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GEOLOGICAL REPORT  
on the  
GOLD DUST I & II MINERAL CLAIMS  
Babine Lake Area  
Omineca Mining Division  
British Columbia

NTS: 93L/16E  
54°45.5'N 126°12'W  
OWNER: Gerard Auger  
AUTHOR: N.C. Carter, Ph.D. P.Eng.  
DATE: January 8, 1988

16,874  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

N.C. CARTER, Ph.D., P.Eng.  
CONSULTING GEOLOGIST

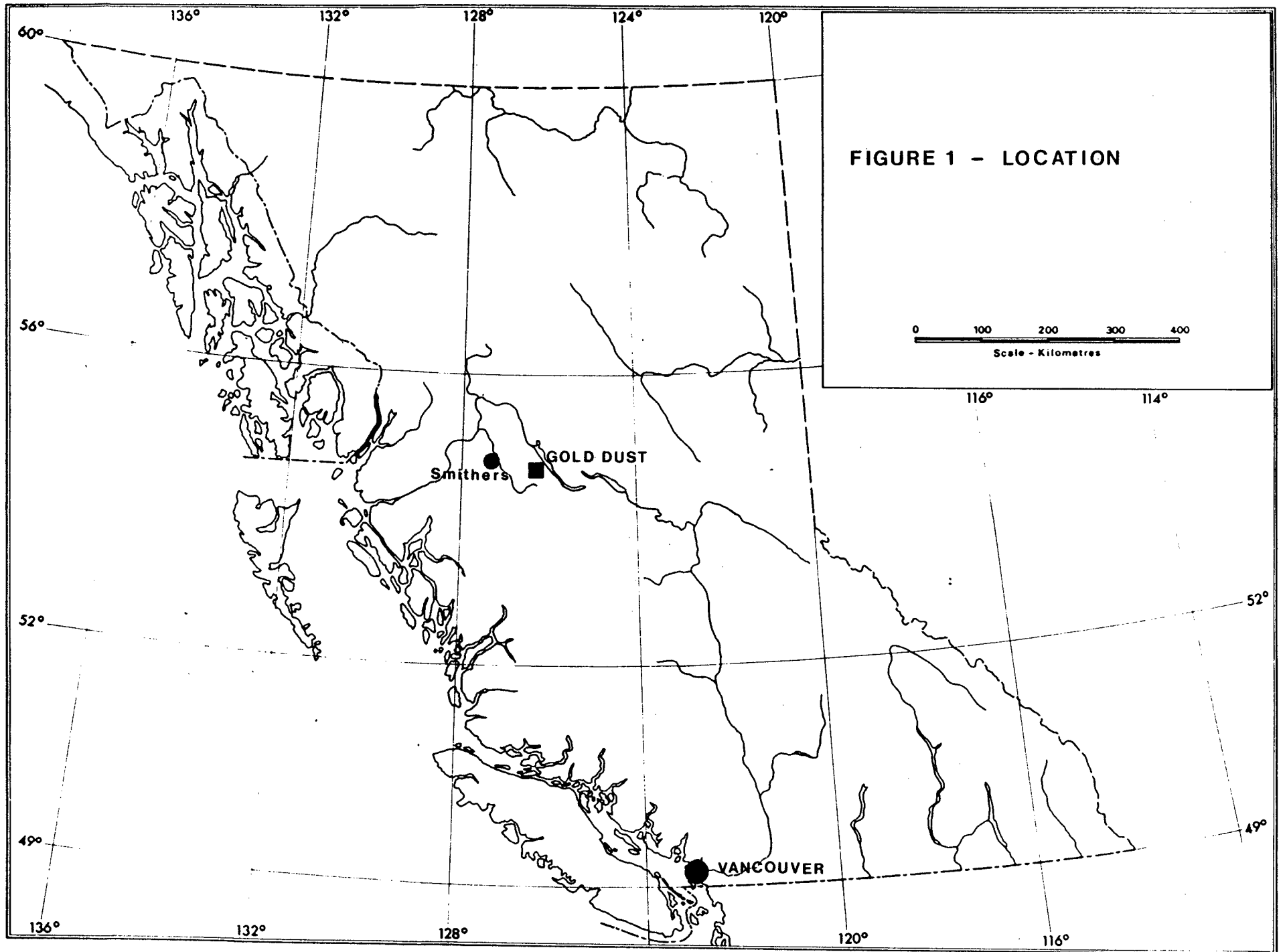
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## TABLE OF CONTENTS

