82-373-10429

DU PONT OF CANADA EXPLORATION LIMITED

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE SHUI PROPERTY

CASSIAR MINING DIVISION

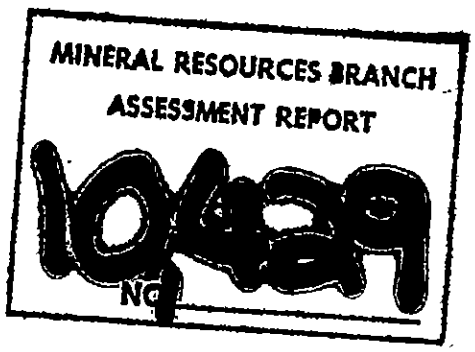
(BRITISH COLUMBIA)

LAT. 59°53'N, LONG. 134°53'W

NTS: 104-M-15W

OWNER OF CLAIMS: DU PONT OF CANADA EXPLORATION LIMITED

OPERATOR: DU PONT OF CANADA EXPLORATION LIMITED



Submitted by: J.T. Neelands
H.J. Copland

Date : 1982 May

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INTRODUCTION

During 1981 May, reconnaissance stream sediment sampling was carried out in the Tagish-Bennett Lake area of northwestern British Columbia. The sampling was undertaken as part of a large regional programme known as Kulta Project. The areal extent of this project is shown on Dwgs. KU.81-1, 1a and 2.

As the result of an andomalous gold sample in a creek draining south into Paddy's Pass, the drainage area of this creek was staked as the SHUI property (Dwg. No. KU.81-244).

LOCATION AND ACCESS

The SHUI claim is located within the Cassiar Mining Division, NTS 104-M-15W (Lat. 59°53'N, Long. 134°53'W). The property is located midway between Tutshi Lake and Bennett Lake on the north side of Paddy's Pass. The nearest populated centre is Carcross, YT which is 33 kilometres to the north. The claim is accessible by helicopter from Carcross. The Carcross-Skagway highway passes 5 kilometres to the east of the property and a rough 4x4 road from the highway terminates within one kilometre of the claim.

TOPOGRAPHY AND VEGETATION

The claim lies on the north side of Paddy's Pass, midway between Tabish Lake and Bennett Lake. Elevation varies from 1950 metres in the north to 875 m in the south, in the valley floor of Paddy's Pass. The valley is a typical glacial carved U-shaped valley. Drainage flows north and south into the valley then eastward into Tutshi Lake. The floor of the valley is covered by glacial and alluvial material which supports scattered stands of Black spruce and abundant alders. Above 1200 metres only small shrubs and grasses grow on the steep slope.

PROPERTY DEFINITION

The SHUI property consists of one claim of 12 units as shown on Dwg. No. KU.81-249. The claims are in good standing until 1982 June 23.

