

COMINCO LTD.

EXPLORATION  
NTS: 92I/10

WESTERN DISTRICT

ASSESSMENT REPORT

PERCUSSION DRILLING - HAPPY DAYS MINERAL CLAIMS

ROPER LAKE AREA, KAMLOOPS M.D.

LATITUDE: 50°34'45"      LONGITUDE: 120°39'30"

(Work Performed between May 14 and July 15, 1979)

AUGUST 1979

R.U. BRUASET

7436

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(Work Performed between May 14 and July 15, 1979)

INTRODUCTION

This report describes a percussion drilling program carried out on the HAPPY DAYS and HAPPY DAYS #5 mineral claims located on a porphyry molybdenum prospect about 26 km WSW of the City of Kamloops in the south central Interior. The property is accessible by the Dominic Lake Road from Cherry Creek on the Trans Canada Highway, a distance of 30 km.

SUMMARY

Since 1978 this property has been under option from Keda Resources (1973) Ltd. The area of interest is the Roper Lake stock, a roughly circular granite plug about 2 km in diameter. The stock intrudes volcanic rocks of the Upper Triassic Nicola Group. The granite has not been dated, however, it is felt that a Tertiary age is probable. A narrow belt of Upper Triassic volcanic rocks trending NNW extends part way across the stock near its centre. It is thought that these volcanic rocks represent a pendant in view of the fact that several drill holes collared in the volcanics encountered Roper Lake granite at depth. The granite and the rocks of the volcanic pendant are generally very poorly exposed.

Molybdenum mineralization occurs both in the Roper Lake stock and the volcanics. The mineralization occurs typically in quartz veins and along narrow fractures generally in association with pyrite.

Diamond and percussion drilling was carried out in the late 1960's in the western half of the Roper Lake stock. Several of these holes encountered encouraging molybdenum mineralization. The percussion drilling described in this report was mainly done in the eastern part of the Roper Lake granite. Some of these holes encountered interesting values in molybdenite.

HISTORY

Kennco Exploration (Western) Ltd. is believed to have made the initial discovery of molybdenum mineralization in the area in 1959. Soil sampling and IP surveying were carried out on Kennco's DRG claims in 1960. A number of geochemical and geophysical anomalies were indicated.

No significant drill testing was carried out and the claims were allowed to lapse.

Mr. C.W. Dansey, Prospector, staked the T.C. and Spur groups of claims which relocated the former Kennco ground. In 1966 and 1967 under Dansey's direction and that of their consultant Gavin Dirom, Dominic Lake Mining Co. Ltd. conducted road building, trenching as well as percussion and diamond drilling programs. A number of the diamond drill holes encountered encouraging molybdenum values in the Roper Lake granite and Roper Lake pendant in the vicinity of Roper Lake.

Programs of geological mapping, soil sampling and magnetic surveying were carried out in the following years but little or no drilling was done. By 1978 Dansey's claims had lapsed and the area had been relocated as HAPPY DAYS and HAPPY DAYS #3 mineral claims on behalf of Keda Resources (1973) Ltd. Jim Dawson and John Kerr are the principals for Keda.

In 1978 Cominco re-evaluated the available data on the property which included a considerable body of data in assessment report terms. Most of this information extending back to Kennco's discovery is well documented in the assessment reports on the area and the grid-controls are still clearly discernable. Cominco conducted its own geologic mapping of the property, and IP survey and drilled a number of bedrock/overburden sample holes for geological and geochemical information within the northern half of the Roper Lake stock. These holes confirmed the extent of the Roper Lake stock and pendant in the area tested and yielded several molybdenum anomalies in soils and bedrock.

#### PERCUSSION DRILLING

Seventeen vertical holes total 4,420 feet (1,347.6 m) were drilled in 1979. The depths of the holes range from 80 to 340 feet. Broken ground prevented a number of holes from reaching the projected depth of 300 feet.

Conventional ten-foot samples representing a 1/16 split were collected in plastic refuse containers. Excess water was decanted after a settling agent had been added and the sample allowed to settle. The remaining sludge was poured into sludge cutter bags for removal of most of the remaining water. The bags were then left to dry in the sun for a few hours. Dry samples, contained in sludge cutter bags, were placed in plastic bags, which were then taken to Cominco's Exploration Research Laboratory in Vancouver for analysis.

All analysis were done by standard methods. In some cases (Mo ppm) was done geochemically as a first pass acid digestion using  $\text{HNO}_3\text{-HClO}_4$  colorimetry. In the case of assay (% Mo) the method and chemicals are the same as for the geochemical determinations but the measurements are more accurate.

Tungsten was determined by  $\text{K}_2\text{S}_2\text{O}_7$  fusion and colorimetry. Gold was determined by aqua regia solvent extraction and A.A. Cu, Pb, Zn, Ag, and Mn were done with aqua regia with determinations on the A.A. Fluorine was determined by the specific ion method. The sludge was examined at the drill site for rock type, mineralization and alteration using a ten power hand lens. This is sufficient to indicate major rock

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types and mineralization, and gives some indication of grade.

#### TREATMENT OF DATA

The attached plan shows the position of the drill holes in relation to existing roads and claims. The latitude and longitude of the centre of Roper Lake is shown on this plan in order to provide a tie-in with government maps.

The lithologies encountered in the drill holes are noted in the percussion drill logs.

Assay results for all elements determined are attached to this report.