	Page
INTRODUCTION	
Location and Access	1
Mineral Property	1
History	1
Present Status	2
GEOLOGY AND MINERALIZATION	
Physical Setting	3
Regional Geological Setting	3
Property Geology and Mineralization	4
CONCLUSIONS AND RECOMMENDATIONS	7
COST STATEMENT	8
REFERENCES	9
AUTHOR'S QUALIFICATIONS	10
APPENDIX I - Geochemical Analyses	11

### List of Figures

	Following Page
Figure 1 - Location	Frontispiece
Figure 2 - Location - Gold Dust I & II Claims	1
Figure 3 - Gold Dust I & II Claims	2
Figure 4 - Gold Dust Property - Geology	in pocket



## INTRODUCTION

### Location and Access

The Gold Dust property, near Babine Lake, is situated 65 km east of Smithers in west-central British Columbia (Figure 1).

The geographic centre of the property is at latitude 54°45.5'North and longitude 126°12'West in NTS map-area 93L/16E.

Excellent access is afforded by a paved highway which passes through the property and links Granisle and Topley Landing with highway 16 at Topley, 32 km to the south (Figure 2).

### Mineral Property

The Gold Dust property consists of two grouped Modified Grid mineral claims comprising 36 units as shown on Figure 3. Details of the mineral claims are as follows:

<u>Claim Name</u>	<u>Units</u>	<u>Record Numbers</u>	<u>Date of Record</u>
Gold Dust I	16	8026	October 14, 1986
Gold Dust II	20	8027	" "

### History

Copper and molybdenum mineralization was discovered by local prospectors in Tachek Creek in the southern part of the present property in the late 1960's.

Noranda Exploration Company, Limited held an option on 170 two-post claims in 1968 and 1969 and work done included geological mapping, geochemical and geophysical surveys, road building,

