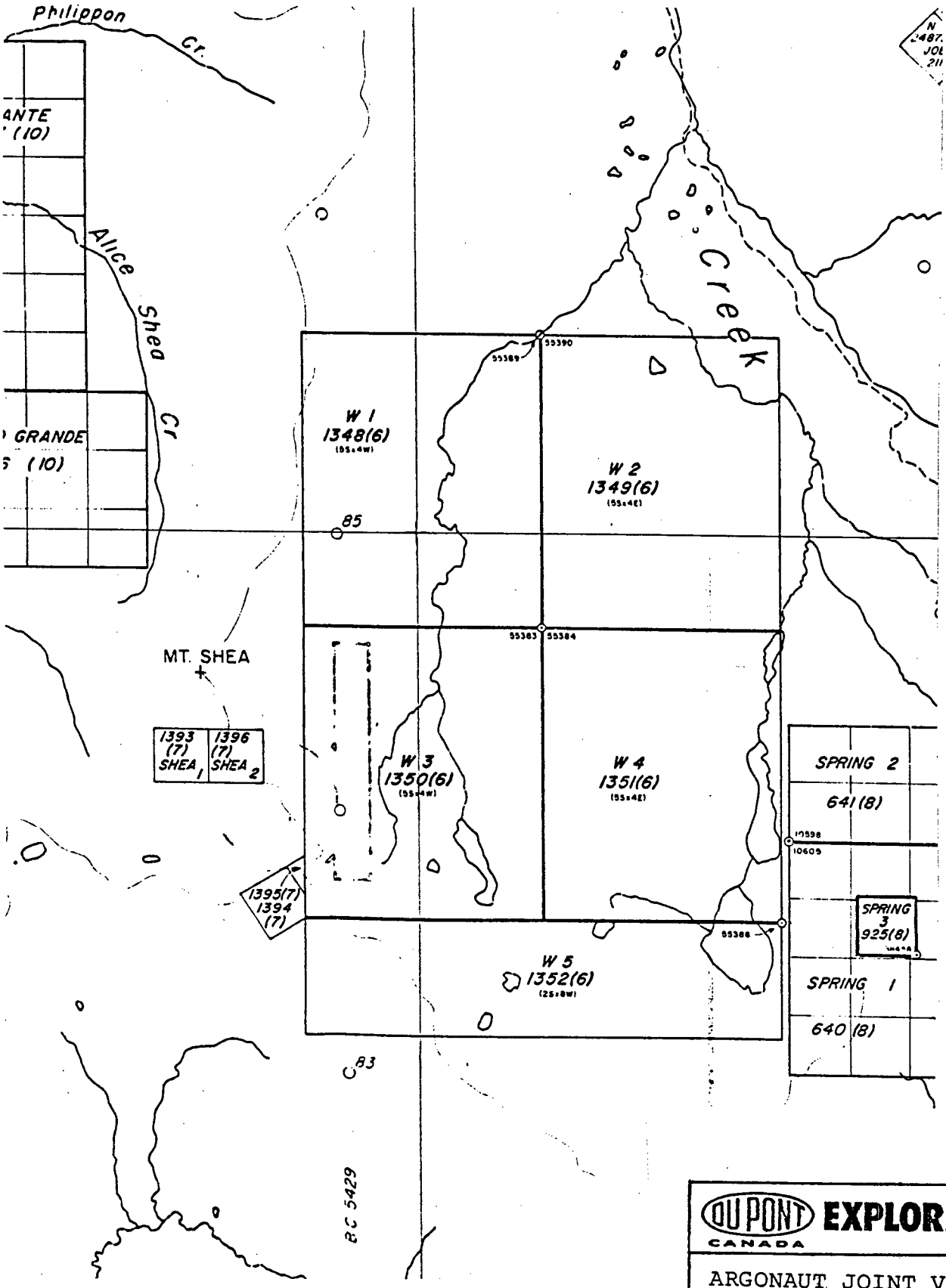
Follow-up work conducted in early August 1980 included 4 person days of stream sediment and soil sampling and 4 person days of geologic mapping and prospecting.

