

86-363-14970

**GEOCHEMICAL REPORT
ON THE
SUNNY MINERAL CLAIM**

BY

GUDMUND LOVANG

FILMED

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,970

Vancouver, B.C.

July, 1986

GEOCHEMICAL REPORT

ON THE

**SUNNY MINERAL CLAIM, RECORD NO. 3488
LOCATED IN
KAMLOOPS MINING DIVISION
NTS 92 I/9 W**

LATITUDE: 50°34.5' LONGITUDE: 120° 20.5'

OWNER:

**AFTON OPERATING CORPORATION
1199 WEST HASTINGS STREET
VANCOUVER, B.C.
V6E 2K5**

OPERATOR:

**TECK CORPORATION
1199 WEST HASTINGS STREET
VANCOUVER, B.C.
V6E 2K5**

BY

GUDMUND LOVANG

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Geochemical Survey Map, Scale 1:2500	In pocket

INTRODUCTION

The Sunny mineral claim, consisting of 9 units, is located approximately 11.5 km due south of downtown Kamloops. Elevation is around 1,000 metres above sea level with a moderate relief of 75 metres on the property.

The terrain is open grassland on gently rolling hills. A few scattered stands of pine and fir trees occur as well as some poplars in depressions and along water courses.

The property covers the eastern part of Edith Lake and ground to the east and south of the lake. The surface is owned by rancher G. Shannon. Edith Lake is an experimental aeration lake.

The property can be reached with a 2-wheel drive vehicle by following highway no. 5 from Kamloops to Knutsford, then south on paved road for approximately 3 km to the Edith Lake road turn-off, then for 3 km on good gravel road to Edith Lake.

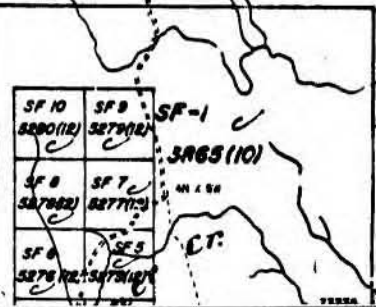
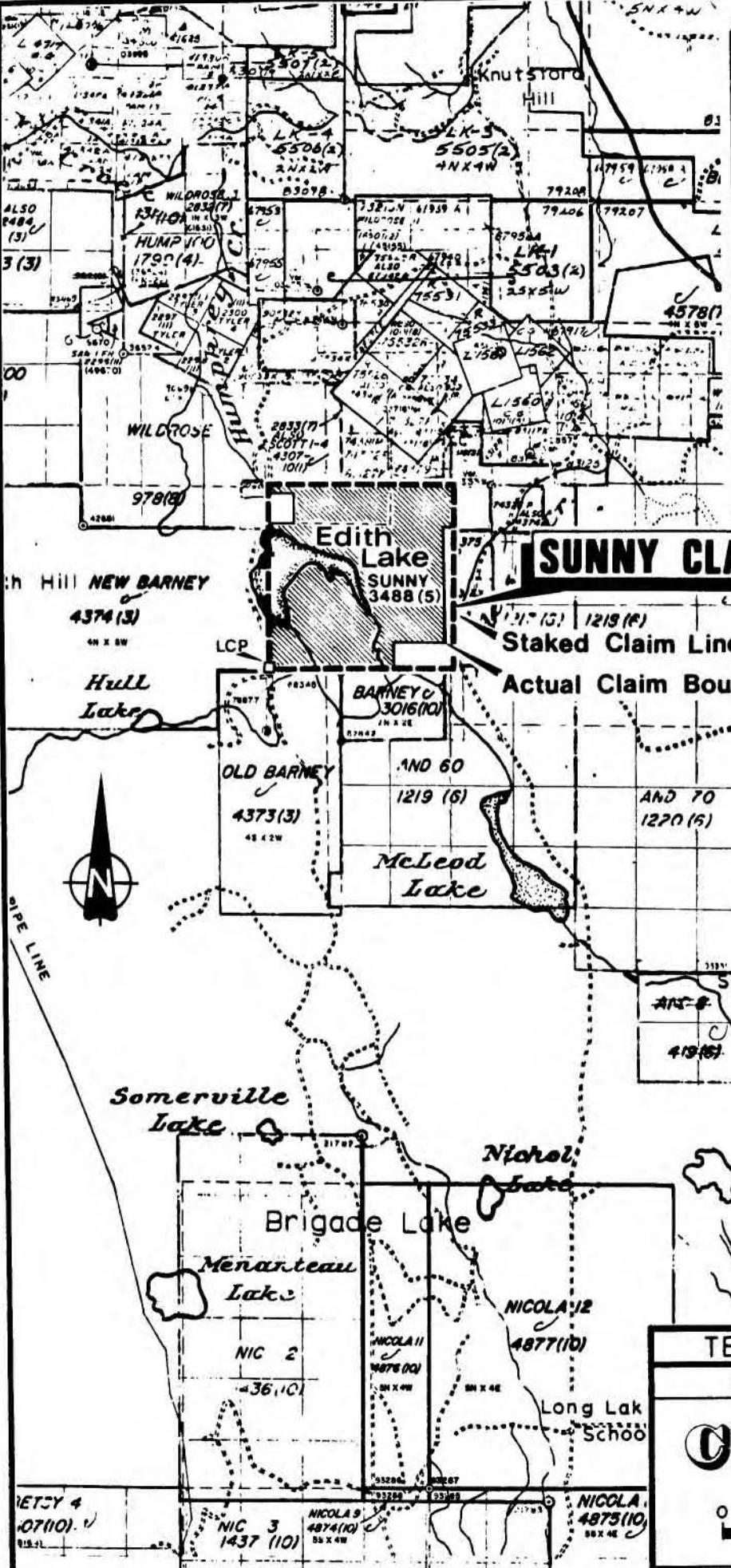
Claim location and index maps are included as Figure 1.