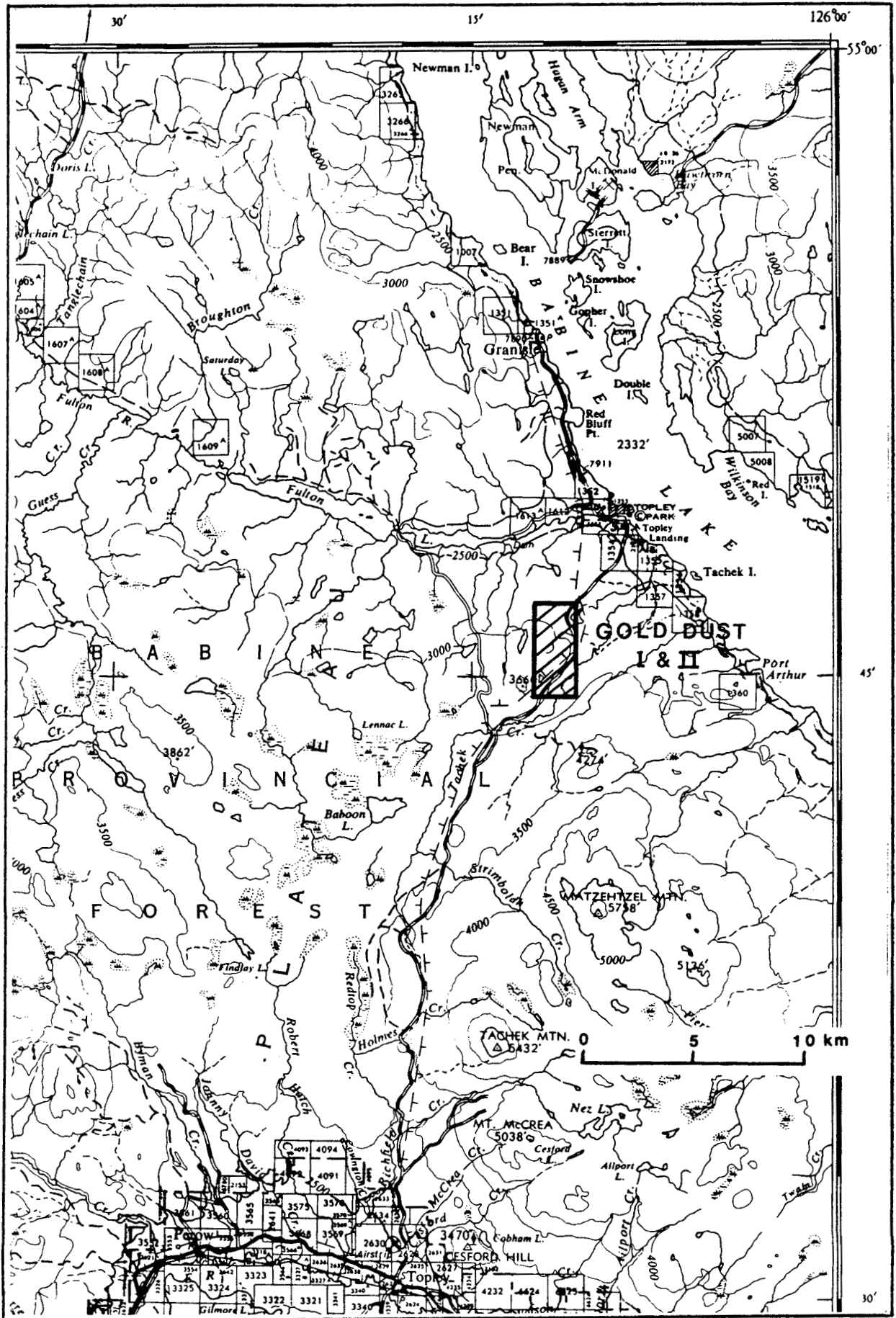


FIGURE 2 - LOCATION - GOLD DUST I & II CLAIMS

1,725 metres of percussion drilling and 1,015 metres of diamond drilling.

Taseko Mines Limited completed 3 diamond drill holes totalling 305 metres in 1970 and Perry, Knox, Kaufman Inc. carried out 11 km of IP survey and drilled 3 holes totalling 300 metres in 1973.

Amoco Canada Petroleum Company Limited held claims in the northeast part of the present property in 1973 and carried out soil geochemistry, geophysics and 500 metres of diamond drilling in 3 holes.

Limited prospecting and geological mapping was conducted on claims in the area in 1977 and in 1982 Dancer Energy and Resources Ltd. completed a soil geochemical survey over part of the present Gold Dust I claim.

#### Present Status

The Gold Dust I and II mineral claims were located by the present owner September 25 and 26, 1986.

Field work to date by the owner and author of this report has included prospecting, geological mapping and the collection of rock samples for geochemical analyses during the period October 4 - 8, 1987.

Research of previous work on and adjacent to the present claims has been undertaken by the writer and has been partially incorporated into this report.

