

84-#121-12079

GEOCHEMICAL REPORT
FOR ASSESSMENT CREDIT

CLOUD CLAIMS

LITTLE LILLOOET LAKE AREA

NEW WESTMINISTER MINING DIVISION

50° 05' N

122° 27' W

N.T.S Map 92 J / 1 W

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

R.A. Boyce
Placer Development Ltd.
14 March, 1984

12,079

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Geochemical Results: Cu/Zn/Pb	In Pocket
" " Ag/Au/As	" "
" " Mo/W/Hg/Sb	" "

1. Introduction

A geochemical sampling program was undertaken on the Cloud Claim group, southeast of Pemberton, in July of 1983. Fifty-four samples were taken from outcrop, stream sediment and soil.

The purpose of the program was to bracket anomalous areas suitable for future work.

The claims were staked in February, 1983 on the strength of several anomalous heavy minerals samples, from streams draining the claims area. The bedrock geology is considered favourable for polymetallic volcanogenic mineral deposits.

2. Location and Access

The Cloud Claims are located east of Little Lillooet Lake, in south-western British Columbia. Cloudraker Mountain lies immediately northeast of the claims. The centre of the claims lies approximately 35 kilometres southeast of Pemberton, and 100 kilometres northeast of Vancouver.

Road access to near the property boundaries is good. The all-weather Lillooet River Forest Road from Pemberton passes three kilometres west of the claims. A partly overgrown spur climbs to within a kilometre of the northwestern corner of the property. A logging road on Rogers Creek reaches to one-half kilometre of the southeastern corner. This road is presently washed-out, but improvements are planned in conjunction with future logging.

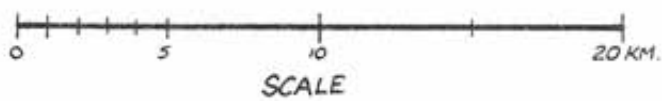
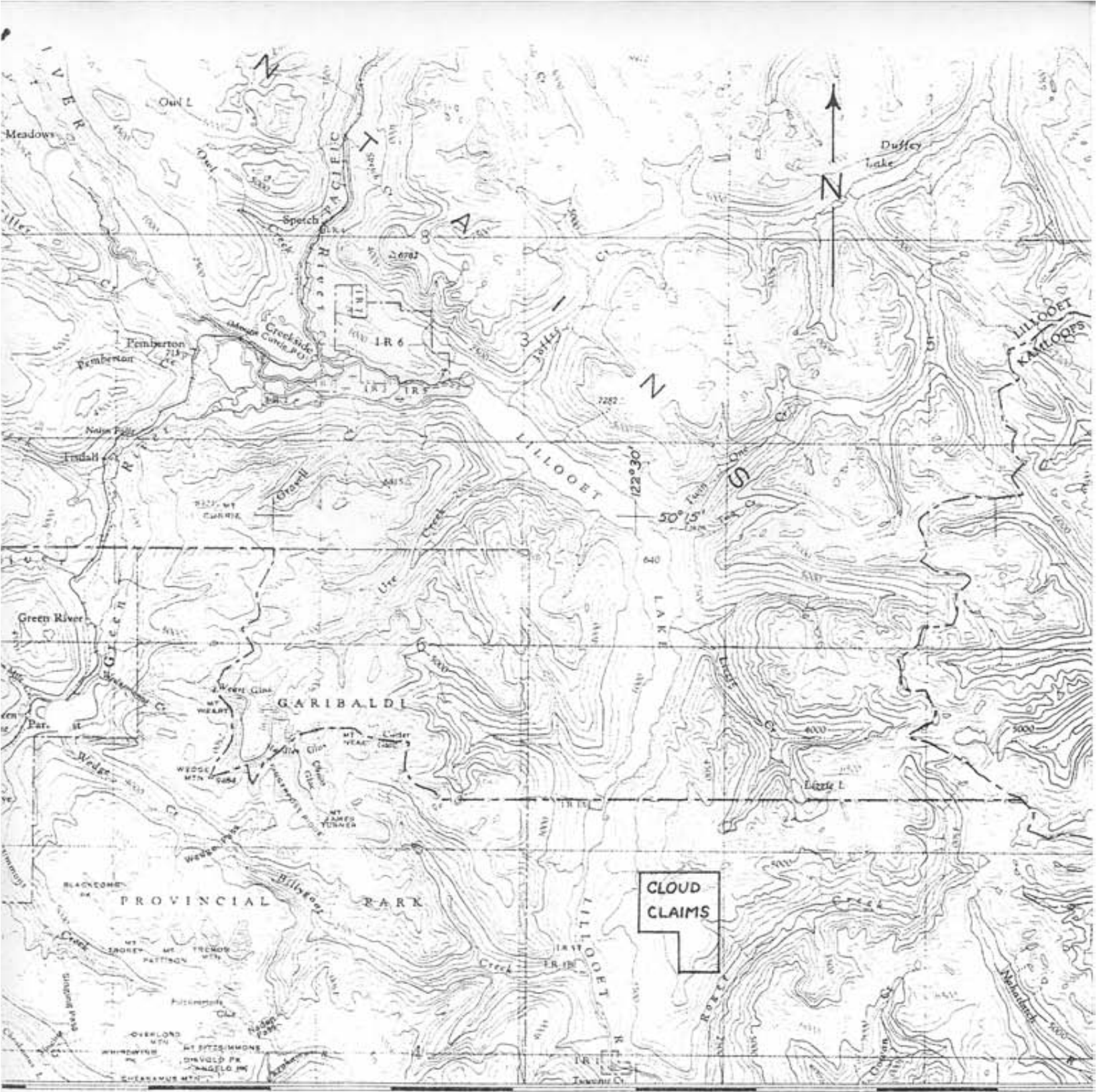