#### CONCLUSIONS

Interesting values in molybdenum are present in PH's 79-1, 3 to 8, and 16.

Report by: R. U. Bruaset

R.U. Bruaset  
Project Geologist

Endorsed by: D. L. Cooke for D.C.

D.L. Cooke  
Senior Geologist

Endorsed by: G. Harden

G. Harden  
Manager, Western District

#### Attachments

- 1) Drill Plan Scale 1:20,000
- 2) Percussion Drill Logs
- 3) Assay Sheets
- 4) Cost Estimate (Exhibit "A")
- 5) Statement of Qualifications

RUB:hmr

PERCUSSION DRILL LOGS

HAPPY DAYS PROPERTY

P.H. RL 79-1

<u>Depth (feet)</u>	<u>Notes</u>
0-47	Overburden
47-300	Roper Lake granite. Strong argillic alteration of plagioclase. Mafics altered to chlorite. MoS <sub>2</sub> occurs in quartz veins associated with pyrite. Plagioclase and biotite both becoming less intensely altered with depth.

END

P.H. RL 79-2

0-39	Overburden
39-260	Roper Lake granite. Strong argillic alteration. Minor MoS <sub>2</sub> and pyrite in quartz.
260-290	Dioritic dyke. Unmineralized and weakly altered.

END

P.H. RL 79-3

0-20	Overburden
20-55	Nicola volcanics. Pyritic with strong epidote development. Heavy MoS <sub>2</sub> in quartz veins.
55-60	Garnet-epidote skarn. Heavy MoS <sub>2</sub> occurs in association with epidote in fractures.
60-80	Nicola volcanics. Fairly heavy MoS <sub>2</sub> in quartz veins, weaker epidote development.
80-190	Roper Lake granite, strong argillic alteration of plagioclase. MoS <sub>2</sub> and pyrite in quartz veins. Granite becoming fresher with depth from 150-190. Hole abandoned at 190' due to stuck rods in section of caving. All rods recovered.

END

P.H. RL 79-4

0-20	Overburden
20-260	Roper Lake granite. Generally strong alteration, biotite usually fresh. Abundant quartz

Depth (feet)	Notes
20-260 Cont'd.	<p>in the better mineralized section, MoS<sub>2</sub> content in end of hole similar to the best part of P.-. RL 79-1. Hole abandoned at 260' due to stuck rods in section of caving. All rods recovered.</p> <p>END</p>
<u>P.H. RL 79-5</u>	
0-60 60-270	<p>Overburden Roper Lake granite, oxidized at the top of the interval. Biotite generally fresh or weakly chloritized. Strong argillic alteration of plagioclase. Minor MoS<sub>2</sub> in quartz veins. Pyrite throughout.</p>
270-280 280-310	<p>Dioritic intrusive with heavy pyrite Roper Lake granite as 60-270, minor MoS<sub>2</sub>.</p>
END	
<u>P.H. RL 79-6</u>	
0-43 43-260	<p>Overburden Roper Lake granite. Generally weak argillic alteration, biotite usually fresh. Pyrite throughout. MoS<sub>2</sub> throughout and appears to increase with depth. Hole abandoned due to sticking rods.</p>
260'	END
<u>P.H. RL 79-7</u>	
0-65 65-300	<p>Overburden Roper Lake granite. Weakly altered plagioclase and generally fresh biotite. MoS<sub>2</sub> and pyrite throughout associated with quartz.</p>
END	
<u>P.H. RL 79-8</u>	
0-14 14-300	<p>Overburden Roper Lake granite. Fairly intense argillic alteration of plagioclase. MoS<sub>2</sub> associated with quartz veins.</p>
END	

Depth (feet)	Notes
<u>P.H. RL 79-9</u>	
0-24 24-210	Overburden Roper Lake granite, strong argillic alteration. Minor MoS <sub>2</sub> . Pyrite throughout about 1-2% and strong chloritization. Hole abandoned due to sticking drill rods.  END
<u>P.H. RL 79-10</u>	
0-5 5-20 20-200	Overburden Nicola volcanics Roper Lake granite. Minor molybdenum in quartz veins. Strong argillic alteration in upper part of the hole decreasing in intensity towards the bottom. Mafics chloritized throughout, 1-2% pyrite.  END
<u>P.H. RL 79-11</u>	
0-5 5-80	Overburden Nicola volcanics. Chloritized and epidotized volcanics containing heavy pyrite and minor MoS <sub>2</sub> in quartz veins. Much caving and frequent loss of circulation lead to abandonment of this hole. (Hole =12 in- tended as a second try in the area of PH 79-11.)  END
<u>P.H. RL 79-12</u>	
0-15 15-340	Overburden Nicola volcanics. Chloritized and epidotized, 2-3% pyrite occurs as disseminations and in quartz veins. Traces of MoS <sub>2</sub> . Roper Lake dykes occasionally intersected in the last 100 feet of the hole. Traces of MoS <sub>2</sub> in the dykes. Dykes are usually strongly chloritized but argillic alteration is weak. 3-5% pyrite in the volcanics in the lower part of the hole. Hole abandoned due to sticking drill rods.  END

