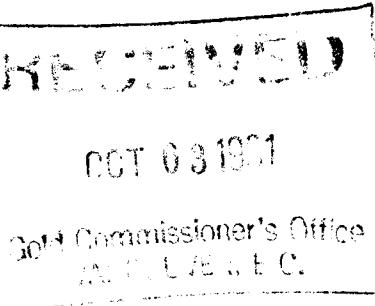


D. L. COOKE AND ASSOCIATES LTD.
MINERAL EXPLORATION CONSULTANTS

ASSESSMENT REPORT
RECONNAISSANCE GEOCHEMISTRY
OF THE MAY 1-3 CLAIMS



Mt. Milligan Area

LOG NO: OCT 08 1991 RD.

N.T.S. 930/4W

ACTION:

Omineca M.D.

FILE NO:

Latitude: 55° 06' North

GEOLoGICAL BRANCH
ASSESSMENT REPORT

Longitude: 123° 47' West

by

DAVID L. COOKE, Ph.D., P.Eng.

D. L. COOKE AND ASSOCIATES LTD.

811 - 675 West Hastings Street

Vancouver, B.C., V6B 1N2

21,686

Report Date: September, 30, 1991 Work Done: June 6 - 10, 1991

Claims on which work was done:

<u>Claim</u>	<u>Units</u>	<u>Record No.</u>	<u>Month of Record</u>
May 1	20	12260	July
May 2	15	12261	July
May 3	15	12262	July

D. L. COOKE AND ASSOCIATES LTD.
MINERAL EXPLORATION CONSULTANTS

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Figure 1: Location Map; May 1 - 3 Mineral Claims

Figure 2: Claim Map; May 1 - 3 Mineral Claims, 1:50,000

Figure 3: Sample Location and ppb Gold; May 1 - 3 Mineral Claims, 1:10,000

SUMMARY

The May claims are situated in the Mt. Milligan area of central B.C. The claims are underlain by Upper Triassic volcanic rocks and intercalated black argillaceous sedimentary rocks which are permissive for the occurrence of porphyry copper-gold and gold vein deposits. Large areas of the claims are covered by glacial till and outwash deposits.

A reconnaissance soil sampling and prospecting program was conducted in three areas of the claims to determine the usefulness of soil and rock geochemistry in locating sulphide mineralization.

It is concluded from the results that soil and rock geochemistry is useful in the northern and western third of the property where the relief is moderate to steep. Geochemistry, however, is not effective over the remaining two thirds of the claim area, because it is covered by deep and extensive glacial debris.

Geophysical techniques, such as magnetometer and induced polarization will be required to further evaluate these claims.

INTRODUCTION

The May claims were staked to cover an area of Takla volcanic rocks which are favourable for the occurrence of porphyry copper-gold mineralization. A small aeromagnetic anomaly occurs to the west of the May claims and could be caused by an underlying intrusive body. Porphyry copper-gold mineralization in the Mt. Milligan area is associated with hypabyssal intrusive bodies.

The claims were explored during the period June 6 - 10, 1991. The results of this exploration work form the subject of this report. Exploration expenditures for the period amounted to \$6,421.76.

1991 EXPLORATION PROGRAM

The 1991 exploration program consisted of reconnaissance soil sampling and prospecting along secondary logging roads and on survey lines within logged-off areas. The lines were run at 100 metre intervals and control provided by compass and topofil chain. Soil samples were collected at 50 metre intervals. Mineralized rocks occurring as float were occasionally sampled. This exploration work was done by geologist David L. Cooke, Ph.D., P.Eng. and field assistant M. A. Cooke.

Assay results were plotted on 1:10,000 topographic maps prepared by Fletcher Challenge Ltd. and the B.C. Department of Land and Forestry.

LOCATION AND ACCESS

The May 1 - 3 mineral claims are located in the Mt. Milligan area, approximately 75 kilometers by the main Philip Lakes road west of McKenzie, B.C. (Figure 1). The claims lie at elevations ranging from 3,500 to 3,990 feet and are accessible by good gravel roads. Topographic relief is moderate with the highest areas occurring in the western parts of the property. The local timber cover consists of fir, spruce and lodgepole pine. Several stands of timber have been harvested in the area of the claims. Logging activity has provided good road access to most of the claims.

