

COMINCO LTD.

EXPLORATION
NTS: 104 A/12 E

WESTERN DISTRICT

LOG NO:	11 01	RD.
ACTION:		
FILE NO:		

20.399

GEOLOGICAL BRANCH
ASSESSMENT REPORT

ASSESSMENT REPORT
GEOLOGICAL AND GEOCHEMICAL WORK
ON THE

DELTA 1 and 2
MINERAL CLAIMS

LIARD MINING DIVISION, BRITISH COLUMBIA

LATITUDE: 56° 36' N

LONGITUDE: 129° 31' W

WORK PERFORMED AUGUST 10-18, 1990
OWNER AND OPERATOR: COMINCO LTD.

OCTOBER, 1990

A. W. LEE

SUB-RECORDER RECEIVED	
OCT 25 1990	
M.R. #	\$
VANCOUVER, B.C.	

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

ASSESSMENT REPORT
GEOLOGICAL AND GEOCHEMICAL WORK ON
DELTA 1 and 2

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EXPLORATION

COMINCO LTD.

WESTERN DISTRICT

ASSESSMENT REPORT
GEOLOGICAL AND GEOCHEMICAL WORK ON
DELTA 1 and 2

SUMMARY

Work completed on the Delta 1 and 2 claims in 1990 was carried out to follow up geochemical sampling anomalies (Cu, Au, Ba) which led K.R. Pride to stake the property in 1989.

Geological mapping at 1 : 10000 scale identified volcanic and sedimentary rocks of the Hazelton Group which have been intruded by a porphyritic stock of unknown age.

Contour soil lines indicate a Au, Cu, Zn anomaly (Ba not analysed) near the centre of the claims which is approximately 700 m long by 600 m wide.

LOCATION AND ACCESS

The Delta property is located in the Liard Mining Division on NTS map sheet 104 A/12 E. The claims cover ground to the south of Delta Glacier, at the southern end of the Oweege Range in the Coast Mountains of northwestern British Columbia.

Nearest services (helicopter, fuel, food, communications) are in Bell II on highway 37, which is located approximately 23 km to the northwest of the claims. Stewart is 81 km to the southwest, and Telegraph Creek is 140 km to the northwest.

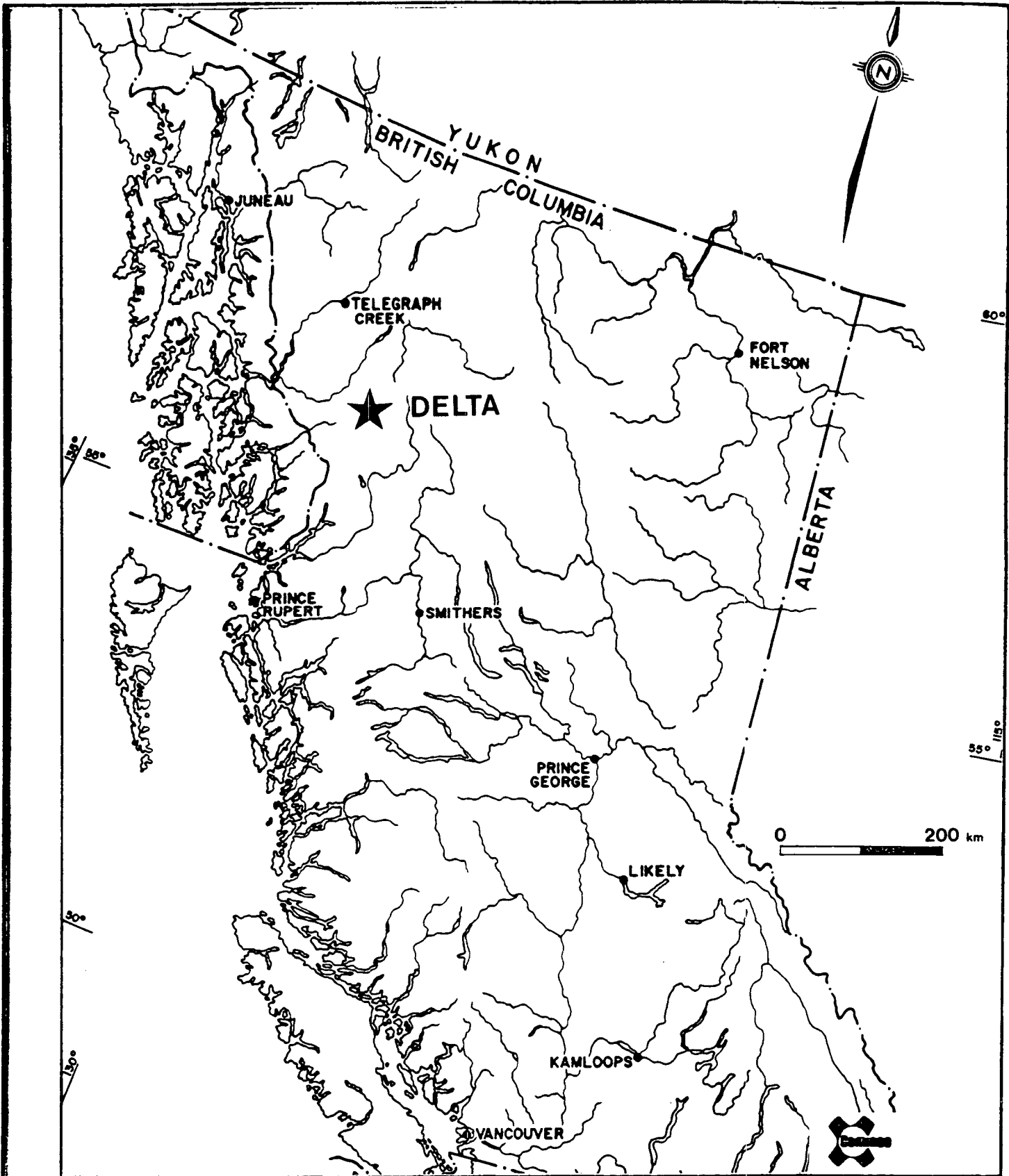
Highway 37, a two-lane, all-weather road, is approximately 7 km southwest of the claims. However, most ground within the Delta is above 4000', and therefore it is accessible by helicopter only.