Depth (feet)	Notes
<u>P.H. RL 79-13</u>	
0-30 30-270	Overburden Nicola. Strongly chloritized and epidotized. Abundance of quartz veins but only traces of MoS <sub>2</sub> . 2% pyrite. Lack of any Roper Lake granite dykes in this hole suggests the volcanics may be fairly thick or that the hole is collared outside of the vertical projection of the Roper Lake stock.
END	
<hr/> <u>P.H. RL 79-14</u>	
0-10 10-210	Overburden Nicola. Mafics chloritic. Frequent sections of strong bleaching. 5% pyrite. Some quartz veining present but only traces of MoS <sub>2</sub> .
END	
<hr/> <u>P.H. RL 79-15</u>	
0-10 10-300	Overburden Abundant chlorite and epidote. Fairly heavy MoS <sub>2</sub> in quartz veins. Heavy pyrite (3-5%) throughout. No dykes of Roper Lake granite encountered in this hole. Nicola throughout.
END	
<hr/> <u>P.H. RL 79-16</u>	
0-34 34-300	Overburden Roper Lake granite. Strong argillic alteration, mafics generally chloritized. Abundant quartz veins. MoS <sub>2</sub> in quartz veins throughout hole. Pyrite ¼% or less throughout.
END	
<hr/> <u>P.H. RL 79-17</u>	
0-34 34-60 60-110	Overburden Nicola volcanics. Chloritized and epidotized, minor MoS <sub>2</sub> in quartz veins. Nicola volcanics cut by dykes of Roper Lake granite. The granite is weakly altered and weakly mineralized with MoS <sub>2</sub> .



Depth (feet)	Notes
110-300	Roper Lake granite. Generally weak argillic alteration of plagioclase. Biotite generally chloritic. Minor $\text{MoS}_2$ . Generally 0.25% pyrite or less. Abundant fragments of volcanic rock throughout hole indicates probable caving from the top of the hole.  END

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SAMPLE NUMBER	FIELD NUMBER	Mo(1) %	Mo ppm
R79 06361	DH79-1 47-60	0.034	
R79 06362	DH79-1 60-70	0.061	
R79 06363	DH79-1 70-80	0.042	
R79 06364	DH79-1 80-90	0.083	
R79 06365	DH79-1 90-100	0.018	
R79 06366	DH79-1 100-110	0.116	
R79 06367	DH79-1 110-120	0.126	
R79 06368	DH79-1 120-130	0.119	
R79 06369	DH79-1 130-140	0.092	
R79 06370	DH79-1 140-150	0.088	
R79 06371	DH79-1 150-160	0.059	
R79 06372	DH79-1 160-170	0.053	
R79 06373	DH79-1 170-180	0.023	
R79 06374	DH79-1 180-190	0.059	
R79 06375	DH79-1 190-200	0.053	
R79 06376	DH79-1 200-210	0.130	
R79 06377	DH79-1 210-220	0.042	
R79 06378	DH79-1 220-230	0.042	
R79 06379	DH79-1 230-240	0.077	
R79 06380	DH79-1 240-250	0.121	
R79 06381	DH79-1 250-260	0.052	
R79 06382	DH79-1 260-270	0.220	
R79 06383	DH79-1 270-280	0.114	
R79 06384	DH79-1 280-290	0.121	
R79 06385	DH79-1 290-300	0.054	
R79 06386	DH79-2 39-50	.038	
R79 06387	DH79-2 50-60	.060	
R79 06388	DH79-2 60-70	.060	
R79 06389	DH79-2 70-80	.042	
R79 06390	DH79-2 80-90	.020	
R79 06391	DH79-2 90-100	.037	
R79 06392	DH79-2 100-110	.043	
R79 06393	DH79-2 110-120	.034	
R79 06394	DH79-2 120-130	.028	
R79 06395	DH79-2 130-140	.065	
R79 06396	DH79-2 140-150	.038	
R79 06397	DH79-2 150-160	.018	
R79 06398	DH79-2 160-170	.016	
R79 06399	DH79-2 170-180	.028	

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SAMPLE NUMBER	FIELD NUMBER	Mo(1) %	Mo ppm
R79 06400	DH79-2 180-190	.044	
R79 06401	DH79-2 190-200	.020	
R79 06402	DH79-2 200-210	.007	
R79 06403	DH79-2 210-220	.005	
R79 06404	DH79-2 220-230	.006	
R79 06405	DH79-2 230-240	.005	
R79 06406	DH79-2 240-250	.004	
R79 06407	DH79-2 250-260	.004	
R79 06408	DH79-2 260-270	.004	
R79 06409	DH79-2 270-280	.003	
R79 06410	DH79-2 280-290	.003	
R79 06411	DH79-3 20-30	0.036	
R79 06412	DH79-3 30-40	0.057	
R79 06413	DH79-3 40-50	0.038	
R79 06414	DH79-3 50-60	0.042	
R79 06415	DH79-3 60-70	0.048	
R79 06416	DH79-3 70-80	0.038	
R79 06417	DH79-3 80-90	0.056	
R79 06418	DH79-3 90-100	0.067	
R79 06419	DH79-3 100-110	0.075	
R79 06420	DH79-3 110-120	0.365	
R79 06421	DH79-3 120-130	0.053	
R79 06422	DH79-3 130-140	0.061	
R79 06423	DH79-3 140-150	0.042	
R79 06424	DH79-3 150-160	0.031	
R79 06425	DH79-3 160-170	0.098	
R79 06426	DH79-3 170-180	0.089	
R79 06427	DH79-3 180-190	0.039	
R79 06428	DH79-4 20-30	0.007	
R79 06429	DH79-4 30-40	0.010	
R79 06430	DH79-4 40-50	0.009	
R79 06431	DH79-4 50-60	0.012	
R79 06432	DH79-4 60-70	0.042	
R79 06433	DH79-4 70-80	0.005	
R79 06434	DH79-4 80-90	0.011	
R79 06435	DH79-4 90-100	0.016	
R79 06436	DH79-4 100-110	0.013	
R79 06437	DH79-4 110-120	0.014	
R79 06438	DH79-4 120-130	0.023	