Figure 1
LOCATION MAP
CLOUD CLAIMS

Access to most of the property is more practical by helicopter, due to the rough terrain. Landing sites are available on the ridgecrest, in rocky bowls on the east, and a few narrow ledges on the west.

3. Physical Features

The Cloud Claims lie near the southern end of the Pacific Ranges subdivision of the Coast Mountains. The claims straddle the ridge dividing the Lillooet River valley to the west from Rogers Creek on the southeast. The ridgecrest is rounded to serrate, running southwestward from Cloudraker Mountain three kilometres, then southward. The southern part is less rugged, due to change in rock type. A composite cirque is evident at the northern edge of the property. Two southeast-facing bowls are developed in the property centre, and a third at the southern end. Valley slopes are generally very steep. Total relief is 1350 metres, from 2000 metres on the shoulder of Cloudraker Mountain to 850 metre.

Pleistocene glaciation is believed to have been directed south-southeastward along the major valley of Lillooet River. There was very little debris deposition within the claims area, and bedrock grain was accentuated in the southwestern part. Only the highest ridges were not overridden.

The claims lie within the Coastal-mountain climate. Summers are warm and winters are cool. Annual precipitation is about 200 centimetres. More than half occurs as snow. Forest cover over most of the property is dense stands of mixed conifers. Treeline occurs at about 1700 metres. About one-third of the property is alpine.

4. History and Ownership

Prospecting has occurred in the Lillooet valley as early as the late 1850's, resulting from the construction of the Douglas Trail, up Lillooet River valley. This was an early route to the Cariboo gold rush. Bedrock gold and copper-gold properties in, and southwest of the valley were worked as early as the 1890's. One is listed as containing copper, lead, zinc and silver. However, production was small. Several placer claims on Lillooet River, downstream from Cloud claims are shown on the Mineral Inventory map. Silver and platinum are listed in addition to gold. One copper-moly property is marked southwest of the Cloud.

No previous claims are known in area covered by Cloud Claims.

The area was first visited in August, 1981 by personnel of Placer Development Ltd. Heavy mineral samples were collected from drainages in and adjacent to Fire Lake group rocks. This lithology was considered favourable for polymetallic volcanogenic mineral deposits, with base and precious metals. Four of these samples returned anomalous values. Minor follow-up work in 1982 involved collecting several panned concentrates of stream sediment in parts of four drainages. Analytical results were all low. However, it was felt that the earlier anomalies could not be ignored. Hence the Cloud Claims were located by Placer Development Ltd., on 21st of February, 1983. Total area is 2000 hectares, in 80 units, comprising four claims. It was later discovered that a recently-staked claim pre-empted the southwestern section of the Cloud Claims, removing 26 units (400 hectares) from the property. Claims data is summarized below.

<u>Claim</u>	<u>Units</u>	<u>Tag No.</u>	<u>Record No.</u>
Cloud 1	20 4W x 5S	87303	1833
Cloud 2	20 4E x 5S	87304	1834
Cloud 3	20 4W x 5S	87301	1835
Cloud 4	20 4E x 5S	87302	1836

5. General Geology

The claims are underlain by two rock-units of about equal area. They are separated by a linear contact, which may be fault-related.