TUTS:	Record No.	1466
	Tag No.	75822
	Date Recorded:	1981 June 23

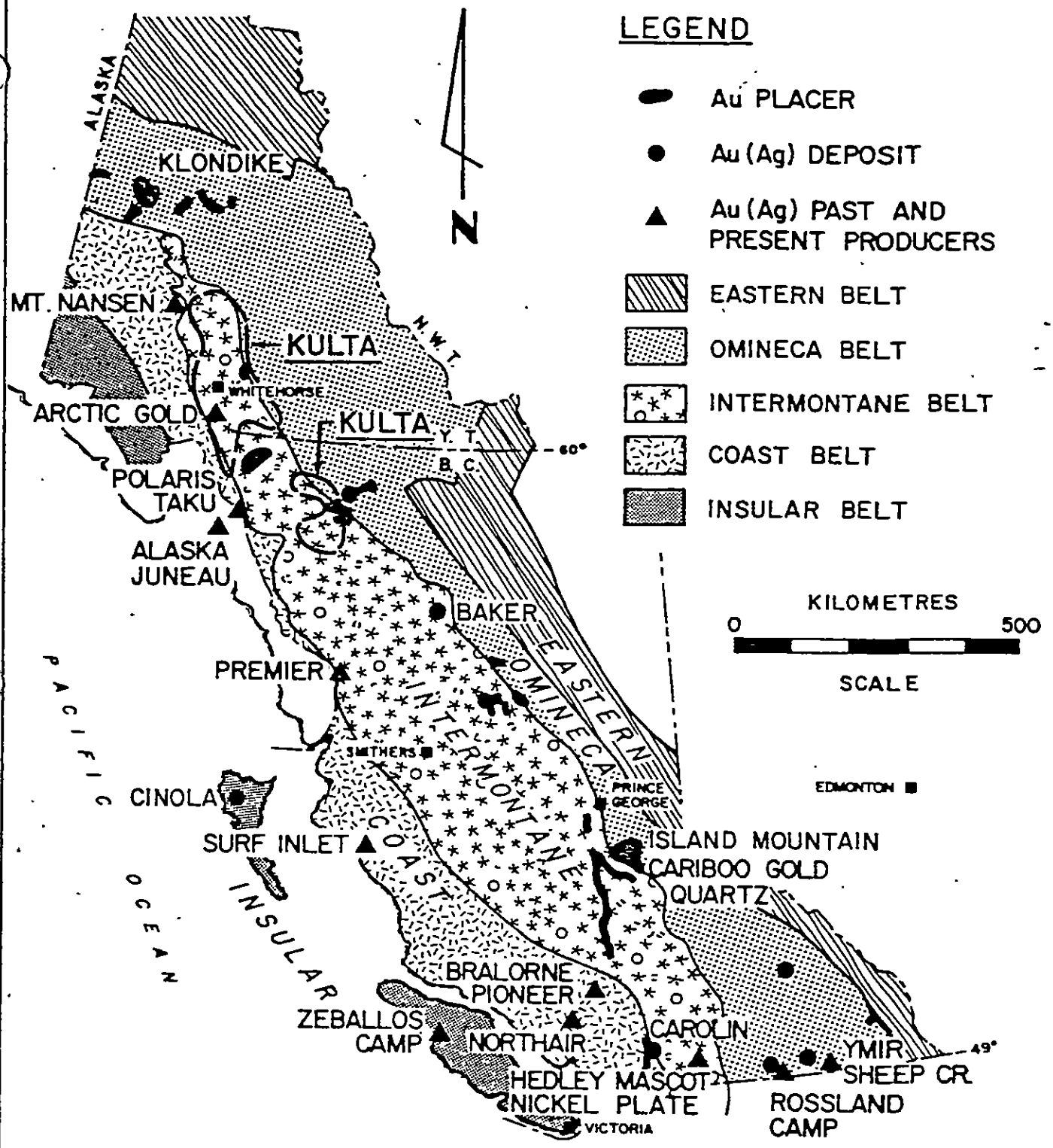


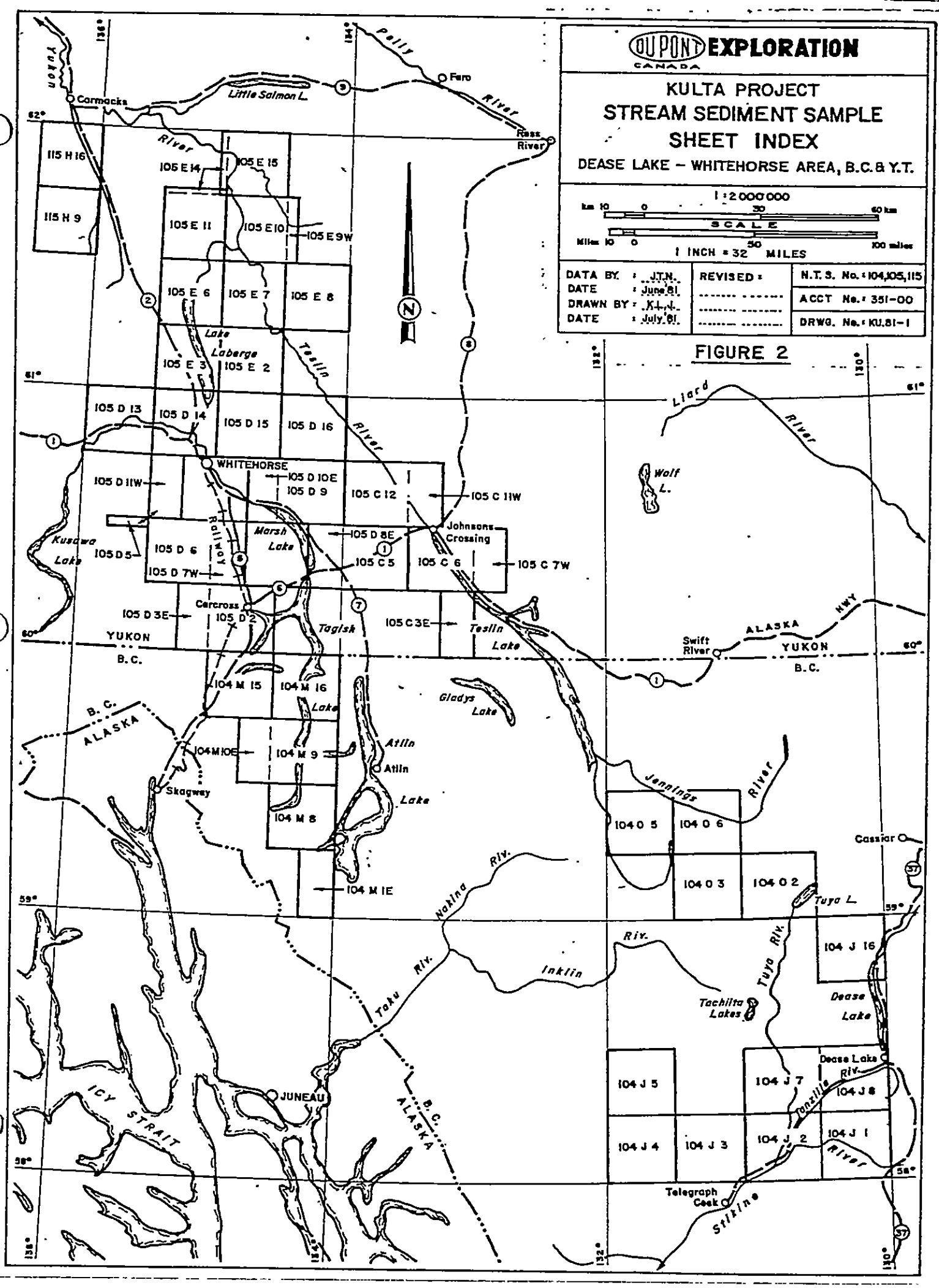
FIGURE 1

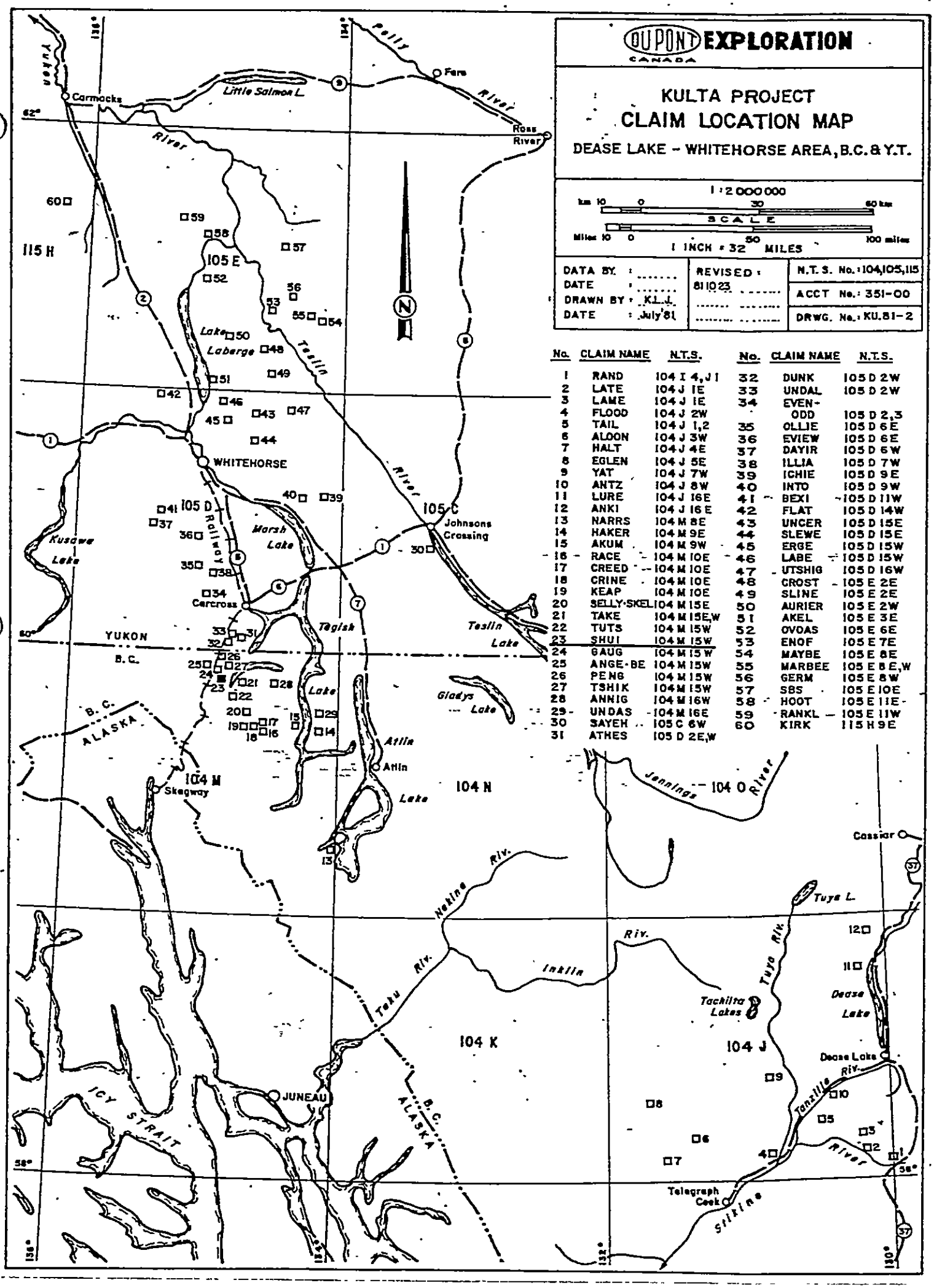
KULTA PROJECT AREAS

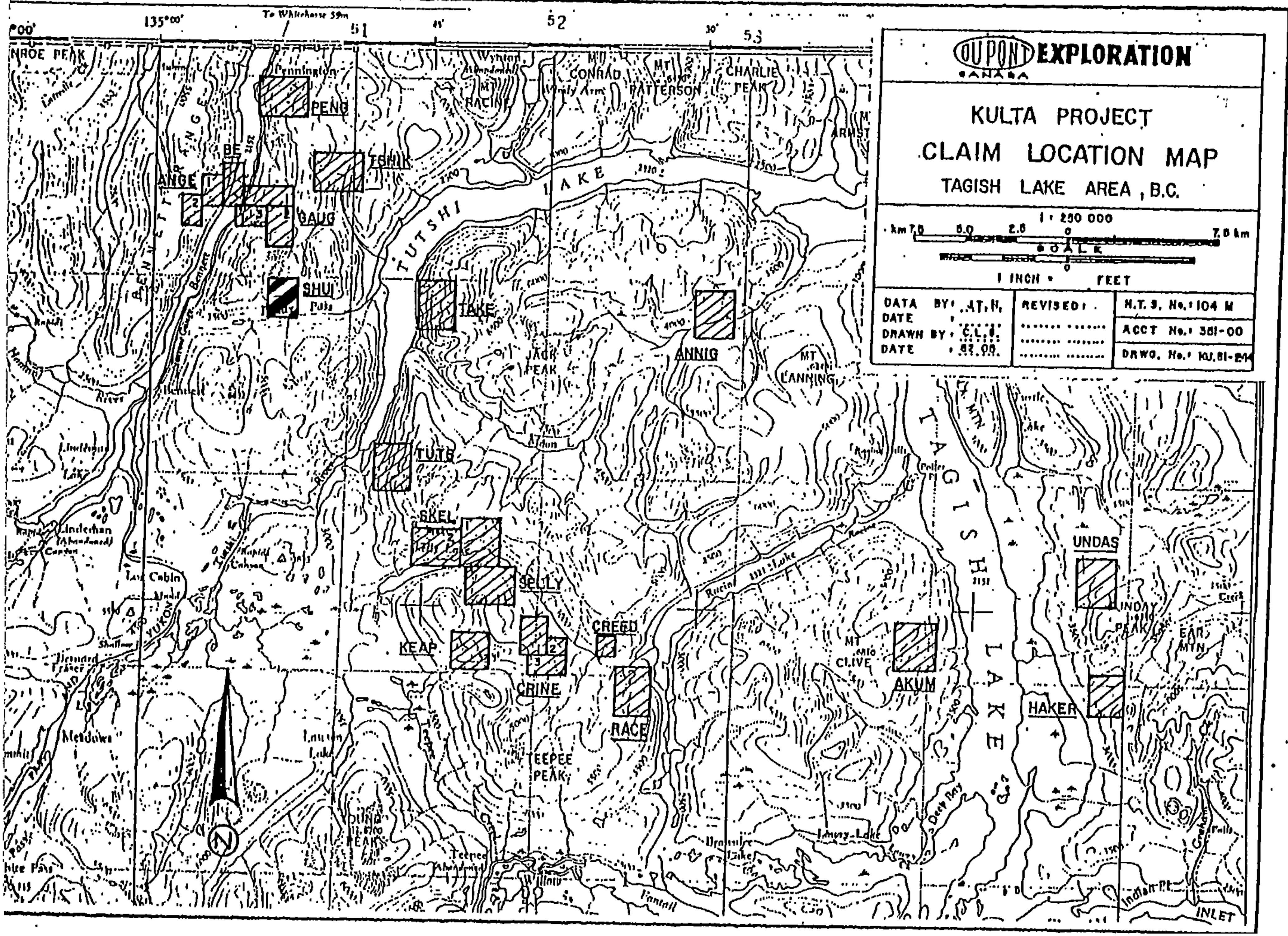
PRINCIPAL LODE & PLACER GOLD DEPOSITS CANADIAN CORDILLERA

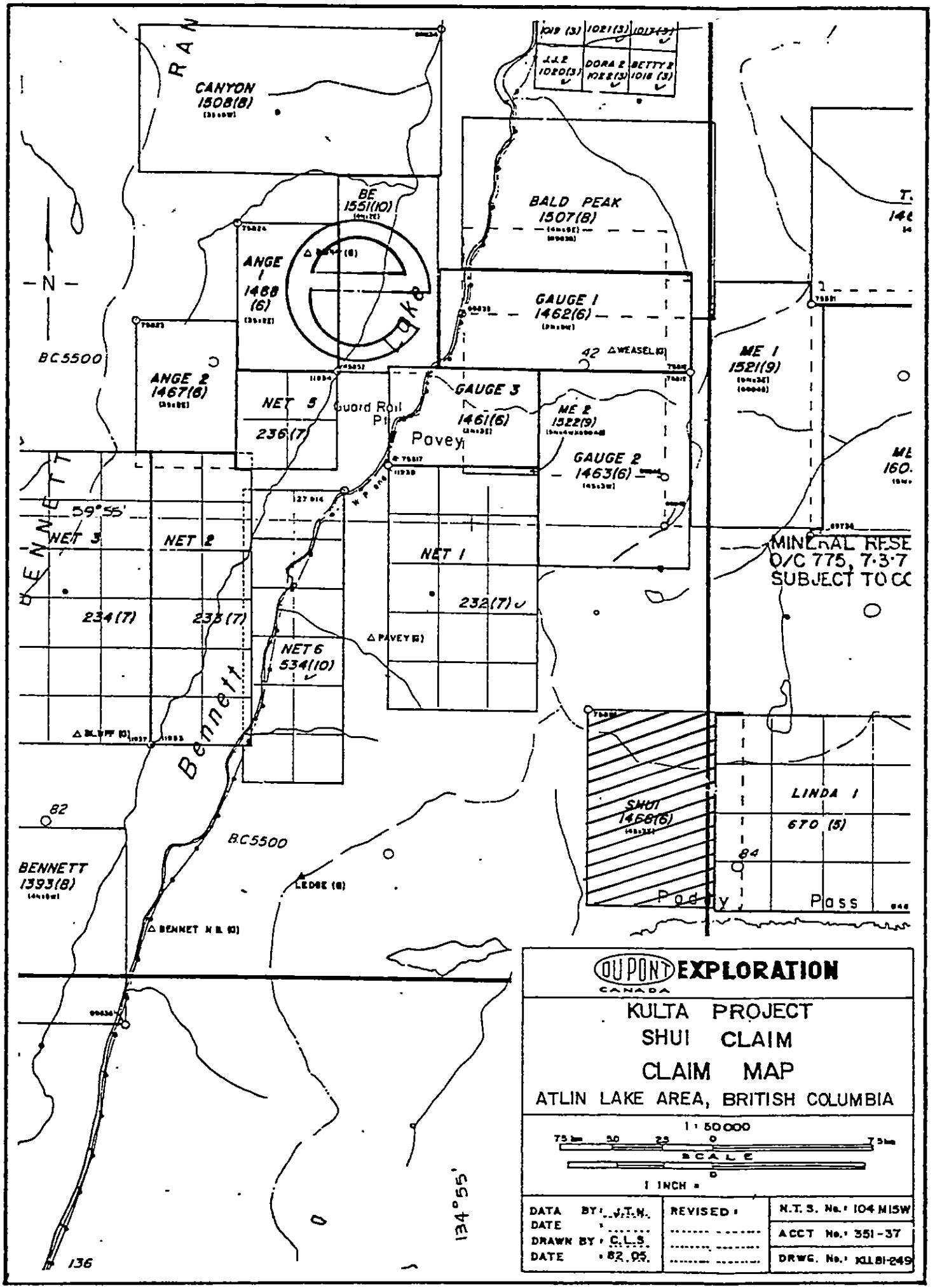
K.L.J. 8111 26

DRWG No. KU.81-1a


DUPONT EXPLORATION
CANADA
KULTA PROJECT
STREAM SEDIMENT SAMPLE
SHEET INDEX
DEASE LAKE – WHITEHORSE AREA, B.C. & Y.T.
1:2000000
km 10 0 30 60 km
SCALE
Miles 10 0 30 100 miles
1 INCH = 32 MILES
DATA BY : J.T.N.
DATE : June '81
DRAWN BY : K.L.L.
DATE : July '81
REVISED :
N.T.S. No. : 104,105,115
ACCT No. : 351-00
DRWG. No. : KU.81-1
FIGURE 2
Yukon
Carmacks
Little Salmon L.
Pelly
Faro
River
Ross River
115 H 16