PORPERTY AND OWNERSHIP

The May property consists of the May 1 - 3 mineral claims. The pertinent claim data is as follows:-

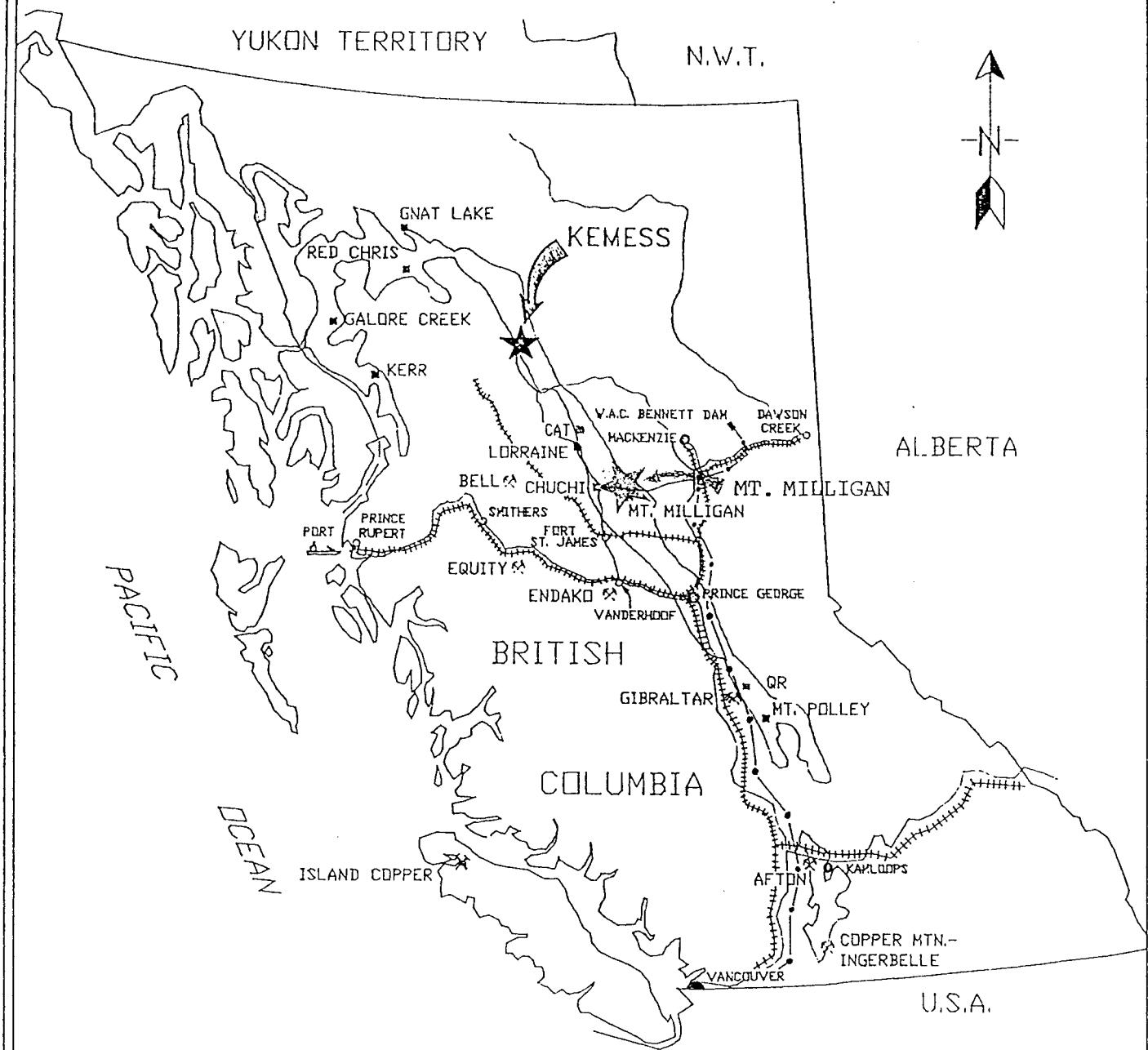
<u>Claim</u>	<u>Units</u>	<u>Record Number</u>	<u>Record Date</u>
May 1	20	12260	July 8, 1990
May 2	15	12261	July 15, 1990
May 3	15	12262	July 8, 1990

The claims are owned by David L. Cooke of Surrey, B.C.

