DU PONT OF CANADA EXPLORATION LIMITED

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE ELGAR CLAIM

SKEENA MINING DIVISION

LAT. 56°29'N, LONG. 130°23'W

NTS: 104-B-8W

OWNER OF CLAIM: Du Pont of Canada Exploration Limited

OPERATOR: Du Pont of Canada Exploration Limited

L. Eccles

Author: L. Eccles

Date Submitted: 1981 June 8

TABLE OF CONTENTS

LIST OF FIGURES

I INTRODUCTION

(a) Location and Access

The ELGAR claim is located in northwestern British Columbia within the Skeena Mining Division, NTS 104-B-8W. The property is situated immediately south of Sulphurets Creek 7 km east of the Unuk River. The claim is centered by latitude 56°29'N, and longitude 130°30'W.

At present access into the property is exclusively via helicopter either from the Stewart-Cassiar Highway 45 km to the northeast or from the town of Stewart 65 km to the SSE. Stewart represents the major supply centre within the region.

(b) Physiography

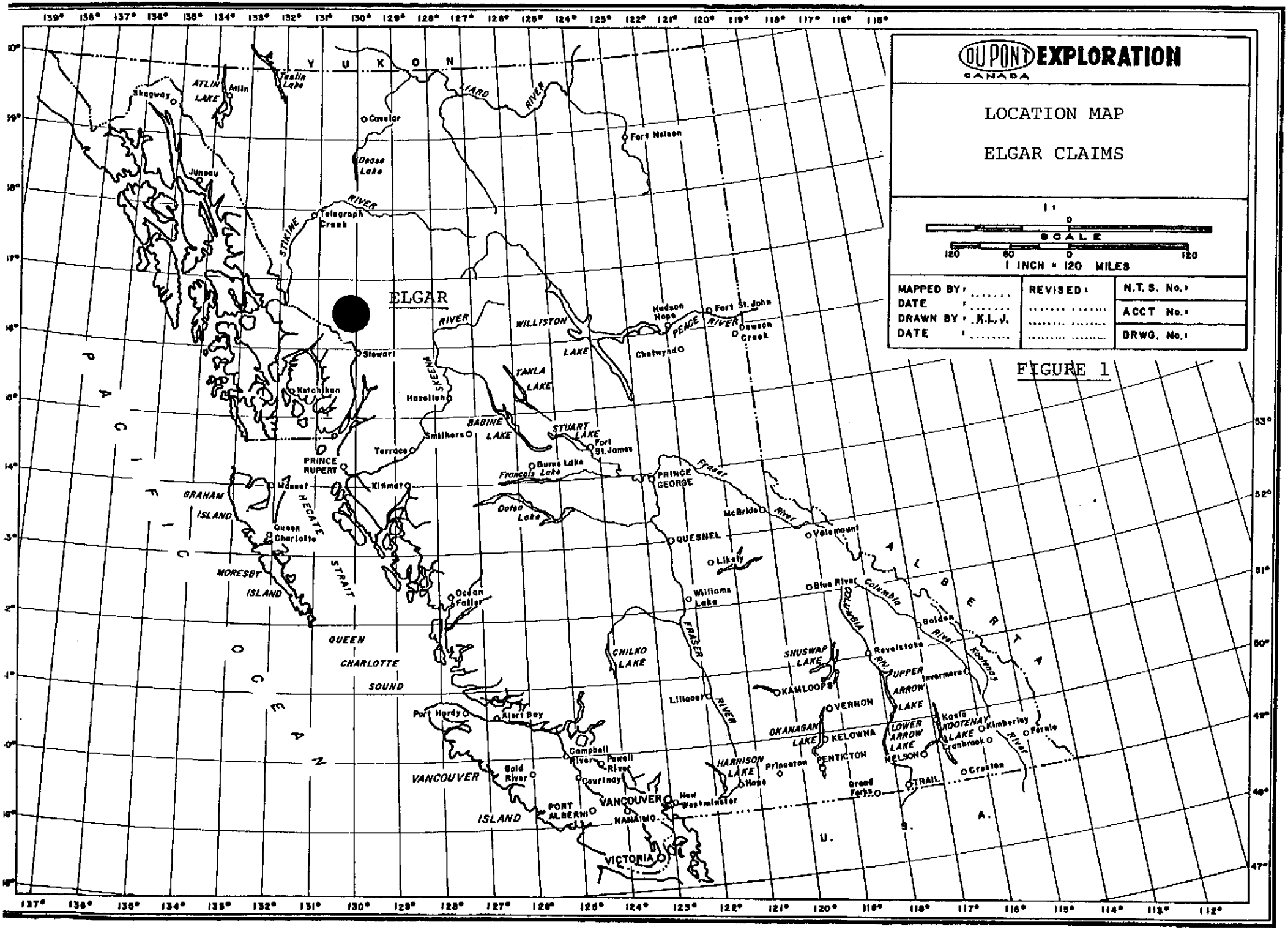
The ELGAR property is situated within the Boundary Ranges of the Coast Mountains. This geographic province consists of a mountainous and glaciated terrain that exhibits relief in excess of 2000 m. Tree line varies from 1000-1200 metres above sea level. Below this point particularly within the lower valleys vegetation consists of a dense growth of spruce. Active glaciation is prevalent in the area particularly in terrain above 1500 metres.

