92I/6E

GEOCHEMICAL REPORT ON SOIL SURVEY

of

SKEENA COPPER-DIVIDE COPPER GROUP,
Highland Valley, Kamloops, M.D.
50° 121° S.E.
under the supervision of W. M. Sharp,
P. Eng.
for
Consolidated Skeena Mines Ltd. (N.P.L.)
Field Survey May 29, 1968 to June 2, 1968
inclusive.

1574

WILLIAM M. SHARP, P. ENG.
CONSULTING GEOLOGICAL ENGINEER

TEL.: BUS. 682-4144
RES.: 987-9520

ROOM 1, 425 HOWE STREET
VANCOUVER 1, B.C.

July 9, 1968

Mr. F. A. McGonigle,
President
Consolidated Skeena Mines Ltd. (N.P.L.)
First Floor, 1003 West Pender Street
Vancouver 1, B.C.

Dear Mr. McGonigle:

Re: Geochemical Survey, Skeena Copper-Divide
Copper Group, Highland Valley, B.C.,
Kamloops Mining Division

The accompanying report "Soil Survey, Consolidated Skeena Mines Ltd., Kamloops Mining District, British Columbia" by F. D. Forgeron, Ph.D. and D. S. Evans, B. Sc. of Bondar-Clegg and Company Ltd. very adequately summarizes the detailed geochemical survey as planned and directed by myself and Mr. White.

As noted in this report, the results show a surprising correspondence with those of the prelimminary survey performed by C. Rutherford, P. Eng. in 1956 and interpreted by me in 1965.

Respectfully submitted,

W. M. Sharp, P. Eng.

WMS:bes
Encl.

June 10, 1968.

Mr. F. A. McGonigle, President,
Consolidated Skeena Mines Ltd.,
#27 - 425 Howe street,
Vancouver, B.C.

Dear Mr. McGonigle:

We are pleased to enclose our report on the "Soil Survey, Consolidated Skeena Mines Ltd., Kamloops Mining District, British Columbia", which you commissioned us to carry out on May 21, 1968.

Some interesting results have come up, largely confirming the original geochemical survey, but present some slightly different aspects.

Please feel free to contact me if there is any questions concerning this survey, or indeed, concerning any other geochemical problem you have.

Respectfully yours,

Linda Stacey

per F. D. Forgeron, Ph. D.
BONDAR-CLEGG & COMPANY LTD.

FDF: ls

cc: Mr. W. M. Sharpe

Enclosure

R E P O R T

O N

SOIL SURVEY

CONSOLIDATED SKEENA MINES LTD.

KAMLOOPS MINING DISTRICT

BRITISH COLUMBIA

F O R

CONSOLIDATED SKEENA MINES LTD.

BY

F. D. Forgeron, Ph. D.

and

D. S. Evans, B. Sc.

Bondar-Clegg & Company Ltd.
1500 Pemberton Avenue
North Vancouver, B.C.

June, 1968

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INTRODUCTION

General

The soil survey reported herein was contracted by Mr. F. A. McGonigle, President of Consolidated Skeena Mines Ltd., to Bondar-Clegg & Co. Ltd. on May 21, 1968. The terms of the survey involved sampling of suitable soil horizons along lines 400 feet apart at 100 foot intervals. The area covered was to include the Consolidated Skeena Claims, the Lornex property where possible and to exclude the Bio-Metals property optioned from Consolidated Skeena. The soil samples were to be analyzed for hot acid extractable copper and cold citrate extractable copper.

Location & Access

The property is located some ~~30~~ 22 miles southeast of the town of Ashcroft in the Kamloops mining district. Access to the area is by the Bethlehem Copper road from Ashcroft.

Physiography

The survey area lies within the interior plateau physiographic province. It is characterized by a rolling-hill type of terrain which has been modified by glaciation. Locally, the relief is approximately 500 feet, with a maximum elevation of approximately 5,000 feet. Glacial deposits within the area are very extensive, consisting of unstratified tills, i.e. drumlins; and stratified tills - eskers, kames, outwash gravel beds and boulder trains. Glacial deposits reach a thickness of up to 150 feet but average approximately 25 to 30 feet. Outcrop within the area is less than 10%.

The drainage is primarily to the northwest. It consists of surface and sub-surface water movements which are controlled largely by seasonal fluctuations in the water table and by the permeability of the over-burden.

Geology

The claims group lies within the Guichon Batholith, a granodiorite intrusion of Mid- to Lower-Jurassic age. The granodiorite consists largely of three varities:

a. a hornblende phase
b. a biotite phase
c. an alteration zone of the granodiorite

The alteration is apparently controlled by faulting and/or fracturing and consists largely of kaolinite-sericite with a network of quartz veins. Sulfide mineralization occurs largely within the altered granodiorite. The sulfide mineralization is predominately chalcopyrite with minor bornite and molybdenite.

GEOCHEMICAL ENVIRONMENT

Soil Development

Soil development throughout the claims group is incipient. The A-Horizon is developed throughout, and in well-drained areas the A-Horizon consists of 6 inches to 1 foot of decomposed organic material and tree roots. In areas of swamps and stagnant drainage areas, the A-Horizon may reach 5 to 6 feet of wet, black peat material. The B-Horizon is discontinuous and is generally poorly developed. The maximum depth of the B-Horizon probably does not exceed a foot, in general, less than 6 inches. The C-Horizon is composed of glacial materials over 80 to 90 percent of the area.

In an attempt to establish the optimum sampling depth and distribution of copper with depth, two vertical profiles were sampled. These profiles were located in exploration trenches (for locations see Figures 1 and 2). The profiles were sampled at 1 foot intervals to a depth of 6 feet. In Profile 1, the cold extractable copper concentration was approximately 25 parts per million

Soil Development (Cont'd)

to a depth of 4 feet then increased to a maximum of 131 parts per million at a depth of 6 feet. The hot extractable copper in Profile 1 reached two maxima within the depth sampled, these maxima occur at depths of 2 feet and 6 feet. The water table occurs at approximately 5½ feet. In Profile 2, both cold and hot extractable copper follows similar trends with maximum values occuring at 4 feet, which is at the upper level of the water table. The interpretation of these phenomena is as follows:

1) Copper concentrates at the upper surface of the water table.

2) Both cold and hot extractable copper defines the water table.

3) Former water table levels may be defined by hot extractable copper, as indicated by the high value at 2 feet in Profile 1.

4) Examination of water table levels by augering throughout the area indicates that the water table depth is not constant and therefore precludes the assignment of a constant sampling depth.

5) The variation in copper with depth makes interpretation of the soil data impossible on low contrast variations. This factor must be taken into consideration in assigning true bed rock source anomalies.

Profile #1. - (BL 204 N, 0 E).