REGIONAL GEOLOGY AND MINERALIZATION

Mt. Milligan occurs roughly at the core of an area of porphyry copper-gold mineralization which runs northwesterly from Carp Lake to the Nation River in the Omineca Mining Division of B.C. This area is part of the Quesnel Trough of Upper Triassic rocks, which extend northwesterly from the U.S. border through B.C. to the Yukon.

The Upper Triassic rocks in the Mt. Milligan area belong to the Takla Group and consist mainly of andesitic and basaltic flows and pyroclastics. Minor amounts of black argillites have been noted locally. Older metamorphic rocks of the Slide Mountain and Cache Creek Groups occur to the east of the Takla rocks. The Takla volcanic rocks are intruded by calc-alkaline and alkaline plutons of Upper Triassic to Cretaceous ages.

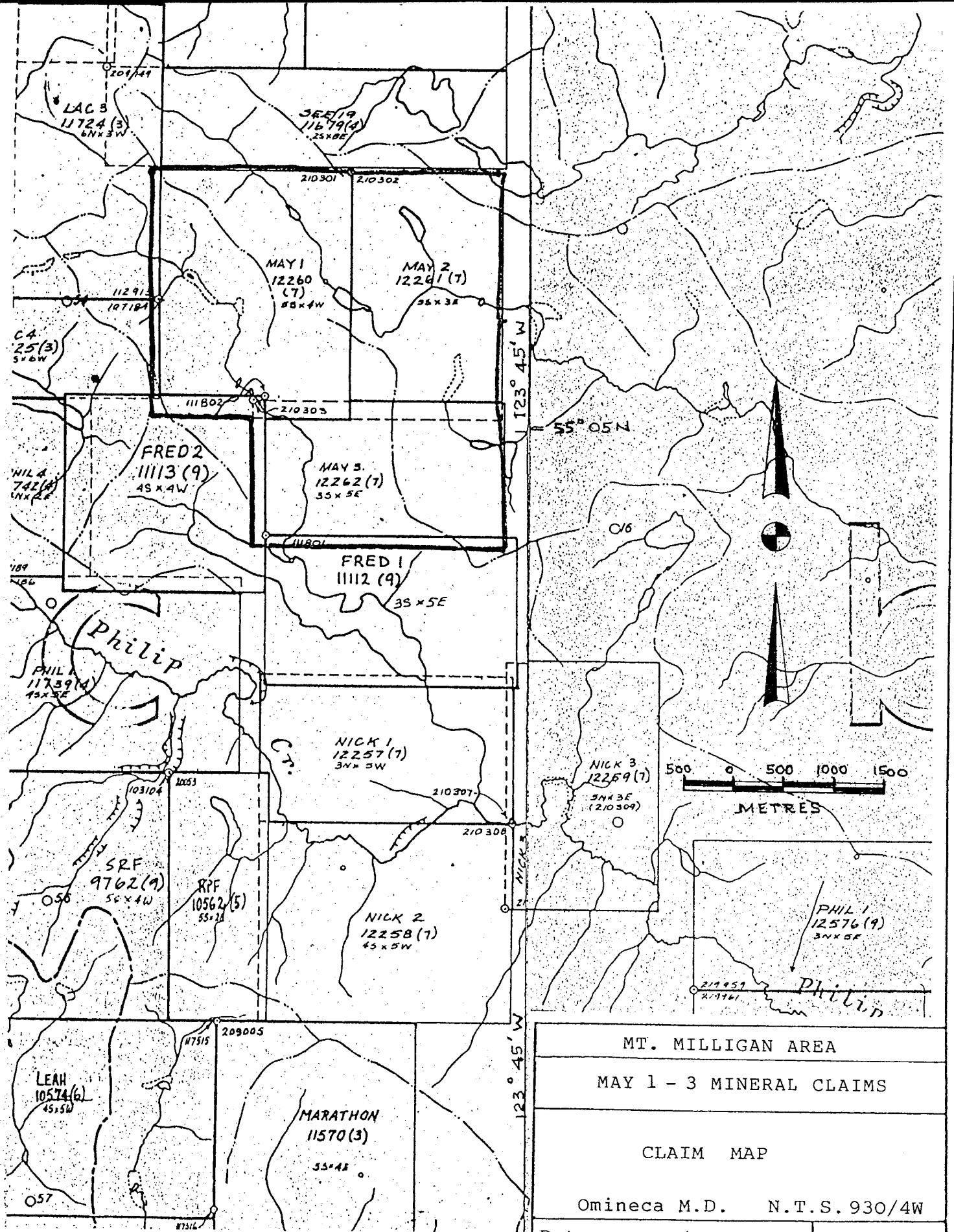


LEGEND

- ROAD
- ++ RAILWAY
- MAJOR POWER LINE
- QUESNEL TROUGH
- ✖ PRODUCING PORPHYRY MINES
- COPPER AND/OR GOLD DEPOSIT

0 100 200 300
SCALE KILOMETRES

MT. MILLIGAN AREA	
D. L. COOKE & ASSOCIATES LTD.	
MAY 1 - 3 MINERAL CLAIMS	
LOCATION MAP	
Omineca M.D. N.T.S. 930/4W	
SCALE:	AS SHOWN
DATE:	SEPT. 80
PRINTED BY:	ProComp GeoDraft Ltd.
REVISION:	1
FILE #:	1



MT. MILLIGAN AREA

MAY 1 - 3 MINERAL CLAIMS

CLAIM MAP

Omineca M.D. N.T.S. 930/4W

Date: Sept./91	1:50,000
D.L.COKE & ASST.LTD.	Fig. 2

The geology of the Mt. Milligan area is mainly obscured by glacial drift. The Mt. Milligan porphyry copper-gold deposit which is currently being developed by Placer Dome Inc. contains 385 million tons of probable ore with a grade of 0.22% copper and 0.016 ounce gold per ton. The mineralization consists of pyrite, chalcopyrite and free gold within Takla volcanic rocks and in coeval alkaline intrusions (monzonite, diorite, etc.) of Triassic age. The sulphides occur as disseminations and stockworks in both intrusive and volcanic host rocks.