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


DUPONT EXPLORATION
CANADA
W CLAIM GROUP
LOCATION MAP
SCALE
120 60 0 120
1 INCH = 120 MILES
MAPPED BY:
DATE :
DRAWN BY : K.J.J.
DATE :
REVISED :
N.T.S. No.:
ACCT No.:
Fig.1
YUKON
PACIFIC OCEAN
ALBERTA
U.S.A.
Skagway
Atlin
ATLIN LAKE
Teslin Lake
Cassiar
LIARD RIVER
Fort Nelson
Dease Lake
Juneau
STIKINE RIVER
Telegraph Creek
Stewart
Ketchikan
SKEENA RIVER
Hazelton
WILLISTON LAKE
Hudson Hope
Fort St. John
PEACE RIVER
Dawson Creek
Chetwynd
TAKLA LAKE
BABINE LAKE
STUART LAKE
Fort St. James
Smithers
Terrace
PRINCE RUPERT
Kitimat
Burns Lake
Francois Lake
Ootsa Lake
PRINCE GEORGE
Fraser River
McBride
Valemount
GRAHAM ISLAND
Masset
HECATE STRAIT
Queen Charlotte
MORESBY ISLAND
QUEEN CHARLOTTE SOUND
Ocean Falls
QUESNEL
Likely
Williams Lake
Blue River
Columbia River
Golden
Revelstoke
CHILKO LAKE
FRASER RIVER
SHUSWAP LAKE
KAMLOOPS
UPPER ARROW LAKE
Invermere
Kootenay River
Lillooet
VERNON
OKANAGAN LAKE
KELOWNA
LOWER ARROW LAKE
KOOTENAY LAKE
Kaslo
Nelson
Cranbrook
Kimberley
Fernie
Port Hardy
Alert Bay
Campbell River
Powell River
Courtenay
HARRISON LAKE
Hope
Princeton
PENTICTON
Grand Forks
TRAIL
Creston
VANCOUVER ISLAND
Gold River
PORT ALBERNI
VANCOUVER
New Westminster
NANAIMO
VICTORIA



DRWG No. 80-13A K.L.J. 80 09 17 FIGURE 2



Miles 1 .5 0

Metres 1000 500 0 1000

Kilometres 1 .5 0 1

DUPONT EXPLORATION CANADA

ARGONAUT JOINT VENTURE

Cry Project

W CLAIM GROUP

Cassiar Range, B.C.

N.T.S. 104-I Fig.3

(d) Physiography and Vegetation

The general area surrounding the W claims is typified by broad, shallow valleys, undulating slopes and hills, and jagged peaks. Rivers in the larger valleys are relatively slow flowing and are often bordered by swamps. Tree line occurs at 1370 metres and topography varies from 1220 metres in the north to 2000 metres in the south. The W group covers an area of gentle topography with the exception of the W-5 claim which extends south to King Mountain.

Large snow accumulations on King Mountain provide an ample water supply for the main creeks draining the claims. Most of the group is above tree line with vegetation limited to stunted shrubs, grasses and moss.

(e) Previous Work

No previous work is recorded within the property boundary. Jade has been recovered from pits along the eastern boundary of the property.

II GEOLOGY

(a) Introduction

The W claim group is located 1 km north of King Mountain in the Hinterland Belt, Fig.4. The property is north of the Nahlin Fault which parallels the Teslin Lineament and the King Salmon Fault, Figs. 5 and 6. The fault separates Lower Jurassic rocks (Inklin Fmn.) to the south from Mississippian rocks (Cache Creek Group) to the north, Fig.7. Faulting occurs within the Cache Creek Group as suggested by the diagrammatic cross-section, Fig.5. The property is underlain by rocks of the Cache Creek Group, Fig.7.

Three main rock units were observed on the property. In order of abundance the units are, serpentinized peridotite, a volcanic-sedimentary package and an altered dioritic intrusion which occurs in the southern part of the property.