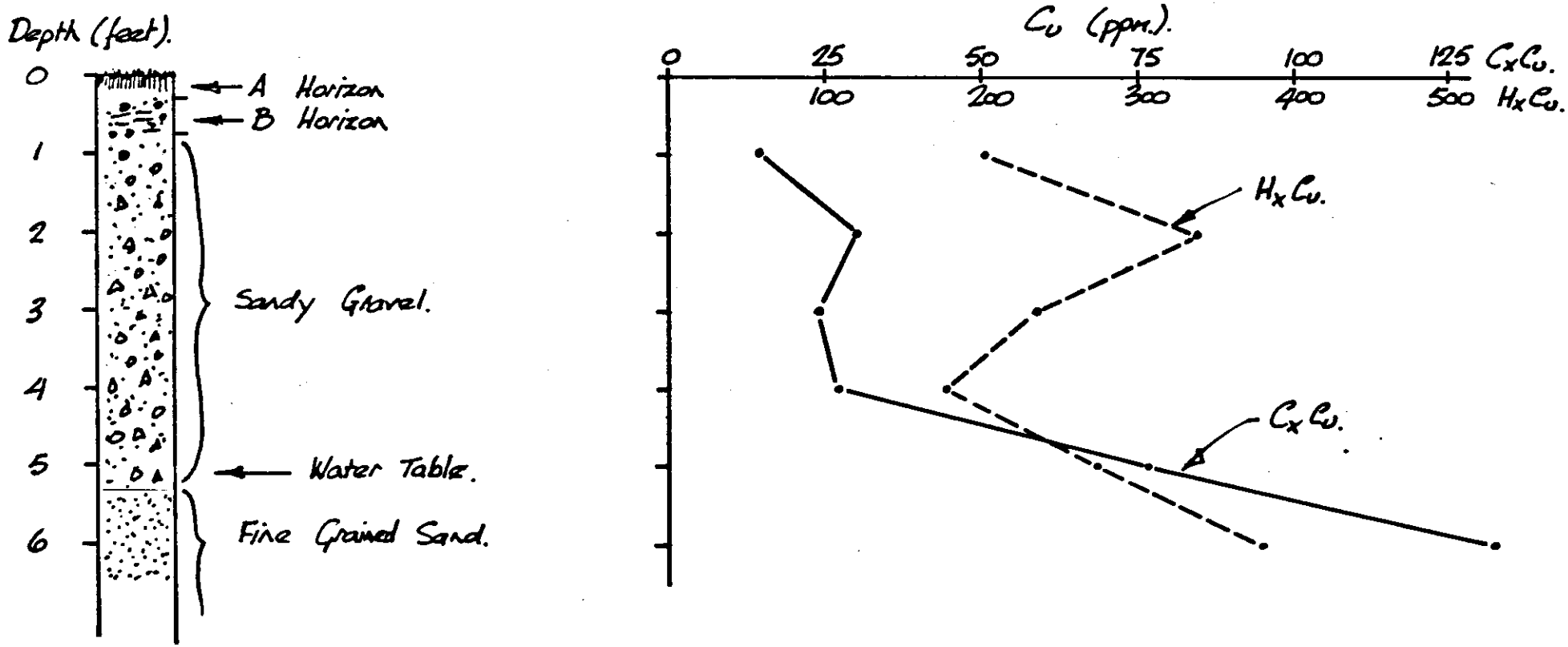


Figure 1.

Distribution of Copper with depth in Profile #1.

Profile #2 - (BL 188 N 11 E.)

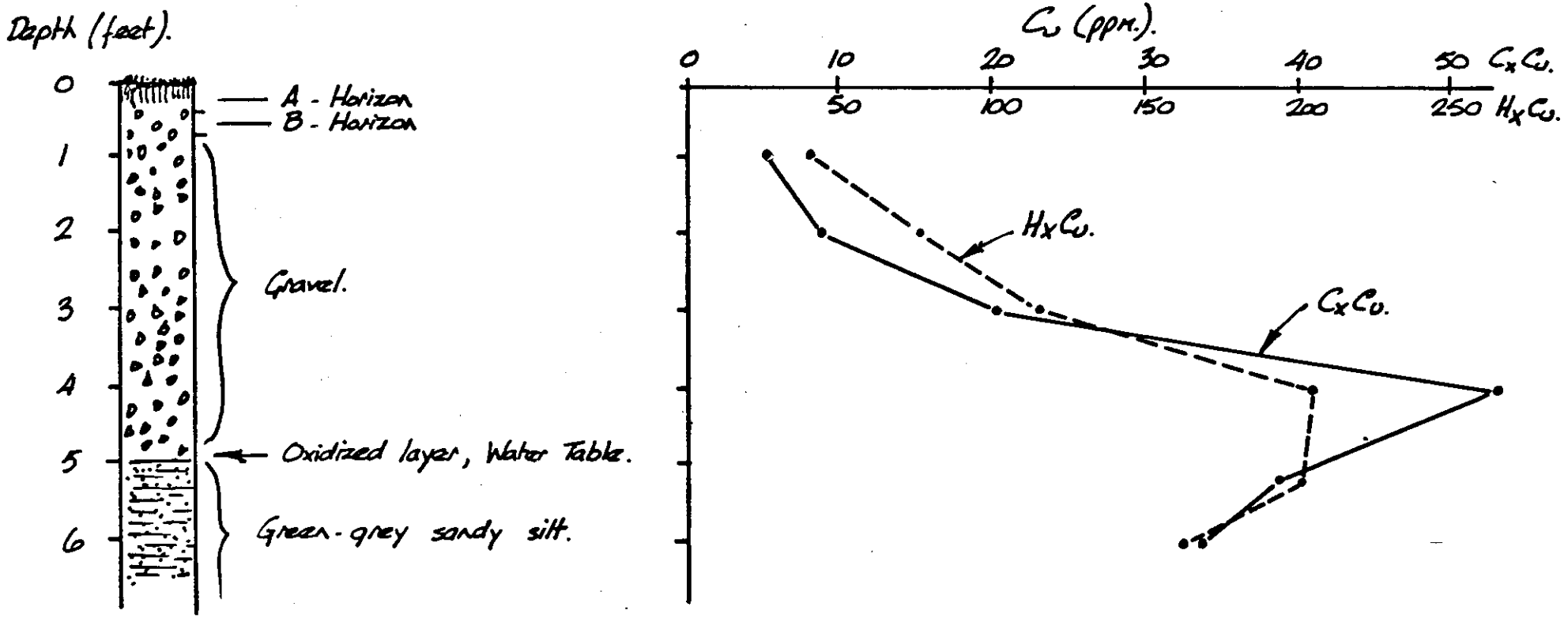


Figure 2.

Distribution of Copper with depth in Profile #2.

Chemical Dispersion

The soil survey carried out in 1956 clearly indicated the presence of the copper deposits, i.e. Lornex and Bio-Metals, without prior knowledge of their existence. Dispersion from these deposits was at least 2,000 feet, indicating that copper is sufficiently mobile in this environment to define sub-croping copper mineralization.

Contamination

Exploration and development within the area, which affect the geochemical environment consists of the following:

1) Open-pit excavation at the Lornex deposit
2) The pilot mill
3) Stripping at the Bio-Metals deposit
4) Trenching and diamond drilling

The open-pit development is on a westerly drainage system and prohibits geochemical investigation in the open-pit area and to the west of the mine area. The pilot mill is located about one thousand feet east of the open-pit and had been in operation for 10 months previous to the survey. Sludges from the mill have been

Contamination (Cont'd)

pumped into the northward drainage system and have caused considerable contamination throughout the property. Trenching and diamond drilling and fairly extensive on an areal basis but are believed to be local in effect on the geochemical environment. During the course of the survey, records have been kept on all sources of contamination. Approximately 20% of the claim group is thought to be effected by contamination.

SAMPLING PROCEDURES

Sampling was carried out on a grid cut in 1966 to carry out a geophysical survey. A different base line was used on the geophysical survey and hence, sample locations on the geochemical survey do not correspond to the flaggings on the pickets. The geochemical survey was carried out around the base line shown on Map 1, and the locations of the sample are given in 100 foot intervals east and west of the base line shown on Map 1.

Samples were collected at depths of up to 4 feet. The depth was determined by:

1) the water table,
2) bed-rock,
3) the presence of impenetrable boulder trains.

Drill steel, hammer mattocks, shovels and augers were used to accomplish the sampling.

The sampling program was carried out during the period May 28, 1968 to June 2, 1968 inclusive.

EVALUATION OF THE SOIL SURVEY RESULTS

Classification of Metal Values

The analytical data were plotted as histograms and the modal class of the histogram taken as background. The data were further classified into possibly anomalous, probably anomalous, and definitely anomalous. The ranges of values within these anomalous categories are plotted on Maps 2 and 3. The classification given applies to soils only. Inasmuch as, every attempt was made to collect only soils throughout the survey, many samples have drainage characteristics. No classification is given for drainage samples, however; inspection of the data, suggests that anomalous categories would be two to three times higher in the drainage samples than in the soils.

Description of Anomalies

The cold extractable copper and hot extractable copper are plotted on Maps 2 and 3 respectively. Possible anomalous values have been coloured blue, probably anomalous vaues red, definitely anomalous black. The anomalous areas have been outlined on Maps 2 and 3. Examination of the anomalies outlined

Description of Anomalies (Cont'd)

indicate that except for minor differences, both cold extractable and hot extractable copper gives similar results in outlining the geochemical anomalies. The anomalies have been numbered from 1 to 8 on Map 3 and each will be discussed below.

Anomaly 1

Anomaly 1 is consistently definitely anomalous in both cold and hot extractable copper. The source of this anomaly is considered to be the Bio-Metals development, however; because of disruption of the soils within the Bio-Metals development, the full extent of this anomaly could not be tested. Inasfar as a known source can be attributed to Anomaly 1, no further discussion is warranted at this time.

Anomaly 2

The northern part of Anomaly 2 is probably related to drainage from the Bio-Metals development but, the southern part of the anomaly lies

Anomaly 2 (Cont'd)

up drainage from the Bio-Metals development and is considered to be either bedrock reflection of a halo to the east of the Bio-Metals deposit or, alternatively; it may be related to a source further to the east.