The intrusions are characterized by abundant disseminations of magnetite, which make them detectable by airborne and ground magnetic surveys. Sulphides are concentrated in the intrusive margins and adjacent volcanic rocks and may be traced under the glacial cover by induced polarization methods.

In addition to the disseminated and stockwork habit of sulphide mineralization, there are fault-controlled gold veins which occur peripheral to the porphyry mineralization. The veins contain quartz, carbonate, pyrite, chalcopyrite and gold which in some cases is of economic interest.

PROPERTY GEOLOGY

The May claims occur east of a small boomerang-shaped aeromagnetic anomaly, which lies to the southeast of the larger Mt. Milligan aeromagnetic anomaly. The May property have potential for the occurrence of mineralized satellite alkaline intrusions similar to the Mt. Milligan intrusions. The property, however, is extensively covered by unconsolidated glacial debris of unknown thickness. Some rock exposures occur in the north and northwestern parts of the claim group. These areas are underlain by Takla volcanic tuffs, lapilli tuffs and black argillites.

GEOCHEMISTRY

Sample Collection and Analysis

Soil samples were taken with a shovel from depths of 15 - 30 centimetres on grid lines and secondary logging roads at 100 metre intervals. Soil samples were placed in numbered Kraft sample bags and shipped to Min-En Laboratories in North Vancouver, B.C. for analysis. Rock samples were occasionally collected in the course of soil sampling, prospecting, mapping, etc. The sample location sites and numbers are indicated on Figure 3.

The soil samples were dried at approximately 60°C and then sieved to minus 80 mesh. A 1.0 gram sample was then digested with HNO₃ and HClO₄ mixture. These samples were then diluted to standard volume after cooling, and the solutions analyzed for 30 elements by computer operated Jarrell Ash 9000 Induction Coupled Plasma (ICP) Analyzer. Gold was determined on separate solutions by atomic absorption spectrophotometry. Rock samples were crushed and treated in a similar geochemical fashion.