115 H 9
105 E 14
105 E 15
105 E 11
105 E 10
105 E 9W
105 E 6
105 E 7
105 E 8
Lake Laberge
105 E 3
105 E 2
Teslin River
105 D 13
105 D 14
105 D 15
105 D 16
WHITEHORSE
105 D 11W
105 D 10E
105 D 9
105 C 12
105 C 11W
Kusawa Lake
105 D 5
105 D 6
105 D 7W
Marsh Lake
105 D 8E
Johnsons Crossing
105 C 5
105 C 6
105 C 7W
Carcross
105 D 3E
105 D 2
Tagish
105 C 3E
Teslin Lake
YUKON
B.C.
104 M 15
104 M 16
Gladys Lake
B.C. ALASKA
104 M 10E
104 M 9
Atlin
Skagway
Lake
104 M 8
104 M 1E
Liard River
Wolf L.
Swift River
ALASKA HWY
YUKON
B.C.
Jennings River
104 O 5
104 O 6
104 O 3
104 O 2
Cassiar
Nakina Riv.
Tuya L.
Tuya Riv.
104 J 16
Inklin Riv.
Taku Riv.
Tachilta Lakes
Dease Lake
Dease Lake
Dzaskie Riv.
104 J 8
104 J 5
104 J 7
104 J 4
104 J 3
104 J 2
104 J 1
JUNEAU
ICY STRAIT
B.C. ALASKA
Telegraph Creek
Stikine River