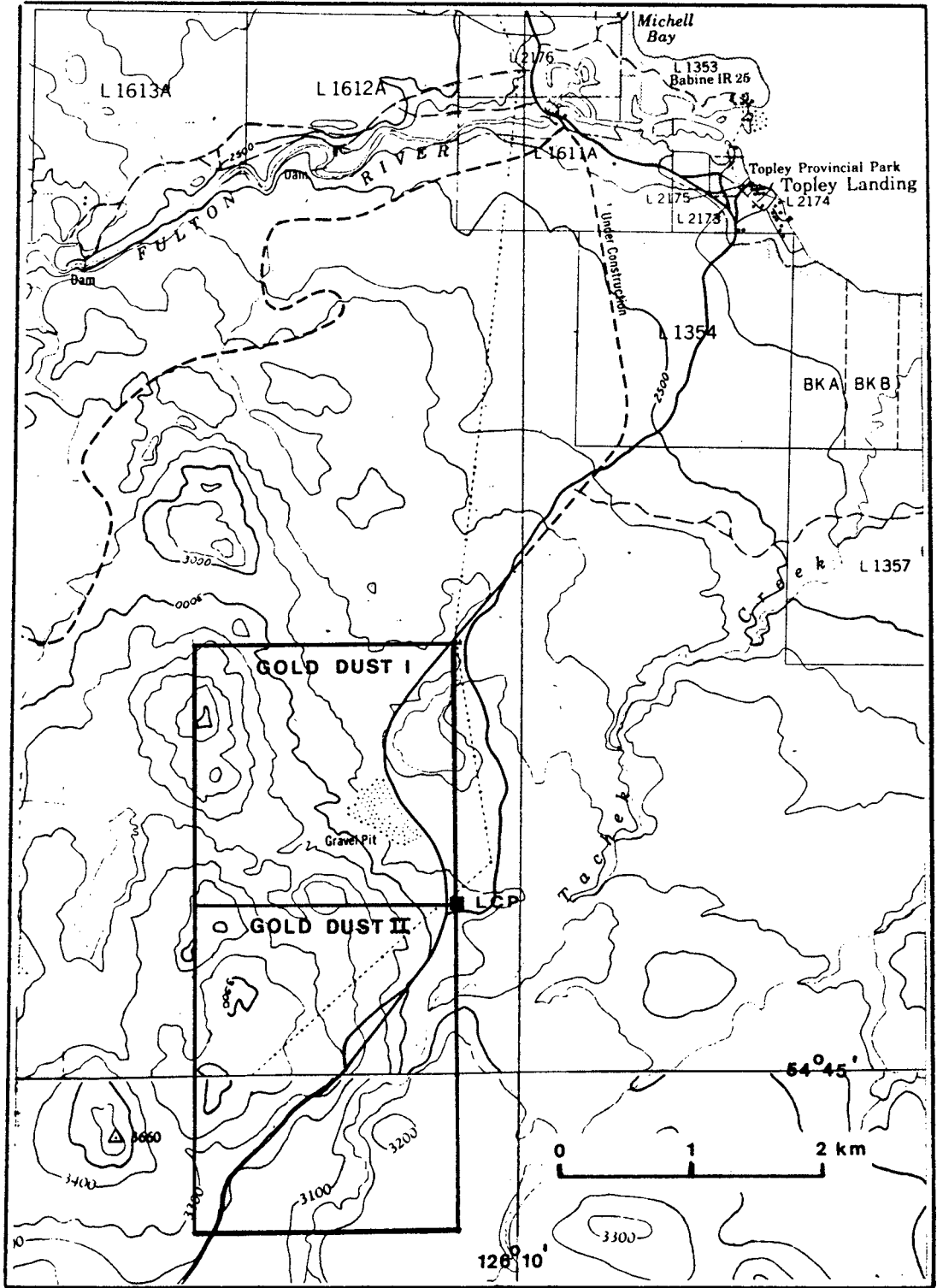


FIGURE 3 - GOLD DUST I & II CLAIMS

## GEOLOGY and MINERALIZATION

### Physical Setting

The northern Babine Lake area is within the Nechako Plateau, a physiographic subdivision of the Interior Plateau.

The Gold Dust property is just north of the height of land between Babine Lake and highway 16. Elevations range from 850 metres along Tachek Creek and near Timber Lake to more than 1050 metres along the western property boundary (Figure 3).

The property area features relatively gentle topography with the exception of some local steep-walled, 35 metre high canyons along Tachek Creek.