TENURE

Size: 16 units (Delta 1) + 8 units (Delta 2) = 24 units
Record numbers: 7793, 7794 (Delta 1, Delta 2)
Due date: October 18, 1990
Ownership: 100% Cominco Ltd.

GEOLOGY

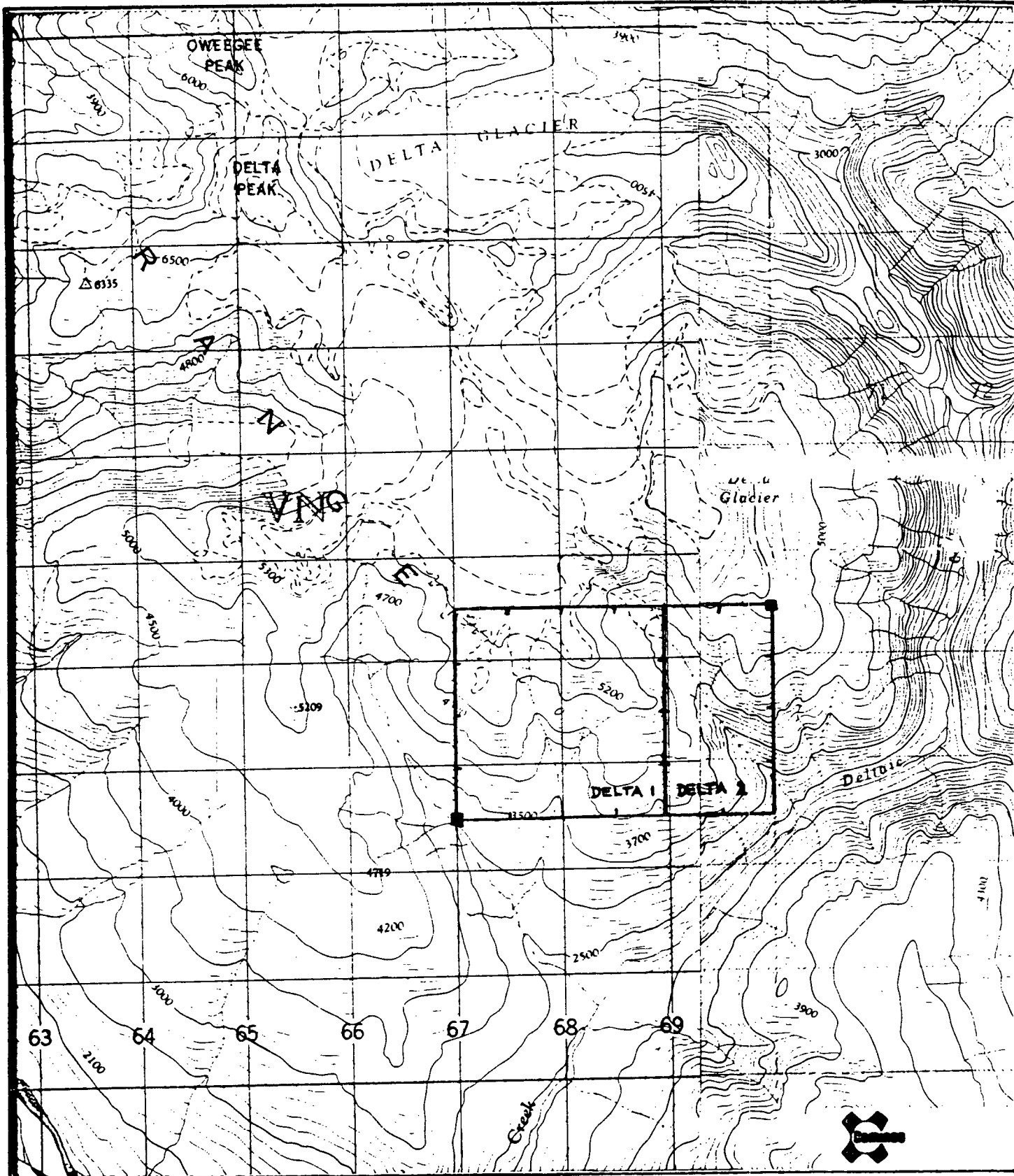
The property is situated in a tectonic window caused by the uplift of broad anticlinal structures known as the Oweege Uplift and the Ritchie Dome. Upper Jurassic sediments of the Bowser Basin have been eroded away, exposing the underlying Mississippian to Middle Jurassic rocks of the Stikinia Terrane.



Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

LOCATION MAP
FIGURE 1

Scale: 1 : 900000 Date: OCTOBER, 1990 Plate:



Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

CLAIM MAP

FIGURE 2

Scale: 1 : 50000 Date: OCTOBER, 1990 Plate:

The property is underlain by Lower and Middle Jurassic Hazelton Group volcanic and sedimentary rocks which have been intruded by a porphyritic stock of unknown age, now largely unroofed.