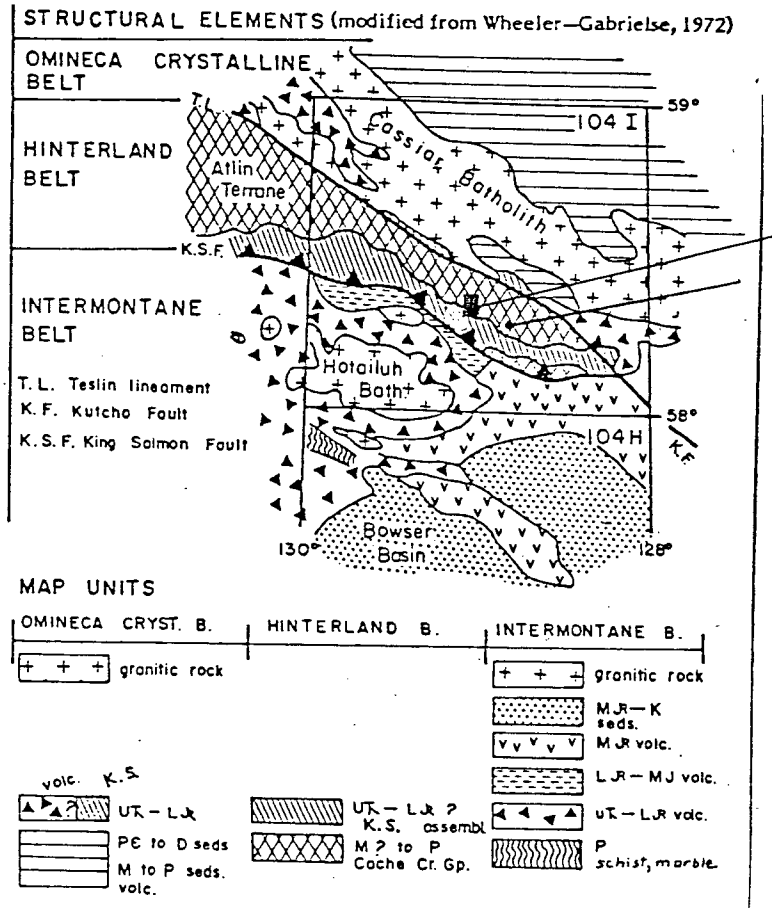


Figure 4 Index map showing general distribution of lithological assemblages and major structural elements in Cry Lake (104I) and northern Spatzizi (104H) map-areas.

From GSC Paper 78-1

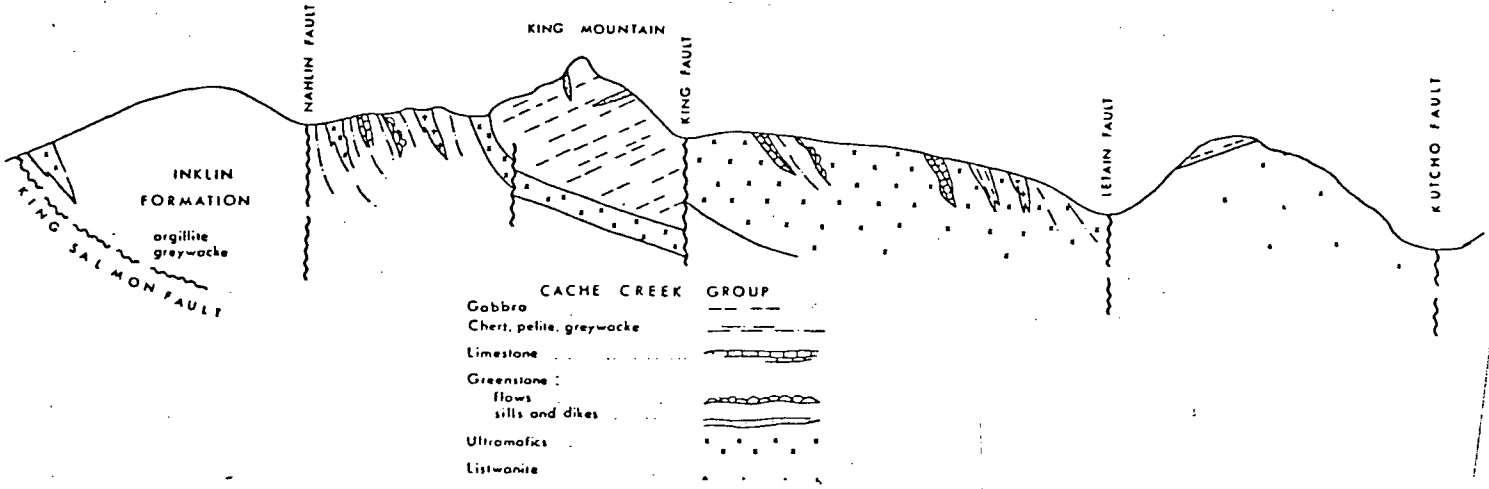


Figure 5 Diagrammatic cross-section through King Mountain (looking west).