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SAMPLE NUMBER	FIELD NUMBER	Mo(1) %	Mo ppm
R79 06439	DH79-4 130-140	0.016	
R79 06440	DH79-4 140-150	0.004	
R79 06441	DH79-4 150-160	0.007	
R79 06442	DH79-4 160-170	0.014	
R79 06443	DH79-4 170-180	0.024	
R79 06444	DH79-4 180-190	0.010	
R79 06445	DH79-4 190-200	0.037	
R79 06446	DH79-4 200-210	0.077	
R79 06447	DH79-4 210-220	0.039	
R79 06448	DH79-4 220-230	0.033	
R79 06449	DH79-4 230-240	0.032	
R79 06450	DH79-4 240-250	0.015	
R79 06451	DH79-4 250-260	0.179	
R79 06452	DH79-5 60-70		60
R79 06453	DH79-5 70-80		110
R79 06454	DH79-5 80-90		70
R79 06455	DH79-5 90-100		65
R79 06456	DH79-5 100-110		80
R79 06457	DH79-5 110-120		110
R79 06458	DH79-5 120-130	.015	125
R79 06459	DH79-5 130-140		65
R79 06460	DH79-5 140-150		130
R79 06461	DH79-5 150-160	.014	130
R79 06462	DH79-5 160-170		135
R79 06463	DH79-5 170-180		130
R79 06464	DH79-5 180-190		95
R79 06465	DH79-5 190-200	.025	225
R79 06466	DH79-5 200-210		110
R79 06467	DH79-5 210-220		140
R79 06468	DH79-5 220-230		110
R79 06469	DH79-5 230-240	.015	135
R79 06470	DH79-5 240-250		120
R79 06471	DH79-5 250-260		100
R79 06472	DH79-5 260-270	.016	130
R79 06473	DH79-5 270-280		70
R79 06474	DH79-5 280-290	.021	
R79 06475	DH79-5 290-300	.020	
R79 06476	DH79-5 300-310	.017	

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Where analysis requested but no values shown, results are to follow

ANALYTICAL METHODS

Mo

HNO3-HClO4/colorimetric

Mo(1)

Assay: HNO3-HClO4/colorimetric

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SAMPLE NUMBER	FIELD NUMBER	Mo(1) %	Mo ppm
R79 06665	DH79-6 43-60	.071	
R79 06666	DH79-6 60-70	.208	
R79 06667	DH79-6 70-80	.027	
R79 06668	DH79-6 80-90	.042	
R79 06669	DH79-6 90-100	.070	
R79 06670	DH79-6 100-110	.049	
R79 06671	DH79-6 110-120	.053	
R79 06672	DH79-6 120-130	.061	
R79 06673	DH79-6 130-140	.055	
R79 06674	DH79-6 140-150	.032	
R79 06675	DH79-6 150-160	.074	
R79 06676	DH79-6 160-170	.043	
R79 06677	DH79-6 170-180	.035	
R79 06678	DH79-6 180-190	.103	
R79 06679	DH79-6 190-200	.072	
R79 06680	DH79-6 200-210	.100	
R79 06681	DH79-6 210-220	.091	
R79 06682	DH79-6 220-230	.050	
R79 06683	DH79-6 230-240	.053	
R79 06684	DH79-6 240-250	.087	
R79 06685	DH79-6 250-260	.150	
R79 06686	DH79-7 100-110	.048	
R79 06687	DH79-7 130-140	.103	
R79 06688	DH79-7 180-190	.032	
R79 06689	DH79-7 190-200	.026	
R79 06690	DH79-7 200-210	.047	
R79 06691	DH79-7 220-230	.062	
R79 06692	DH79-7 230-240	.041	
R79 06693	DH79-7 260-270	.046	
R79 06694	DH79-7 270-280	.039	
R79 06695	DH79-7 290-300	.045	
R79 06696	DH79-8 14-30	.044	
R79 06697	DH79-8 30-40	.037	
R79 06698	DH79-8 40-50	.032	
R79 06699	DH79-8 50-60	.039	
R79 06700	DH79-8 60-70	.082	
R79 06701	DH79-8 70-80	.082	
R79 06702	DH79-7 65-80	.029	260
R79 06703	DH79-7 80-90	0.015	175