The northeast area is underlain by intrusive rock of Coast Crystalline Complex. Commonest type is medium-grained, allotriomorphic-granular granodiorite to quartz diorite. Some areas were coarse-grained, and border phase was fine-grained. Gabbro was also noted.

The southwest area is underlain by metasedimentary and metavolcanic rocks of lower Cretaceous Fire Lake Group. It is believed to be a surviving pendant of country rock intruded by the Coast Crystalline Complex. Rock types include andesite, locally siliceous; basalt; and carbonaceous limestone. All rocks are pyritic to some degree, and mafics are chloritized. Three sample sites had very rusty surfaces. Foliation was often marked, running north-northwesterly and dipping steeply. This resulted in numerous topographic ridges, gullies, and ledges.

Immediately west of the claims lies a quartz diorite body. It is oval in surface expression, and forms a sloping bench on the valley wall, about three kilometres long.

6. Field Work Performed

Two crews spent five man-days collecting geochemical samples on Cloud Claims. Sixteen bulk sediment samples were taken from drainages. The method involves wet-sieving through a -20 mesh screen, material from a hole dug vertically through stream sediment. Three to five kilograms is collected in a pan, and washed into a plastic sample bag. Insufficient material was available at three sites, and conventional sediment samples were collected. A line of 25 soil samples was collected in the southern part of the claims. Sample spacing was 50 metres. All outcrops encountered were chip-sampled, resulting in 10 samples.

7. Analytical Results

All samples were sent to Placer's laboratory in Vancouver for analysis. Analytical methods are listed in Appendix A. Bulk samples were analyzed for gold three times, and an average figure plotted on maps. Maps of results are attached at the end of the report. Bulk samples were sieved to -150 mesh in the lab, while soil and conventional sediments were sieved to -80 mesh. Rock samples were pulverized before analysis.

All samples were analyzed for content of Cu, Zn, Pb, Ag, Au, and As. Rocks were additionally analyzed for Mo, W, Hg, and Sb.

Analyses from soil samples showed very little variation in Zn and Pb and no detectable Au. However modest anomalies were seen in Cu, Ag and As. One-third of samples contained at least 0.4 ppm Ag, with a high of 2.0 ppm. Distribution was not very continuous. Two of these samples correlated with 100+ ppm in Cu. Another one correlates with 40 ppm As.

Three bulk sediment samples contained moderately anomalous Au averaged analyses of 0.33, 0.31, and 0.16 ppm. The highest value was adjacent to the soil line at the south end. The bulk sample next to it contained an average 0.09 ppm Au, and 100 ppm As. The other anomalous Au samples reflect the northwest boundary area. One of these and an adjacent sample contain around 60 ppm As. One sample near the centre of the property contained 100 ppm As and 0.5 ppm Ag.

Rock samples showed only low values in all elements, with one exception. A rusty outcrop in the southern part of the claim contained 245 ppm Pb and 45 ppm Sb.

8. Conclusions

Modest anomalies in several elements partly reflect anomalies from previous heavy minerals samples. This gives encouragement for further work on the property.

9. Summary of Expenditures

Personnel Costs

<u>Personnel</u>	<u>Period Employed</u>	<u>Days & Rates</u>	<u>Costs</u>
R.A. Boyce	24&25 July'83	1 1/2 days @ \$230.	\$345.
H.R. Goddard	24&25 July,83	1 1/2 days @ \$220.	330.
P.R. Hodgson	24th July'83	1 day @ \$220.	220.
E.T. Kimura	24th July'83	1 day @ \$380.	<u>380.</u> \$1275.00

Helicopter Costs Okanagan Helicopters 24 July 1202.50

Sample Preparation and Assaying Costs

28 soils for Cu,Pb,Zn,Ag,As & Au @ \$11.20	\$313.60
16 bulk sed for Cu,Pb,Zn,Ag,As & Au(x3) @ \$ 29.55	472.80
10 rocks for Mo,Cu,Pb,Zn,Ag,As,Sb,W,Au & Hg @23.20	<u>232.00</u> 1018.40

Crew Board and Room Costs

Pemberton Hotel: 8 man days @ \$50.50 per man day \$ 404.00

Crew Mob & Demob Costs

Vancouver to Pemberton and return
 33% of total applicable to Cloud Claims 330.00