From GSC Paper 80-1

ARGONAUT PROJECT
COMPILATION MAP
CRY LAKE AREA, BRITISH COLUMBIA

N.T.S. 104 I, W CLAIM GROUP

1:500 000

10 0 10 20 30

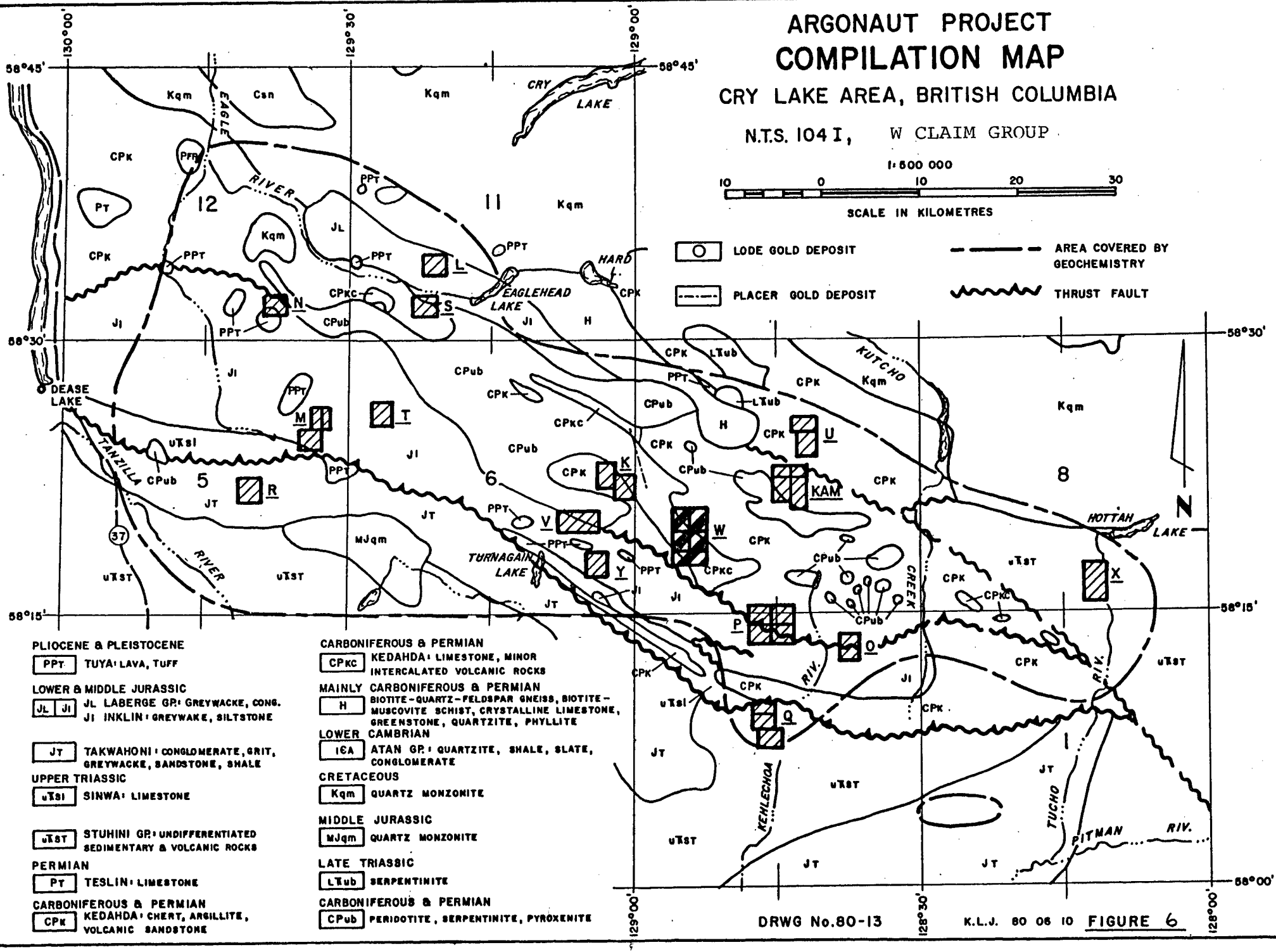
SCALE IN KILOMETRES

LODE GOLD DEPOSIT

PLACER GOLD DEPOSIT

AREA COVERED BY GEOCHEMISTRY

THRUST FAULT



PLIOCENE & PLEISTOCENE

PPT TUYA: LAVA, TUFF

LOWER & MIDDLE JURASSIC

JL | JI JL LABERGE GP: GREYWACKE, CONG.
JI INKLIN: GREYWAKE, SILTSTONE

JT TAKWAHONI: CONGLOMERATE, GRIT, GREYWACKE, SANDSTONE, SHALE

UPPER TRIASSIC

uTsl SINWA: LIMESTONE

uTst STUHINI GP: UNDIFFERENTIATED SEDIMENTARY & VOLCANIC ROCKS

PERMIAN

PT TESLIN: LIMESTONE

CARBONIFEROUS & PERMIAN

CPk KEDAHDA: CHERT, ARGILLITE, VOLCANIC SANDSTONE

CARBONIFEROUS & PERMIAN

CPkc KEDAHDA: LIMESTONE, MINOR INTERCALATED VOLCANIC ROCKS

MAINLY CARBONIFEROUS & PERMIAN

H BIOTITE-QUARTZ-FELDSPAR GNEISS, BIOTITE-MUSCOVITE SCHIST, CRYSTALLINE LIMESTONE, GREENSTONE, QUARTZITE, PHYLLITE