DUPONT EXPLORATION
CANADA
KULTA PROJECT
CLAIM LOCATION MAP
DEASE LAKE - WHITEHORSE AREA, B.C. & Y.T.
1:2 000 000
km 10 0 30 60 km
SCALE
Miles 10 0 50 100 miles
1 INCH = 32 MILES
DATA BY : .....
DATE : .....
DRAWN BY : K.L.J.
DATE : July'81
REVISED : 81 10 23
N.T.S. No.: 104,105,115
ACCT No.: 351-00
DRWG. No.: KU.81-2
No. CLAIM NAME N.T.S.
1 RAND 104 I 4, J 1
2 LATE 104 J 1E
3 LAME 104 J 1E
4 FLOOD 104 J 2W
5 TAIL 104 J 1,2
6 ALOON 104 J 3W
7 HALT 104 J 4E
8 EGLEN 104 J 5E
9 YAT 104 J 7W
10 ANTZ 104 J 8W
11 LURE 104 J 16E
12 ANKI 104 J 16E
13 NARRS 104 M 8E
14 HAKER 104 M 9E
15 AKUM 104 M 9W
16 RACE 104 M 10E
17 CREED 104 M 10E
18 CRINE 104 M 10E
19 KEAP 104 M 10E
20 SELLY-SKEL 104 M 15E
21 TAKE 104 M 15E,W
22 TUTS 104 M 15W
23 SHUI 104 M 15W
24 GAUG 104 M 15W
25 ANGE-BE 104 M 15W
26 PENG 104 M 15W
27 TSHIK 104 M 15W
28 ANNIG 104 M 16W
29 UNDAS 104 M 16E
30 SAYEH 105 C 6W
31 ATHES 105 D 2E,W
32 DUNK 105 D 2W
33 UNDAL 105 D 2W
34 EVEN-ODD 105 D 2,3
35 OLLIE 105 D 6E
36 EVIEW 105 D 6E
37 DAYIR 105 D 6W
38 ILLIA 105 D 7W
39 ICHIE 105 D 9E
40 INTO 105 D 9W
41 BEXI 105 D 11W
42 FLAT 105 D 14W
43 UNCER 105 D 15E
44 SLEWE 105 D 15E
45 ERGE 105 D 15W
46 LABE 105 D 15W
47 UTSHIG 105 D 16W
48 CROST 105 E 2E
49 SLINE 105 E 2E
50 AURIER 105 E 2W
51 AKEL 105 E 3E
52 OVOAS 105 E 6E
53 ENOF 105 E 7E
54 MAYBE 105 E 8E
55 MARBEE 105 E 8E,W
56 GERM 105 E 8W
57 SBS 105 E 10E
58 HOOT 105 E 11E
59 RANKL 105 E 11W
60 KIRK 115 H 9E
Yukon
Carmacks
Little Salmon L.
Pelly River
Faro
Ross River
River
115 H
105 E
105 D
105 C
104 M
104 N
104 K
104 J
104 O
WHITEHORSE
Lake Laberge
Teslin River
Marsh Lake
Kusawa Lake
Carcross
Tagish
Teslin Lake
Johnsons Crossing
Gladys Lake
Atlin Lake
Atlin
Skagway
YUKON
B.C.
ALASKA
Jennings River
Cassiar
Nakina Riv.
Tuya L.
Tuya Riv.
Inklin Riv.
Tahtsa Lakes
Dease Lake
Dease Lake Riv.
Tanzilla River
Telegraph Creek
Stikine
JUNEAU
ICY STRAIT


DUPONT EXPLORATION
CANADA
KULTA PROJECT
CLAIM LOCATION MAP
TAGISH LAKE AREA, B.C.
1 : 250 000
SCALE
1 INCH = FEET
DATA BY: A.T.N.
DATE
DRAWN BY: C.L.S.
DATE: 82.05.
REVISED:
N.T.S. No.: 104 M
ACCT No.: 381-00
DRWG. No.: KU.81-24
PENG
TSHIK
ANGE
BE
GAUG
SHUI
TAKE
ANNIG
TUTE
SKEL
SELLY
CREED
KEAP
CRINE
RACE
AKUM
UNDAS
HAKER
TUTSHI LAKE
TAGISH LAKE
JACK PEAK
MT LANNING
MT CLIVE
TEEPEE PEAK
MT CONRAD
MT PATTERSON
CHARLIE PEAK
MT RACINE
To Whitehorse 59m
135°00'
INLET



DUPONT EXPLORATION
CANADA

KULTA PROJECT
SHUI CLAIM
CLAIM MAP
ATLIN LAKE AREA, BRITISH COLUMBIA

1 : 50000

75 km 50 25 0 75 km

SCALE

1 INCH =

DATA BY : J.T.N.	REVISED :	N.T.S. No. : 104 M/5W
DATE :		ACCT No. : 351-37
DRAWN BY : C.L.S.		DRWG. No. : KLL81-249
DATE : 82.05.		

PREVIOUS WORK

No previous work is recorded concerning the property. The property was staked on 1981 June on the basis of an auriferous stream sediment anomaly. Follow-up work in July and August consisted of collecting 20 soil samples and 10 rock samples.

The property was observed to be underlain by granites, metasediments and metavolcanic rocks. No significant mineralization was observed during the follow-up.

PERSONNEL

Property work was performed by the following people on the dates indicated:

1981 July 26: H. Copland (Sr. Geological Assisant)
L. Cunningham (Jr. Geological Assistant)

1981 July 27: H. Copland and L. Cunningham

1981 Aug. 12: H. Copland

GEOLOGY

Regional Geology

The property lies within the Intermontane Belt of the western Cordillera. The belt consisting mainly of sedimentary and volcanic rocks stretches from the Yukon to southern British Columbia. The belt averages 150 kilometres in width and trends northwest-southeast. Bordering the belt to the west are the granitic rocks of the Coast Mountain Intrusions, which stretch along the entire B.C. coast into Alaska.

Physiographically, the region is part of the Yukon Plateau. This area is characterized by glaciated mountain peaks generally under 2000 metres in elevation and long narrow lake-filled valleys. To the west, the rugged extensively glaciated peaks of the Coast Mountains dominate.

The Tagish-Bennett Lake areas are dominated by rocks of the Intermontane Belt with small plutons (2-8 km in size) of Late Cretaceous Coast Intrusions scattered throughout. The main front of the Coast Mountains occurs seven kilometres west of the area. The rocks of the Intermontane Belt comprise Palaeozoic metamorphic rocks (schists and gneiss), Pennsylvanian (?) and Permian volcanic and meta-volcanic rocks (Taku Group), Lower and Middle Jurassic sediments (Laberge Group), and Upper Cretaceous volcanic rocks (Hutshi Group).

See Table of Formations (Table 1) and Dwg. No. KU.81-2b (Kulta Project Regional Geology).