Discussion of Results

The analytical results are presented in Appendix III. Significant values for gold are plotted on Figure 3. Although there were some high values for silver, they do not appear to be coincident with high gold values. Because of the small sample population, statistical treatment of the data was not attempted. By inspection and experience, the following values were assumed to be anomalous:

gold	:	+ 10 ppb
silver	:	+ 1.0 ppm
arsenic	:	+ 20 ppm
copper	:	+ 100 ppm

CONCLUSIONS AND RECOMMENDATIONS

The reconnaissance soil sampling and prospecting program failed to identify any anomalous areas for copper and gold on the May property. Moderate amounts of pyrite mineralization occur in the northern part of the property. Because of the extensive unconsolidated glacial cover, soil geochemistry is not believed to be the most effective method of evaluating the claims.

A program of magnetometer and induced polarization is recommended to define zones of intrusion and strong sulphide mineralization which may be present on the May property.

Report by

D. L. COOKE AND ASSOCIATES LTD.



David L. Cooke, Ph.D., P.Eng.
September 30, 1991



REFERENCES

- Cooke, D. L., 1991. Reconnaissance Geology and Geochemistry of the Lac 1 - 4 Claims, Mt. Milligan Area, 9 pp.
- Geophysical Paper, 1961. Philip Lakes, British Columbia, Map 1573G, Geological Survey Canada.
- Geophysical Paper, 1961. Wittschica Creek, British Columbia. Map 1584G, Geological Survey Canada.
- Muller, J. E., 1961. Geology, Pine Pass, British Columbia, Map 11 - 1961, Geological Survey Canada.
- Rice, H. M. A., 1948. Smithers - Fort St. James, British Columbia, Map 971A, 1 inch to 8 miles.

APPENDIX I

STATEMENT OF EXPENDITURES

MAY 1 - 3 MINERAL CLAIMS
OMINECA M.D.

SALARIES

D.L.Cooke, Geologist: June 6 - 10, 1991	5 days @ \$350/day	\$1,750.00
M.A.Cooke, Field Asst: June 6 - 10, 1991	5 days @ \$150/day	<u>750.00</u>
		2,500.00

GEOCHEMISTRY

Analyses: 141 Soil Samples @ \$12.00 ea.	\$1,692.00
14 Rock Samples @ \$14.50 ea.	203.00
Sample Bags, Flagging, etc.	<u>50.00</u>
	1,945.00

DOMICILE

Room and Board: 10 man days @ \$60/day	600.00
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TRANSPORTATION

Truck Rental: 5 days @ \$60/day	\$ 300.00
Mileage: 1,278 km @ \$0.20/km	255.60
Gasoline	<u>46.16</u>
	601.76

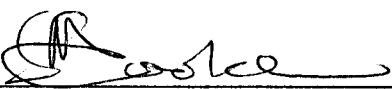
INTERPRETATION AND REPORT

D.L. Cooke: 1 1/2 days @ \$350/day	\$ 525.00
Drafting and Reproduction	150.00
Typing and Photocopies	<u>100.00</u>
	775.00

TOTAL EXPENDITURES \$6,421.76

Prepared by:

D. L. COOKE AND ASSOCIATES LTD.


David L. Cooke, Ph.D., P.Eng.
September 30, 1991



D. L. COOKE AND ASSOCIATES LTD.

APPENDIX II
STATEMENT OF QUALIFICATIONS

I, DAVID LAWRENCE COOKE, of the Municipality of Surrey in the Province of British Columbia, hereby certify:

1. That I am a Consulting Geologist, residing at 10667 Arbutus Wynd, Surrey, B.C., V3R 0B5, with a business office at 811 - 675 West Hastings Street, Vancouver, B.C., V6B 1N2.
2. That I graduated with a B.Sc. degree in Geology from the University of New Brunswick in 1959, and with M.A. and Ph.D. degrees in Geology from the University of Toronto in 1961 and 1966 respectively.
3. That I have practised my profession as an exploration geologist from 1959 to the present time in Canada, the U.S.A., Mexico, the Caribbean and South America.
4. That I am a Registered Member of the Association of Professional Engineers of the Province of British Columbia.
5. That I personally performed the exploration work on May 1-3 claim described herein.
6. And that I am the author of this report on the May 1-3 mineral claim, dated September 30, 1991.



D.L. Cooke

DAVID L. COOKE, PH.D., P.ENG.

September 30, 1991

APPENDIX III

ANALYTICAL RESULTS

COMP: D.L.COKE & ASSOC.