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SAMPLE NUMBER	FIELD NUMBER	Mo(1) %	Mo ppm
R79 06704	DH79-7 90-100	.099	
R79 06705	DH79-7 110-120	.047	
R79 06706	DH79-7 120-130	.060	
R79 06707	DH79-7 150-160	.049	
R79 06708	DH79-7 160-170	0.040	400
R79 06709	DH79-7 170-180	0.032	
R79 06710	DH79-7 210-220	.071	720
R79 06711	DH79-7 240-250	0.025	260
R79 06712	DH79-7 250-260	.073	
R79 06713	DH79-7 280-290	.054	
R79 06714	DH79-8 80-90	.017	
R79 06715	DH79-8 90-100	.026	
R79 06716	DH79-8 100-110	.028	
R79 06717	DH79-8 110-120	.036	
R79 06718	DH79-8 120-130	0.028	280
R79 06719	DH79-8 130-140	0.038	400
R79 06720	DH79-8 140-150	.023	
R79 06721	DH79-8 150-160	.027	
R79 06722	DH79-8 160-170	.017	
R79 06723	DH79-8 170-180	.010	
R79 06724	DH79-8 180-190	.023	
R79 06725	DH79-8 190-200	.039	
R79 06726	DH79-8 200-210	.031	
R79 06727	DH79-8 210-220	.017	
R79 06728	DH79-8 220-230	.023	
R79 06729	DH79-8 230-240	.016	
R79 06730	DH79-8 240-250	.015	
R79 06731	DH79-8 250-260	.017	
R79 06732	DH79-8 260-270	.012	
R79 06733	DH79-8 270-280	.014	
R79 06734	DH79-8 280-290	.027	
R79 06735	DH79-8 290-300	.019	
R79 06736	DH79-9 24-40	.012	
R79 06737	DH79-9 40-50	.024	
R79 06738	DH79-9 50-60		80
R79 06739	DH79-9 60-70		115
R79 06740	DH79-9 70-80	0.053	
R79 06741	DH79-9 80-90		130
R79 06742	DH79-9 90-100	0.017	

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SAMPLE NUMBER	FIELD NUMBER	Mo(1) %	Mo ppm
R79 06743	DH79-9 100-110		175
R79 06744	DH79-9 110-120		65
R79 06745	DH79-9 120-130		85
R79 06746	DH79-9 130-140		150
R79 06747	DH79-9 140-150		115
R79 06748	DH79-9 150-160		140
R79 06749	DH79-9 160-170		150
R79 06750	DH79-9 170-180	.014	
R79 06751	DH79-9 180-190		140
R79 06752	DH79-9 190-200		140
R79 06753	DH79-9 200-210	.018	
R79 06754	DH79-10 5-20		125
R79 06755	DH79-10 20-30	.017	175
R79 06756	DH79-10 30-40	.013	140
R79 06757	DH79-10 40-50	.023	
R79 06758	DH79-10 60-70	.020	
R79 06759	DH79-10 70-80		140
R79 06760	DH79-10 50-60	.023	
R79 06761	DH79-10 80-90		175
R79 06762	DH79-10 90-100		180
R79 06763	DH79-10 100-110		150
R79 06764	DH79-10 110-120		90
R79 06765	DH79-10 120-130		85
R79 06766	DH79-10 130-140	.023	
R79 06767	DH79-10 140-150	.013	140
R79 06768	DH79-10 150-160	.036	
R79 06769	DH79-10 160-170	.031	
R79 06770	DH79-10 170-180	.020	
R79 06771	DH79-10 180-190		150
R79 06772	DH79-10 190-200	.012	
R79 06773	DH79-11 5-20		90
R79 06774	DH79-11 20-30		120
R79 06775	DH79-11 30-40		100
R79 06776	DH79-11 40-50	.022	
R79 06777	DH79-11 50-60	.010	
R79 06778	DH79-11 60-70	.020	
R79 06779	DH79-11 70-80	.025	
R79 06780	DH79-12 15-30	.018	
R79 06781	DH79-12 30-40	.015	



REPORTING DATE 1 AUG 1979

PEAFIS P

SAMPLE NUMBER	FIELD NUMBER	Mo(1) %	Mo ppm
R79 06782	DH79-12 40-50	.011	
R79 06783	DH79-12 50-60	.011	
R79 06784	DH79-12 60-70	.018	
R79 06785	DH79-12 70-80	.015	
R79 06786	DH79-12 80-90	.013	
R79 06787	DH79-12 90-100	.011	
R79 06788	DH79-12 100-110	.010	
R79 06789	DH79-12 110-120	.009	100
R79 06790	DH79-12 120-130	.007	75
R79 06791	DH79-12 130-140	.009	115
R79 06792	DH79-12 140-150	.016	
R79 06793	DH79-12 150-160	.010	
R79 06794	DH79-12 160-170	.006	
R79 06795	DH79-12 170-180	.005	
R79 06796	DH79-12 180-190	.009	
R79 06797	DH79-12 190-200	.006	
R79 06798	DH79-12 200-210	.007	
R79 06799	DH79-12 210-220	.019	
R79 06800	DH79-12 220-230	.015	
R79 06801	DH79-12 230-240	.005	
R79 06802	DH79-12 240-250	.010	
R79 06803	DH79-12 250-260	.022	
R79 06804	DH79-12 260-270	.007	75
R79 06805	DH79-12 270-280	.011	100
R79 06806	DH79-12 280-290	.016	
R79 06807	DH79-12 290-300	.015	
R79 06808	DH79-12 300-310	.007	
R79 06809	DH79-12 310-320	.005	
R79 06810	DH79-12 320-330	.011	
R79 06811	DH79-12 330-340	.016	
R79 06812	DH79-13 30-40	.005	
R79 06813	DH79-13 40-50	.010	
R79 06814	DH79-13 50-60	.007	
R79 06815	DH79-13 60-70		45
R79 06816	DH79-13 70-80		25
R79 06817	DH79-13 80-90	.007	90
R79 06818	DH79-13 90-100	.008	
R79 06819	DH79-13 100-110	.005	
R79 06820	DH79-13 110-120	.005	