The rocks generally occur in northwest trending belts as part of a large regional synclinorium (Wheeler 1961, p. 103). All Pre-Cretaceous rocks show this trend. Locally tight folding has been observed, possibly due to intrusive placement.

Economic mineralization has been exploited in the area from various sources. The Engineer Mine (Au,Ag) is hosted by quartz-calcite veins occurring in shales and greywackes of the Laberge Group. Venus Mine (Au,Ag) is hosted by a quartz vein cutting through Hutshi Group andesites. Numerous other showings similar to the Venus Mine occur in the Tagish Lake region.

Local Geology

The SHUI claim is underlain by three major rock types. Cretaceous granites at the Coast Mountain intrusions occur in the southern portion of the property in contact with metamorphic rocks at an elevation of 1450 metres. The metamorphic rocks consist of highly metamorphosed sediments (siltstones, cherts and limestones) probably belonging to the Pennsylvanian and Permian Taku Group. Overlying these sediments are vesicular basalts and porphyritic dacites described by Wheeler (1961, p. 29) as also belonging to the Taku Group. Poor weather conditions and steep slopes did not allow a detailed examination of these upper units.

The following is a brief description of the units observed thus far on the property.

a. Granite - map unit 7a

This unit is commonly porphyritic with K-feldspar phenocrysts comprising 25-40% of the rock. The rock weathers to a light grey to pink colour similar to the fresh surfaces. The groundmass is coarse-grained and equigranular. Phenocrysts of feldspar are generally euhedral, measuring up to 3 cm long and 1 cm wide.

The mode of the rock averages: 40% K-feldspar, 35% quartz, 10% plagioclase, and 15% biotite. Minor aplite dykes less than 6 cm in width cut the granites in scattered areas.

b. Interbedded Siltstones and Limestones - Map Unit 2a&b

These units have been deformed and altered due to the nearby intrusion. The siltstone is commonly grey to black,

DUPONT EXPLORATION
CANADA

KULTA PROJECT
REGIONAL GEOLOGY
DEASE LAKE - WHITEHORSE AREA, B.C. & Y.T.

1 2 000 000

km 10 0 30 60 km

SCALE

Miles 10 0 50 100 miles

1 INCH = 32 MILES

DATA BY	J.T.N.	REVISED	NTS No 104,105,115
DATE			ACCT No 351-00
DRAWN BY	K.L.J.		DRWG No KU.81-2b
DATE	MAY '82		

No.	CLAIM NAME	N.T.S.	No	CLAIM NAME	N.T.S.
1	RAND	104 I 4, J 1	32	DUNK	105 D 2W
2	LATE	104 J 1E	33	UNDAL	105 D 2W
3	LAME	104 J 1E	34	EVEN-ODD	105 D 2,3
4	FLOOD	104 J 2W			
5	TAIL	104 J 1,2	35	OLLIE	105 D 6E
6	ALOON	104 J 3W	36	EVIEW	105 D 6E
7	HALT	104 J 4E	37	DAYIR	105 D 6W
8	EGLEN	104 J 5E	38	ILLIA	105 D 7W
9	YAT	104 J 7W	39	ICHIE	105 D 9E
10	ANTZ	104 J 8W	40	INTO	105 D 9W
11	LURE	104 J 16E	41	BEXI	105 D 11W
12	ANKI	104 J 16E	42	FLAT	105 D 14W
13	NARRS	104 M 8E	43	UNCER	105 D 15E
14	HAKER	104 M 9E	44	SLEWE	105 D 15E
15	AKUM	104 M 9W	45	ERGE	105 D 15W
16	RACE	104 M 10E	46	LABE	105 D 15W
17	CREED	104 M 10E	47	UTSHIG	105 D 16W
18	CRINE	104 M 10E	48	CROST	105 E 2E
19	KEAP	104 M 10E	49	SLINE	105 E 2E
20	SELLY-SKEL	104 M 15E	50	AURIER	105 E 2W
21	TAKE	104 M 15E,W	51	AKEL	105 E 3E
22	TUTS	104 M 15W	52	OVOAS	105 E 6E
23	SHUI	104 M 15W	53	ENOF	105 E 7E
24	GAUG	104 M 15W	54	MAYBE	105 E 8E
25	ANGE-BE	104 M 15W	55	MARBEE	105 E 8E,W
26	PENG	104 M 15W	56	GERM	105 E 8W
27	TSHIK	104 M 15W	57	SBS	105 E 10E
28	ANNIG	104 M 16W	58	HOOT	105 E 11E
29	UNDAS	104 M 16E	59	RANKL	105 E 11W
30	SAYEH	105 C 6W	60	KIRK	115 H 9E
31	ATHES	105 D 2E,W			

LEGEND

UPPER CRETACEOUS - OLIGOCENE

KTo — Carmacks, Mt Nansen, Endako. Intermediate to acidic volcanic flows, tuff. non marine

LOWER AND MIDDLE JURASSIC

TJt — Nicola and Lewes Volcanic and sedimentary rocks

LATE CRETACEOUS AND EARLY TERTIARY

KTq, KTg — Granitic rocks

LATE PALEOZOIC - TRIASSIC

Alpine - type ultramafics

TABLE I

Table of Formations

Miocene to Pleistocene (TQW)

Wrangell-Garibaldi: Basic to intermediate volcanics.

Upper Cretaceous-Oligocene (KTo)

Ootsa Lake - Kamloops (Hutshi Group): Intermediate to acidic volcanic flows, tuff; non-marine.

Late Cretaceous and Early Tertiary

Nisling Range Alaskite, Nanika (KTq): Granite, quartz monzonite lesser granodiorite.

Babine (KTg): Granodiorite, quartz diorite, quartz monzonite, lesser quartz monzonite, diorite, monzonite.

Lower and Middle Jurassic (JL)

Laberge-Quesnel (Stuhini Fmn): Greywacke, argillite, conglomerate; marine.

Late Triassic - Early Jurassic

Hogem Granodiorite (EJg): Quartz diorite, granodiorite, lesser diorite, quartz monzonite.

Iron Mask (Ejd): Diorite, monzonite, syenite, quartz, diorite, minor pyroxenite, granodiorite.

Upper Triassic - Lower Jurassic (TJT)

Takla-Nicola: Augite porphyry, basaltic volcanics; siltstone, shale, limestone, conglomerate.

Mississippian - Triassic (MTC)

Cache Creek - Anvil Range: Chert, argillite, carbonate, basalt, associated diabase, gabbro, alpine ultramafic; marine.

Proterozoic - Palaeozoic

Central Gneiss - Skagit: Granitoid Gneiss, migmatite schist, amphibolite, plutonic rocks.

fine-grained, weathering to a rusty orange-brown. The limestones are dark grey to black with stringers of white calcite also weathering to an orange-brown. Finely disseminated pyrite (1 to 2%) accounts for the iron stain of these units. Minor green cherty beds up to 5 cm in thickness are found interbedded with the siltstones. Minor folding is evident in these chert beds. Isolated pods of this unit several metres across are found engulfed by the granites to the east of the claim.

c. Volcanic Units - Map Unit 4e

Although accessibility to these rocks is limited, float and talus in the lower elevations show them to consist of dacites and basalts. The basalts are both vesicular and amygdaloidal with calcite and chlorite observed filling the vesicles. The basalt is dark green to black weathering a dark grey. The dacites are typically dark green and porphyritic. Plagioclase phenocrysts make up 15-25% of the rock. Disseminated pyrite (<1%) is common throughout these units.

Structure

Bedding measurements in the siltstones show a northeast striking and northwest dipping orientation of the rocks. Dip angles range from 25% to 79%. GSC Map No. 19-1957 (Bennett) shows a northerly trending syncline running through the property. Small scale folding observed in the chert beds follows regional trends with a shallow dipping fold axis in a northerly direction.