The present work was conducted by Teck Corporation employees on April 10-12, 1986 and consisted of a localized soil sampling program of 5.3 line-km for the purpose of investigating the contact zone between the Nicola volcanics and the Iron Mask Pluton as mapped by K. E. Northcote (1977). Geological mapping was completed by W. R. Bergey, P.Eng. A total of 231 samples were collected and analyzed for Cu with every second sample analyzed for Au.

PROPERTY DEFINITION

The Sunny mineral claim, record number 3488(5) and consisting of 9 units, was purchased by Afton Operating Corporation of Vancouver, B.C. from Argenta Resources Ltd. of Vancouver, B.C. on April 4, 1986.

Afton Operating Corporation is the current owner.



TECK EXPLORATIONS LIMITED
KAMLOOPS MINING DISTRICT

CLAIM MAP

0 1000 2000 3000
METRES

SCALE: 1:50,000 NTS: 91 I/9W FIG. 1

HISTORY AND PREVIOUS WORK

The Sunny claim is located on the margin of the copper-rich Iron Mask Batholith.

Exploration and mining in the area dates back to the 1890's with many former small producers.

In 1977, the Afton Copper Mine commenced production with reserves of 30 million tons of ore grading approximately 1% Cu with Au and Ag values. Afton Mine is located some 14 km northwest of the Sunny claim.

Recent work in the area of the Sunny claim has been carried on intermittently since 1968. The recorded work is listed as follows:

Assessment Report #2871, Ace, Mot Mineral Claims, Erin Exploration Ltd., Stadnyk, M.P., B.Sc., 1970.

Soil geochemical survey for Cu. The three southern units of Sunny were included in this survey. A large (400 x 600 metres), but weak Cu-anomaly was delineated on the Mot 1-4 claims. The southwest quadrant of the Sunny claim covers most of this ground.

Assessment Report #4018, Mot Claim Group, Erin Exploration Ltd., White, G.E., B.Sc., 1972.