Equipment and Supplies Costs

Vehicle: Lease rate \$250/month 2 vehicles	
Two days @ \$16.60 per day	\$ 66.40
Sampling supplies and equipment (estimated)	60.00
Other supplies, groceries, etc.	70.00
Maps, air photos, etc.	<u>20.00</u> 216.40

Evaluation, Report and Map Preparation Costs

<u>Personnel</u>	<u>Days and Rate</u>	
R.A. Boyce	4 days @ \$230.	\$920.
H.R. Goddard	2 days @ 220.	440.
A.W. Kemp	1/2 day @ 200.	100.
E.T. Kimura	2 days @ 380.	760.
D.D. Dussault	1 day @ 200.	200.
I. Thomson	1/2 day @ 350.	175.
Map reproductions, stationary, etc.		75.
Computer time and map plotting	<u>200.</u>	\$2870.00

TOTAL EXPENDITURES \$7316.30

P L A C E R D E V E L O P M E N T L T D (R E S E A R C H C E N T R E)

GEOCHEMICAL DATA LISTING: Cloud Claims E. Kimura

DATE: 84-01-

PDL lab data file: P4001-1
 AREA: CLOUD CLAIMS
 MAPSHEET NO: 92J1W
 VENTURE: *
 GEOLOGIST: E. KIMURA
 LAB PROJECT NO: 4001

REMARKS: PLEASE DISTRIBUTE RESULTS TO: E. KIMURA S. TENNANT B. HODGSON
 I. THOMSON R. SHKLANKA

STANDARD ANALYSIS METHODS USED BY PDL GEOCHEM LAB ARE LISTED BELOW:
 ALL RESULTS EXPRESSED AS INDICATED IN UNITS COLUMN BELOW
 ANY EXCEPTIONS FOR THIS PROJECT ARE NOTED ABOVE

REMARKS: INTERNAL LAB STANDARDS HAVE BEEN INCLUDED FOR REFERENCE.
 SAMPLE NUMBERS FOLLOWED BY * ARE DUPLICATE ANALYSES.

	UNITS	WT. G	ATTACK	USED	TIME	RANGE	METHOD
MO	PPM	0.5	C	HClO4/HNO3	4HRS	1-1000	ATOMIC ABSORPTION
CU	PPM	0.5	C	HClO4/HNO3	4HRS	2-4000	ATOMIC ABSORPTION
ZN	PPM	0.5	C	HClO4/HNO3	4HRS	2-3000	ATOMIC ABSORPTION
PB	PPM	0.5	C	HClO4/HNO3	4HRS	2-3000	A.A. BACKGROUND COR.
CD	PPM	0.5	C	HClO4/HNO3	4HRS	0.2-200	A.A. BACKGROUND COR.
NI	PPM	0.5	C	HClO4/HNO3	4HRS	2-2000	ATOMIC ABSORPTION
CO	PPM	0.5	C	HClO4/HNO3	4HRS	2-2000	ATOMIC ABSORPTION
AG1	PPM	0.5	C	HClO4/HNO3	4HRS	0.2-20	A.A. BACKGROUND COR
AG2	PPM	0.5	C	HNO3	2HRS	0.02-4.00	A.A. SOLVENT EXTRACT
AU	PPM	10.0	AQUA REGIA		3HRS	0.02-4.00	A.A. SOLVENT EXTRACT.
U	PPM	0.25	DIL	HNO3	2HRS	1.0-1000	FLOURIMETRY SOLV. EX.
V	PPM	0.5	C	HF/HClO4/HNO3/HCL	6HRS	5-1000	ATOMIC ABSORPTION
W	PPM	1.0	C	HF/HNO3/HCL/H2SO4	4HRS	5-500	A.A. SOLVENT EXTRACT.
F	PPM	0.25	NA2CO3/KNO3	FUSION	30MIN	40-4000	SPECIFIC ION ELECTODE
AS	PPM	0.5	C	HClO4/HNO3	4HRS	2-1000	A.A. BACKGROUND COR.
SB	PPM	0.5	C	HClO4/HNO3	4HRS	2-1000	A.A. BACKGROUND COR.
BI	PPM	0.5	C	HClO4/HNO3	4HRS	2-2000	ATOMIC ABSORPTION
MN	PPM	0.5	C	HClO4/HNO3	4HRS	2-3000	ATOMIC ABSORPTION
FE	%	0.5	C	HF/HClO4/HNO3/HCL	6HRS	0.02-20%	ATOMIC ABSORPTION
HG	PPB	0.5	DIL	HNO3	2HRS	5-2000PPB	A.A. COLD VAPOR GEN.
BA	%	0.25	C	HF/HI/OXALIC	4HRS	0.02-20%	ATOMIC ABSORPTION
NA	%	0.5	C	HF/HClO4/HNO3/HCL	6HRS	0.2-20%	ATOMIC ABSORPTION
K	%	0.5	C	HF/HClO4/HNO3/HCL	6HRS	0.2-20%	ATOMIC ABSORPTION
CA	%	0.5	C	HF/HClO4/HNO3/HCL	6HRS	0.02-20%	ATOMIC ABSORPTION
SR	PPM	0.5	C	HF/HClO4/HNO3/HCL	6HRS	10-2000	ATOMIC ABSORPTION
MG	%	0.5	C	HF/HClO4/HNO3/HCL	6HRS	0.2-20%	ATOMIC ABSORPTION
SN	PPM	1.0	NH4I	FUSION	15MIN	5-500	A.A. SOLVENT EXTRACT.
LOI	%	1.0	ASH 600	DEG C	2HRS	0.02-99%	WEIGH RESDUE