The geological section exposed on the claims is of uncertain position in the Hazelton Group, but includes polymictic orthoconglomerate, successively overlain by massive, dark green volcanics, brown-black laminated siltstone/mudstone, and finally, lapilli and crystal-lithic tuffs and tuff breccia. The sequence strikes northwest, and dips moderately to steeply to the southwest.

The stock which cuts this sequence is an intermediate feldspar-(hornblende) porphyry with strong hematite-epidote alteration.

Quartz-sericite-pyrite-limonite alteration in the country rock may be related to the intrusion of the porphyritic stock. The most intense alteration occurs adjacent to numerous fractures and shears on the property.

GEOCHEMISTRY

A total of 94 soil and silt samples and 26 outcrop and talus rock samples were collected to cover the prominent gossans on the claims. Initial reconnaissance sampling in the 1988 season indicated these gossans to be anomalous in Au, Cu, and Ba.

Contour soil lines at 50 m intervals usually encountered talus fines (A Horizon). Results indicate that the ridge in the centre of the claims is anomalous in Au, Cu, and Zn (no Ba analyses). Of these metals, the most consistently anomalous is Au, with threshold (25 ppb) to high (599 ppb) values in 69 out of 94 soil samples. Zn anomalies are less consistent, with 41 out of 94 samples in the range 200-1550 ppm. Cu analyses returned with 14 in the threshold (150-200 ppm) range, 28 anomalous (>200 ppm), and the remaining 52 below threshold. Samples 58198-58216 (from the northeast slope of the ridge) represent a 700 m long Au-Cu-Zn soil anomaly which extends to the west approximately 600 m.

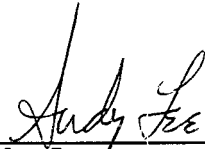
Rock samples taken were chipped over 1-2 m or in some cases grabbed. Most analyses returned with low metal values; the highest Au returned was 112 ppb, the highest Cu 141 ppm, and the highest Zn 177 ppm.

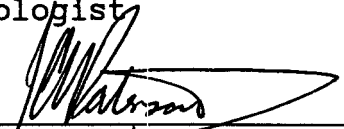
CONCLUSIONS AND RECOMMENDATIONS


Follow-up work on the Delta claims in the 1990 season revealed a 700 m by 600 m Au, Cu, Zn anomaly on a gossanous ridge near the centre of the claims.

Furthermore, geological mapping indicates the rocks underlying the property are most probably Hazelton Group, and have been intruded by an intermediate porphyritic stock.

Continued work on the Delta should include more contour soil lines and prospecting on ground surrounding the gossans and at lower elevations to assess the potential of the property as a possible alkaline Cu-Au porphyry system.

Report by: 
A.W. Lee
Geologist

Endorsed by: 
I.A. Paterson
Senior Geologist

Approved for
Release by: 
W.J. Wolfe
Manager, Exploration
Western Canada

APPENDIX I

STATEMENT OF EXPENDITURES FOR DELTA 1 and 2, 1990

The following expenses were incurred by Cominco Ltd. during geological and geochemical surveys on the Delta 1 and 2 claims in the 1990 field season.

SALARIES

PERSONNEL	PERIOD	RATE x DAYS
I.A. Paterson	August 10	\$350 x 1 = \$350
B. Unger	August 10-18	\$170 x 9 = \$1530
D.W.C. Hick	August 10-18	\$147 x 9 = \$1323

SALARY TOTAL: \$3203.00

TRANSPORTATION

Bell 206 Helicopter 6.2 hours @ \$700.00/hour = \$4340.00

TRANSPORTATION TOTAL: \$4340.00

ANALYTICAL COSTS

94 soil/silt samples: lab prep. @ \$1.25/sample = \$117.50
analyses (Au, Ag, Cu, Pb, Zn)
94 @ \$10.75 = \$1010.50

26 rock samples: lab prep. @ \$4.00/sample = \$104.00
analyses (Au, Ag, Cu, Pb, Zn)
26 @ \$10.75 = \$279.50