An I.P. Survey was conducted over the area of the 1970 Cu soil anomaly on the Mot 1-4 Cu claims. A weak chargeability anomaly coincides with the Cu soil anomaly.

Assessment Report #8028, Sunny Claim, Jocelyn Resources Ltd., Sookochoff, L., P. Eng., 1970.

Reconnaissance VLF-EM, Magnetometer, geochemical and geological surveys were carried out.

Assessment Report #10552, Sunny Claim, Argenta Resources Ltd., Sookochoff, L., P. Eng., 1982.

A localized geochemical survey outlined a small and weak Cu-Zn anomaly in the central area of the Sunny claim.

Assessment Report #12419, Sunny Claim, Argenta Resources Ltd., Sookochoff, L., P. Eng.

Two geochemical soil lines north of the 1982 survey.

In addition to the recorded work, a total of eight bulldozer trenches can be seen in the northeast quadrant of the claim. Presumably, these were put in by Copper Lake Explorations Ltd., prior to 1970 (probably in 1968). Copper Lake held 21 claims called the Totem Group in this area at that time.

GEOLOGY

The Sunny Claim lies along the southwestern margin of the Iron Mask Batholith which intrudes Nicola volcanic rocks in the claim area. Both the batholith and the rocks of the Nicola Group are late Triassic in age.

The present survey was designed to investigate the contact zone between the Nicola rocks and the Sugarloaf unit of the batholith. Previous surveys did not encompass this 500 metre by 500 metre semi-circular area on the south shore of Edith Lake. Mapping by W. R. Bergey confirmed the contact as mapped by K. E. Northcote (1977). The geology is shown on Figure 2.

GEOCHEMISTRY

A small localized grid was established measuring roughly 500 metres by 500 metres as shown on Figure 2. The stations were marked with flagging. A total of 231 soil samples were collected and analyzed for copper with every second sample analyzed for Au. The results are shown on Figure 2.

The samples were collected from the "B" horizon at depths ranging from 30 cm to 50 cm by using a one metre long soil auger. The overburden is shallow in the grid area with abundant outcrops. A good geochemical response should be expected.

The samples were analyzed by Kamloops Research and Assay Laboratory Ltd. in Kamloops. The technique employed is shown in the Appendix.

RESULTS

The copper and gold values are plotted on Figure 2. Values above 100 ppm copper are considered to be anomalous and are contoured. The maximum copper value is 245 ppm.

The results are not indicative of any near surface significant mineralization.

Practically all gold values were below the detection limit of 5 ppb. The few erratic higher values with up to 90 ppb is not coincidental with the anomalous copper values. However, the highest value on Line 0 (40 ppb) appears to be associated with altered pyritic volcanic rocks.

Analytical results are tabulated in the Appendix.

CONCLUSIONS AND RECOMMENDATIONS

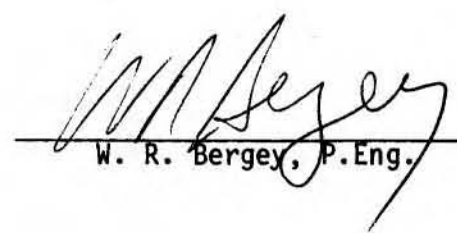
No significant near surface mineralization appears to exist on or near the Nicola/Sugarloaf contact on the property. The possible exception is the lake proper which remains unexplored. The aeration program indicates reducing conditions in the lake.

Further work on the property should include an I.P. survey of the northeast quadrant of the claim as well as systematic gyttja sampling of Edith Lake.