Bedrock is reasonably well exposed along sections of Tachek Creek and on ridges in the western half of the claims area (Figure 4). The eastern part of the property features extensive overburden cover of gravel, sand and clay.

### Regional Geological Setting

The Babine Lake area is within the Intermontane tectonic belt which is underlain principally by Mesozoic and older layered rocks, the most widespread in this area being volcanic and sedimentary rocks of the Jurassic Hazelton Group. These are intruded by plutonic rocks of various ages including lower Jurassic Topley intrusions, Omineca intrusions of early Cretaceous age, late Cretaceous rhyolite and granodiorite porphyries and Babine intrusions of early Tertiary age.



The best known style of mineralization in the Babine Lake area is porphyry copper mineralization associated with small stocks and dyke swarms of biotite-feldspar-porphyry of the Babine intrusions. Copper-molybdenum mineralization is also known to occur in late phases of the Topley intrusions, as noted on the present Gold Dust claims, and in late Cretaceous granodiorite porphyries. Other deposit types include narrow veins with base and precious metals values which commonly occur marginal to porphyry deposits and disseminated copper mineralization in Hazelton Group volcanic rocks.

Deposits with volcanogenic massive sulfide affinities and containing precious metals values include Topley Richfield 10 km north of Topley and the RED prospect 5 km northeast of the dormant Granisle copper mine.

#### Property Geology and Mineralization

The Gold Dust property includes a north-trending contact between early Jurassic Topley granitic rocks on the east and late Triassic volcanic and lesser sedimentary rocks on the west (Figure 4).

The late Triassic (or older?) sequence extends from the property area to north of Fulton Lake and is in fault contact on the west with Topley granitic rocks and Jurassic Hazelton Group volcanics and sediments (Carter, 1973). Principal lithologies noted within the property area include chlorite and sericite schists in the western claims area. These are locally strongly deformed and

feature north-trending, steeply-dipping schistosity (Figure 4). Intercalated with the schists and bordering them on the west are mainly massive andesites (greenstones) which are locally weakly schistose. Fragmental varieties occur north of the present property where they are interbedded with shaly siltstones. Argillaceous siltstones were intersected in three 1973 drill holes west of the Topley intrusions contact in the southern part of the property, suggesting that the sedimentary component of the late Triassic (or older?) sequence underlies the drift covered areas.

Topley granitic rocks, exposed in Tachek Creek in the southeast part of the Gold Dust II claim (Figure 4) are medium-grained, light grey to pink granodiorites and quartz monzonites. Steeply dipping fractures trend west-northwest and north-northeast. Crowded texture quartz-hornblende-biotite-feldspar porphyry dykes, 2-10 metres wide, intrude the granitic rocks and trend west-northwest, parallel to one of the principal fracture directions developed in the granitic rocks. A radiometric age of  $176 \pm 7$  Ma was obtained from one of these porphyry dykes (Carter, 1981).

Basic dykes, magnetic and up to 1 metre wide, were noted cutting granitic rocks in Tachek Creek. These are believed to be of Tertiary age and occupy the second principal fracture direction of north-northeast.

The contact between the granitic rocks and the volcanic-sedimentary sequence is not exposed and that shown on Figure 4 is conjectural. An apparent inclusion of silicified greenstone

is exposed in the northern outcrop section in Tachek Creek (Figure 4).

Pyrite, chalcopyrite and molybdenite mineralization occurs as disseminations and in west-northwest fractures in Topley granitic rocks in Tachek Creek. Iron and copper staining was noted locally and many of the sulfide-bearing fractures are rimmed by pink K-feldspar. Sulfide mineralization appears more widespread marginal to the younger porphyry dykes.

Several samples collected from exposures along Tachek Creek were analyzed by inductively coupled argon plasma (ICP) techniques by Min-En Laboratories of North Vancouver. Results are contained in Appendix I. Samples from granitic rocks (GD-2,-3,-5) contained low copper values (126-214 ppm), molybdenum values of up to 1675 ppm (0.17%) and one gold value of 1270 ppb (GD-2). A sample collected from a porphyry dyke yielded low copper, molybdenum and gold values. As expected, a basic dyke sample (GD-4) returned significantly higher iron, calcium and magnesium values.