Anomaly 3

Anomaly 3 occurs on an eastern drainage. Considerable trenching has been carried out in the area and copper strain was commonly observed during the course of sampling. The known copper mineralization in the area has contributed largely to the anomaly, however; the persistence of anomalous copper up slope from the trenches suggests that copper mineralization may be more extensive in the area, particularly to the west of Anomaly 3, than has already been defined.

Anomaly 4

Anomaly 4 consists of three possible anomalous values. The anomaly is located in a

Anomaly 4 (Cont'd)

small valley or catchment basin. Samples were taken near water table and could express the effect of copper accumulating in organic materials.

Anomaly 5

Anomaly 5 is continuous throughout the property, extending in the south from the area of the Pilot Mill to the drainage from the Bio-Metals deposit in the north. The southern part of the anomaly is probably contaminated from the mill sludges from the Pilot Mill, but; in the central portion of the anomaly, the definitely anomalous area outlined by the hot extractable copper is reproduced on the original geochemical survey before mill contamination was present and, is therefore considered legitimate. Definitely anomalous portion of Anomaly 5 is considered to be a complex of both drainage anomalies and soil anomalies. Ground water circulation in the area is considered to be an important aspect of the chemical dispersion. Also, the presence of eskers and kames has

Anomaly 5 (Cont'd)

diverted the drainages to such an extent that it is difficult to predict the source of the anomaly, however; the southward source is indicated. The definitely anomalous portion of Anomaly 5 maybe the result of organic accumulation or the result of other geochemical barriers. An alternative approach is also possible in the interpretation of Anomaly 5. The direction of faulting and/or jointing in the area is largely NNE-SSW. The Lornex and Bio-Metals deposits fall within this trend. The definitely anomalous portion of Anomaly 5 lies between the Bio-Metals and Lornex deposits and presents the possibility of another such deposit in the area.

Anomaly 6

Anomaly 6 occurs to the north of the Lornex development and lies within its drainages. Anomaly 6 is considered to have its source at the Lornex deposit.

Anomaly 7

Anomaly 7 consists of four samples, two of which are definitely anomalous in hot extractable copper and two of which are possibly anomalous in cold extractable copper. The samples were taken in a swampy area and were composed at least in part of organic materials of which copper has a high affinity. Diamond drilling has been carried out in the area and contamination from drill sludges is possible.

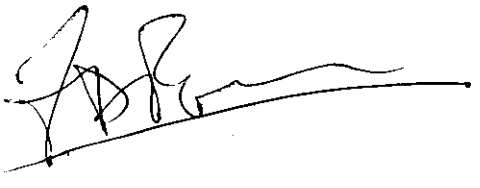
Anomaly 8

Anomaly 8 occurs in a swampy area and its source lies to the south-west of the claims group. The samples all have a high organic content and copper accumulation in the organic phase is considered probable.

CONCLUDING COMMENTS

Of the eight anomalies discussed, anomaly three and five appear to have the greatest potential for follow-up work within the property and further exploration is warranted in these areas. Anomaly 8 (copper concentrations of 1.1%) has its source to the south-west and outside of the claims group, however; this anomaly may have a high potential source.

Considering the survey as a whole, many parts of the claims group, because of deep over-burden, are probably inaccessible to exploration by geochemistry in terms of the techniques used, i.e. manually sampling to depths of four feet. In the heavy over-burden areas, geochemical techniques which would prove more definitive involve deep sampling (collection of samples near bed-rock). The whole southeastern section of the claims group is considered to be covered by heavy over-burden and the geochemical results found within the southeastern section of the claims group are not necessarily a true reflection of the mineralization potential of this section of the claims group.



APPENDIX

Field and Analytical Data

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR Dave Evans PROJECT Skeena - 1 WEATHER -----

DATE May 29/68 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
1	L232 600E	-	C	2'	Gray	Sandy	Boulder Bed	4	65
2	" 700E	-	"	3½'	Br.	"		27	170
3	" 800E	↑	"	3'	Gray Br.	"	Road Cut Sample	141	420
4	" 9 E	"	"	3'	"	"	"	4	55
5	10 E	"	"	3½'	"	"	"	10	110
6	11 E	↑↑	"	4'	"	"	"	53	360
7	12 E	↑↑	"	4'	"	"	"	42	225
8	13 E	↑	A	3½'	Blk	O.M. Silt	Seepage Area	>250	1800
9	15 E	"	C	3'	"	"	W.T. @ 6' ← 14 missed "Road Cut"	>250	2200
10	16 E	-	"	4'	"	"	"	>250	3400
11	17 E	↑	"	2½'	"	"	"	>250	2500
12	18 E	↑↑	"	"	Gray	Sandy	W.T.C. 1'	75	360
13	19 E	"	"	3'	Br.	Sandy		1	20
14	20 E	↑↑	"	1½'	"	"		6	80
15	21 E	"	"	"	Gray	"		3	30
16	22 E			O/C	No Sample Taken				
17	23 E	↑↑	"	1½'	Br.	Sandy	Boulder Bed	30	260
18	24 E	"	"	"	Gray	"	"	70	440
19	25 E	"	"	"	"	"	Alders	74	320
20	26 E	"	"	2½'	"	"	"	2	40
21	27 E	"	"	"	"	"	"	2	30
22	28 E	"	"	2'	"	"	W.T. @ 8"	28	230
23	29 E	↑	"	4'	Br.	"	Road Cut	5	100
24	30 E	↑	"	4'	Gr. Br.	"	"	8	105
25	31 E	↑↑	"	4'	"	"	"	7	120

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GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR Dave Evans PROJECT Skeena - 1 WEATHER

DATE May 29, 1968 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
26	L232 3200E	↟	C	3'	Gr. Br.	Sandy	O/C Nearby	35	190
27	" 3300E	"	"	1½'	"	"	Boulder Bed	9	100
28	" 34E	"	"	"	"	"	" "	9	125
29	" 35E	↑	"	2'	"	"	" "	13	135
30	" 36E	"	"	"	"	"	" "	8	70
31	" 37E	"	"	1½'	"	"	O/C Nearby	8	100
32	" 38E	"	"	"	"	"		18	135
33	" 39E	"	"	4'	"	"	Clay	18	200
34	" 40E	"	"	1½'	"	"	"	9	140
35	" 41E	"	"	2'	"	"	O/C to South	9	70
May 30/68 36	L224 0E	-	"	3'	Gr.	"	Esker	7	70
37	" 1E	-	"	"	Gr. Br.	"	Base of Esker W.T.	45	160
38	" 2E	-	"	3½'	"	"	" " "	28	145
39	" 4E	-	"	3'	"	"	Swamp W.T.	35	165
40	" 5E	-	A	1'	Blk.		30% OM W.T. Road Bed	83	500
41	" 6E	↖	C	4'	Gray	Sandy	Road Cut	10	110
42	" 7E	-	"	4'	"	"	" "	36	280
43	" 8E	↑	A	3½'	"	"	W.T. 20% OM Stream	53	350
44	" 9E	-	A	"	Gr. Br.	"	W.T. 10% OM Swampy	32	300
45	" 10E	↖	"	"	"	"	W. Side of Power Line	18	100
46	" 11E	←	"	2½'	"	"	E. Side of Power Line	50	220
47	" 12E	-	"	2'	"	"	Esker	7	80
48	" 13E	-	"	1½'	"	"	Bottom of Esker (Biometals Road)	142	1200
49	" 14E	-	"	1½'	"	"	Edge of Biom. Development	28	200
50	(81E) 21E	↑	"	3'	"	"	Next to Biom. Road	12	160

C-4251—AXING

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR D. Evans PROJECT Skeena - 1 WEATHER

DATE May 30/68 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm)					
												CxCu	HxCu
51	L224N 22E	↑	B	6"	Blk	Silty	O/C					3	35
52	" 23E	"	"	"	Blk Brn	Sandy						8	170
53	(78E) 24E	"	"	"	Brn	"	O/C					22	170
54	" 25E	"	B	8"	"	"						5	70
55	" 26E	"	"	1½'	"	"						4	55
56	" 27E	↟	C	2'	Gr. Br.	"						5	40
57	" 28E	↟	"	2'	"	"	Dry Gulley 10' to E					3	45
58	" 29E	"	"	1'	Br.	"	O/C					6	110
59	" 30E	↑	"	1'	"	"	"					3	25
60	" 31E	"	B	1'	"	"	O/C W.T.					18	120
61	" 32E	"	BC	1'	"	"	"					3	25
62	" 33E	"	C	1½'	"	"						2	35
63	" 34E	"	B	1½'	Blk Brn	"						4	45
64	" 35E	"	C	2'	Brn	"	Road Cut Sample					20	240
65	(65E) 36E	"	C	2'	"	"	" " "					21	230
66	L220N (64E) 37E	"	"	2'	Brn	Sandy	Road 30' E					5	60
67	" 36E	"	B	1½'	"	"						6	90
68	" 35E	↗	C	2'	"	"						5	80
69	" 34E	"	"	"	"	"	Trench 200' S					7	140
70	" 33E	"	"	2½'	"	"	Boulder Bed					8	135
71	" 32E	-	"	3'	"	"						10	210
72	" 31E	-	"	3½'	"	"	Basin					86	425
73	" 30E	-	"	"	"	"	Esker					23	425
74	" 29E	-	"	3'	"	"	Kame					7	135
75	(73E) 28E	-	"	"	"	"	O/C South Kame					9	100