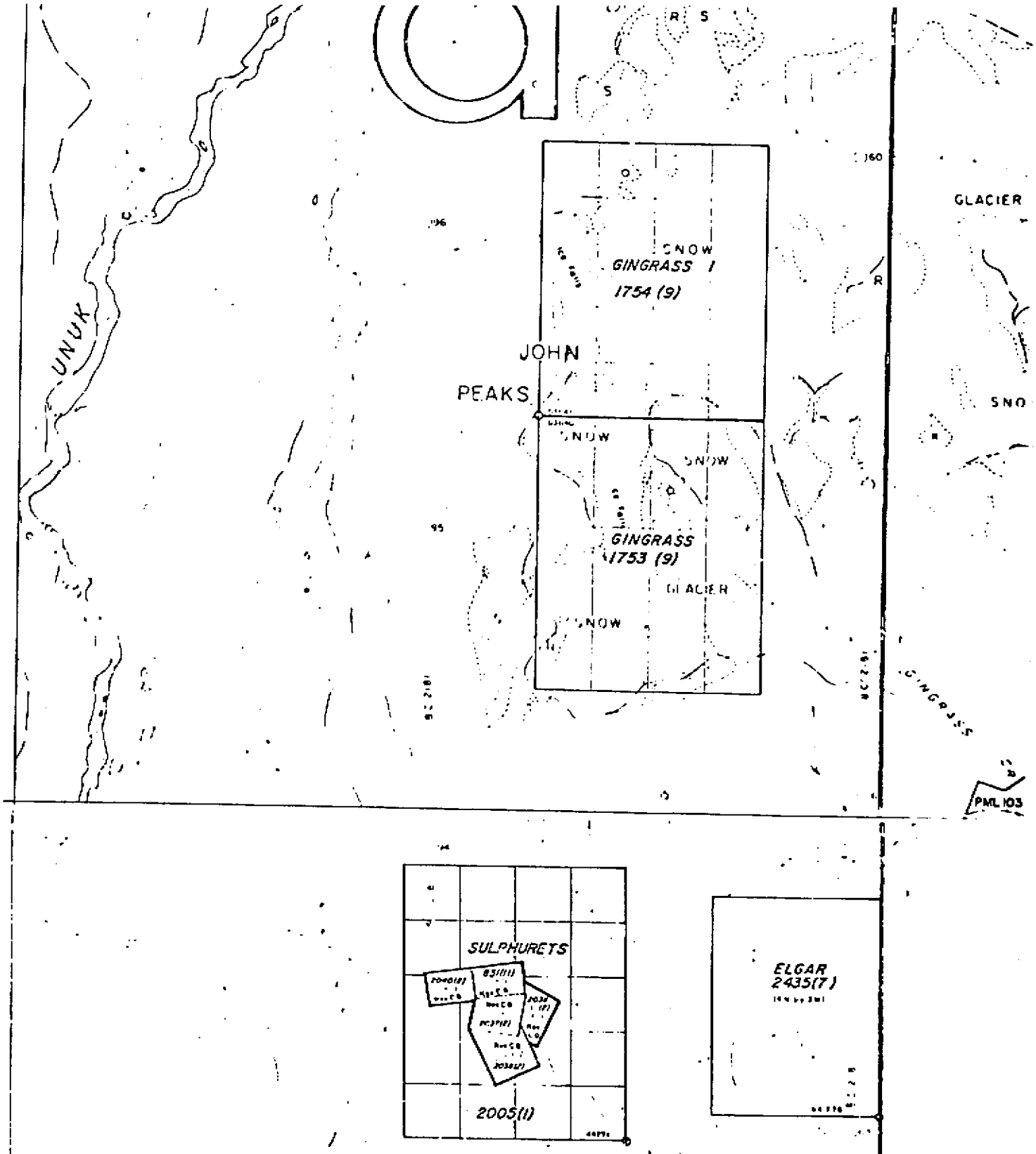
Elevation over the property varies from 420 metres above sea level at Sulphurets Creek to 1450 metres along the south boundary of the claim. The property occurs across steep, north facing slopes of an unnamed mountain. The southern third of the claim is situated above tree line.