Chlorite and sericite schists north of the highway contain numerous quartz veins ranging in width from several cm to more than 2 metres. These usually occupy planes of schistosity although some cross-cutting relationships were also noted. Samples collected from both quartz veins and host rocks (GD-7-11) yielded silver values to 2.2 ppm, gold in the 5 - 10 ppb range, 9 - 23 ppm arsenic. 1 - 24 ppm bismuth and copper values of up to 473 ppm.

Previous percussion and diamond drilling of a 1 km<sup>2</sup> area east

of the exposures in Tachek Creek indicated widespread copper and molybdenum mineralization. Three diamond drill holes drilled in 1973 to test IP anomalies between the highway and Tachek Creek in the south part of the present Gold Dust II claim intersected argillaceous sedimentary rocks with 2 - 10% pyrite and silver values of up to 0.50 oz/ton over 3 metres (M. Kaufman, personal communication).

#### CONCLUSIONS AND RECOMMENDATIONS

The Gold Dust property includes a porphyry copper-molybdenum mineralized system near the western margin of the Topley intrusions south of Babine Lake.

A 1270 ppb gold value near the contact between granitic and volcanic rocks and low silver values in siltstones immediately adjacent to the granitic contact indicates an enhancement of precious metals values in this environment.

A compilation of all existing data pertaining to previous exploration work in the area of the present claims is required. Further prospecting of the potentially favourable chlorite and sericite schist sequence is also warranted.

COST STATEMENT

Wages

N.C. Carter - October 4-6, 1987 -	
3 days @ \$400/day	\$1,200.00
G. Auger - October 6-8, 1987 -	
3 days @ \$300/day	<u>\$900.00</u>
	\$2,100.00

Transportation

Airfare - (N.C. Carter-Victoria-Smithers)	\$208.80
Rental vehicle - 584 km @ \$0.35/km	<u>\$204.40</u>
	\$413.20

Accommodation, Meals

October 4 - 7, 1987	\$163.34
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Geochemical Analyses

11 samples @ \$14/sample	\$154.00
Freight (samples)	\$26.40

Report Preparation

N.C. Carter - 2 days @ \$400	\$800.00
Typing, drafting, duplicating	<u>\$143.06</u>
	\$943.06

TOTAL EXPENDITURE \$3,800.00

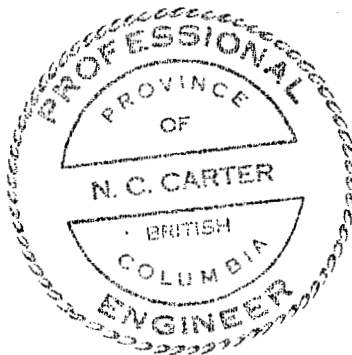
REFERENCES

- B.C. Ministry of Energy Mines and Petroleum Resources:  
- Annual Report of the Minister of Mines and Petroleum Resources 1968 - p.133  
- Geology, Exploration and Mining in B.C. - 1970, p.157  
- 1973, p.350
- Carter, N.C. (1969): Tachi in Geology, Exploration and Mining in B.C. 1969, pp.115-117
- \_\_\_\_\_ (1973): Geology of the Northern Babine Lake Area  
B.C. Department of Mines and Petroleum Resources  
Preliminary Map No. 12
- \_\_\_\_\_ (1981): Porphyry Copper and Molybdenum Deposits  
West Central British Columbia, B.C. Ministry  
of Energy Mines and Petroleum Resources Bulletin 64,  
pp. 73-74, 149-150
- Lloyd, J. (1973): Report on a Time Domain IP Survey, Tachi and Tak  
Groups, Omineca Mining Division, B.C.  
BCMEMPRA Assessment Report 4479
- Plicka, P. (1982): Prospecting Report on Dan No.1 Claim, Omineca  
Mining Division, BCMEMPRA Assessment Report 10862