MIN-EN LABS — ICP REPORT

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

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

FILE NO: 1V-0559-R

DATE: 91/06/

* ROCK * (ACT:F3)

COMP: D.L. COOKE & ASSOC.

PROJ: MAY GROUP

ATTN: D.L.COKE

MIN-EN LABS — ICP REPORT

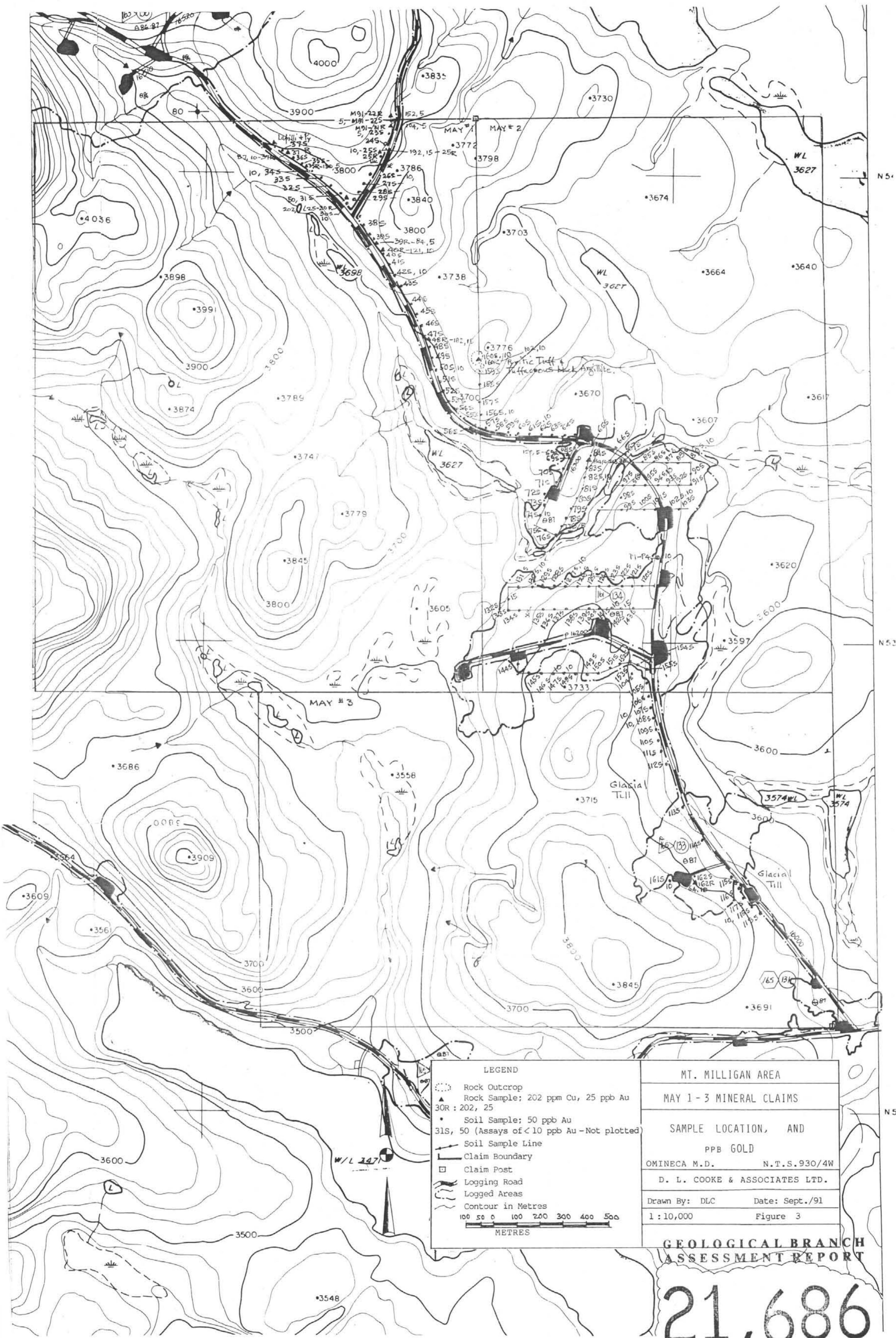
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1V-0559-SJ5