LOWER CAMBRIAN

ICA ATAN GP: QUARTZITE, SHALE, SLATE, CONGLOMERATE

CRETACEOUS

Kqm QUARTZ MONZONITE

MIDDLE JURASSIC

MJqm QUARTZ MONZONITE

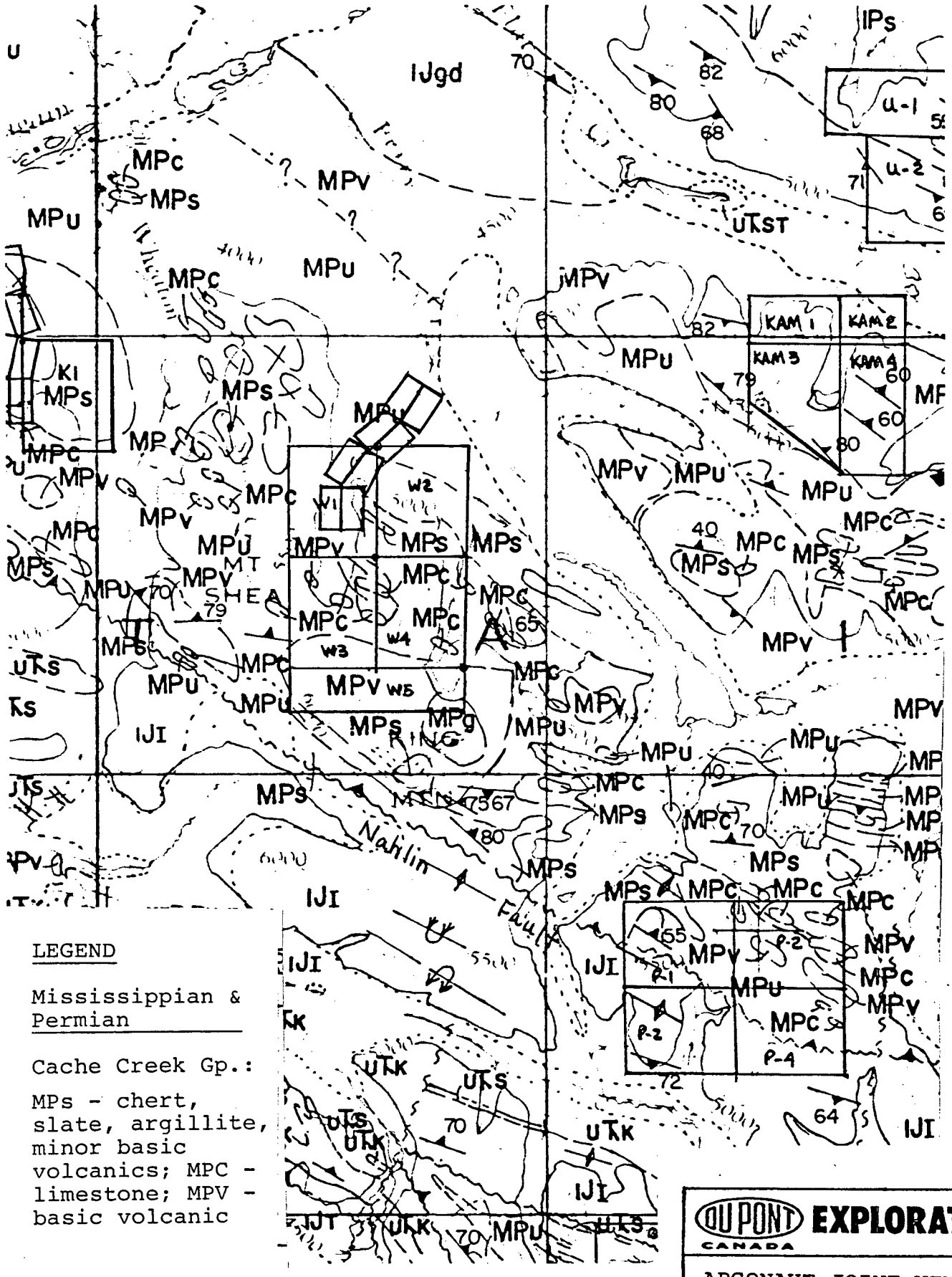
LATE TRIASSIC

LTub SERPENTINITE

CARBONIFEROUS & PERMIAN

CPub PERIDOTITE, SERPENTINITE, PYROXENITE

DRWG No.80-13 K.L.J. 80 06 10 FIGURE 6


LEGEND
Mississippian & Permian
Cache Creek Gp.:
MPs - chert, slate, argillite, minor basic volcanics; MPC - limestone; MPV - basic volcanic
Miles 5 0
Kilometres 5 0
DUPONT EXPLORATION CANADA
ARGONAUT JOINT VENTURE
Cry Project
W CLAIM GROUP
Cassiar Range, B.C.
N.T.S. 104-I Fig. 7

(b) Lithology

The ultra-mafic rocks weather to a pale olive green colour which contrasts with the surrounding rocks. Serpentinization of these rocks is widespread and of moderate intensity with the result that most of the original textures are destroyed.