AUTHOR'S QUALIFICATIONS

I, NICHOLAS C, CARTER, of 1410 Wende Road, Victoria, British Columbia, do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers of British Columbia since 1966.
2. I am a graduate of the University of New Brunswick with B.Sc. (1960), Michigan Technological University with M.S. (1962) and the University of British Columbia with Ph.D. (1974).
3. I have practised my profession in eastern and western Canada and in parts of the United States for more than 25 years.
4. Geological mapping and prospecting on the Gold Dust I and II mineral claims was carried out in October, 1987 under my supervision.



A handwritten signature in black ink, appearing to read "N.C. Carter".

N.C. Carter, Ph.D. P.Eng.

APPENDIX I

COMPANY: NICK CARTER

MIN-EN LABS ICP REPORT

(ACT:F31) PAGE 1 OF 3

PROJECT NO:

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 7-1581

ATTENTION: NICK CARTER

(604)980-5814 OR (604)988-4524

\* TYPE ROCK GEOCHEM \*

DATE: OCT 15, 1987

(VALUES IN PPM )	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE	K
GD-1	1.6	15640	4	16	116	1.3	17	10010	1.5	5	603	38520	2420
GD-2	1.7	11950	10	43	82	1.2	13	9430	1.5	12	126	40240	1670
GD-3	1.5	14430	3	17	109	1.3	13	7180	.5	12	169	38740	1630
GD-4	3.4	49550	35	44	96	2.0	19	35050	3.0	22	103	61850	900
GD-5	1.1	10840	1	8	97	.6	14	10170	.4	4	214	18570	1350
GD-6	2.2	24830	18	19	316	1.4	25	13020	1.5	8	141	42660	5120
GD-7	2.2	21210	9	16	44	.9	24	17640	2.0	13	68	27320	420
GD-8	1.1	10220	14	7	232	.4	15	11780	.8	7	473	14600	210
GD-9	.3	3500	23	2	19	.3	2	9120	1.0	3	25	8130	140
GD-10	.2	3400	11	4	69	.4	1	590	.1	1	9	11640	1530
GD-11	.3	3250	23	1	79	.3	1	1070	.1	1	7	9730	1160

(VALUES IN PPM )	LI	MG	MN	MO	NA	NI	P	PB	SB	SR	TH	U	V
GD-1	12	11860	251	15	1070	3	600	91	3	78	1	1	70.3
GD-2	7	8120	245	1675	1020	1	860	99	3	81	1	3	54.6
GD-3	7	9750	296	222	1020	1	730	54	4	178	1	2	49.3
GD-4	31	32960	760	11	2930	46	770	30	8	262	1	2	146.0
GD-5	3	4760	188	16	1170	3	530	27	2	214	1	3	35.8
GD-6	9	14540	422	8	2310	4	850	30	3	170	1	1	83.5
GD-7	11	16270	659	2	260	27	790	31	4	84	1	3	75.6
GD-8	4	7180	358	1	120	19	200	19	2	38	1	3	27.2
GD-9	2	3660	318	2	70	15	120	34	1	10	1	2	7.9
GD-10	1	870	185	1	130	4	160	13	1	3	1	1	5.0
GD-11	1	1120	303	1	130	6	270	13	1	3	1	1	4.2

(VALUES IN PPM )	ZN	BA	SN	W	CR	AU-PPB
GD-1	44	2	2	2	117	5
GD-2	40	3	1	2	117	1270
GD-3	51	1	1	2	132	5
GD-4	104	1	3	5	47	5
GD-5	29	1	1	1	136	5
GD-6	51	3	1	3	78	10
GD-7	55	2	1	2	191	10
GD-8	31	1	1	1	261	5
GD-9	17	1	1	1	303	5
GD-10	24	1	1	1	315	5
GD-11	29	1	1	1	360	10