PLACER GEOCHEM ASSAY SYSTEM: DATA FROM Cloud Claims E. Kimura

GRID	SAMPLE	PROJECT	MO	CU	ZN	PB	AG	AU	W	AS	HG	SB
92J11W	CLR 54	4001	5	4	52	11	22	00	5	2	27	2
92J11W	CLR 100	4001	5	39	44	5	22	00	5	2	27	2
92J11W	CLR 101	4001	5	13	35	24	22	00	5	2	27	2
92J11W	CLR 102	4001	5	17	76	8	22	00	5	2	27	2
92J11W	CLR 105	4001	5	66	30	10	22	00	5	2	27	2
92J11W	CLR 111	4001	5	19	63	4	22	00	5	2	27	2
92J11W	CLR 124	4001	5	48	33	8	22	00	5	2	27	2
92J11W	CLR 125	4001	5	24	45	15	22	00	5	2	27	2
92J11W	CLR 132	4001	5	9	51	24	22	00	5	2	27	2
92J11W	CLR 135	4001	5	39	51	5	22	00	5	2	27	2
92J11W	CLR 135*	4001	5	80	33	8	22	00	5	2	27	2
test	STD G	4001	1	90	22	10	22	00	5	2	27	2
test	STD SB	4001										153
test	STD AU	4001						1.88				
test	STD W	4001							36			
test	STD HG	4001									201	

ROCK SAMPLES

GRID	SAMPLE	PROJECT	CU	ZN	PB	AG	AU	AS
92J11W	CLS 45	3114	30	46	15	22	00	2
92J11W	CLS 47	3114	72	68	19	22	00	2
92J11W	CLS 53	3114	30	51	30	22	00	2
92J11W	CLX 103	3114	76	49	8	22	00	2
92J11W	CLX 104	3114	33	49	2	22	00	2
92J11W	CLX 107	3114	23	23	1	22	00	2
92J11W	CLX 108	3114	31	41	12	22	00	2
92J11W	CLX 109	3114	16	22	1	22	00	2
92J11W	CLX 110	3114	27	27	9	22	00	2
92J11W	CLX 112	3114	30	47	8	22	00	2
92J11W	CLX 114	3114	35	67	9	22	00	2
92J11W	CLX 115	3114	19	22	1	22	00	2
92J11W	CLX 116	3114	24	22	8	22	00	2
92J11W	CLX 117	3114	4	22	6	22	00	2
92J11W	CLX 118	3114	35	42	10	22	00	2
92J11W	CLX 119	3114	23	25	11	22	00	2
92J11W	CLX 121	3114	17	24	11	22	00	2
92J11W	CLX 122	3114	58	17	1	22	00	2
92J11W	CLX 123	3114	107	32	8	22	00	2
92J11W	CLX 126	3114	103	33	9	22	00	2
92J11W	CLX 127	3114	32	35	13	22	00	2
92J11W	CLX 128	3114	20	33	2	22	00	2
92J11W	CLX 129	3114	33	35	1	22	00	2
92J11W	CLX 130	3114	30	36	10	22	00	2
92J11W	CLX 131	3114	31	55	12	22	00	2
92J11W	CLX 133	3114	31	22	11	22	00	2
92J11W	CLX 134	3114	15	26	11	22	00	2
92J11W	CLX 134*	3114	15	27	12	22	00	2
92J11W	CLR 41*	3114	39	37	11	22	00	2
test	STD G	3114	89	78	10	22	00	2
test	STD G	3114	90	72	11	22	00	2
test	STD AU	3114					1.76	
test	STD AU	3114					1.68	