(c) Claim Status

The ELGAR property entails a total of 12 units. Pertinent data for the group is outlined below:

Record No: 2435
Tag No: 64776
Date Recorded: July 14, 1980


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



INDEX MAP - Figure 2

ELGAR CLAIM

NTS: 104-B-8W

SCALE: 1:50 000

Claim centered @

Lat. 56°29'N

Long. 130°23'W

(d) History and Economic Assessment of Property

No previous assessment work has been filed for the area immediately covered by the ELGAR claim. Considerable exploration dating back to at least 1960 has been conducted at the headwaters of Mitchell and Sulphurets Creeks, located 6 km to the east and northeast of the ELGAR property. Work has been conducted in search of copper and molybdenum mineralization and most recently for precious metals.

Results obtained during the 1980 programme revealed the presence of weakly anomalous stream sediment samples, in terms of gold. In addition, two rock samples returned significant gold values. The nature and extent of these occurrences are presently unknown.

(e) Summary of Work

Subsequent to staking the ELGAR property two traverses, entailing stream sediment sampling, geological mapping and prospecting, was conducted along two principal northwesterly draining streams. Both the mapping and the stream sediment sample locations were drawn on a scale of 1:10 000 (Dwg. No. AR 80-197 & AR 80-198). A total of 13 stream sediment and 3 rock samples were obtained across the property.

II GEOLOGY

(a) Regional Geology

The Boundary Ranges of the Coast Mountains occur along the contact of the Intermontane and Coast Crystalline geologic provinces. The latter, the bulk of which occurs across the border in the Alaskan panhandle consists of Tertiary and Cretaceous quartz monzonite and quartz diorite. The Intermontane belt within the Unuk River area consists of Carboniferous and Permian schists; Upper Triassic andesite, basalt and clastic sediments and Jurassic clastic sediments and minor volcanics.

Intruding the Intermontane belt within this region are a number of intrusives that include Triassic diorite and monzonite, Jurassic quartz diorite and Cretaceous and Tertiary quartz monzonite.

Pliocene - recent aerial volcanism extruded rhyolites, basalts and tuffs within the Edziza Peak, Level Mountain and to a lesser degree Iskut River areas.

(b) Property Geology

The ELGAR claim, as indicated on G.S.C. map 1418A (1974), is underlain by Middle Jurassic Hazelton Group tuffs and clastic sediments.

Mapping conducted along the two streams revealed the presence of argillite within the southern portion of the claim. Andesite occurs in outcrop within the western stream at an elevation of approximately 890 metres. Occurring sporadically along the stream bed are a series of gossans which appear to be related to shear zones.

Although an east-west strike appears to be prevalent, the limited nature of the mapping precludes any structural interpretation of the property.

(c) Mineralization

Hosted by andesite and/or argillite are several scattered mineralized quartz veins. These veins which are up to one metre in width contain pyrite-galena-chalcopyrite-sphalerite and/or arsenopyrite. The orientation of these veins has not been determined.

Of the three rock samples that were obtained two revealed anomalous values in gold and to a lesser degree Ag, and/or Pb, Zn and Cu. The results obtained are shown below:

Assays:

Samp.#	Au(o/t)	Ag(o/t)	Pb(%)	Zn(%)	Cu(%)
6285	0.091	0.40	0.38	0.40	0.048

Geochemistry:

Samp.#	Au(ppb)	Pb(ppm)	Zn(ppm)	Cu(ppm)
6284	3050	36	560	240
6291	25	23	220	146

(d) Conclusions

The ELGAR claim is underlain by a sequence of andesitic volcanics and argillites that host scattered pyrite-galena-chalcopyrite-sphalerite-(arsenopyrite) bearing quartz veins. Associated with these veins are anomalous gold-silver values. The nature, concentration and extent of this mineralization is at present unknown.

III GEOCHEMISTRY

(a) Procedure

A total of 13 stream sediment and 3 rock samples were obtained from the ELGAR claim.