ANALYTICAL TOTAL: \$1511.50

DOMICILE

18 Man-days accommodation at Bell II (Northern Mountain Helicopters)
\$55.00/man-day 18 x \$55.00 = \$990.00

18 Man-days food at Bell II services
\$20/man-day 18 x \$20.00 = \$360.00

DOMICILE TOTAL: \$1350.00

DATA COMPILATION AND REPORT PREPARATION

A.W. Lee 8 days @ \$189.97/day = \$1519.76

REPORT PREPARATION TOTAL: \$1519.76

TOTAL 1990 DELTA EXPENDITURE

\$11924.26

APPENDIX II

GEOCHEMICAL DATA

SOIL AND SILT ANALYSES

SAMPLE #	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
58187	<10	<.4	108	<4	96
58188	15	<.4	99	<4	90
58189	<10	<.4	78	<4	84
58190	<10	<.4	75	<4	87
58191	<10	<.4	74	<4	79
58192	90	1	280	18	213
58193	16	1.2	103	67	244
58194	49	.8	297	31	269
58195	20	.5	145	15	150
58196	30	.8	143	21	226
58197	28	1.2	174	75	310
58198	323	5.6	182	89	149
58199	388	1.6	199	26	169
58200	200	1.3	121	39	163
58201	60	1.3	125	40	317
58202	599	1.5	340	20	305
58203	210	1.3	611	18	339
58204	285	2.3	353	30	191
58205	115	1.8	183	20	128
58206	340	2	428	47	402
58207	138	1	391	33	226
58208	50	.7	234	28	201
58209	120	1.1	207	30	221
58210	110	.8	254	23	278
58211	226	1.7	369	35	892
58212	62	.9	248	21	251
58213	45	.5	132	21	171
58214	129	1.8	288	11	446
58215	285	2.2	301	16	1550
58216	326	.8	80	20	572
58217	312	1.8	249	40	128
58218	347	1.4	737	32	174
58219	190	.8	192	46	145
58220	153	1.6	151	61	81
58221	145	1.1	100	58	78
58222	112	.7	134	23	44
58223	99	.9	133	33	101
58224	89	.7	158	52	102
58225	21	.5	130	35	165
58226	118	.7	125	34	112
58227	30	<.4	74	14	84
58228	32	1	49	18	55
58229	75	.9	125	35	110
58230	36	.4	65	20	71
58231	90	.7	134	32	126
58232	56	.4	185	25	200
58233	61	.6	135	11	112
58234	173	.8	261	185	106
58235	60	.9	427	30	217
58236	473	.6	314	42	178
58237	92	1.5	219	70	248
58238	218	1	296	40	315

58239	65	1.7	107	56	217
58240	55	.8	61	38	90
58241	140	1.1	66	56	56
58242	56	1	170	41	302
58243	218	.8	247	33	155
58244	147	1	117	27	296
58245	86	1.9	405	85	129
58246	90	1	276	56	334
58247	125	1	421	169	279
58248	19	.6	83	22	190
58249	<10	<.4	65	9	163
58250	39	.5	37	14	210
58251	35	.7	52	74	529
58252	30	.4	82	32	302
58253	40	<.4	132	21	225
58254	55	<.4	125	28	208
58255	73	1	166	21	306
58256	116	1.9	96	43	133
58257	15	<.4	101	<4	107
58258	20	<.4	125	<4	117
58259	<10	<.4	82	<4	95
58260	436	1.8	364	12	420
58261	29	<.4	138	23	191
58262	50	<.4	177	66	230
58263	<10	<.4	32	7	62
58264	205	.6	260	42	467
58265	45	<.4	136	21	177
58266	12	<.4	64	12	137
58267	<10	<.4	84	13	192
58268	16	<.4	192	47	318
58269	12	.5	172	22	272
58270	28	.6	112	86	277
58271	70	.6	146	37	235
58272	40	.9	55	19	78
58273	22	.5	92	16	100
58274	13	<.4	128	12	154
58275	<10	<.4	121	<4	112
58276	<10	<.4	108	<4	100
58277	23	<.4	101	16	210
58278	39	.5	198	17	171
58279	68	.5	373	9	134
58280	81	.5	83	29	81
58281	146	<.4	94	22	89

ROCK ANALYSES

SAMPLE #	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
UR90-001	<10	<.4	33	11	35
UR90-002	<10	.8	33	8	64
UR90-003	<10	.5	3	<4	78
UR90-004	64	.8	54	14	53
UR90-005	38	<.4	31	<4	33
UR90-006	40	.5	28	5	39
UR90-007	60	.9	87	8	73
UR90-008	<10	.5	80	5	37
UR90-009	<10	<.4	20	<4	55
UR90-010	64	<.4	141	<4	94
UR90-011	<10	<.4	64	<4	83
UR90-012	<10	.5	66	8	64
UR90-013	<10	<.4	46	5	40
UR90-014	<10	.7	12	6	61
UR90-015	<10	<.4	88	<4	100
UR90-016	<10	<.4	17	<4	177
UR90-017	112	.7	80	<4	43
UR90-018	<10	<.4	39	<4	55
UR90-019	56	.7	30	6	53
UR90-020	<10	.9	31	6	25
UR90-021	<10	<.4	4	<4	26
UR90-022	<10	<.4	80	<4	47
UR90-023	<10	<.4	32	<4	20
UR90-024	<10	<.4	48	9	46
UR90-025	42	<.4	84	7	35
UR90-026	<10	<.4	40	<4	91

APPENDIX III

ANALYTICAL METHOD

Soils and silts

Dry, sieve through 80 mesh screen

Au	Aqua Regia Decomposition / AAS
Ag	20% HNO3 Decomposition / AAS
Cu	20% HNO3 Decomposition / AAS
Pb	20% HNO3 Decomposition / AAS
Zn	20% HNO3 Decomposition / AAS

Rocks

Two stage crushing, riffing to approximately 250 g

Au	Aqua Regia Decomposition / AAS
Ag	20% HNO3 Decomposition / AAS
Cu	20% HNO3 Decomposition / AAS
Pb	20% HNO3 Decomposition / AAS
Zn	20% HNO3 Decomposition /AAS


* All analyses done at Cominco Research Laboratory, 1486
E.Pender Street, Vancouver