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GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR Dave Evans PROJECT Skeena - 1 WEATHER

DATE May 30/68 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
76	L220N 27E	-	C	2½'	Brn	Sandy	O/C	26	135
77	" 26E	-	C	"	"	"	"	37	400
78	" 25E	-	BC	2'	"	"	"	5	50
79	" 24E	-	B	8"	"	"	"	33	200
80	(78E) 23E	-	"	1'	"	"	"	34	220
81	" 22E	↑	BC	1'	Brn	"	"	7	110
82	" 21E	-	C	"	"	"	"	3	40
83	" 13E	→	"	1½'	"	"	Esker	7	140
84	" 12E	-	"	8"	"	"	" O/C	5	130
85	" 11E	↖	B	2½'	Gr. Br.	"	"	9	130
86	" 10E	-	"	1½'	"	"	O/C Power Line	5	110
87	" 9E	-	C	2'	"	"	Stream →	16	170
88	" 8E	-	C	1'	Blk	Silty	O.M.	126	770
89	" 7E	-	C	2'	Gr.	Sandy		8	110
90	" 6E	-	C	3'	"	"		13	120
91	" 5E	↗	C	2½'	"	"		43	260
92	" 4E	↗	C	"	"	"	Esker Swamp 30'W	15	160
93	" 3E	↗	"	2'	Gr. Br.	"		15	140
94	" 2E	↗	"	1½'	"	"	O/C Drainage to NE	27	280
95	" 1E	-	"	2'	Blk	O.M.& Silt	Drainage to NE; Swampy	42	320
May 31/68 96	L216N OE	-	A	1'	Blk	"	W.T. @ 1' Esker	8	70
97	" 1E	-	A	2'	"	"	W.T.	45	280
98	" 2E	←	A	3½'	Gray	"	W.T. Esker to W 50'	69	410
99	" 3E	-	C	2'	Brn	Sandy	Top Esker	15	205
100	" 4E	-	C	2½'	"	"	Top Esker	8	195

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR Dave Evans PROJECT Skeena - 1 WEATHER

DATE May 31/68 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
101	L216N 500E	↑	C	2'	Br.	Sandy	Esker E/W	5	145
102	" 6E	↑	"	1'	"	"	" "	4	170
103	" 7E	"	"	2½'	"	"	Stream 30' ↗	2	35
104	" 8E	"	"	"	"	"	Stream into Dam; Contaminated Power Line	148	750
105	" 9E	"	"	2'	"	Clay	Glacial Outwash; W.T.	16	300
106	" 10E	"	"	2'	"	Sandy	Esker N/S	9	110
107	" 11E	"	"	2'	"	"	Top Esker	2	60
108	" 12E	"	"	2'	"	"	Top Esker	2	60
109	" 13E	→→→	"	3'	Gr. Brn.	"	Gulley - Contaminated?	10	90
110	" 19E	↖	"	3'	Brn.	"	Road Cut Sample	> 250	900
111	" 20E	-	"	2½'	"	"	Boulder Bed; W.T.	13	220
112	" 21E	-	"	2'	"	"	Boulder Bed; W.T.	5	90
113	" 22E	-	"	2'	"	"	" "	45	410
114	(77E) 23E	-	"	1½'	Gr.	Clay	O/C Claim Post	8	75
115	" 24E	-	B	1'	Gr. Br.	Sandy	O/C	4	30
116	" 25E	-	B	1'	"	"	O/C Catchment Basin	9	160
117	" 26E	↑	"	1'	"	"	O/C	4	20
118	" 27E	↑	"	1'	"	"	"	3	20
119	" 28E	↑	"	1'	"	"	O/C to N.	5	100
120	" 29E	↑↑	"	1'	"	"	O/C to S & N	6	80
121	" 30E	↑	"	1'	"	"	"	2	30
122	" 31E	↗	"	1'	"	"	"	2	20
123	" 32E	↑	C	3'	Brn	"	Alluvium	80	410
124	" 33E	↑	C	"	"	"	Trench Cut Sample	31	400
125	" 34E	↑	C	"	"	"	Old Road (Trench Sample)	115	335

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR Dave Evans PROJECT Skeena-1 WEATHER

DATE May 31/68 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
126	L216N 35E	↗	C	3½'	Brn	Sandy	O/C	145	700
127	L212N 38E	↗	"	3'	"	"	Trench Sample) Oxidiz. O/C	>250	2300
128	" 37E	→	"	3'	"	"	" "	23	190
129	" 36E	"	"	"	"	"	" " Malachite	130	490
130	" 35E	"	"	3½'	"	"	" " O/C	145	550
131	" 34E	"	"	"	"	"	" " O/C	28	250
132	" 33E	→→	"	4'	"	"		>250	2300
133	" 32E	"	B	1'	"	"	O/C	8	50
134	" 31E	"	"	1½'	Gr. Brn	"	W.T.	4	40
135	" 30E	→→	BC	2'	"	"	W.T.	4	50
136	" 29E	→	"	2'	Brn	"		3	55
137	(72E) 28E	-	B	1'	"	"		3	50
138	" 27E	←	BC	8"	"	"	O/C V. Prominent	5	65
139	" 26E	-	C	1½'	"	"	W.T.	9	85
140	" 25E	-	BC	1'	"	"	O/C	6	70
141	" 24E	-	C	1½'	"	"	Small Catchment Basin	6	75
142	(77E) 23E	-	"	3'	"	"	Road Sample	6	70
143	" 20E	-	B	2'	"	← "	No Samples - Sand Pit Small Basin (E/O Trench)	13	155
144	" 19E	↗	C	"	"	"	Heavy Drift	5	60
145	" 18E	↗	BC	"	"	"	O/C	4	65
146	" 17E	"	"	3'	"	"	Drift or O/C?	16	170
147	" 14E	-	B	4'	"	← "	No Samples - Disb. Ground Trench Cut Sample	28	210
148	(87E) 13E	↑	B	1½'	"	"	W.T.	19	150
149	" 12E	↑	B	2½'	"	"		43	330
150	" 11E	↑	B	"	"	"	Stream 30' W	23	280

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151	L212N 10E	↑	B	2½'	Brn	Sandy	Swampy; Some O.M.; W.T.	40	345
152	" 9E	↑	"	2'	"	"	W.T.; Stream; Hi O.M.	63	620
153	" 8E	↑	"	2½'	Blk Brn	O.M. Silty	W.T.; Swampy	60	320
154	" 7E	"	"	2'	Blk	"	Powerline	57	850
155	" 6E	"	BC	"	Brn	Sandy		12	135
156	" 5E	"	C	2'	"	"	Esker	9	145
157	" 4E	"	"	"	"	"	"	9	90
158	" 3E	"	"	1½'	"	"	" Top; Oxidized	12	150
159	" 2E	"	BC	4'	Blk	O.M. Silty	W.T.	54	1000
160	" 1E	"	"	2'	"	"	W.T.	48	360
161	" 0E	"	C	3'	Brn	Sandy	Esker	8	40
162	" 1W	"	C	1½'	"	"	" Gravelly	4	40
163	" 2W	"	C	"	"	"	Esker O/C?	2	55
164	L204 0E	-	"	2'	"	"	Trench Sample - Esker	6	110
165	" 1E	↑	"	"	"	"	Heavily wooded	7	175
166	" 2E	"	"	2½'	"	"	Glacial Drift	4	80
167	" 3E	"	"	"	"	"	" "	70	370
168	" 4E	"	"	3½'	"	"	W.T. O.B. V. Deep	107	480
169	" 5E	"	"	2½'	Dk. Brn.	O.M. Silty	W.T. Powerline; Contam. (Cont. Stream)	33	250
170	" 6E	"	"	"	"	"	W.T. Contamination	60	520
171	" 7E	"	"	"	Brn	Sandy	W.T.	12	120
172	" 8E	"	"	"	"	"		16	180
173	" 9E	"	"	3'	"	"	W.T.	125	480
174	" 10E	"	"	2½'	"	"	"	37	300
175	" 11E	"	"	"	"	"	"	60	370