The stream sediment samples were collected from two tributaries of Sulphurets Creek. Samples were obtained along 150-200 metre intervals. Each sample was placed in numbered wet-strength sample envelopes and the various locations were flagged indicating their respective numbers.

The three rock samples that were obtained were deposited in plastic bags. At the laboratory the samples were crushed, split, pulverized and sieved to -100 mesh. One sample was assayed for Au (oz/ton), Ag (oz/ton), Cu (%), Pb (%) and Zn (%). The other two samples were geochemically analyzed for Au (ppb), Cu (ppm), Pb (ppm) and Zn (ppm).

The stream sediment and rock samples were shipped to Min-En Laboratories in North Vancouver for preparation and analysis. The stream sediment samples were sieved to -80 mesh and analyzed for Au (ppb), Pb (ppm), Zn (ppm) and Cu (ppm), according to the procedure outlined in Appendix A. Three samples, #6282, #6290 and #6296 were prepared to a -40 mesh fraction and analyzed.

(b) Results

Drawing AR 80-198 denotes the various sample locations and their respective results. Stream sediment samples were obtained from two north-west draining tributaries of Sulphurets Creek. This was undertaken in order to define the source of anomalous gold concentrations obtained during a regional survey.

Within the eastern tributary results indicated only slightly elevated Au and Zn concentrations however these are not considered anomalous. Samples obtained from the western stream revealed anomalous Au, Zn and to a lesser degree Cu results. Au ranges from 35 ppb at the downstream point (#6290) to 85 ppb (#6288) further upstream. Above #6288 Au varies from 20-35 ppb. Both Cu and Zn also exhibit corresponding increases upstream however in both instances the peak occurs 600 metres above the anomalous gold sample (#6288). Copper ranges from 136-510 ppm and zinc varies from 460-1970 ppm. Lead exhibited background values.

In conclusion the stream sediment geochemistry appears to reflect the mineralized quartz veins as observed by samples #6285 and #6284.

IV COST STATEMENT

(a) Wages

	Rate/ day	Spec. dates	No. days	Cost
1 jr. geol.	$ 50.82	Jul.24/80	1	$ 50.82
1 field asst.	46.58	Jul.24/80	1	46.58
1 tech.asst.	39.18	November/80	1	39.18
1 geologist	146.92	Mar.19,30,31/ 1981	2	293.84
				$ 430.42

(b) Room and Board

The per diem rate of $50.41 applies to 2 person days during July 24/80: $ 100.82

(c) Transportation

Costs to and from the project area during July, pertinent to the ELGAR claim, are split amongst claims that had work conducted upon.

A. To/From Project Area - Scheduled Carriers

Date	From-To	Via	No.persons	
Jul.13	Vanc./Stewart	CP/TPA	2 @ $150.10	$ 300.20
Jul.14	Vanc./Stewart	CP/TPA	3 @ $150.10	450.30
Jul.15-16	Whitehorse/ Vanc./Stewart	CP/TPA	1 @ $301.00	301.00
Jul.16	Vanc./Stewart	CP/TPA	1 @ $150.10	150.10
Jul.21-22	Whitehorse/ Vanc./Stewart	CP/TPA	1 @ $301.00	301.00
				$1,502.60

ELGAR portion (2/34 person days) $ 88.39

Transportation (continued)

Helicopter - (Stewart-Camp-Stewart)

Terr-Air Rotary Limited

July 16/80 - Inv.#907 (5.5 hrs @ $366/hr)	$2,013.00
July 28/80 - Inv.#917 (8.3 hrs @ $366/hr)	3,037.80
	$5,050.80
Charter split with another area:	$2,525.40
ELGAR portion:	$ 148.55

B. To/From Claims

Terr-Air charter ticket #913 (1.03 hours @ $366/hr):	$ 376.98
Total transportation expenses:	$ 613.92

(d) Analytical Services

Min-En Laboratories Invoice #6938

13 stream sed. - prep. (@ $0.60 each)	$ 7.80
13 stream sed. - Pb (@ $1.75 each)	22.75
13 stream sed. - Cu (@ $0.75 each)	9.75
13 stream sed. - Au (@ $4.25 each)	55.25
13 stream sed. - Zn (@ $0.75 each)	9.75
2 rock (geochem) - prep. (@ $2.00 each)	4.00
2 rock (geochem) - Cu,Pb,Zn (@ $3.25 each)	6.50
2 rock (geochem) - Au (@ $4.25 each)	8.50
1 rock (assay) - prep. (@ $2.50 each)	2.50
1 rock (assay) - Cu,Pb (@ $11.00 each)	11.00
1 rock (assay) - Zn (@ $6.00 each)	6.00
1 rock (assay) - Ag (@ $6.50 each)	6.50
1 rock (assay) - Au (fire), (@ $7.50 each)	7.50
	$ 157.80