APPENDIX IV

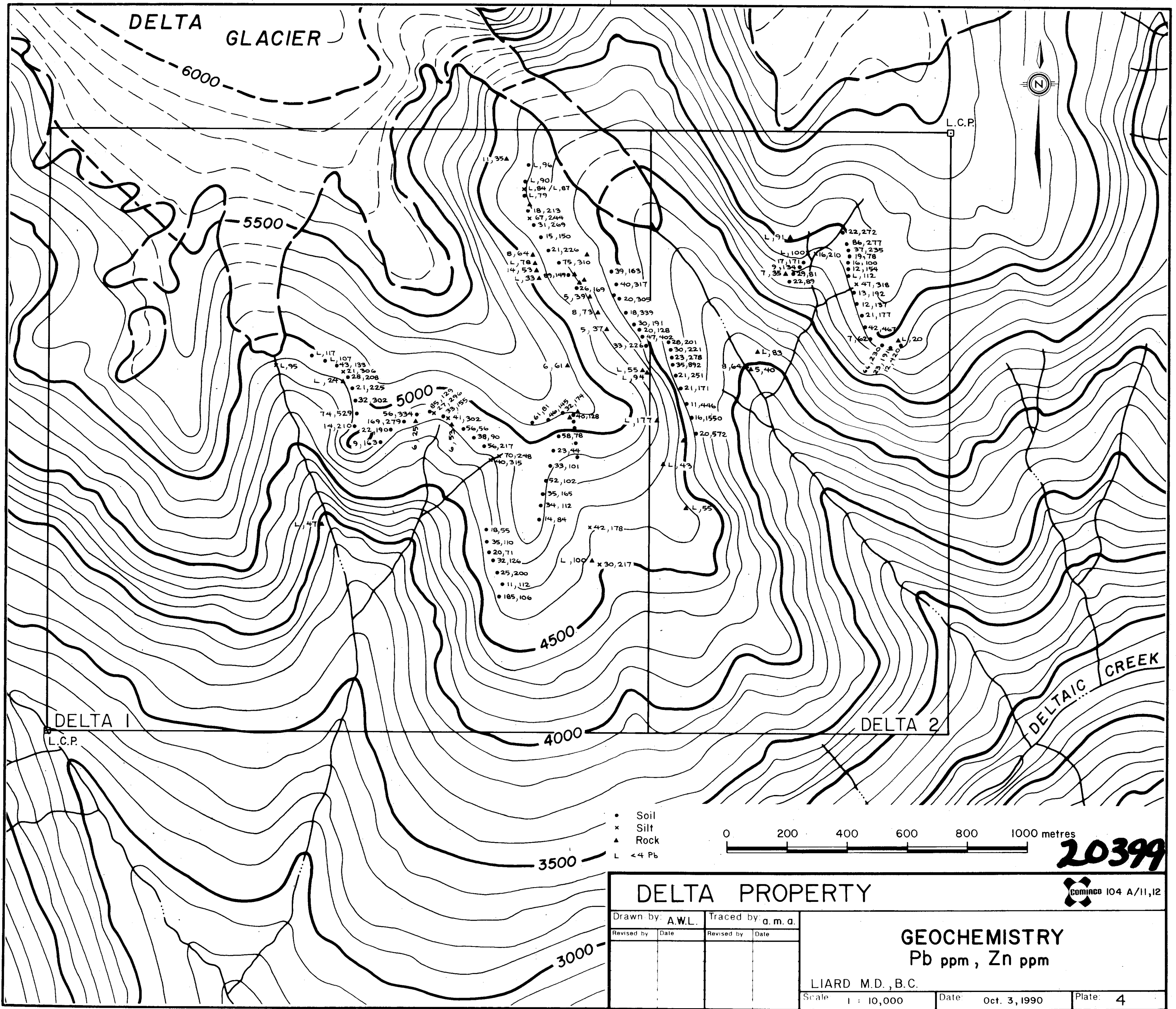
I, Andrew W. Lee, of 2033-Floralynn Crescent, North Vancouver, British Columbia, Canada, declare:

1. I am a geologist, residing at the above address
2. I graduated from the University of British Columbia in 1990 with a Bachelor of Science (Geology) degree
3. This report is based on my personal field examination of the property and a review of all pertinent information.