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p-70715 PAR

SAMPLE NUMBER	FIELD NUMBER	Mo(1) %	Mo ppm
R79 06821	DH79-13 120-130		90
R79 06822	DH79-13 130-140		80
R79 06823	DH79-13 140-150	.008	100
R79 06824	DH79-13 150-160		110
R79 06825	DH79-13 160-170		60
R79 06826	DH79-13 170-180		45
R79 06827	DH79-13 180-190		80
R79 06828	DH79-13 190-200		45
R79 06829	DH79-13 200-210		85
R79 06830	DH79-13 210-220		35
R79 06831	DH79-13 220-230		140
R79 06832	DH79-13 230-240	.009	100
R79 06833	DH79-13 240-250		95
R79 06834	DH79-13 250-260		115
R79 06835	DH79-13 260-270		90
R79 06836	DH79-14 10-20		45
R79 06837	DH79-14 20-30		140
R79 06838	DH79-14 30-40	.013	160
R79 06839	DH79-14 40-50		65
R79 06840	DH79-14 50-60		125
R79 06841	DH79-14 60-70	.004	60
R79 06842	DH79-14 70-80	.011	130
R79 06843	DH79-14 80-90		50
R79 06844	DH79-14 90-100		100
R79 06845	DH79-14 100-110	.006	50
R79 06846	DH79-14 110-120		75
R79 06847	DH79-14 120-130		175
R79 06848	DH79-14 130-140		70
R79 06849	DH79-14 140-150		90
R79 06850	DH79-14 150-160	.013	150
R79 06851	DH79-14 160-170		150
R79 06852	DH79-14 170-180		110
R79 06853	DH79-14 180-190		60
R79 06854	DH79-14 190-200		160
R79 06855	DH79-14 200-210		110
R79 06856	DH79-15 10-20		120
R79 06857	DH79-15 20-30	.020	240
R79 06858	DH79-15 30-40	.029	300
R79 06859	DH79-15 40-50		140

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P100715 PA

SAMPLE NUMBER	FIELD NUMBER	Mo(1) %	Mo ppm
R79 06860	DH79-15 50-60	.029	
R79 06861	DH79-15 60-70	.031	
R79 06862	DH79-15 70-80	.046	
R79 06863	DH79-15 80-90	.019	
R79 06864	DH79-15 90-100	.020	
R79 06865	DH79-15 100-110	.026	
R79 06866	DH79-15 110-120	.015	
R79 06867	DH79-15 120-130	.011	
R79 06868	DH79-15 130-140		120
R79 06869	DH79-15 140-150	0.015	200
R79 06870	DH79-15 150-160	.009	
R79 06871	DH79-15 160-170	.015	
R79 06872	DH79-15 170-180	.072	
R79 06873	DH79-15 180-190	.093	
R79 06874	DH79-15 190-200	.019	
R79 06875	DH79-15 200-210	.016	
R79 06876	DH79-15 210-220	.014	
R79 06877	DH79-15 220-230	.029	
R79 06878	DH79-15 230-240	.018	
R79 06879	DH79-15 240-250	.016	
R79 06880	DH79-15 250-260		175
R79 06881	DH79-15 260-270	.020	
R79 06882	DH79-15 270-280	.018	
R79 06883	DH79-15 280-290	.014	
R79 06884	DH79-15 290-300	.025	
R79 06885	DH79-16 34-50	.019	
R79 06886	DH79-16 50-60	.014	
R79 06887	DH79-16 60-70	.015	
R79 06888	DH79-16 70-80	.105	
R79 06889	DH79-16 80-90	.144	
R79 06890	DH79-16 90-100	.059	
R79 06891	DH79-16 100-110	.047	
R79 06892	DH79-16 110-120		140
R79 06893	DH79-16 120-130		135
R79 06894	DH79-16 130-140		175
R79 06895	DH79-16 140-150		125
R79 06896	DH79-16 150-160	.076	700
R79 06897	DH79-16 160-170	.017	150
R79 06898	DH79-16 170-180		125

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SAMPLE NUMBER	FIELD NUMBER	Mo(1) %	Mo ppm
R79 06899	DH79-16 180-190		130
R79 06900	DH79-16 190-200		65
R79 06901	DH79-16 200-210	.014	
R79 06902	DH79-16 210-220	.015	
R79 06903	DH79-16 220-230		100
R79 06904	DH79-16 230-240		115
R79 06905	DH79-16 240-250		120
R79 06906	DH79-16 250-260		100
R79 06907	DH79-16 260-270		120
R79 06908	DH79-16 270-280	.018	
R79 06909	DH79-16 280-290	.022	
R79 06910	DH79-16 290-300	.020	
R79 06911	DH79-17 34-50	.002	
R79 06912	DH79-17 50-60	.003	
R79 06913	DH79-17 60-70	.004	
R79 06914	DH79-17 70-80		70
R79 06915	DH79-17 80-90		15
R79 06916	DH79-17 90-100		45
R79 06917	DH79-17 100-110		40
R79 06918	DH79-17 110-120		80
R79 06919	DH79-17 120-130		45
R79 06920	DH79-17 130-140		50
R79 06921	DH79-17 140-150	.013	150
R79 06922	DH79-17 150-160		70
R79 06923	DH79-17 160-170		75
R79 06924	DH79-17 170-180		30
R79 06925	DH79-17 180-190		115
R79 06926	DH79-17 190-200		140
R79 06927	DH79-17 200-210	0.021	225
R79 06928	DH79-17 210-220		175
R79 06929	DH79-17 220-230		125
R79 06930	DH79-17 230-240		125
R79 06931	DH79-17 240-250		100
R79 06932	DH79-17 250-260		100
R79 06933	DH79-17 260-270		110
R79 06934	DH79-17 270-280		100
R79 06935	DH79-17 280-290		90
R79 06936	DH79-17 290-300		140