Olivine was probably a common constituent because pea-sized pseudomorphs containing serpentine are abundant. Magnetite is ubiquitous occuring as very fine disseminated grains up to 20% of the rock.

The volcanic-sedimentary unit is comprised of graphitic quartzites, grey massive limestone, green to black banded tuffs and minor shales and greywackes. These rocks generally strike in an east-west direction and dip to the south.

A fine grained, highly altered intrusive occurs in the southern portion of the group.

(c) Alteration

Serpentinization is most apparent within the ultramafics. Much of this unit has been entirely altered to serpentine. The development of chrysotile asbestos appears to be associated with fracturing of the ultramafics. Alteration of the southerly intrusive consists of serpentinization of the mafic constituents.

Quartz-carbonate alteration patches occur throughout the W claims affecting mainly the serpentinized ultramafic and to a lesser degree the sediments. These zones weather to a typical buff brown colour and commonly consist of quartz, carbonate minerals, magnetite, talc and fuchsite.

(d) Mineralization

Magnetite, as mentioned previously, is a common constituent of the ultramafics. It commonly occurs as fine-grained disseminations but where content is high it forms whispy bands.

Minor pyrite is associated with carbonate alteration and chloritized volcanics.

III GEOCHEMISTRY

(a) Sample Collection, Preparation and Analysis

Besides the anomalous regional reconnaissance sample that contained 75 000 ppb Au, 93 soil, 25 stream sediment and 7 rock samples were collected in order to isolate the cause of the anomaly.

Soil samples were collected from depths of about 10 to 20 cm below surface using a mattock with an 8 cm x 13 cm blade to dig through the LH and Ao horizon (where present) to the C detritus or rock grit horizon.

Stream sediment samples (sand to silt size alluvium) were collected from low energy areas within the stream.

All samples were collected in pre-numbered, wet strength sample envelopes with special information tags stapled to them. At each station (soils-100 m; stream sediments-200 m) the specific information regarding the sample was recorded on the tag, which was then removed and filed. A flag bearing the sample numbers was placed at all stations.

A total of 25 stream sediment samples and 93 soil samples were collected and sent to Min-En Laboratories in North Vancouver for preparation and analysis. The samples were oven dried and sieved to -80 mesh. The -80 mesh fraction was analyzed for Au according to the procedures outlined in Appendix A.

Seven rock samples were sent to Min-En Laboratories and assayed for Cu, Au and Ag, following standard assay procedures.

(b) Results and Interpretation

Drawing AR 80-148, shows the sample numbers, locations and values obtained for Au for both stream sediments and soil samples.

Basic statistical analysis of Au values in the soils and streams, assuming a log normal distribution indicates:

Element	N	Mean ($\bar{x}$)	Std.Dev(s)	% Anomalous
Soil Au	92	12.23 ppb	10.23 ppb	3.3
Stream Sed. Au	30	9.2 ppb	7.1 ppb	6.6

Thus, values of 33 ppb for the soils and 23.4 for the stream sediments are considered anomalous ($\bar{x}$ + 2s).

Samples with values of 5 ppb were considered to be 0; and sample no.5757 (625 ppb) was excluded from the soil population and sample no.5487 (100 ppb) from the stream sediment population.

As indicated on Dwg. AR 80-148, a number of anomalies augmented by above background values form scattered zones throughout the property.

(c) Conclusions

Soil sampling of the slopes dipping into a tributary of Ferry Creek obtained scattered anomalous results. These results though low are significant and will require checking. Quartz veins occur above anomalous soil samples 5477 (25 ppb Au) and 5478 (30 ppb Au). Sampling of these veins did not return significant values as they were less than 0.003 oz/ton Au.

IV COST STATEMENT

(a) Wages

	Rate/ day	Specific dates	No. days	Cost
Geologist	$119.42	Aug. 1,2/80	2	$ 238.84
Geologist	51.88	Aug. 1,2/80	2	103.76
Geologist	51.88	Mar. 2-6/81	5	259.40
Field asst.	39.18	Aug. 1,2/80	2	78.36
Field asst.	46.58	Aug. 1,2/80	2	93.16
Field tech.	39.18	Dec. 11-12/80	1.5	58.77
				$ 832.29

(b) Room and Board

A per diem rate of $36.70 applies to 8 person days for August 1, 2, 1980 $ 293.60

(c) Transportation

In support of field work:

Aug. 1,2/80 - 2.9 hours @ $365/hour	$1,058.50
Fuel - 87 gals. @ $3.00/gal.	261.00
	$1,319.50