SEDIMENT

SOIL SAMPLES

APPENDIX B

PLACER GEOCHEM ASSAY SYSTEM: DATA FROM

E. Kimura

GRID	SAMPLE	PROJECT	CU	ZN	PB	AG	AU	AS
92J1W	CLB 42	3117	56	75	11	<0.2	<0.02	10
92J1W	CLB 42*	3117					<0.02	
92J1W	CLB 42*	3117					<0.02	
92J1W	CLB 43	3117	56	73	12	<0.2	<0.02	30
92J1W	CLB 43*	3117					<0.02	
92J1W	CLB 43*	3117					<0.02	
92J1W	CLB 44	3117	61	63	11	0.3	<0.02	12
92J1W	CLB 44*	3117					<0.02	
92J1W	CLB 44*	3117					<0.02	
92J1W	CLB 46	3117	57	72	32	0.2	<0.02	18
92J1W	CLB 46*	3117					<0.02	
92J1W	CLB 46*	3117					<0.02	
92J1W	CLB 48	3117	55	48	16	<0.2	<0.02	14
92J1W	CLB 48*	3117					<0.02	
92J1W	CLB 48*	3117					<0.02	
92J1W	CLB 49	3117	42	58	18	<0.2	<0.02	4
92J1W	CLB 49*	3117					<0.02	
92J1W	CLB 49*	3117					<0.02	
92J1W	CLB 50	3117	23	45	17	0.2	<0.02	6
92J1W	CLB 50*	3117					<0.02	
92J1W	CLB 50*	3117					<0.02	
92J1W	CLB 51	3117	49	61	20	<0.2	<0.02	6
92J1W	CLB 51*	3117					<0.02	
92J1W	CLB 51*	3117					<0.02	
92J1W	CLB 52	3117	43	62	18	<0.2	<0.02	2
92J1W	CLB 52*	3117					<0.02	
92J1W	CLB 106	3117	8	78	6	0.3	<0.02	50
92J1W	CLB 106*	3117					<0.02	
92J1W	CLB 106*	3117					<0.02	
92J1W	CLB 113	3117	26	66	18	0.2	0.19	100
92J1W	CLB 113*	3117					<0.02	
92J1W	CLB 113*	3117					<0.02	
92J1W	CLB 120	3117	32	83	12	0.3	<0.02	22
92J1W	CLB 120*	3117					<0.02	
92J1W	CLB 120*	3117					<0.02	
92J1W	CLB 136	3117	55	91	9	0.5	<0.02	100
92J1W	CLB 136*	3117					<0.02	
92J1W	CLB 136*	3117					<0.02	
92J1W	CLB 140	3117	68	91	15	0.4	0.18	58
92J1W	CLB 140*	3117					<0.02	
92J1W	CLB 141	3117	46	60	7	<0.2	<0.02	66
92J1W	CLB 141*	3117					<0.02	
92J1W	CLB 141*	3117					<0.02	
92J1W	CLB 142	3117	24	27	3	<0.2	<0.02	18
92J1W	CLB 142*	3117	23	26	3	<0.2	<0.02	18
92J1W	CLB 142*	3117					<0.02	
test	STD G	3117	95		104	0.9		76
test	STD G	3117	85		103	0.9		74
test	STD A	3117					1.53	
test	STD AU	3117					1.48	
test	STD AU	3117					1.60	

BULK SEDIMENTS

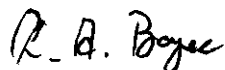
10. Statement of Qualifications

I, R.A. Boyce, with business address at Box 49330, Bentall Postal Station, Vancouver, B.C., V7X 1P1, do hereby certify that:

1. I have personally carried out the field work, and have assessed and interpreted the data from this geochemical program on the Cloud claims, New Westminster Mining Division.
2. I am a graduate of the University of British Columbia, Vancouver (B.Sc., Geological Sciences, 1977).
3. I am a member of the Canadian Institute of Mining and Metallurgy.
4. I have engaged in the practice of mineral exploration since graduation in the Provinces of British Columbia and Saskatchewan, and Yukon and Northwest Territories.