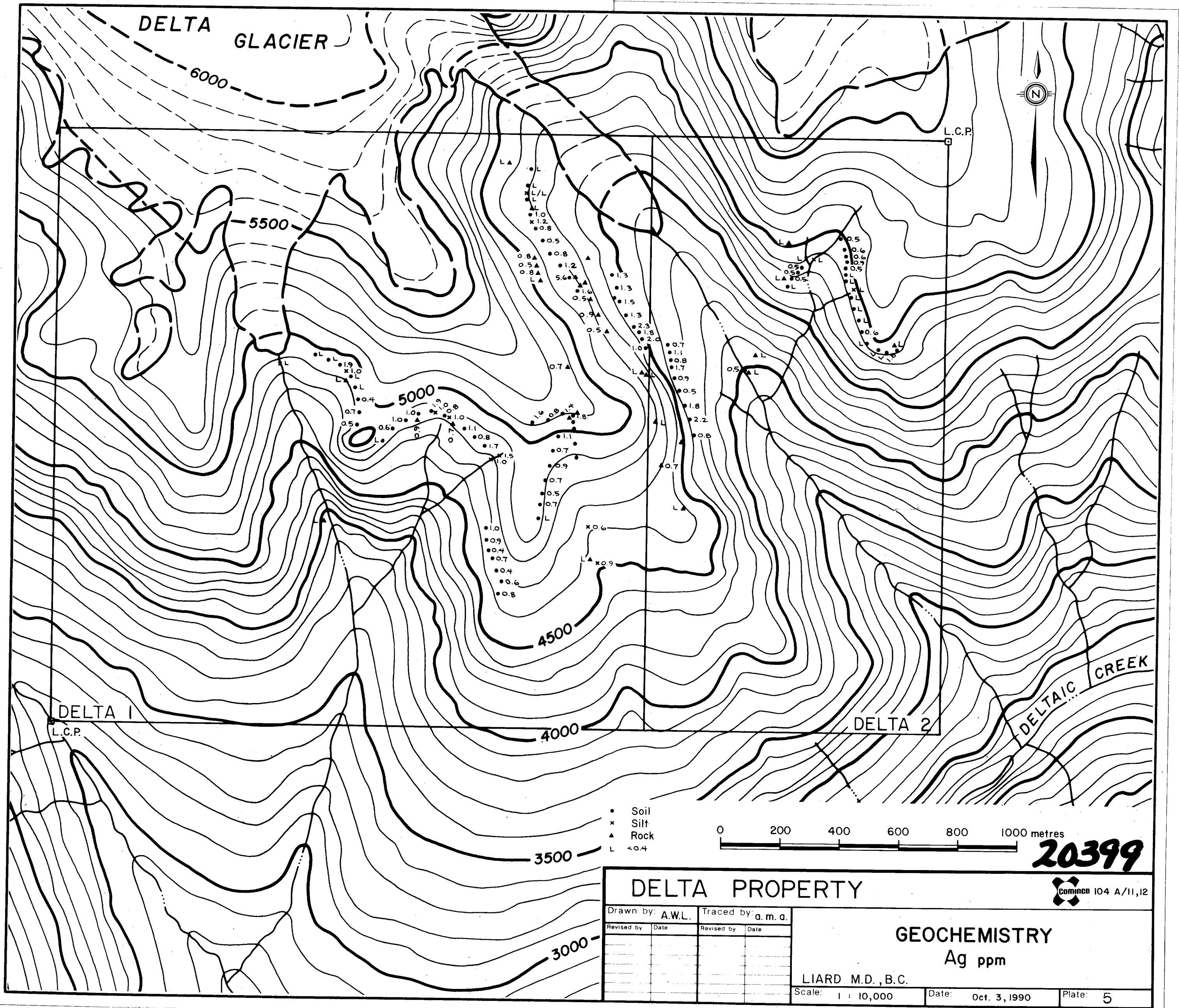
Dated at Vancouver, B.C., this
16 day of October, 1990.



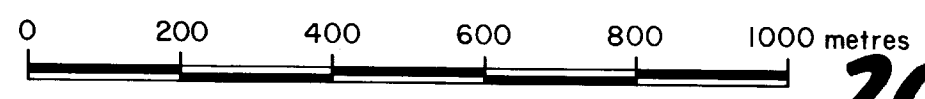
Andrew W. Lee
Geologist



DELTA PROPERTY				GEOCHEMISTRY	
Drawn by: A.W.L.		Traced by: a.m.a.		Pb ppm, Zn ppm	
Revised by	Date	Revised by	Date	LIARD M.D., B.C.	
Scale 1 : 10,000		Date Oct. 3, 1990		Plate: 4	