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SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
176	L204N 12E	↑	C	2½'	Brn	Sandy	W.T. @ 1'	32	270
177	" 13E	"	"	"	"	"	Stream	7	120
178	" 14E	"	"	"	"	"	"	17	195
179	" 15E	↖	"	3'	"	"	Esker & Outwash	8	170
180	" 16E	-	"	2½'	"	"	" " "	7	140
181	" 17E	-	"	"	"	"	" Trench 50'S	7	110
182	" 18E	-	"	"	"	"	" & Till	6	90
183	" 19E	-	"	"	"	"	Swampy	18	150
184	" 20E	-	"	"	Gr.	"	"	8	95
185	" 21E	-	"	2½'	Brn	"	Glacial Outwash + Esker	10	130
186	" 22E	-	"	"	"	"	Esker N/W	7	150
187	" 23E	-	"	"	"	"		4	65
188	" 24E	-	B	8"	"	"		4	60
189	" 25E	-	"	2½'	"	"	Road 10' E	5	80
190	" 26E	-	C	3'	"	"	Esker	4	70
191	" 27E	-	"	"	"	"	Esker & O/C	5	90
192	" 28E	-	B	8"	"	"	Small Basin O/C	3	20
193	" 29E	-	B	"	"	"	O/C V. Prominent; Top Rav.	3	30
194	" 30E	↗	"	"	"	"	O/C V. Prom'nt; Steep "	2	30
195	" 31E	-	"	"	"	"	Dry Gulley (Bottom Rav.)	3	30
196	" 32E	↡	"	"	"	"	O/C Prominent	6	100
197	" 33E	"	"	"	"	"	" "	2	30
198	" 34E	→→	"	"	"	"		4	35
199	" 35E	-	"	"	Blk	O.M.	Valley Bottom) Mn & Cu	135	1450
200	" 36E	-	"	"	"	"	" ") Stain on Road	80	1350

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SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
201	L208N 37E	-	C	2½'	Blk. Brn.	O.M. Silty	W.T.	27	240
202	" 36E	→→→	"	5'	Brn	Sandy	Trench Sample	70	400
203	" 35E	"	"	"	"	"	"	32	190
204	" 34E	"	"	3'	"	"	"	15	120
205	" 33E	"	BC	2½'	"	"		7	70
206	" 32E	-	"	2'	"	"	Glacial Material	3	30
207	" 31E	-	C	2½'	Gr.	"	" Till; W.T.	17	160
208	" 30E	↘	"	"	Gr. Br.	"	Catchment Basin	24	215
209	" 29E	-	"	2½'	"	"		18	185
210	" 28E	←	"	2'	"	"	W.T.	7	90
211	" 27E	←	"	3'	"	"	Till; Boulder Bed	4	50
212	" 26E	-	"	1½'	"	"	W.T. Swampy	10	70
213	" 25E	-	"	"	"	"	" "	7	130
214	" 24E	-	"	2'	Brn	"	W.T.	8	110
215	" 23E	-	"	"	Yellow Brn.	"		9	120
216	" 22E	-	"	2½'	Brn	"	Glacial Drift Deep	4	70
217	" 21E	-	"	"	"	"	" " "	24	230
218	" 20E	-	"	"	"	"	" " " & Esker	9	85
219	" 19E	-	"	2'	"	"	" " "	16	230
220	" 18E	-	"	2½'	"	"	Sand	9	120
221	" 17E	↖	"	2½'	Gr. Br.	"	Stream ↖	52	280
222	" 16E	-	"	"	"	"		36	260
223	" 15E	↖	"	"	"	"	W.T.	26	190
224	" 14E	↑	"	2½'	"	"	Stream ↑	17	135
225	" 13E	↑	"	2'	"	"		25	170

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SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm)					
												CxCu	HxCu
226	L208N 12E	↑	C	2½'	Gr. Br.	Sandy						25	230
227	" 11E	"	A	2'	"	O.M. & Silt	Stream					57	490
228	" 10E	"	C	2'	"	Sandy	"		50'	W		7	55
229	" 9E	"	"	"	"	"	Swampy					24	220
230	" 8E	"	"	"	"	"						75	400
231	" 7E	"	AB	"	"	O.M. Silt	Swampy; Contaminated Stream					79	900
232	" 6E	"	AB	4'	Blk	"	Contaminated					38	330
233	" 5E	"	C	2½'	Gr. Br.	Sandy	Swampy					160	1700
234	" 4E	"	"	"	"	"						23	140
235	" 3E	"	"	2'	"	"	Glacial Drift					21	250
236	" 2E	"	"	2'	"	"	" "					7	110
237	" 1E	"	"	4'	"	"	Trench Sample					>250	800
238	" 0E	"	"	2'	Gr. Br.	"	W.T.					23	150
239	L196N 1125W	"	"	2'	"	"	W.T.)					6	80
240	" 1025W	"	"	"	"	"	") Glacial Drift					6	80
241	" 925W	"	"	2½'	"	"	")					8	120
242	" 825W	→→→	"	"	"	"	Base of Esker (Swampy)					4	50
243	" 725W	←←←	"	2'	Br.	Gravel	Side of Next Esker					7	80
244	" 625W	-	"	2'	Blk Brn	Sandy	W.T. Road Sample			Some O.M.		39	490
245	" 525W	↑	B	1'	Brn	"	O/C					15	135
246	" 425W	↑	"	1'	"	"	O/C					3	20
247	" 325W	↑	"	1'	"	"	"					3	30
248	" 225W	↑	C	1½'	Dk. Brn.	Sandy	Glacial Drift W.T.					3	120
249	" 125W	↑	"	3'	Br.	"	Esker					5	60
250	" 25W	↑	B	1½'	Br.	"	O/C					5	55

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SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm)					
												CxCu	HxCu
251	L196N 0W	↑	B	8"	Dk. Br.	Sandy	O/C Base Line					4	50
252	L200N 00	-	C	2'	Brn	"	Gravel Esker					10	235
253	" 1W	←	"	1½'	"	"	Kame					7	110
254	" 2W	↑	"	2'	"	"	Boulder Bed					5	60
255	" 3W	↑	"	"	"	"	"	" Gravel				5	60
256	" 4W	-	"	"	"	"	"	"	"			6	90
257	" 5W	-	"	"	"	"	"	"	"			8	70
258	" 6W	↑	"	4'	"	"	"	" Esker				11	130
259	" 7W	-	"	2½'	"	"	Road 15'W					6	90
260	L192N 00	↑	"	1½'	"	"	Sand; Esker E					4	60
261	" 1W	-	"	"	"	"	W.T.					6	120
262	" 2W	-	"	2'	"	"	W.T.					4	70
263	" 3W	-	"	"	"	"	Gravel					1	20
264	" 4W	-	"	2'	"	"	"					3	40
265	" 5W	-	"	1½'	Gr. Br.	"	" W.T.					8	150
266	" 6W	-	"	2½'	"	"	W.T.					32	260
267	" 7W	-	"	3'	"	"	Sand					30	220
268	" 8W	-	"	2'	Br.	"	Gravel; Road Sample					9	120
269	" 9W	-	"	4'	Gr. Br.	"	Road Sample					16	170
270	" 10W	-	"	5'	"	"	" "	(N.B. 650' from main rd.)				24	210
June 1/68 271	L200N 36E	→	"	2'	Br.	Sand	W.T. Glacial Sand					8	80
272	" 35E	"	"	"	Gr. Br.	"	O/C					3	40
273	" 34E	"	B	1'	Br.	"	O/C Boulder Bed					4	35
274	" 33E	"	"	"	"	"						3	50
275	" 32E	"	"	8"	"	"						12	150

C-6281—AKING

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR F. Forgeron PROJECT Skeena - 1 WEATHER