Mineralization

No significant mineralization was observed on the property. Metasediments generally contain 1-2% pyrite throughout. Milky white quartz veining was common near the intrusive contact. One zone of highly metamorphosed sediments in the eastern part of the claims is both highly silicified and carbonated. Pyrrhotite (15%) and malachite staining was observed in some talus pieces in this area, but the source of these rocks could not be located.

GEOCHEMISTRY

Procedure

A total of 20 soil, 10 rock and 1 stream sediment samples were collected during 1981. Soil sampling was carried out at 100 metre intervals. Rock samples were taken at random locations

throughout the claim group. The samples were collected from below the organic layer with a mattock and placed in a Kraft paper envelope. A sample number was marked on the bag and on flagging tape which was secured at the sample site.

All samples were shipped to Min-En Laboratories Ltd., North Vancouver for preparation and analysis. All samples were analyzed for Cu, Pb, Zn, Ag, Hg, As, Au and Sb. The rock samples were analyzed for Cu, Pb, Zn, Ag and Au. Samples were sieved to -80 mesh. The stream sediment sample was sieved to -20 mesh and a heavy mineral separation and analysis was performed for Cu, Ag and Au. Refer to Appendix A for detail analytical procedures.

Results

A statistical analysis of the results obtained from regional stream sediment samples was performed to determine background and anomalous values for the various elements. Details of this analysis appears in a report by Neelands (1982) titled "Geochemical Report - Kulta Regional Stream Sediment Sampling Programme in the Dease Lake and Tagish Lake Areas". Table II reproduced from that report reveals median background values obtained for the elements studied. Table III shows the results of a report titled "Kulta Follow-Up" (Neelands 1982). The two studies show a good correlation between the stream sediment (heavy mineral) samples. The anomalous values given in Table III will be applied to the results of this property.

The results of geochemical sampling on SHUI are tabled on Dwg. No. KU.81-165. These results have also been tabulated according to frequency distribution of elements in soils (Table IV).

The original stream sediment sample (9701B) ran 35 ppb in the fine fraction and 20 ppb in the coarse heavy minerals fraction. Other elements in this sample were all slightly anomalous. Three soil samples (B9, B10, B11) all produced high values of Cu, Pb, Zn, As and Au. Highest gold value was 90 ppb (Sample B10). These sample locations are all at the head of the creek from which the anomalous stream sediment sample was taken. Rock geochemistry failed to determine the source of the anomalies. Quartz veining on the property contained only background values of all elements. One sample of the metasediments ran 105 ppb Au and 875 ppm As while others showed no significant values. A sample from a highly altered zone of calc-silicate rocks in the east ran 10.8 ppm Ag and 5 ppb Au.

TABLE II

Kulta Regional Stream Sediment Sampling Programme

Background and Anomalous Values

Element	No. of Samples	Mean ppm	Median Background ppm	Standard Deviation	95% Threshold ppm
Mo	625	1.8	1.0	1.39	4.0
Cu(C1)CHm	598	44.5	38.0	27.39	150.0
Cu(C2)F	621	35.9	32.0	21.15	80.0
Pb	622	16.3	15.0	7.08	30.0
Zn	598	67.0	65.0	23.77	150.0
Ag(S1)CHm	623	1.04	1.0	0.50	2.5
Ag(S2)F	628	0.71	1.0	0.32	1.6
Mn	602	589.6	570.0	232.6	1200.0
Au(G1)CHm	588	8.21	5.0	5.22	25.0
Au(G2)F	579	6.2	5.0	4.66	15.0
%HM			6.0%		

TABLE III

Kulta Follow-Up

Background and Anomalous Values

Element	Medium					
	Heavy Mineral (227 samples)		SiH (43 Samples)		Soil (461 samples)	
	Median	Anomalous	Median	Anomalous	Median	Anomalous
MoF	1.0	3.0	1.0	2.0	4.0	15.0
CuF	30.0	90.0	70.0	160.0	40.0	250.0
CuFHM						
CuHM	50.0	180.0				
PbF	20.0	60.0	20.0	30.0	20.0	50.0
ZnF	60.0	160.0	80.0	100.0	90.0	200.0
AgF	0.8	1.5	0.9	1.2	0.8	1.7
AgFHM						
AgCHM	0.8	2.6				
HgF	25.0	50.0	40.0	80.0	35.0	160.0
AsF	10.0	50.0	15.0	45.0	15.0	120.0
MnF	500.0	1000.0	800.0	2000.0	700.0	2000.0
AuF	5.0	30.0	5.0	15.0	5.0	20.0
AuFHM						
AuCHM	5.0	50.0				
SbF	15.0	40.0	25.0	40.0	20.0	40.0
HM%						

Table III
Soil SHUI
Frequency Distribution of Elements

Class Interval ppm/ppb	Mo P	Cu F	Cu FHM	Cu CHM	Pb P	Zn F	Ag F	Ag FHM	Ag CHM	Hg P	As F	Mn F	Au F	Au FHM	Au CHM	Sb P	H.M %
0.1																	
0.2																	
0.3																	
0.4																	
0.5																	
0.6																	
0.7																	
0.8																	
0.9																	
1.0							1										
1.1																	
1.2							1										
1.3							1										
1.4							4										
1.5																	
1.6-1.7							5										
1.8-1.9																	
1.9-2.0							1										
2.1-2.3							5										
2.4-2.6																	
2.7-2.9																	
3.0-3.9																	
4.0-4.9																	
5.0-5.9							1			9			6				
6.0-10										2			5				
11 - 15										1			1				
16 - 20						1				2			1			2	
21 - 25										1			2				
26 - 30		1								2			1				
31 - 35										3							
36 - 40		1			3					1						1	
41 - 45		1			5					1						3	
46 - 50					2												
51 - 60		1			5											2	
61 - 70		1			2					1			1			2	
71 - 80					1					1						2	
81 - 90		1											3			1	
91 -100		1				1										1	
101-120		2														2	
121-140		1				4				1							
141-160		3				4											
161-180		1			1	2					1						
181-200		3				1											
201-250		2				5											
251-300						1					3						
301-350						1					1						
351-400											6						
401-450																	
451-500											1						
501-600					1						2						
601-700											2						
701-800											2						
801-900											1						
901-1000																	
1001-2000											1						
2001-3000																	
3001-4000																	
4001-5000																	
>5000																	

CONCLUSIONS AND RECOMMENDATIONS

Follow-up work on the original anomalous stream sediment sample has outlined a possible source area for the high Au values. The source appears to be in the metasediments very near to the intrusive contact. It is recommended that further detailed soil and rock geochemistry be performed to further isolate the source of the anomaly.

HJC/krl

COST STATEMENT

Wages

	Cost
1 Sr. Geol. Assistant, 2 manday(s) (1981 July 26,27)	$ 118.58
1 Jr. Geol. Assistants, 2 manday(s) (1981 July 26,27)	107.16
	$ 225.74

Room & Board

Location	Daily Rate	Date	No. of Days	
Carcross	$25.00	1981 Aug. 1,3,5	4	$ 100.00

Transportation

a. Truck Rental (Avis-Whitehorse, YT): 1 day(s) @ $35.85/day	$ 35.85
b. Helicopter in support of field work @ $432.50/hr including fuel (Flying by Viking Helicopter Ltd. of Prince George)	
Dates (1981): July 27, 27 No. of hrs: 1.2	519.00
	$ 554.85

Analytical Services

Type of Sample	No. of	Fraction Analyzed F FHM CHM	Elements Analyzed Mo Cu Pb Zn Ni Ag Hg As Mn Au Sb	Unit Price	
Soil	20	X	X X X X X X X X X 20.95		$ 419.00
Rock	9	X	X X X X X X X X X 12.70		114.30
Preparation - Rock			9 @ $2.25/sample		20.25
- Soil/Silt			20 @ $0.85/sample		17.00

Mo($0.90), Cu($0.90), Pb($0.90), Zn($0.90), Ni(0.90), Ag($0.90/$2.00), Hg($4.50), As($3.00), Mn($0.90), Au($5.00), Sb($3.75)

$ 570.55

Report Preparation

Drafting: 1 day @ $100/day	$ 100.00
Typing: 1 day @ $95.00	95.00
Map preparation 8 maps (9 sq ft) at 16¢/square foot	11.52
	$ 206.52

GRAND TOTAL: $1,657.66

REFERENCES

Christie, R. L.; "Geology: Bennett (104M)", G.S.C. Preliminary Series Map No. 19-1957, 1957.