REPORTING DATE 1 AUG 1979

PLATE 15 PAGE

Where analysis requested but no values shown, results are to follow

ANALYTICAL METHODS

Mo

HNO<sub>3</sub>-HClO<sub>4</sub>/colorimetric

Mo(1)

Assay: HNO<sub>3</sub>-HClO<sub>4</sub>/colorimetric

## ROPER LAKE (COMPOSITES)

JL # U796

REPORTING DATE 9 AUG 1979

P13415

SAMPLE NUMBER	FIELD NUMBER		Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mn ppm	F ppm	Au ppb	W ppm
		Footage								
Hole # 1 R79 06477	6361-6365	60'-100'	39	18	43	<.4	350	605	<10	5
R79 06478	6366-6370	100-150	45	8	44	<.4	323	690	<10	6
R79 06479	6371-6375	150-200	36	5	42	<.4	320	620	<10	6
R79 06480	6376-6380	200-250	37	4	33	<.4	272	720	<10	8
R79 06481	6381-6385	250-300'	35	4	38	<.4	290	780	<10	7
R79 06482	6386-6390	30-90'	60	8	33	<.4	290	660	<10	7
R79 06483	6391-6395	90-140	53	6	30	<.4	280	730	<10	6
2 R79 06484	6396-6400	140-190	53	4	30	<.4	325	720	<10	6
R79 06485	6401-6405	190-240	17	9	20	<.4	290	450	<10	6
R79 06486	6406-6410	240-290'	59	4	68	<.4	660	340	16	5
R79 06487	6411-6415	20-70'	152	<4	54	<.4	700	720	<10	65
3 R79 06488	6416-6420	70-120	44	<4	36	<.4	275	580	16	8
R79 06489	6421-6427	120-190'	42	<4	40	<.4	270	605	<10	8
R79 06490	6428-6432	20-70'	21	7	28	<.4	205	560	<10	8
R79 06491	6433-6437	70-120	26	<4	29	<.4	220	535	<10	3
4 R79 06492	6438-6442	120-170	24	<4	26	<.4	235	510	22	8
R79 06493	6443-6447	170-220	20	4	21	<.4	241	560	20	6
R79 06494	6448-6451	220-260'	17	11	18	1.4	230	560	40	6
R79 06495	6452-6456	60-110'	32	<4	26	<.4	187	780	<10	3
R79 06496	6457-6461	110-160	30	<4	30	0.4	213	740	<10	12
5 R79 06497	6462-6466	160-210	32	4	26	<.4	268	720	62	13
R79 06498	6467-6471	210-260	42	7	29	0.5	285	720	12	6
R79 06499	6472-6476	260-310'	41	8	37	<.4	320	730	10	9