(e) Report Preparation

	Rate/ day	Spec. dates	No. days	
Drafting	$127.00	Mar.24,25/81	2	$ 254.00
Typing	64.80	Apr.1/81	1	64.80
				$ 318.80

(f) Miscellaneous

Cooks wages @ $86.40/day (July 16-28)	$1,123.20
ELGAR portion of expenses (2/34 person days):	$ 66.07
Room and board - pilot and cook	
Per diem rate of $50.41	$1,210.66
ELGAR portion of expenses:	71.22
Total miscellaneous expenses	$ 137.29
GRAND TOTAL	$1,759.05

V. QUALIFICATIONS

I, Louise K. Eccles, do hereby certify that:

1. I am a geologist residing at 782 West 22nd Avenue, Vancouver, British Columbia and was employed by Du Pont of Canada Exploration Limited at the time of the programme.

2. I am a graduate of the University of British Columbia with a B.Sc. (Honours) degree in geology.

3. I have practised my profession in geology continuously for the past four years in British Columbia, Ontario, the Yukon and Northwest Territories.

4. Between 1980 July 13 - August 31, I directed/ supervised a field programme on the ELGAR property on behalf of Du Pont of Canada Exploration Limited.

L. Eccles

Louise K. Eccles

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.

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.

56° 30'

CREEK

SULPHURETS

2

1

X-6291D
py, ppy, asp

X-6285D
Q.V. contains py, as, cpy, Sph.

X-6284D
py

Hematite staining

L.C.P.

N

130° 25'

LEGEND

2	ANDESITE
1	ARGILLITE

SYMBOLS

	OUTCROP
X-62840	ROCK SAMPLE LOCATION & No.
asp	ARSENOPYRITE
cpy	CHALCOPYRITE
gn	GALENA
py	PYRITE
Sph	SPHALERITE
Q.V.	QUARTZ VEIN

ROCK ASSAYS

Tag No.	Au ozs/ton	Ag ozs/ton	Cu %	Pb %	Zn %
6285D	0.091	0.40	0.048	0.38	0.40

ROCK GEOCHEMISTRY

Tag No.	Au P.P.B.	Ag P.P.M.	Cu P.P.M.	Pb P.P.M.	Zn P.P.M.
6284D	3050		240	36	560
6291D	25		146	23	220

DUPONT EXPLORATION CANADA

ARGONAUT PROJECT
ELGAR CLAIM
GEOLOGY (1)