Neelands, J. T.; "Geochemical Report - Kulta Regional Stream Sediment Sampling Programme in the Dease Lake and Tagish Lake Areas", B.C. Assessment Report, 1982.

Neelands, J. T.; "Kulta Follow-Up (104-J, 104-M)" Geological and Geochemical Report, B.C. Assessment Report, 1982.

Wheeler, J. O.; "Whitehorse Map-Area, Yukon Territory (105-O)", G.S.C. Memoir 312, 1961.

QUALIFICATIONS

I, John Thomas Neelands, do hereby certify that:

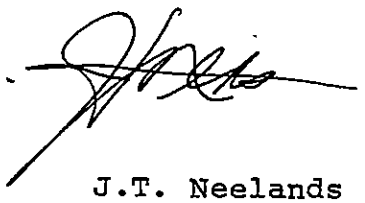
1. I am a geologist residing at 118-B W. 14th Ave, Vancouver, British Columbia and employed by Du Pont of Canada Exploration Limited.

2. I am a graduate of Carleton University (1971) in Ottawa, Canada, and hold a B.Sc., degree in Geology.

3. I am a member of the Geological Association of Canada and of the Association of Exploration Geochemists.

4. I have been practising my profession for the past ten years and have been active in the mining industry for the past sixteen years.

5. Between 1981 May and 1981 October, I supervised and participated in the field programme described in this report on behalf of Du Pont of Canada Exploration Limited.



J.T. Neelands
1982 May

QUALIFICATIONS

I, Hugh J. Copland Jr., do hereby certify that:

1. I am a geologist residing at 5250 Ash Street, Vancouver, British Columbia and employed by Du Pont of Canada Exploration Limited.

2. I am a recent graduate of the University of British Columbia with a B.Sc. (Honours) degree in Geology and McMaster University with a B.Eng. (Mechanical).

3. I have practised my profession in geology for the past two summers in British Columbia and the Yukon.

4. In August and September 1981, I participated in the field programme described in this report on behalf of Du Pont of Canada Exploration Limited.

H. J. Copland
1982 May

APPENDIX I

Laboratory Procedure

PHONE 980-5814

APPENDIX I

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. 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

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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.

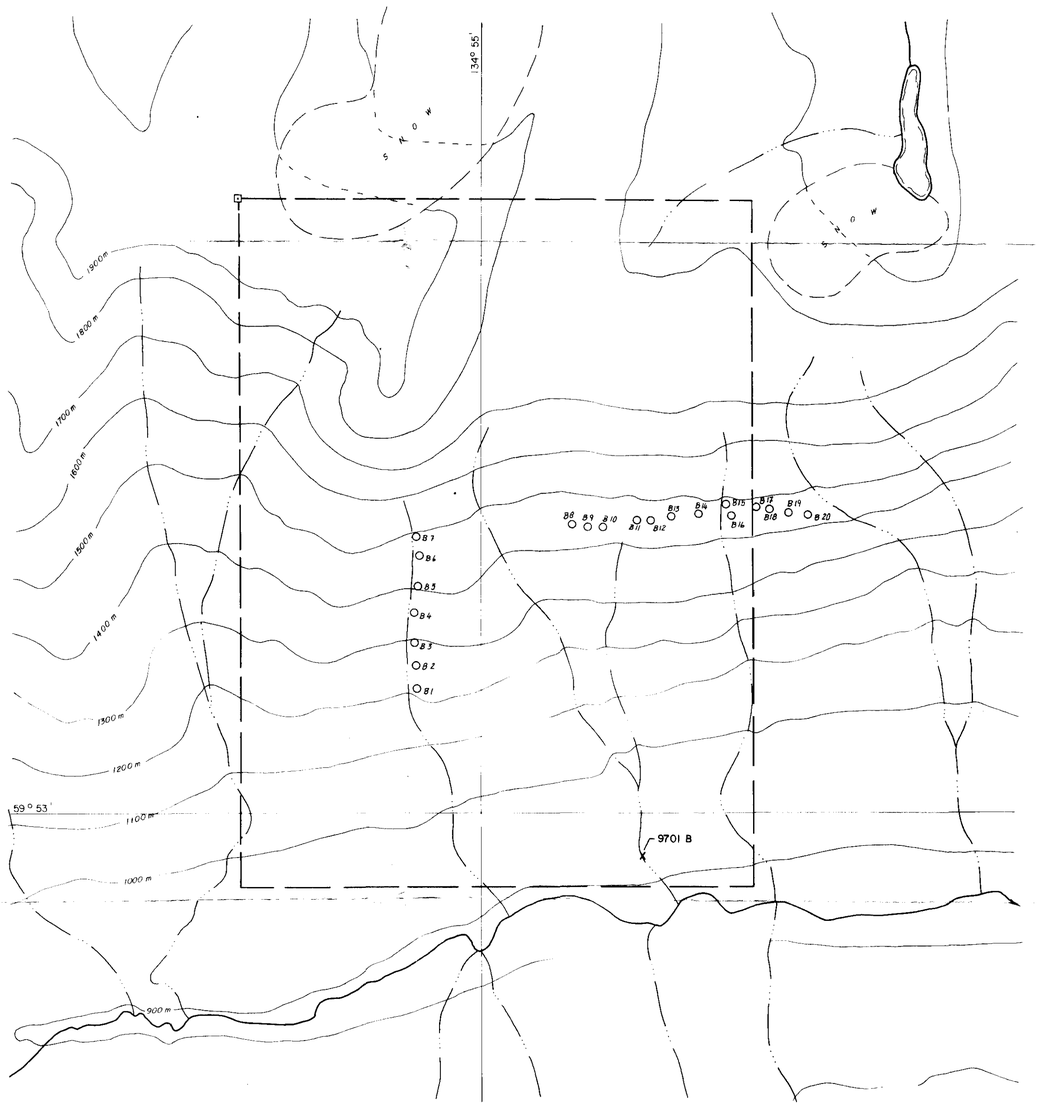
A suitable sample weight 5.0 or 10.0 grams are pre-treated with HNO_3 and $HClO_4$ mixture.

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.



1981 SAMPLE RESULTS

Sample	Cu ppm -80 F	Pb ppm -80 F	Zn ppm -80 F	Ag ppm -80 F	Hg ppb -80 F	As ppm -80 F	Au ppb -80 F	Sb ppm -80 F
Soil								
B 1	104	45	155	1.7	10	720	10	70
B 2	68	41	136	1.4	5	262	5	45
B 3	108	53	187	2.1	15	344	10	40
B 4	148	52	207	2.0	20	376	25	65
B 5	196	50	228	2.3	10	690	30	55
B 6	30	38	18	1.2	5	290	5	20
B 7	152	40	96	2.1	5	840	20	60
B 8	82	56	328	1.4	5	680	5	90
B 9	187	508	100	5.0	35	1900	80	180
B 10	239	173	285	2.3	30	780	90	110
B 11	251	48	151	2.1	30	580	65	115
B 12	152	62	168	1.7	40	500	10	75
B 13	144	42	156	1.4	25	390	25	75
B 14	178	52	222	1.4	35	390	90	95
B 15	126	45	219	1.3	65	370	5	85
B 16	99	38	141	1.0	35	290	15	62
B 17	186	51	178	1.6	20	380	10	80
B 18	38	64	145	1.0	135	173	5	20
B 19	56	74	133	1.6	45	510	5	45
B 20	44	42	208	1.6	75	390	10	45