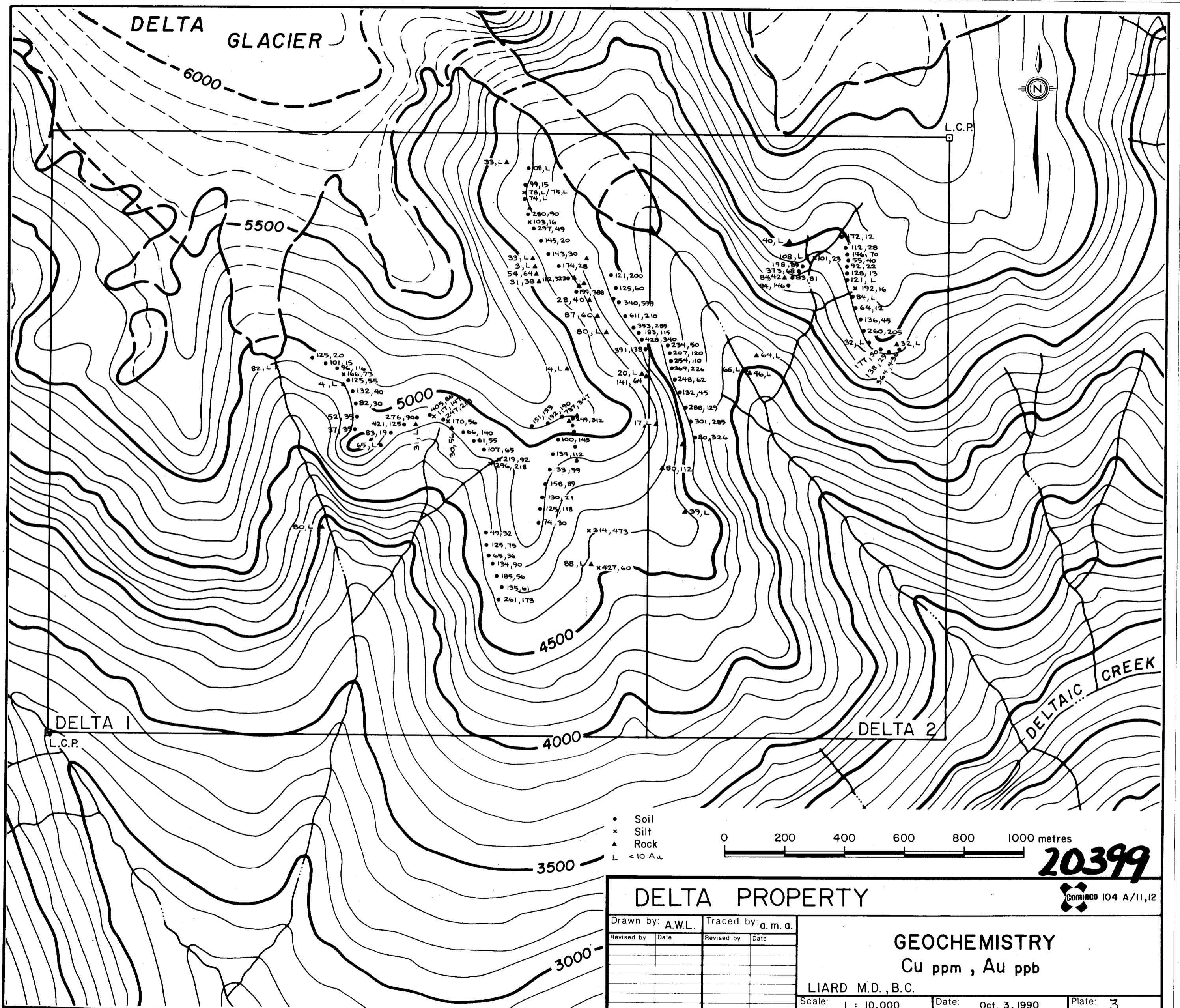


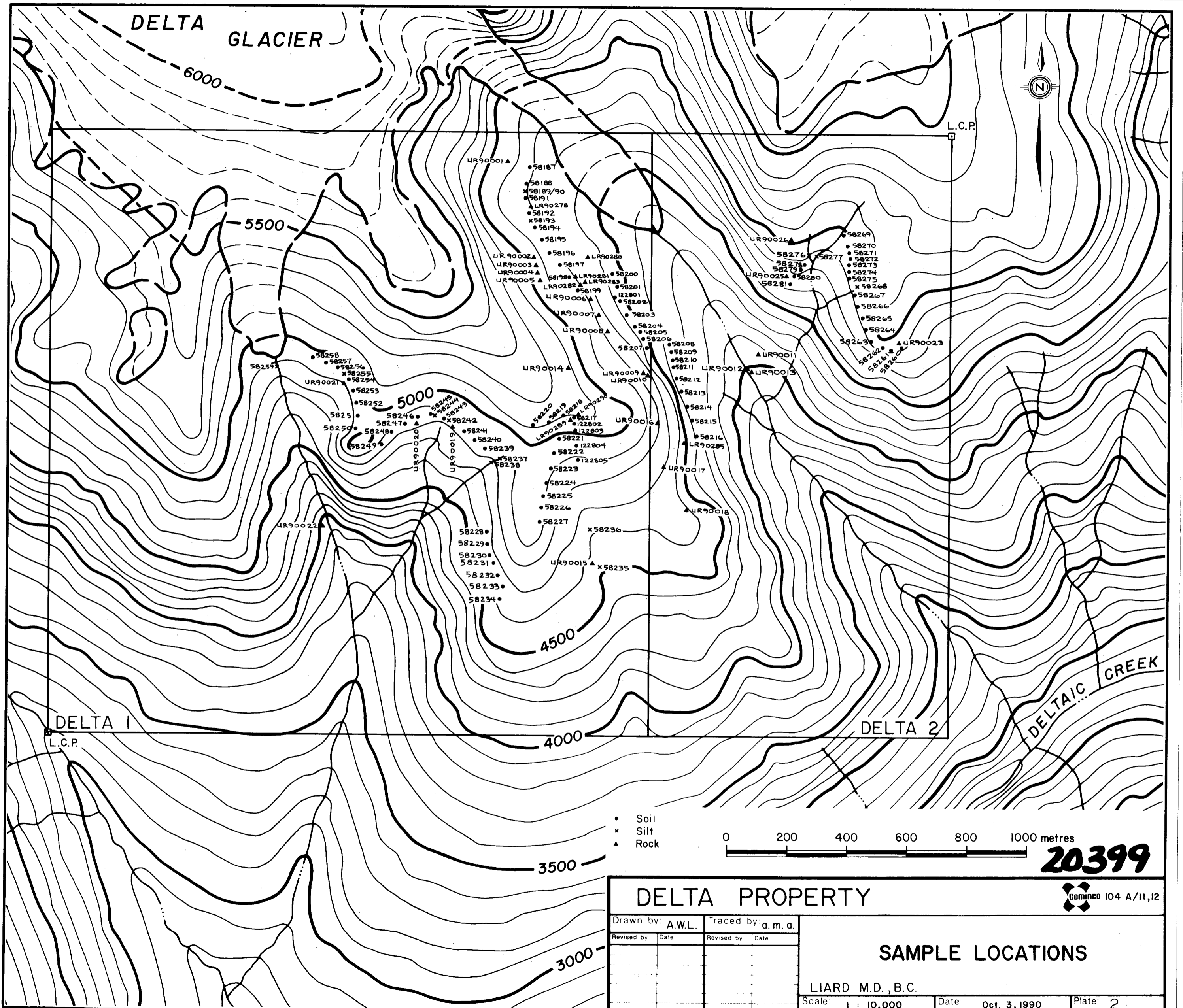
- Soil
- x Silt
- ▲ Rock
- L <0.4



20399

DELTA PROPERTY				<small>Cominco 104 A/11,12</small>	
Drawn by: A.W.L.		Traced by: a.m.d.		GEOCHEMISTRY Ag ppm	
Revised by	Date	Revised by	Date		
LIARD M.D., B.C.				Scale: 1 : 10,000	Date: Oct. 3, 1990
				Plate: 5	