ISKUT RIVER AREA, BRITISH COLUMBIA

1:10 000

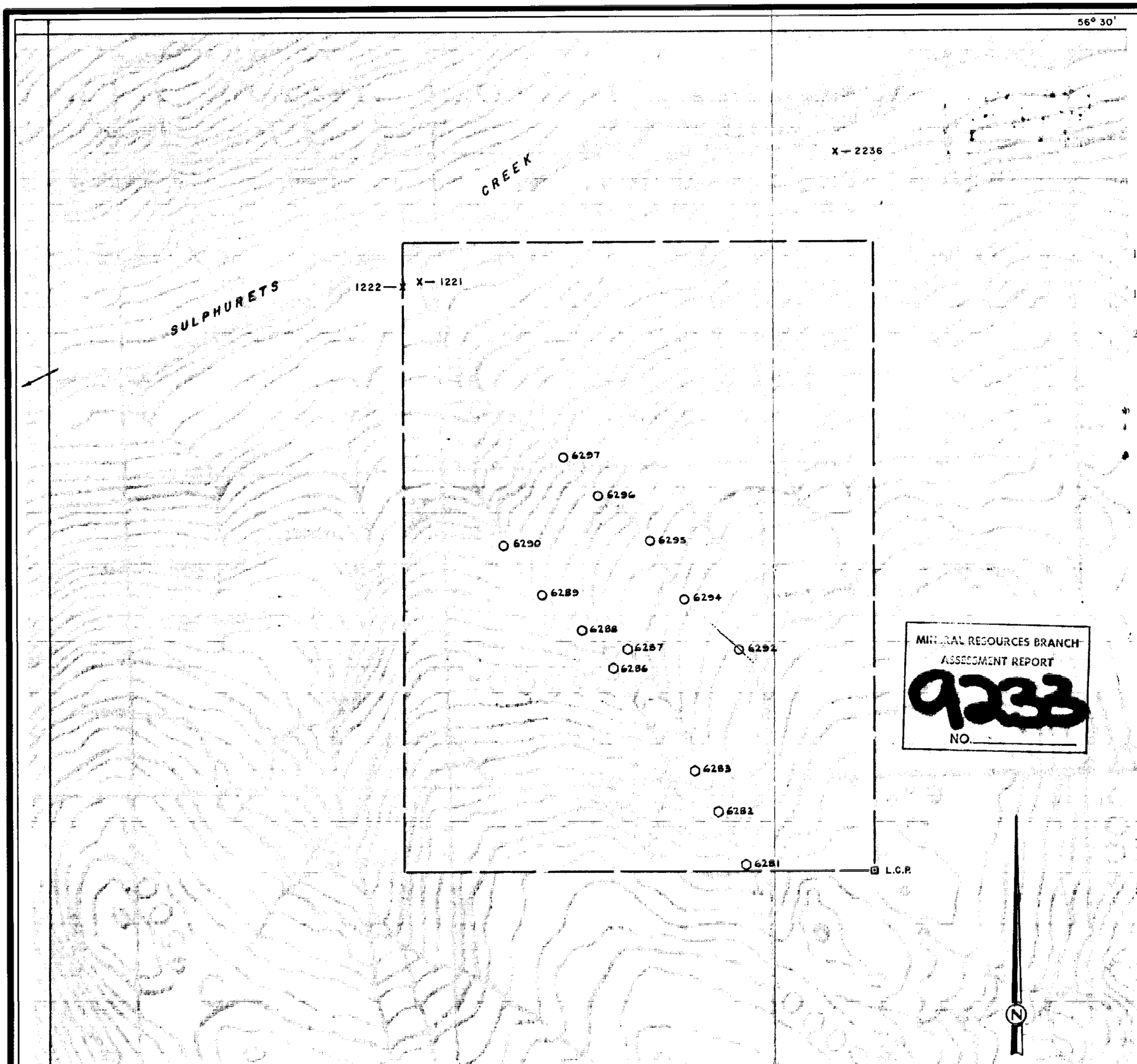
m 300 0 300 600 m

SCALE

ft. 1000 0 1000 2000 ft.

1 INCH = 833 FEET

MAPPED BY	C.B.G.	REVISED	N.T.S. No. 104 B SW
DATE	80 06 24		ACCT No. 347-83
DRAWN BY	K.L.J.		DRWG. No. AR. 80-197
DATE	81 04 06		



LEGEND

6296 ○ STREAM SEDIMENT SAMPLE LOCATION & No. ('D' SERIES)

6282 ○ SOIL SAMPLE LOCATION & No.('D' SERIES)

X—2236 ORIGINAL STREAM SEDIMENT SAMPLE LOC. & No.

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.
1221	- 20	1250					3.41
	-100	10	33	23	121	1.7	
1222	- 20	90					3.47
	-100	15	36	35	190	2.1	
2236	- 20	20					1.30
	-100	30	42	31	133	2.1	

FOLLOW-UP SOIL SAMPLE RESULTS

Tag	Mesh	Au P.P.B.	Pb P.P.M.	Zn P.P.M.	Cu P.P.M.
6281	- 80	25	27	118	124
6282	- 40	55	26	425	115
6283	- 80	20	41	1970	510
6286	- 80	25	31	300	128
6287	- 80	20	38	790	265
6288	- 80	85	38	525	176
6289	- 80	30	42	545	164
6290	- 40	35	30	460	136
6292	- 80	5	32	425	145
6294	- 80	20	27	260	134
6295	- 80	15	34	275	155
6296	- 40	15	20	480	140
6297	- 80	20	15	480	127

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.

L. Hoeve

DUPONT CANADA EXPLORATION

ARGONAUT PROJECT
ELGAR CLAIM
GEOCHEMISTRY
Au IN P.P.B. & Cu, Pb, Zn IN P.P.M.
ISKUT RIVER AREA, BRITISH COLUMBIA (2)

1:10000

m 300 0 300 600 m

SCALE

ft. 1000 0 1000 2000 ft.

1 INCH = 833 FEET

MAPPED BY : C.B.G.	REVISED :	N.T.S. No.: 104 B 8W
DATE : 80 06 24		ACCT No.: 547-53
DRAWN BY : K.L.J.		DRWG. No.: AR. 80-198
DATE : 81 04 06		