Respectfully submitted,



Gudmund Lovang



W. R. Bergey, P.Eng.

ITEMIZED COST STATEMENT

SUNNY MINERAL CLAIM

Personnel

G. Lovang, 3 days @ \$160	\$480.00	
R. Williams, 2 days @ \$120	240.00	
W. R. Bergey Supervision, 0.5 days @ \$350	<u>175.00</u>	
	895.00	\$895.00

Field Expenses

3 days truck rental @ \$30.00	90.00	
Fuel	75.00	
Meals and accommodation, 2.5 days @ \$65.00	162.50	
Telephone, field supplies, etc.	<u>35.00</u>	
	362.50	362.50

Office, Laboratory

Analyses, 231 Copper geochem incl. prep. \$2.60	600.60	
118 Gold geochem \$6.00	708.00	
Drafting, reporting	<u>380.00</u>	
	1,688.60	<u>1,688.60</u>

Total \$2,946.10

Withdrawn from Teck Corp. PAC 653.90

Total applied \$3,600.00
=====

STATEMENT OF QUALIFICATIONS

Gudmund Lovang
1132 Semlin Drive
Vancouver, B.C.
V5L 4K2

- 1970-1985: Mineral exploration and prospecting in British Columbia, Yukon, Northwest Territories, Ontario and Western United States for Teck Corporation and associated companies.
- 1984-1985: Geochemistry Course, University of British Columbia, "Exploration Geochemistry".
- 1974: Geophysical Course, British Columbia Institute of Technology.
- 1973-1974: Geology Course, British Columbia Institute of Technology, "General Interest Geology".
- 1973: Prospecting Course, British Columbia Institute of Technology, "Introduction to Geology and Prospecting".

July 2, 1986
Vancouver, B.C.

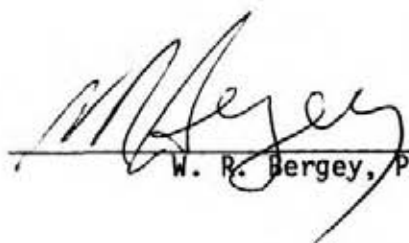

Gudmund Lovang, Prospector

STATEMENT OF QUALIFICATIONS

W. R. Bergey
5746 Cranley Drive
West Vancouver, B.C.
V5L 4K2

1. I am a Member of the Association of Professional Engineers of British Columbia.
2. I visited the Sunny claim during May, 1986, and I discussed the conduct of the work and the results with Gudmund Lovang.
3. I endorse the attached Geochemical Report on the Sunny claim.

July 2, 1986
Vancouver, B.C.



W. R. Bergey, P.Eng.

APPENDIX

GEOCHEMICAL ANALYSIS METHODS

GEOCHEMICAL LABORATORY REPORT

**KAMLOOPS
RESEARCH & ASSAY
LABORATORY LTD.**

B.C. CERTIFIED ASSAYERS

912 - 1 LAVAL CRESCENT — KAMLOOPS, B.C.
V2C 5P5

PHONE: (604) 372-2784 — TELEX: 048-8320

Teck Exploration Ltd.
1199 West Hastings St.,
Vancouver, B.C.
V6E 2K5

Attention: Mr. B. Lovang

GEOCHEMICAL ANALYSIS METHODS

Sample preparation

1. Soils - The samples are dried in our geochemical drying oven and then screened through a stainless steel 80 mesh sieve. The minus 80 fraction is reserved for analysis and the plus 80 fraction is discarded (unless we have been requested to save it).

2. Rocks - The samples are dried, crushed, split then ground using a ring-grinder to approximately -100 mesh.

Au Method

Half to one assay ton of sample is weighed, silver added, along with fluxes and the sample is started as a fire assay. After cupellation the bead is dissolved and the sample is mixed to ensure homogeneity and, after settling, is read on an atomic absorption spectrophotometer using an air acetylene flame.

Cu, Pb, Zn, Ag, Mo, Ni, Sb, Co, Fe, Cd, Bi, Mn
Atomic Absorption

Weigh 1 gram of sample into test tube. Add .5 ml nitric acid. Place in hot water bath for 30 minutes. Add 1.5 ml hydrochloric acid and leave in hot water bath for a further 90 minutes. Bulk to 10 ml with distilled water. Mix thoroughly and read on A.A. For Mo samples AlCl₃ must be added. Use background correction for Pb, Ag, Sb, Co, Cd.