Sample	Mo ppm -80 F	Cu ppm -80 F	Pb ppm -80 F	Zn ppm -80 F	Ag ppm -80 F	Mn ppm -80 F	As ppb -80 +80 F	Hg ppb -20 +80 CHM	H.V.	Orig. wt. gm
-10 Sieve										
9701 B	16	116	168	78	220	1.8	3.1	990	35	20	7.09	550

LEGEND

O B 20 SOIL SAMPLE LOCATION and NUMBER

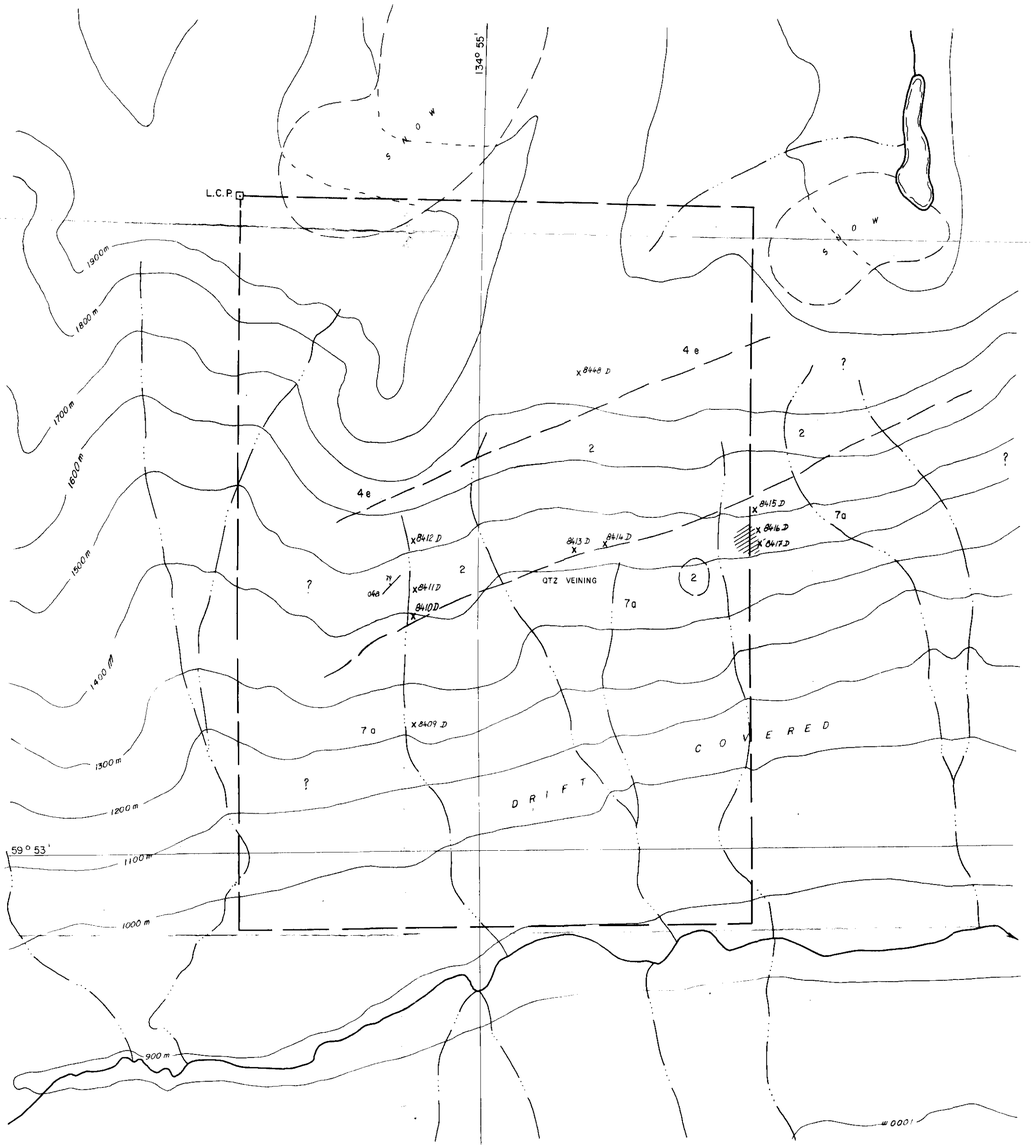
X – 9701 B ORIGINAL SIEVED HEAVY MINERAL SAMPLE LOCATION (1981) and NUMBER

DU PONT CANADA **EXPLORATION**

KULTA PROJECT
SHUI CLAIM
GEOCHEMISTRY
Au, Ag, As, Cu, Hg, Pb, Sb & Zn
ATLIN LAKE AREA, BRITISH COLUMBIA

m 300 200 100 0 10 000 300 600 m
SCALE
0 1 INCH = 833 FEET

MAPPED BY	J.T.N., H.J.C.	REVISED	N.T.S. No.: 104 M 15W
DATE	81 07 27		ACCT No. 351 - 37
DRAWN BY	C. H. K.		DRWG. No.: KU. 81 – 165
DATE	82 02 03		



ROCK GEOCHEMICAL RESULTS

Sample	Cu ppm -80 F	Pb ppm -80 F	Zn ppm -80 F	Ag ppm -80 F	As ppm -80 F	Au ppb -80 F
8409 D	10	2	39	0.6	12	5
8410 D	87	8	100	1.9	181	25
8411 D	16	9	13	1.6	745	5
8412 D	37	13	41	2.1	875	105
8413 D	5	2	10	0.2	22	5
8414 D	4	29	20	1.7	5	10
8415 D	11	1	7	0.5	57	5
8416 D	5	60	112	10.8	555	5
8417 D	69	14	99	2.5	140	10

Sample	Mo ppm -80 F	Cu ppm -80 F	Pb ppm -80 F	Zn ppm -80 F	Ni ppm -80 F	Ag ppm -80 F	Hg ppb -80 F	As ppm -80 F	Au ppb -80 F	Sb ppm -80 F
8448 D	1	79	212	21	40	4.1	5	300	20	72

LEGEND

JURASSIC OR LATER

POST LOWER JURASSIC

COAST INTRUSIONS

7 — 7a) Granite 7b) Granodiorite 7c) Quartz diorite 7d) Diorite 7e) Felsic dyke 7f) Mafic dyke

JURASSIC

LOWER JURASSIC AND LATER

LABERGE GROUP

6 — 6a) Conglomerate 6b) Greywacke 6c) Argillite 6d) Siltstone 6e) Hornfels

PENNSYLVANIAN TO TRIASSIC

5 — 5a) Felsic dyke 5b) Mafic dyke

4 — 4a) Rhyolite 4b) Rhyodacite 4c) Dacite 4d) Andesite 4e) Basalt

3 — 3a) Volcanic breccia 3b) Volcanic conglomerate 3c) Tuff

2 — 2a) Siltstone 2b) Limestone

PRE-PERMIAN

1 — 1a) Schist 1b) Gneiss 1c) Phyllite 1d) Limestone 1e) Quartzite 1f) Arenite 1g) Slate

SYMBOLS

- OUTCROP
- CONTACT
- x 8417 D — ROCK SAMPLE LOCATION AND NUMBER
- △ — MINERAL OCCURRENCE
- L C P — CLAIM LINE AND LEGAL CORNER POST
- CALC - SILICATE ROCKS EXTREMELY METAMORPHOSED

DUPONT CANADA EXPLORATION

KULTA PROJECT
SHUI CLAIM
GEOLOGY

ATLIN LAKE AREA, BRITISH COLUMBIA

m 300 200 100 0 300 600 m
SCALE 1 : 10 000
0 1 INCH = 833 FEET

MAPPED BY	J.T.N., H.J.C.	REVISED	N.T.S. No.: 104 M 15W
DATE	81 07 27		ACCT. No.: 351 - 37
DRAWN BY	C. H. K.		DRWG. No.: KU. 81 - 164
DATE	82 02 03		