Where analysis requested but no values shown, results are to follow

## ANALYTICAL METHODS

Au

## ROPER LAKE (COMPOSITES)

JT 0790

REPORTING DATE 9 AUG 1979

p14715

SAMPLE NUMBER	FIELD NUMBER	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mn ppm	F ppm	Au ppb	W ppm	
6 R79 06940	R7906666-6669	60'-100'	40	8	32	<.4	270	570	<10	7
R79 06941	R7906670-6674	100-150	29	4	29	<.4	225	550	10	9
R79 06942	R7906675-6679	150-200	28	<4	30	<.4	235	620	<10	6
R79 06943	R7906680-6685	200'-260'	31	<4	30	<.4	307	620	<10	4
R79 06944	R796686, 6702-05	65'-120'	30	<4	27	1.0	284	630	<10	12
R79 06945	R796687, 6706-08	120-170	35	63	38	2.0	297	650	22	45
7 R79 06946	6688-90, 6709-10	170-220	28	12	34	0.7	251	690	<10	8
R79 06947	6691-93, 6711-12	220-260	32	4	42	0.7	218	690	<10	8
R79 06948	6694-95, 6713	260'-300'	25	6	34	<.4	260	700	10	17
R79 06949	R7906696-6700	14'-70'	19	4	47	<.4	255	650	<10	8
R79 06950	6701, 6714-6717	20-120	25	9	37	0.4	321	810	10	13
8 R79 06951	R7906718-6722	120-170	20	27	39	2.3	230	580	10	13
R79 06952	R7906723-6726	170-210	21	<4	35	<.4	336	690	10	28
R79 06953	R7906727-6732	210-270	24	<4	36	<.4	304	690	20	30
R79 06954	R7906733-6735	270'-300'	21	<4	31	<.4	295	670	10	6
R79 06955	R7906736-6740	24'-20'	68	8	53	0.4	654	1080	<10	20
9 R79 06956	R7906741-6745	80-130	61	10	39	0.6	333	690	20	30
R79 06957	R7906746-6750	130-180	54	5	26	<.4	228	690	<10	65
R79 06958	R7906751-6753	180'-210'	69	<4	27	<.4	295	860	<10	70
R79 06959	6754-57, 6760	5'-60	50	125	180	2.0	255	570	<10	45
10 R79 06960	6758-59, 6761-63	60-110'	32	228	820	0.4	220	550	<10	40
R79 06961	R7906764-6768	110-160	32	130	451	0.4	225	600	<10	40
R79 06962	R7906769-6772	160-200	48	60	213	0.4	205	530	<10	40
11 R79 06963	R7906773-79	5'-80'	260	<4	69	0.4	495	860	<10	140
R79 06964	R7906780-6784	15'-70'	226	<4	42	0.4	472	760	<10	75
R79 06965	R7906785-6789	70-120	164	<4	53	<.4	530	790	<10	55
12 R79 06966	R7906790-94	120-170	118	<4	55	<.4	470	690	<10	55
R79 06967	R7906795-99	170-220	182	<4	63	<.4	670	860	10	20
R79 06968	R7906812-16	30'-20'	123	<4	48	<.4	520	860	10	100
R79 06969	R7906817-6821	80-130	152	<4	40	<.4	380	790	<10	35
13 R79 06970	R7906822-6826	130-180	106	<4	54	<.4	540	710	<10	40
R79 06971	R7906827-31	180-230	102	6	106	0.4	570	740	<10	85
R79 06972	R7906832-35	230-270	134	<4	56	<.4	620	670	<10	80
R79 06973	R7906836-40	10'-60'	290	5	60	<.4	595	530	10	95
R79 06974	R7906841-45	60-110	315	<4	46	<.4	465	550	16	30
14 R79 06975	R7906846-50	110-160	426	165	401	2.2	850	530	22	60
R79 06976	R7906851-55	160'-210'	255	<4	59	<.4	560	670	12	55
R79 06977	R7906856-60	10'-60'	200	<4	50	<.4	355	820	<10	45
15 R79 06978	R7906861-65	60-110	183	<4	46	<.4	400	820	<10	65

REPORTING DATE 9 AUG 1979

PIS 415

SAMPLE NUMBER	FIELD NUMBER	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mn ppm	F ppm	Au ppb	W ppm	
↑ R79 06979	R7906866-70	110-160	190	<4	52	0.4	520	900	<10	45
R79 06980	R7906871-75	160-210	182	<4	46	<.4	480	940	10	70
15 R79 06981	R7906876-80	210-260	185	<4	54	0.4	535	860	<10	65
R79 06982	R7906881-84	260-300'	200	60	200	0.7	940	760	<10	35
R79 06983	R7906885-89	34-90'	22	8	35	0.6	240	470	12	20
R79 06984	R7906890-94	90-140	28	6	39	0.5	285	530	10	20
16 R79 06985	R7906895-99	140-190	24	6	48	<.4	310	470	18	20
R79 06986	R7906900-904	190-240	27	10	43	1.0	300	535	18	350
R79 06987	R7906905-10	240-300'	37	30	31	<.4	225	580	<10	70
R79 06988	R7906911-15	34-90'	35	<4	58	0.4	390	630	<10	30
R79 06989	R7906916-20	90-140	18	5	39	0.4	280	880	<10	70
17 R79 06990	R7906921-25	140-190	17	11	31	0.4	205	800	<10	25
R79 06991	R7906926-30	190-240	14	12	34	0.4	275	690	<10	35
R79 06992	R7906931-36	240-300'	12	10	32	<.4	280	780	<10	35

Where analysis requested but no values shown, results are to follow

ANALYTICAL METHODS

Au  
Aqua regia/solvent extr/AA

W  
K2S2O7 fusion/colorimetric

Cu  
Pb  
Zn  
Ag  
Mn  
Aqua regia/AA

F  
Specific ion



EXHIBIT "A"

COST ESTIMATE

ROPER LAKE PROPERTY (HAPPY DAYS CLAIMS)

Work Performed During Period May 14 - July 15, 1979

Salaries - R.U. Bruaset	Project days 42 days @ \$150/day	\$ 6,300
	R.A. Ryziuk Project days 10 days @ \$ 70/day	700
Transportation		1,765
Communications		100
Living Expenses		1,500
Miscellaneous Supplies		820
Reclamation		2,400
Bulldozer Contract		5,900
Assaying		3,100
Drilling Contract		<u>17,680</u>
		<u>\$ 40,265</u>

Overall cost/foot of drilling is \$ 9.11/ft

or \$29.88/metre

**7436**


STATEMENT OF QUALIFICATIONS

I, Ragnar U. Bruaset, with business address at 409 Granville Street, Vancouver, British Columbia, V6C 1T2, do hereby certify that I have supervised the percussion drilling programme on the HAPPY DAYS Property.

I also certify that:

- 1) I am a graduate of the University of British Columbia with a degree of B.Sc. in Geology 1967.
- 2) That I have been involved in exploration work for Cominco Ltd. since 1967 and that I have been involved in all phases of porphyry copper exploration and development since 1968 to the present.
- 3) That I have been closely involved with the exploration work on the HAPPY DAYS property during the period July 1, 1978 to the present.

Respectfully submitted:



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Ragnar U. Bruaset, B.Sc.  
Project Geologist