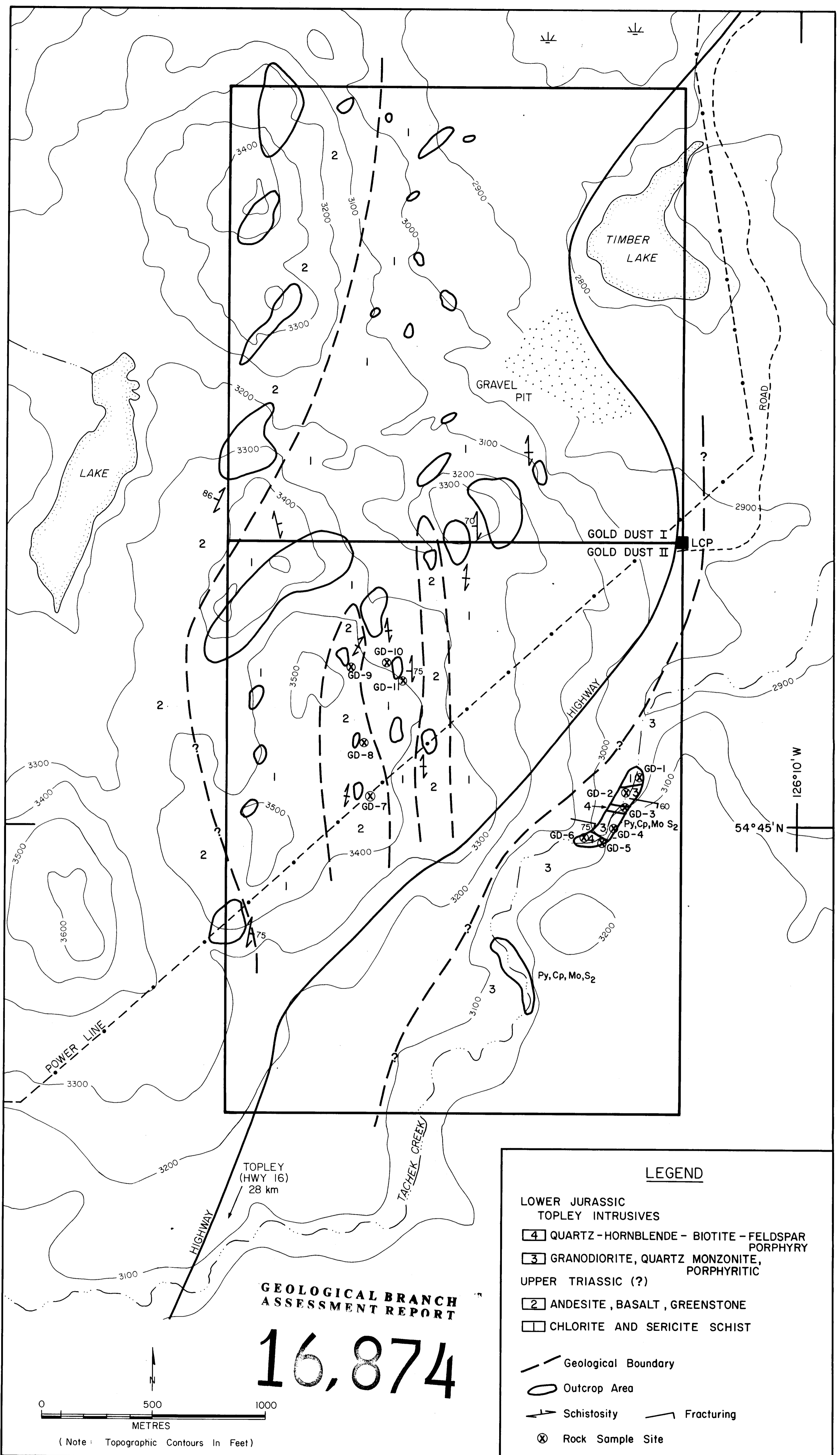


FIGURE 4 - GOLD DUST PROPERTY - GEOLOGY