KAMLOOPS RESEARCH
&
ASSAY LABORATORY
LTD.

B. C. CERTIFIED ASSAYERS

912 LAVAL CRESCENT
PHONE 372-2784 - TELEX 048-8320

GEOCHEMICAL LAB REPORT

TECK CORPORATION
1199 WEST HASTINGS ST..
VANCOUVER, B. C.
V6E 2K5

DATE APR 24 1986

FILE NO. G 1449

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KRAL NO.	IDENTIFICATION	AU	CU
1	0+00N L0+00	3.0	45.0
2	0+25N	0.0	61.0
3	0+50N	3.0	65.0
4	0+75N	0.0	83.0
5	1+00N	3.0	62.0
6	1+25N	0.0	94.0
7	1+50N	3.0	98.0
8	1+75N	0.0	103.0
9	2+00N	3.0	143.0
10	2+25N	0.0	80.0
11	2+50N	3.0	75.0
12	2+75N	0.0	71.0
13	3+00N A	3.0	73.0
14	3+00N B	3.0	84.0
15	3+25N	0.0	66.0
16	3+50N	40.0	90.0
17	3+75N	0.0	78.0
18	4+00N	3.0	99.0
19	0+00N L0+50	3.0	57.0
20	0+25N	0.0	64.0
21	0+50N	3.0	62.0
22	0+75N	0.0	61.0
23	1+00N	3.0	60.0
24	1+25N	0.0	97.0
25	1+50N	3.0	120.0
26	1+75N	0.0	119.0
27	2+00N	3.0	102.0
28	2+25N	0.0	71.0
29	2+50N	3.0	112.0
30	2+75N	0.0	88.0

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KRAL NO.	IDENTIFICATION	AU	CU
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32	3+25N	0.0	62.0
33	3+50N	3.0	185.0
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35	4+00N	3.0	81.0
36	4+25N	0.0	70.0
37	4+50N	3.0	91.0
38	4+75N	0.0	103.0
39	5+00N	3.0	113.0
40	5+25N	0.0	94.0
41	0+00N L1+00	3.0	65.0
42	0+25N	0.0	84.0
43	0+50N	3.0	110.0
44	0+75N	0.0	100.0
45	1+00N	3.0	86.0
46	1+25N	0.0	130.0
47	1+50N	3.0	139.0
48	1+75N	0.0	124.0
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50	2+25N	0.0	76.0
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52	2+75N	0.0	96.0
53	3+00N	3.0	79.0
54	3+25N	0.0	91.0
55	3+50N	3.0	75.0
56	3+75N	0.0	91.0
57	4+00N	3.0	89.0
58	4+25N	0.0	82.0
59	4+50N	3.0	84.0
60	4+75N	0.0	77.0
61	5+00N	3.0	69.0
62	5+25N	0.0	93.0
63	0+00N L1+50	3.0	76.0
64	0+25N	0.0	112.0
65	0+50N	3.0	90.0
66	0+75N	0.0	91.0
67	1+00N	3.0	82.0
68	1+25N	0.0	83.0
69	1+50N	3.0	102.0
70	1+75N	0.0	94.0