DATE June 1/68 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
276	L200N 31E	-	B	1½'	Br.	Sandy	Top of Rise; C/C	11	135
277	" 30E	-	C	"	"	"	W.T. Glacial Till	4	55
278	" 29E	-	"	2'	"	"	" " "	5	45
279	" 28E	-	"	"	"	"	O.B. Thick; W.T.	4	60
280	" 27E	↖	"	2½'	Gr. Br.	"	Glacial Till	8	140
281	" 26E	↖	"	2'	"	"	" " W.T.	4	60
282	" 25E	"	"	"	"	"	W.T.	8	65
283	" 24E	"	"	"	"	"	"	7	50
284	" 23E	"	"	3'	"	"	"	12	65
285	" 22E	"	"	2'	"	"	"	9	70
286	" 21E	↖	"	2'	"	"	W.T. Glacial Till O.B. Thick	10	130
287	" 20E	"	A	"	Blk.	"	O.M. Sample "	62	370
288	" 19E	"	C	"	Gr. Br.	Gravel	Road Travelling N20E	18	140
289	" 18E	"	"	"	"	"	Glacial Till	38	220
290	" 17E	"	A	"	Blk	O.M. Silt	Seepage Area	40	200
291	" 16E	↑	C	"	Gr. Br.	Sand	W.T.	15	120
292	" 15E	↖	"	2½'	"	"	O.B. Thick; Glacial Till	10	110
293	" 14E	↑	"	"	"	"	Surface Flow; Alders O.M.	27	220
294	" 13E	↑	"	2'	Br.	"	Glacial Till	28	235
295	" 12E	"	"	"	"	"	" "	37	320
296	" 11E	"	"	4'	Gr. Br.	Gravel	Esker	8	70
297	" 10E	"	"	3'	"	"	Glacial Till	13	220
298	" 9E	"	"	2'	"	"	Contaminated Stream Near	12	110
299	" 8E	↖	"	"	"	Sand	" " "	22	190
300	" 7E	"	A	4'	Blk	O.M.	W.T.	>250	2500

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301	L200N 6E	↑	A	3'	Blk	O.M.	Base Kame; O.B. Thick W.T.	60	460
302	" 5E	"	C	2'	Gr. Br.	Gravel	" " " "	13	130
303	" 4E	"	A	3'	Blk.	O.M. Sand	W.T. Kame	77	550
304	" 3E	⇈	C	"	Gr. Br.	Gravel	On Kame Front	28	210
305	" 2E	"	"	2'	"	"	" " " O.B. Thick	13	80
306	" 1E	-	"	2½'	"	"	Boulder Bed; Top of Kame	15	140
307	L196N 1E	↑	B	1'	Brn	Sand	O/C	5	40
308	" 2E	"	BAC	1½'	"	"	" Near	7	35
309	" 3E	"	C	4'	Gr. Br.	Gravel	On Kame - Road Cut	3	120
310	" 4E	-	C	2'	"	"	On Kame	5	30
311	" 5E	↑	"	2½'	"	"	Kame Mill Contamination Stream at 450'	6	50
312	" 6E	"	"	2'	"	"	Kame	6	70
313	" 7E	"	"	"	"	"	O.B. Thick; Glacial Outwash Contamination	1.7	60
314	" 8E	"	"	"	"	"	" " " " " "	9	50
315	" 9E	"	"	"	"	"	" " " " " "	20	100
316	" 10E	↗	"	3'	Brn	"	W.T. O.B. Thick?	140	175
317	" 11E	"	"	2'	"	"	" "	35	710
318	" 12E	"	"	"	"	"	" " Surface	63	260
319	" 13E	"	"	2'	"	"	" " Drainage O.M.	20	405
320	" 14E	"	"	"	"	"	" " Alders	20	150
321	" 15E	↑	"	"	"	"	" "	18	185
322	" 16E	"	"	2½'	"	"	" "	10	90
323	" 17E	"	"	2'	"	"	" " O.M.	12	90
324	" 18E	"	"	"	"	"	" "	11	105
325	" 19E	"	"	"	"	"	" " O.M.	32	250

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												CxCu	HxCu
326	L196N 20E	↑	C	3'	Gr. Br.	Sand	O.B. Thick					13	100
327	" 21E	"	"	2½'	Br.	"	" "	Limonitic				27	165
328	" 22E	"	A	3'	Blk	O.M. Silty	" "					110	720
329	" 23E	"	"	2'	"	"	" "					180	1080
330	" 24E	↖	C	2'	Br.	"	Alders					22	175
331	" 25E	↖	"	2½'	Gr. Br.	Sandy	O.B. Thick W.T.					7	90
332	" 26E	"	"	2½'	"	"	" "	"				2	40
333	" 27E	"	"	"	"	"	" "					2	40
334	" 28E	-	"	"	"	"	Edge of Ridge W.T.			O.B. Thick		3	55
335	" 29E	-	"	2'	"	"	O.B. Thick, Water Table					2	40
336	" 30E	-	"	2½'	"	"	" "					2	35
337	" 31E	↑↑	"	"	"	"	" "					2	35
338	" 32E	→	"	"	"	"	A Young Stream Valley; Alds.					7	70
339	" 33E	→	"	3'	"	"	" " "	"	"		"	4	55
340	" 34E	→	"	2'	"	"	" " "	"	"			2	20
341	" 35E	→	"	4'	"	"	" " "	"	"			13	100
342	" 36E	→	"	4'	"	"	In Road					7	60
343	L192N 36E	↑	"	2'	"	"	South Side Valley					4	50
344	" 35E	"	"	2½'	"	"	" "		"			2	30
345	" 34E	-	"	3'	"	"	O.B. Thick Edge of Ridge					5	65
346	" 33E	-	"	2'	Br.	Sand	O.B. "					5	75
347	" 32E	↖	"	1½'	Gr. Br.	"	" "	W.T.				3	50
348	" 31E	"	"	"	"	"	" "	"				3	45
349	" 30E	"	"	"	"	"	" "	"				3	40
350	" 29E	"	"	"	"	"	" "	"				3	50

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												CxCu	HxCu
351	L192N 28E	↖	C	1½'	Gr. Br.	Sandy	C.B. Deep	W.T.				3	35
352	" 27E	"	"	"	"	"	" "	"	Surface		Flow	11	50
353	" 26E	"	"	"	"	"	" "	"	"		"	15	75
354	" 25E	-	"	"	"	"	" "	"				12	120
355	" 24E	-	"	2'	"	"	" "	"				8	90
356	" 23E	"	"	"	"	"	" "	"				5	75
357	" 22E	"	"	"	"	"	" "	"				4	40
358	" 21E	"	"	"	"	"	" "	"				4	40
359	" 20E	"	"	3'	"	"	" "	"				6	35
360	" 19E	↖	-	3'	Gr.	O.M. Sand	" "	"	Surface		Flow	22	60
361	" 18E	"	-	2½'	Br.	O.M. Sand	" "	"				12	210
362	" 17E	"	-	2'	"	"	" "	"				10	120
363	" 16E	"	C	2'	"	Sand	" "	"				10	95
364	" 15E	"	"	1½'	"	"	" "	"				13	95
365	" 14E	↑	"	"	"	"	" "	"	Surface		Drng	13	120
366	" 13E	"	"	2'	"	"	" "	"				15	120
367	" 12E	"	"	3'	"	"	" "	"				13	80
368	" 11E	"	"	1½'	"	O.M. Sand	" "	"				50	390
369	" 10E	"	"	1½'	"	Sandy	Near Trench					17	210
370	" 9E	"	"	"	"	"						9	80
371	" 8E	"	"	"	"	"						3	35
372	" 7E	"	"	"	"	"						1	25
373	" 6E	"	"	"	"	"	Contamination	50'				2	20
374	NO SAMPLE - CONTAMINATION & TRENCHING												
375	NO SAMPLE - CONTAMINATION & TRENCHING												

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR Dave Evans PROJECT Skeena - 1 WEATHER

DATE June 1/68 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm)					
												CxCu	HxCu
376	NO SAMPLE - CONTAMINATION & TRENCHING												
377	NO SAMPLE - CONTAMINATION & TRENCHING												
378	NO SAMPLE - CONTAMINATION & TRENCHING												
379	L176N 37E	↑	C	2'	Gr. Br.	Sandy	Deep Drift					5	70
380	" 36E	↑	"	2'	"	"	" "					12	120
381	" 35E	↑	A	2'	Blk	O.M. Silt						25	170
382	" 34E	↑	A	2'	Blk	"					>	250	2600
383	" 33E	↑	A	5'	Blk	"					>	250	11,000
384	" 32E	↑	A	5'	Blk	"	Stream ↗ Large Swamp				>	250	4000
385	" 28E	↑	A	3'	Blk	"						180	720
386	" 27E	"	AB	3½'	Dk. Br.	"						42	295
287	" 26E	"	AB	3'	"	"						100	420
388	" 25E	"	C	1½'	Br.	Sandy						8	90
389	" 24E	"	C	"	Gr. Br.	"						11	250
390	" 23E	"	C	"	"	"						3	50
391	" 22E	"	C	"	"	"						6	60
392	L180N 22E	↑	"	2'	Dk. Br.	O.M.					>	250	1440
393	" 21E	↑	"	2'	Br.	Sand						18	370
394	" 20E	"	"	2'	Br.	"	W.T.					5	95
395	" 19E	-	"	"	Gr.	"	W.T. Esker					15	120
396	" 18E	-	"	"	"	"	" Swampy					63	240
397	" 17E	-	"	"	"	"	" "					6	40
398	" 15E	-	"	2'	"	"	W.T.					5	35
399	" 14E	-	"	"	"	"	"					2	45
400	" 13E	-	"	"	Br.	"	Glacial Material					4	70