DATE: 91/06/21

* SOIL * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU-WET PPB
M91-142S	.8	17450	1	5	96	.1	5	6570	.1	10	23	29620	630	18	5220	275	1	650	8	1110	37	1	17	1	1	92.8	70	1	1	1	40	15
M91-143S	.3	18110	1	3	95	.1	7	6960	.1	12	27	38380	780	13	6220	271	1	240	7	1410	39	1	17	1	1	122.6	44	1	1	1	45	5
M91-144S	.7	16620	1	2	80	.1	8	10640	.1	12	31	27180	1020	12	7320	397	1	290	14	1050	29	1	27	1	1	94.8	36	1	1	1	43	5
M91-145S	.9	22410	1	1	92	.1	8	8010	.1	11	25	31460	970	18	7010	283	1	760	9	1140	34	1	25	1	1	100.0	55	1	2	1	43	5
M91-146S	1.0	18400	1	1	81	.1	8	8630	.1	10	20	25940	1380	12	6390	473	1	690	10	810	33	1	28	1	1	87.2	50	1	2	1	38	10
M91-147S	.6	26800	1	1	79	.3	8	7520	.1	14	38	42170	1090	20	8000	318	1	770	12	1340	47	1	25	1	1	117.8	51	1	1	1	52	10
M91-148S	.6	27340	1	1	87	.5	6	7270	.1	14	38	37910	1000	23	8420	328	1	620	17	1290	43	1	22	1	1	103.1	83	1	1	2	50	5
M91-149S	1.0	26300	1	1	112	.2	8	8470	.1	15	45	40750	1180	23	9520	375	1	590	17	1280	48	1	28	1	1	121.3	81	1	1	2	53	5
M91-150S	.8	22000	1	1	80	.1	8	8030	.1	12	33	36060	990	17	7380	302	1	1230	9	1190	42	1	26	1	1	112.0	52	1	1	1	46	5
M91-151S	.9	22590	1	1	77	.1	8	7240	.1	13	30	35260	1100	17	7420	332	1	700	11	910	38	1	22	1	1	109.8	66	1	1	2	50	5
M91-152S	.9	24410	1	1	100	.1	8	7540	.1	12	32	33610	890	18	7100	287	1	590	10	1010	38	1	24	1	1	103.0	55	2	1	1	47	5
M91-153S	.7	18850	1	1	83	.1	8	8100	.1	11	24	31700	780	13	6310	247	1	740	9	1640	33	1	25	1	1	107.9	59	1	1	2	45	5
M91-154S	.9	19460	1	1	97	.1	8	9350	.1	12	31	36150	930	16	7760	314	1	890	9	1920	38	1	32	1	1	114.3	59	1	1	1	49	5
M91-155S	.7	18050	1	1	93	.1	6	8240	.1	12	38	31640	880	13	6980	365	1	230	17	1330	34	1	22	1	1	96.0	43	1	1	1	47	5
M91-156S	.7	22480	1	1	67	.3	6	5700	.1	12	37	30720	650	16	6400	234	1	170	15	1350	36	1	14	1	1	82.8	49	1	1	1	42	10
M91-157S	1.0	24240	1	1	111	.3	6	6530	.1	14	37	30900	850	18	7850	507	1	700	19	770	38	1	17	1	1	84.7	65	1	1	1	47	5
M91-158S	1.2	16200	4	1	72	.1	5	5740	.1	8	22	22670	610	12	5400	245	1	150	14	830	29	1	13	1	1	66.4	53	1	1	1	34	5
M91-159S	.7	23540	1	1	65	.2	5	5420	.1	10	31	31530	690	23	7250	230	1	120	17	1200	40	1	12	1	1	78.9	68	1	1	1	42	5
M91-160S	1.1	26090	1	1	61	.2	6	6450	.1	14	53	40820	800	18	6660	367	1	620	18	1500	48	1	17	1	1	112.5	132	1	1	2	52	10
M91-161S	.7	24370	1	1	100	.2	8	8770	.1	14	46	35470	1050	16	9240	358	1	730	18	1070	39	1	29	1	1	108.6	57	1	1	2	52	10
M91-162S	.5	14560	1	1	121	.1	6	7360	.1	8	22	30330	780	9	3820	172	1	160	3	1560	31	1	20	1	1	99.4	52	1	1	1	36	5



21,686