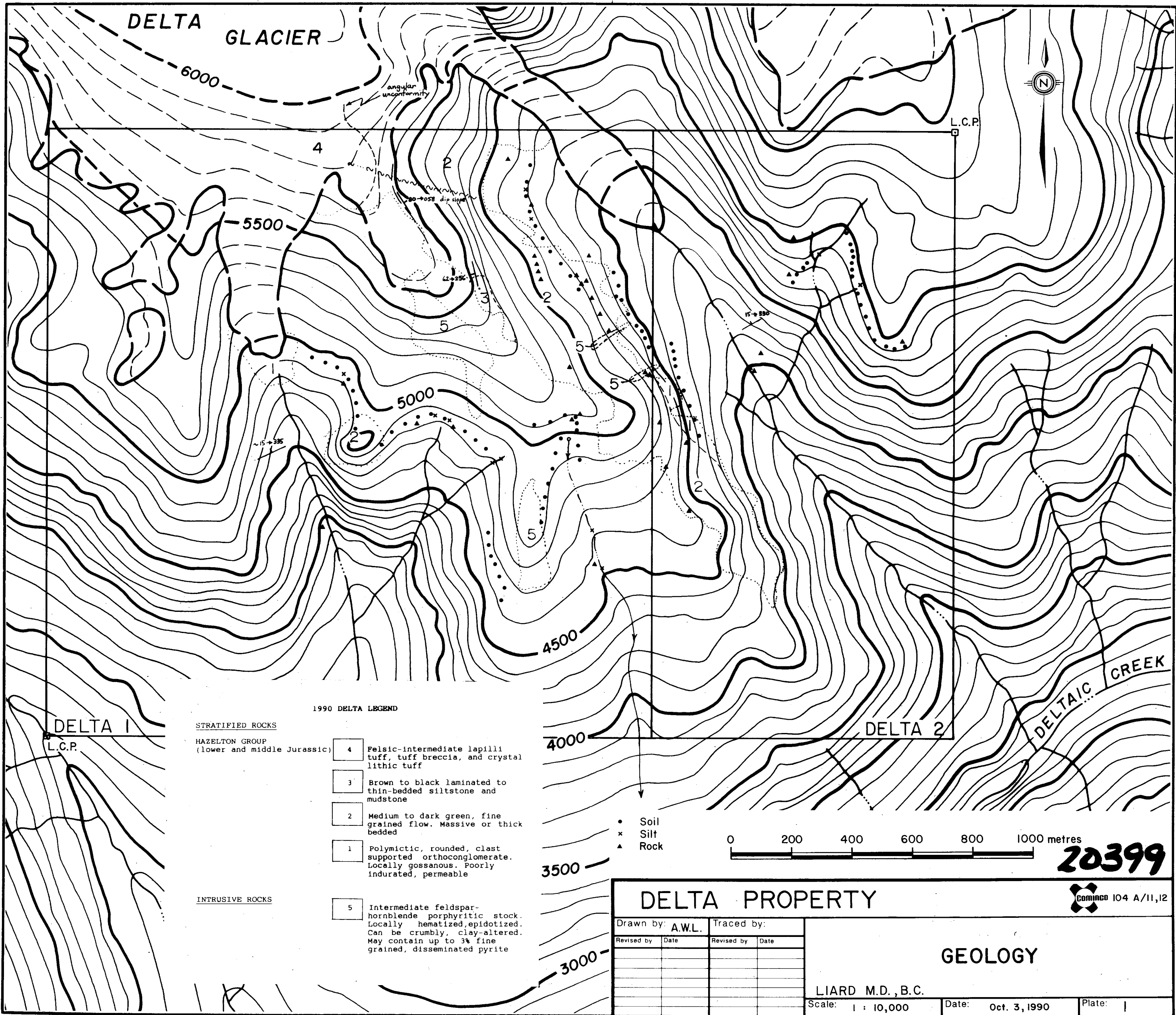


- Soil
- x Silt
- ▲ Rock

0 200 400 600 800 1000 metres

20399

DELTA PROPERTY				104 A/11,12	
Drawn by: A.W.L.		Traced by: a.m.a.		SAMPLE LOCATIONS	
Revised by	Date	Revised by	Date		
LIARD M.D., B.C.				Scale: 1 : 10,000	Date: Oct. 3, 1990
				Plate: 2	



DELTA GLACIER

6000

5500

5000

4500

4000

3500

3000

angular unconformity

150-2058 dip slope

62-256

15-850

~15-335

L.C.P.

DELTA 1
L.C.P.

DELTA 2

DELTAIC CREEK

1990 DELTA LEGEND

STRATIFIED ROCKS

HAZELTON GROUP
(lower and middle Jurassic)

- 4 Felsic-intermediate lapilli tuff, tuff breccia, and crystal lithic tuff
- 3 Brown to black laminated to thin-bedded siltstone and mudstone
- 2 Medium to dark green, fine grained flow. Massive or thick bedded
- 1 Polymictic, rounded, clast supported orthoconglomerate. Locally gossanous. Poorly indurated, permeable

INTRUSIVE ROCKS

- 5 Intermediate feldspar-hornblende porphyritic stock. Locally hematized, epidotized. Can be crumbly, clay-altered. May contain up to 3% fine grained, disseminated pyrite

- Soil
- x Silt
- ▲ Rock

0 200 400 600 800 1000 metres

20399

COMINGO 104 A/11,12

DELTA PROPERTY

Drawn by:	A.W.L.	Traced by:	
Revised by:	Date	Revised by:	Date

GEOLOGY

LIARD M.D., B.C.

Scale: 1 : 10,000

Date: Oct. 3, 1990

Plate: |