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KRAL NO.	IDENTIFICATION	AU	CU
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72	2+25N	0.0	93.0
73	2+50N	3.0	99.0
74	2+75N	0.0	78.0
75	3+00N	3.0	93.0
76	3+25N	0.0	91.0
77	3+50N	3.0	75.0
78	3+75N	0.0	68.0
79	4+00N	3.0	116.0
80	4+25N	0.0	82.0
81	4+50N	3.0	121.0
82	4+75N	0.0	67.0
83	5+00N	3.0	70.0
84	5+25N	0.0	84.0
85	0+00N L2+00	3.0	73.0
86	0+25N	0.0	88.0
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88	0+75N	0.0	80.0
89	1+00N	3.0	74.0
90	1+25N	0.0	75.0
91	1+50N	3.0	96.0
92	1+75N	0.0	245.0
93	2+00N	3.0	103.0
94	2+25N	0.0	93.0
95	2+50N	3.0	180.0
96	2+75N	0.0	97.0
97	3+00N	3.0	90.0
98	3+25N	0.0	89.0
99	3+50N	80.0	92.0
100	3+75N	0.0	101.0
101	4+00N	3.0	102.0
102	4+25N	0.0	82.0
103	4+50N	3.0	58.0
104	4+75N	0.0	64.0
105	5+00N	3.0	55.0
106	0+00N L2+50	3.0	91.0
107	0+25N	0.0	76.0
108	0+50N	3.0	95.0
109	0+75N	0.0	74.0
110	1+00N	3.0	81.0

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156	2+50N	3.0	97.0
157	2+75N	0.0	77.0
158	3+00N	3.0	90.0
159	3+25N	0.0	83.0
160	3+50N	3.0	76.0
161	3+75N	0.0	97.0
162	4+00N	3.0	81.0
163	4+25N	0.0	65.0
164	4+50N	3.0	41.0
165	4+75N	0.0	117.0
166	0+00N L4+00	3.0	81.0
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182	4+00N	3.0	100.0
183	4+25N	0.0	37.0
184	4+50N	3.0	53.0
185	0+00N L4+50	3.0	88.0
186	0+25N	0.0	101.0
187	0+50N	3.0	100.0
188	0+75N	0.0	97.0
189	1+00N	3.0	110.0
190	1+25N	0.0	114.0

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KRAL NO.	IDENTIFICATION	AU	CU
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194	2+25N	0.0	73.0
195	2+50N	3.0	95.0
196	2+75N	0.0	113.0
197	3+00N	3.0	102.0
198	3+25N	0.0	82.0
199	3+50N	3.0	94.0
200	3+75N	0.0	65.0
201	0+00N L5+00	3.0	105.0
202	0+25N	0.0	87.0
203	0+50N	3.0	82.0
204	0+75N	0.0	104.0
205	1+00N	3.0	82.0
206	1+25N	0.0	94.0
207	1+50N	3.0	82.0
208	1+75N	0.0	82.0
209	2+00N	3.0	86.0
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211	2+50N	3.0	85.0
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213	0+00N L5+50	3.0	95.0
214	0+25N	0.0	92.0
215	0+50N	3.0	71.0
216	0+75N	0.0	79.0
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218	1+25N	0.0	75.0
219	1+50N	3.0	84.0
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226	1+00N	3.0	71.0
227	1+25N	0.0	80.0
228	0+00N L6+50	3.0	88.0
229	0+25N	0.0	78.0
230	0+50N	3.0	109.0

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KRAL NO.	IDENTIFICATION	AU	CU
231	0+75N	0.0	103.0

IN AU COLUMN 3 INDICATES <5 PPB 0 INDICATES AU NOT DONE



LEGEND

- GEOCHEM RESULTS
- ACTUAL BOUNDARY
- CLAIM POST
- CLAIM LINE
- TREES
- ROAD
- FENCE
- 100 ppm Cu }
150 ppm Cu } CONTOURS
200 ppm Cu }
- NICOLA GROUP
- SUGARLOAF UNIT
- IRON MASK HYBRID UNIT
- GEOLOGICAL CONTACT
- GEOLOGICAL CONTACT (UNCERTAIN)

0 50 100 200 300
GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,970
OWNER OF SURFACE - G. HANNON (RANCHER)

TECK EXPLORATIONS LIMITED
SUNNY CLAIM - KAMLOOPS MINING DIV.

GEOCHEM SURVEY
Au - Cu
(ppb) (ppm)

COMPILED BY: G. LOVANG DATE: MAY 5, 1986 FIG. NO.
DRAWN BY: JR SCALE: 1:2500 NTS: 92 I / 9W

LCP
SUNNY
3N, 3E