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR Dave Evans PROJECT Skeena - 1 WEATHER

DATE June 1/68 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
401	L180N 12E	↑	C	2'	Br.	Sandy	Esker to South	4	60
402	" 11E	↑↑	"	"	"	"	" " "	5	95
403	" 10E	↑	"	"	"	"	Till	3	30
404	" 9E	-	"	"	"	"	Till (Poss. Contamination)	3	40
405	L184N 5E	↑	"	"	Gr. Br.	"	← Mill Area to West Dry Till Ash Horizons	4	70
406	" 6E	"	"	"	"	"	" " " "	4	95
407	" 7E	"	"	"	"	"	W.T. Swampy	68	500
408	" 8E	"	"	"	Gr.	"9	W.T "	12	105
409	" 9E	"	B	8"	Gr.	"	" " Contamination?	150	700
410	" 11E	"	C	1'	Gr.	"	Boulder Bed " to E	6	60
411	" 12E	"	"	1½'	Gr.	"	W.T. Swampy " to W	72	370
412	" 13E	"	"	"	"	"	" " " to W	70	400
413	" 14E	"	"	"	"	"	Glacial Till " to W	5	60
414	" 15E	"	"	1½'	Br.	"	" "	5	75
415	" 16E	"	"	"	"	"	" "	3	80
416	" 17E	"	"	"	Gr.	"	W T. Swampy	11	100
417	" 18E	"	"	1'	"	"	W.T. Swampy	5	60
418	" 19E	"	"	1½'	"	"	Dry Boulder B.	3	55
419	" 20E	"	"	"	Gr. Br.	"	W.T. Swampy	10	85
420	" 21E	"	"	"	"	"	Dry	3	65
421	" 22E	"	"	"	"	"	W.T.	34	160
422	" 23E	"	A	1½'	Blk Gr.	O.M.	W.T. Swampy	33	240
423	" 24E	"	C	"	Gr.	Sandy	" "	7	80
424	" 25E	"	"	"	Br.	"	Glacial Till	5	140
425	" 26E	"	"	"	Gr. Br.	"	W.T.	2	50

C-4251—AKING

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR Dave Evans PROJECT Skeena - 1 WEATHER

DATE June 1/68 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
426	L184N 27E	↑	C	1½'	Gr. Br.	Sandy	W.T.; Swampy	2	30
427	" 28E	"	B	"	"	O.M. Silty	" " Draining NE	9	75
428	" 29E	"	B	"	"	"	" "	13	95
429	" 30E	"	BC	"	"	Sandy	W.T. Ash Horizon	5	40
430	" 31E	"	C	1'	"	"	W.T. " "	4	45
431	" 32E	"	C	1½'	Orange Gr. Br.	"	" " "	4	55
432	" 33E	"	C	"	"	"	" " "	3	50
433	" 34E	"	"	"	Gr. Br.	"	Dry	3	60
434	" 35E	"	"	"	Gr.	"	Dry; Boulder Bed	3	50
435	" 36E	"	"	"	"	"	W.T. " "	3	50
436	" 37E	"	"	"	Br. Gr.	"	Dry " "	3	50
437	" 38E	"	"	"	"	"	Dry; Boulder Bed	2	40
438	L180N 37E	"	"	"	Gr. Br.	"	W.T. Stream 25'W	225	760
439	" 36E	"	"	"	"	"	" Swampy	135	380
440	" 33E	"	"	"	Blk	O.M. Silty	Swamp Draining E W.T. Swamp Draining NE	>250	3300
441	" 32E	"	"	"	Gr. Br.	Sandy	W.T. "	18	90
442	" 31E	"	C	1'	"	"	Glacial Sand	8	70
443	" 30E	"	"	1'	"	"	W.T. Swampy	16	90
444	" 29E	"	A	3'	Blk	O.M. Silty	W.T. V. Swampy	200	980
445	" 28E	"	A	3'	"	"	W.T. " "	15	140
446	" 27E	"	AB	2½'	Gr. Blk	Silty	W.T. Swampy	S	80
447	" 26E	"	C	2'	Gr. Br.	Sandy	Oxidized Clay V. Swampy	100	450
448	" 25E	"	C	5'	"	"	W.T. Esker Slope	>250	2900
449	" 24E	"	"	2½'	"	"	Glacial Till, Dry	7	150
450	" 23E	"	"	"	"	"	Glacial Sand, Dry.	7	90

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR D. Evans PROJECT Skeena - 1 WEATHER

DATE June 1, 1968 AREA Highland Valley PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm) CxCu	HxCu
451	L188N 2E	←	-	NO SAMPLE TAKEN - DISTURBED					
452	" 3E	↑	C	1'	Gr. Br.	Sandy	Till (On Powerline)	2	25
453	" 6E	↑	"	1'	"	"	"	2	20
454	" 7E	↑	"	1½'	"	"	"	2	20
455	" 8E	↑	"	"	"	"	O/C	5	50
456	" 9E	↑	"	"	"	"	Glacial Material	2	20
457	" 10E	↑	"	"	"	"	"	5	50
458	" 11E	↑	"	4'	"	"	Glacial Material (Trench)	18	210
459	" 12E	"	"	2'	"	"	"	40	380
460	" 13E	"	"	"	"	"	"	4	30
461	" 14E	"	A	1'	Blk	O.M. Silt	W.T. Swampy	18	180
462	" 15E	"	"	"	"	"	" " Hi O.M.	38	260
463	" 16E	"	"	"	"	"	" " " "	15	140
464	" 17E	"	"	"	"	"	" " " "	10	140
465	" 18E	"	"	"	"	"	" " " "	30	260
466	" 19E	"	"	"	"	"	" " " "	13	130
467	" 20E	"	"	"	Gr. Br.	Sandy	W.T. Swampy (gravelly)	7	70
468	" 21E	"	C	1½'	"	"	Gravel; Glacial Material	3	50
469	" 22E	"	"	"	"	"	" " " "	2	30
470	" 23E	"	"	"	"	"	Boulder Bed	3	60
471	" 24E	"	"	"	"	"	" " " "	3	40
472	" 25E	"	"	"	"	"	Sandy to Gravelly	4	90
473	" 26E	"	"	"	"	"	" " " "	3	60
474	" 27E	"	"	"	"	"	W. T. Stream	5	70
475	" 28E	"	"	"	"	Clay	W. T. Glacial Clay	3	30

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL SOIL SURVEY DATA

COLLECTOR D. Evans | PROJECT Skeena - 1 | WEATHER

DATE June 1, 1968 | AREA Highland Valley | PHYSIOGRAPHY Mountainous

SAMPLE NO.	LOCATION	DRAINAGE SLOPE	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	ANALYTICAL (ppm)					
												GxCu	HxCu
476	L 188N 29E	↑	C	1½'	Gr. Br.	Clay	Glacial Clay W.T.					3	35
477	30E	"	"	"	"	"	" " " " W.T.					3	40
478	31E	"	"	"	"	"	" " " " W.T.					5	70
479	32E	"	"	"	"	Sandy	Glacial Sand W.T.					2	50
480	33E	"	"	"	"	"	Dry					3	50
481	34E	"	"	"	"	"	Dry					3	70
482	35E	"	"	"	"	Clay	W.T. Glacial Clay					4	40
483	36E	"	"	"	"	Sandy	Dry Glacial Sand					3	35
484	37E	"	"	"	"	"	Dry "					4	45

INVOICE

June 17, 1968.

Mr. F. A. McGonigle, President,
Consolidated Skeena Mines Limited,
716-602 W. Hastings Street,
Vancouver, B. C.

IN ACCOUNT WITH

BONDAR-CLEGG & COMPANY LTD.,
P. O. Box 3382, Station "C",
Ottawa 3, Ontario.