(d) Analytical Services

124 soil - Au @ $4.85 each	$ 601.40
7 rock - Au @ $10.00 each	70.00
1 rock - Cu @ $5.50 each	5.50
3 rock - Ag @ $6.50 each	19.50
	$ 696.40

(e) Report Preparation

	Rate/ day	Spec. dates	No. days	
Typing	$ 62.00	Apr. 28/81	1	$ 62.00
Drafting	147.00	Feb. 6/81	1	147.00
				$ 209.00

(f) Miscellaneous

Cook's wages, room and board for pilot and commercial transportation. $ 459.29

GRAND TOTAL $3,810.08

V REFERENCES

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1978: Operation Dease, in Current Research, Part A; G.S.C. Paper 78-1A, p.1-4

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1948: Taku River map area, B.C.; G.S.C., Memoir 248, 84p.

Monger, J.W.H.;

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Monger, J.W.H.; Richards, T.A.; Paterson, I.A.

1978: The Hinterland Belt of the Canadian Cordillera: new data from northern and central British Columbia. Can. Jour. of Earth Sciences, V.15, p.823-830.

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1971: Geology and mineral deposits of Tulsequah map-area, B.C.; G.S.C., Memoir 362, 84p.

Tipper, H.W.;

1978: Jurassic biostratigraphy, Cry Lake map-area, B.C.; Current Research, Part A; G.S.C., Paper 78-1A, p.25-27.

VI 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. On 1980 August 1 & 2, I executed a field programme on the 'W' claims on behalf of Du Pont of Canada Exploration Limited.

David M. Strain

V I 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 1980 August 1 and 1981 April 30, I supervised/directed a field programme on the W claims on behalf of Du Pont of Canada Exploration Limited.

Gerald A. Harron

Gerald A. Harron

PHONE 980-5814

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 WORK

PROCEDURES 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 Ag $CS_2N(C_2H_5)_2$ 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.

PHONE 980-5814

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 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 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.

128° 55'

58° 20'

FERRY CREEK

L.C.P.

W1 W2 W3 W4 W5

MT. SHEA

Talus

Talus

X — 4900 Q.V. 57 1a(b)

X — 4901 4904 1a(3)

X — 4902

X — 4903

X — 3487

X 3488

Q.V. 30

1a(b)

Q.V. Q.V. Q.V. 4 1a 1a

LEGEND

4	ALTERED DIORITIC INTRUSIVE
3	CARBONATIZED ZONE
2	SERPENTINIZED PERIDOTITE
1	SEDIMENTS: a) GRAPHITIC QUARTZITES, GREYWACKES, ANDESITE TUFFS b) MASSIVE GREY LIMESTONE

SYMBOLS

- AREA OF PATCHY OUTCROP
- CONTACT – OBSERVED
- CONTACT – APPROXIMATE
- 30 STRIKE & DIP OF BEDDING
- Q.V. QUARTZ VEIN
- X — 4901 ROCK SAMPLE LOCATION & NUMBER
- CLAIM BOUNDARY & LEGAL CORNER POST

ROCK ASSAYS

Tag No.	Au ozs/ton	Ag ozs/ton	Cu %
4900	0.001	–	0.022
4901	0.001	0.02	–
4902	0.003	0.06	–
4903	0.001	0.06	–
4904	0.001	–	–
3487	0.001	–	–
3488	0.001	–	–