Respectfully submitted,

PLACER DEVELOPMENT LIMITED



R.A. Boyce

RAB/dd



GEOLOGICAL BRANCH
ASSESSMENT REPORT

12.079

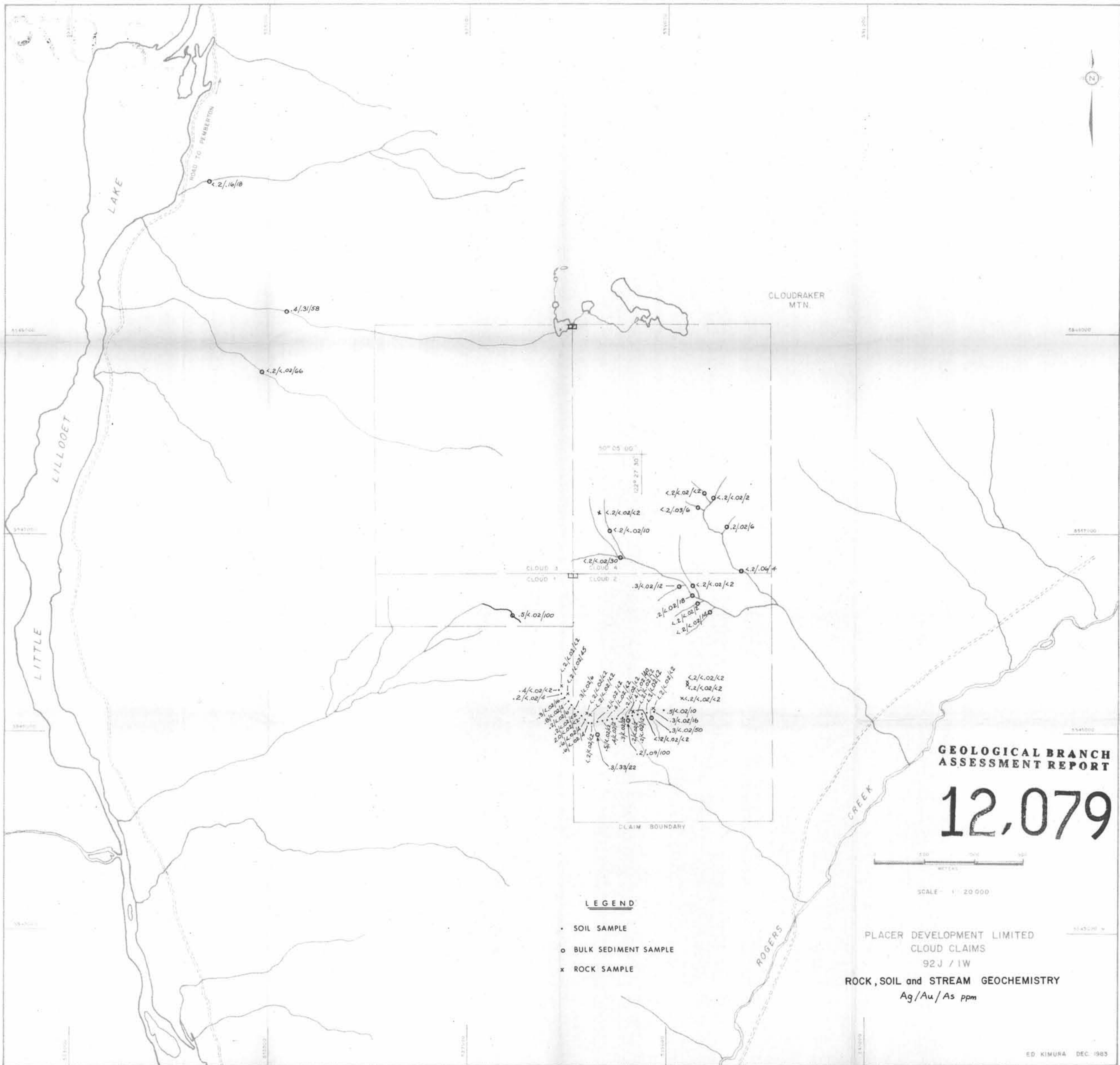
0 500 1000 1500
METERS

SCALE - 1 : 20 000

LEGEND

- SOIL SAMPLE
- BULK SEDIMENT SAMPLE
- x ROCK SAMPLE

PLACER DEVELOPMENT LIMITED
CLOUD CLAIMS
92J / 1W
ROCK, SOIL and STREAM GEOCHEMISTRY
Cu/Zn/Pb ppm



GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,079

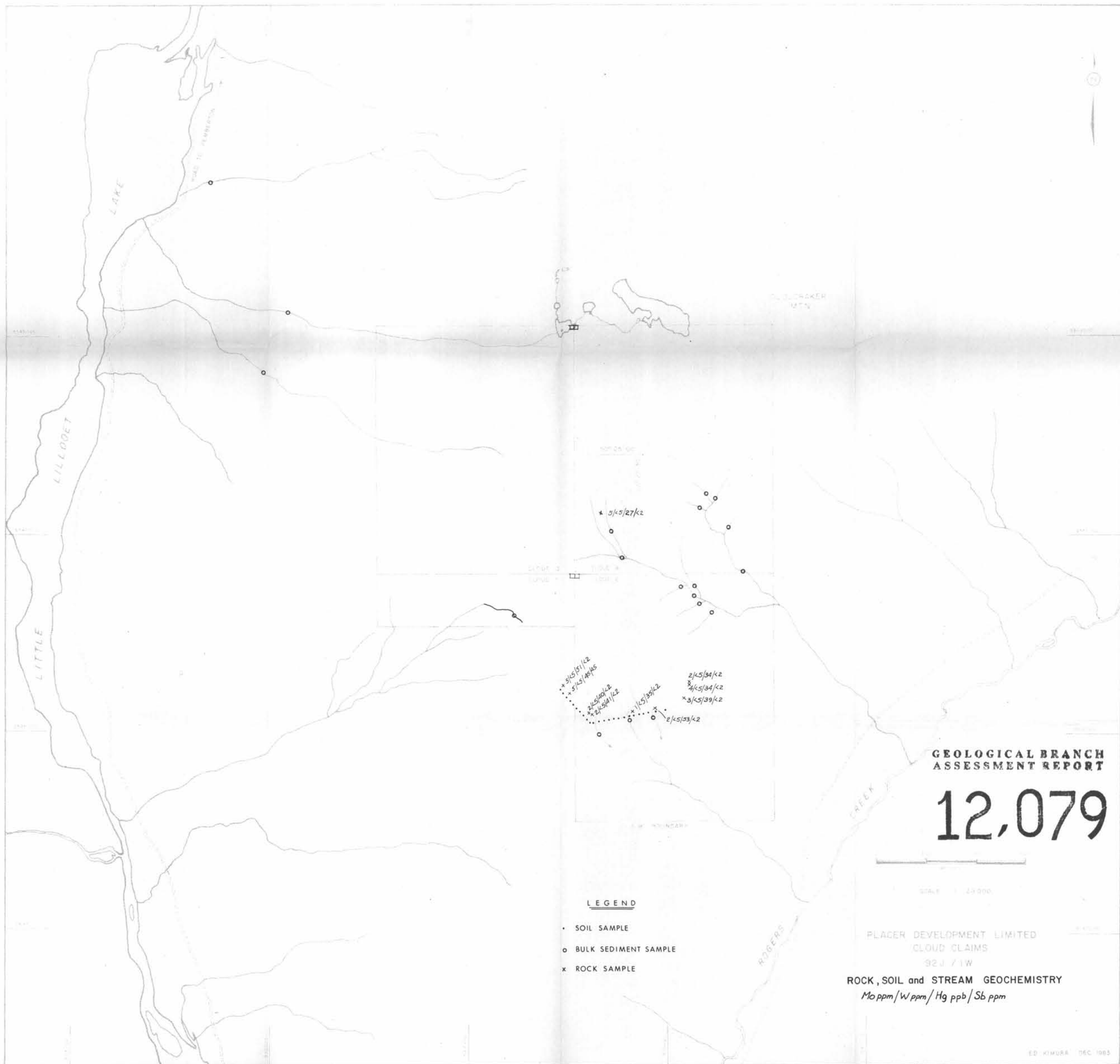
0 500 1000
METERS

SCALE 1:20,000

LEGEND

- SOIL SAMPLE
- BULK SEDIMENT SAMPLE
- x ROCK SAMPLE

PLACER DEVELOPMENT LIMITED
CLOUD CLAIMS
92J / 1W
ROCK, SOIL and STREAM GEOCHEMISTRY
Ag/Au/As ppm



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,079

SCALE 1:25,000

PLACER DEVELOPMENT LIMITED
CLOUD CLAIMS
92J 71W

ROCK, SOIL and STREAM GEOCHEMISTRY
Mo ppm / W ppm / Hg ppb / Sb ppm

LEGEND

- SOIL SAMPLE
- BULK SEDIMENT SAMPLE
- x ROCK SAMPLE