Re: Geochemical Soil Survey,
Lornex Property, Highland Valley,
British Columbia.

Ref: 03R6-8

TO OUR FEE for professional services regarding the above as follows:

One field crew, 6 days @ $50 per day	$300.00
Analysis of 489 CxCu and PxCu @ $1.65 per, report number 2-45-8	805.85
Report - Geochemical Soil Survey Lornex Property, Highland Valley	200.00
Charges and Disbursements	
Paid for transportation to and in the survey area	128.37
Paid for living expense	90.84
Paid for draughting and reproduction	107.61
Total fees, charges and disbursements	$1,633.67

THIS IS OUR ACCOUNT HEREIN.

BONDAR-CLEGG & COMPANY LTD. per:

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA. } In the Matter of
TO WIT:

I, William M. Sharp, P. Eng.

of Room 1 - 425 Howe Street, Vancouver 1, B.C.

in the Province of British Columbia, do solemnly declare that

1. The Geochemical Survey of the Skeena Copper-Divide Copper Claim group, subject of this report and property of Consolidated Skeena Mines Ltd. (N.P.L.) was done under my direction.

2. The survey was performed as reported.

3. The sum of sixteen hundred and thirty-three and 67/100 dollars ($1,633.67) was expended on this survey, as detailed in the attached copy of the Bondar-Clegg and Company invoice re. this project.

4. That I am engaged as a Consulting Geological Engineer, and am a registered Professional Engineer in the Province of British Columbia.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 10 th
day of July 1968, A.D.

W.M. Sharp

A Commissioner for taking Affidavits for British Columbia or
~~*A Notary Public in and for the Province of British Columbia.*~~

BASELINE

BIOMETALS DEVELOPMENT

LORNEX DEVELOPMENT

L232
L224
L220
L216
L212
L208
L204
L200
L196
L192
L188
L184
L180
L176

NORTH

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 1574 MAP 1

LEGEND

Symbol	Classification	Cu (ppm).
o	Negative	0 - 10
•	Possibly Anomalous	11 - 50
•	Probably Anomalous	51 - 100
•	Definitely Anomalous	100 +.

Possible or Probable Anomaly
Definite Anomaly.

Scale : 1 inch = 400 feet.

To accompany Geochemical report by F. D. Forgeron, Ph.D. & D.S. Evans, B.Sc. on the Skeena Copper - Divide Copper Group, Highland Valley, Kamloops, M.D.

MAP 2.

Cold Extractable Copper Distribution.

SOIL SURVEY
CONSOLIDATED SKEENA MINES LTD.
KAMLOOPS MINING DISTRICT
BRITISH COLUMBIA.

Survey By : F. Forgeron.
BONDAR - CLEGG & COMPANY LTD.
VANCOUVER MAY 1968

1574

BASELINE.

L232

L224

L220

L216

L212

L208

L204

L200

L196

L192

L188

L184

L180

L176

BIOMETALS DEVELOPMENT

LORNEX DEVELOPMENT

Mill Sludge visible in stream 2500 feet downstream from mill.

NORTH

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 1574 MAP 2

LEGEND.

Grid Line and Sample Location. L200

Drainage : definite and assumed direction.

Claim Boundaries.

Disturbed Regolith.

Scale : 1 inch = 400 feet.

To accompany Geochemical Report by F. D. Fargeron, Ph. D. & D. S. Evans, B. Sc. on the Skeena Copper - Divide Copper Group, Highland Valley, Kamloops, M. D.

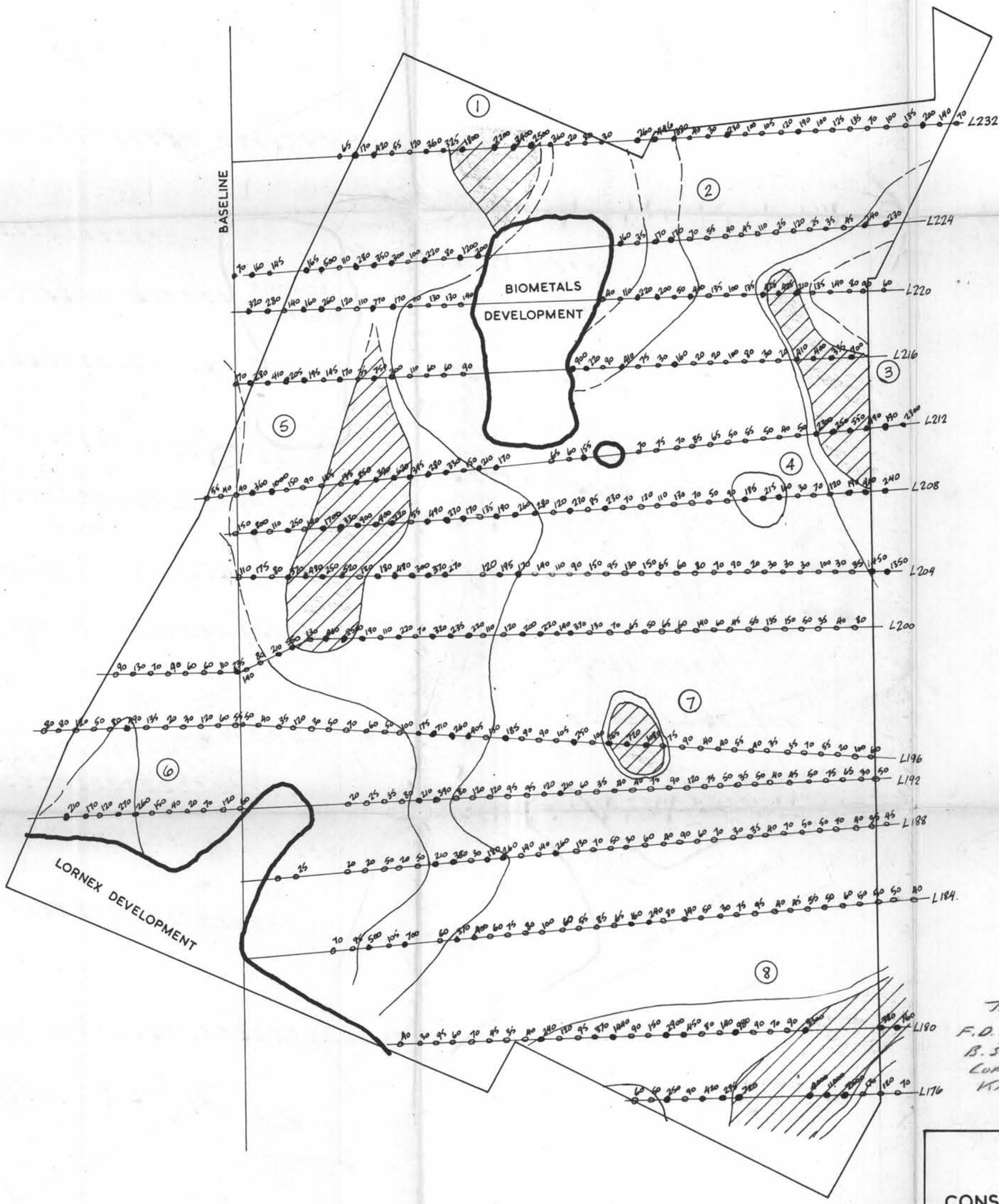
MAP 1.

Claims Group, Sample Locations, Drainage.

1574

SOIL SURVEY
CONSOLIDATED SKEENA MINES LTD.
KAMLOOPS MINING DISTRICT
BRITISH COLUMBIA.

Survey By : F. Fargeron.
BONDAR - CLEGG & COMPANY LTD.
VANCOUVER MAY 1968



NORTH

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1574 MAP 3

LEGEND

Symbol	Classification.	Cu (ppm.).
o	Negative	0 - 150
•	Possibly Anomalous	151 - 300
•	Probably Anomalous	301 - 600
•	Definitely Anomalous.	600 +.

Anomaly : (2.)

Possible or Probable Anomaly

Definite Anomaly

Scale : 1 inch = 400 feet.

To accompany Geochemical report by F. D. Forgeron, Ph. D. and D. S. Evans, B. Sc. on the Skeena Copper - Divide Copper Group, Highland Valley, B. C., Kamloops M. D.

MAP 3.

Hot Acid Extractable Copper Distribution.

SOIL SURVEY
CONSOLIDATED SKEENA MINES LTD.
KAMLOOPS MINING DISTRICT
BRITISH COLUMBIA

Survey By : F. Forgeron.
BONDAR - CLEGG & COMPANY LTD.
VANCOUVER MAY 1968

1574