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 9289

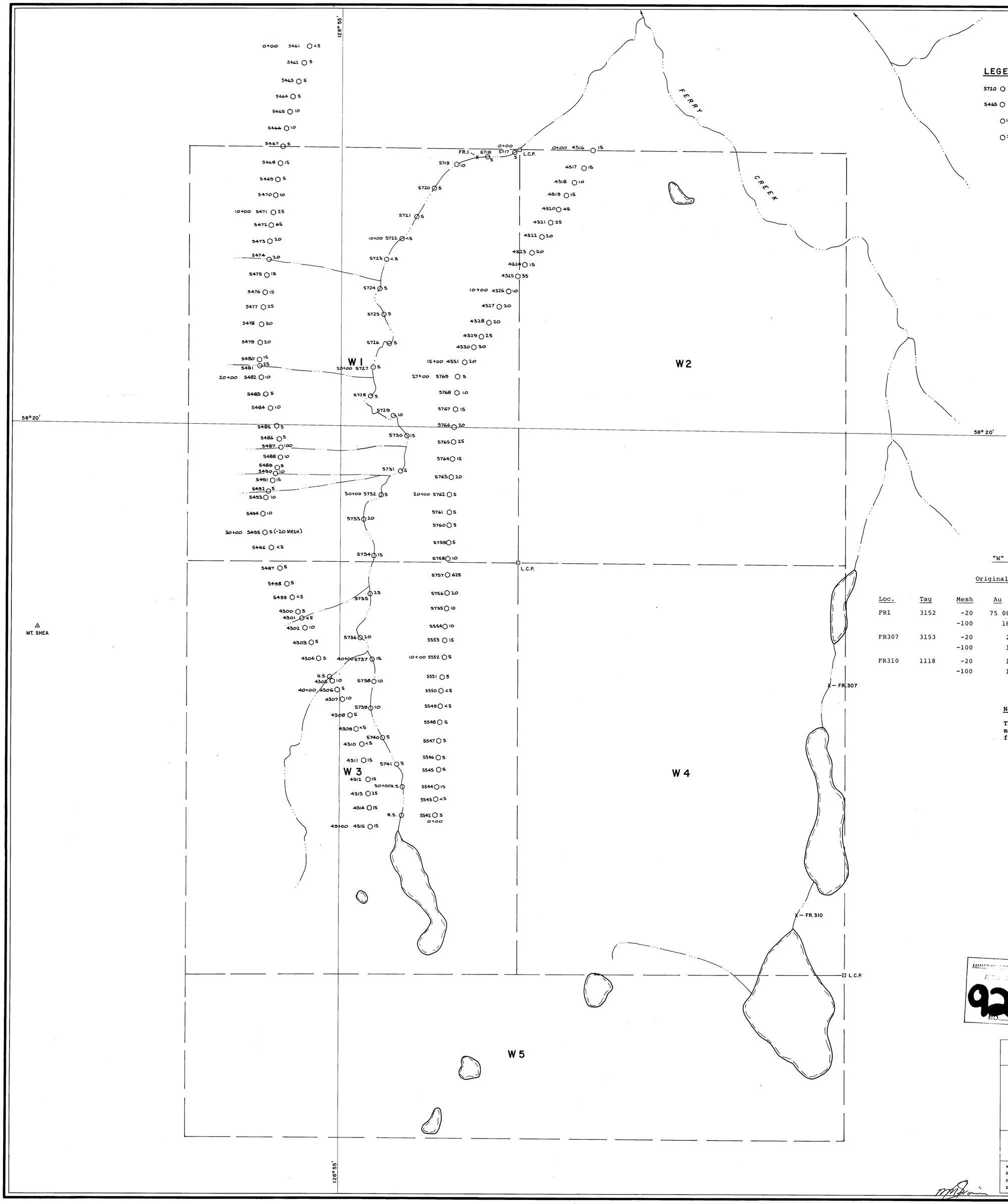
DUPONT EXPLORATION CANADA

ARGONAUT PROJECT
W CLAIMS
GEOLOGY

CRY LAKE AREA, BRITISH COLUMBIA

m 300 0 300 600 m
1 : 10 000
SCALE
ft. 1000 0 2000 ft.
1 INCH = 833 FEET

MAPPED BY :	L.K.E., D.M.S.	REVISED :	N.T.S. No. : 104 I 7W
DATE :	80 08 01,02		ACCT No. : 347-43
DRAWN BY :	K.L.J.		DRWG. No. : AR. 80-148
DATE :	81 02 05		



LEGEND

5720 ○ STREAM SEDIMENT SAMPLE LOCATION & No. ('D' SERIES)

5465 ⬡ SOIL SAMPLE LOCATION & No. ('D' SERIES)

○10 −80 MESH VALUE FOR Au IN P.P.B. (SILT)

⬡25 −80 MESH VALUE FOR Au IN P.P.B. (SOIL)

"W" CLAIM GROUP

Original Sample Results

Loc.	Tag	Mesh	Au	Pb	Cu	Ag	%Hm	Hg
FR1	3152	-20	75 000	10	5	15.9	25.54	
		-100	180	19	48	1.2		16
FR307	3153	-20	20	18	21	0.9	42.62	
		-100	15	21	45	1.1		20
FR310	1118	-20	10	16	63	1.0	7.02	
		-100	10	20	92	1.2		46

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.

DUPONT CANADA EXPLORATION

ARGONAUT PROJECT
W CLAIMS
GEOCHEMISTRY
Au IN P.P.B.
CRY LAKE AREA, BRITISH COLUMBIA

m 300 0 10 000 300 600 m
SCALE
ft. 1000 0 2000 ft.
1 INCH = 833 FEET

MAPPED BY	L.K.E., D.M.S.	REVISED	N.T.S. No.: 104 I 7W
DATE	80 08 01, 02		ACCT No.: 347-43
DRAWN BY	K.L.J.		DRWG. No.: AR. 80-149
DATE	81 02 05		