

## REPORT TO

CRY LAKE MINERALS LTD. (N.P.L.)

ON

### KIRK PROSPECT

## MCDAME CREEK AREA, N.E. BRITISH COLUMBIA

LOCATION: 59° 02' LAT. 129° 10' LONG.

FEBRUARY 1971

4

JAMES R. GLASS CONSULTING GEOLOGIST

For accompanying maps, see report by E.J.Black March 1970.

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#### INTRODUCTION

During the month of October 1970 a preliminary diamond drilling program was carried out to test the bedrock under the main showings on the Cry Lake Minerals Ltd. (N.P.L.) property.

At the same time a trenching program and some geochemical soil sampling was done.

The results of this current work are discussed in the following report.

#### SUMMARY & CONCLUSIONS

- 1. Eight diamond drill holes of depth from 201 feet to 217 feet were used to sample the bedrock under the four main showings on the Kirk claims. The first five holes were located in the vicinity of showings No. 1, No. 2 and No. 3 and the geochemical anomaly associated with them. The last three holes were in the vicinity of showing No. 4.
- 2.

Small amounts and short sections of sub economic copper, lead, zinc mineralization were found in samples split from six of the drill holes. The highest assays returned are as follows:

Hole No.	Intersection	Length	<u>Cu.%</u>	<u>Pb.%</u>	<u>Zn.%</u>	Au. oz/ton	Ag. <u>oz/ton</u>
1.	59.0 - 65.0	6.0'	0.03	1.04	2.10	tr.	0.3
3. 3.	180.0 - 184.0 184.0 - 187.1	4.0' 3.1'	0.39 0.68	0.44 0.80	0.27 1.72	tr.	0.4
7.	31.0 - 35.0	4.0'	0.26	0.43	4.16	tr.	0.9
8. 8.	12.3 - 15.0 182.6 - 183.6	2.7' 1.0'	0.45 0.18	0.10 2.16	0.44 2.08	- tr.	tr.

(Note: - means not assayed)

A total of 96 soil samples were taken from some of the trenches which were dug during the 1969 program and from the trenches made during the 1970 program. These samples were sent to Crest Laboratories in Vancouver where they were analyzed for total copper and lead by the atomic absorption method.

The results obtained in this work indicates that the surface soil horizon may be leached and that future soil samples should be taken at a depth of three or four feet.

Some of the samples taken from the trenches were highly anomalous while the samples taken from surface in the same area were not above back-ground. It is felt because of this that there may be as yet, undetected geochemical anomalies associated with the I.P. anomaly. Any geochemical anomalies will be found by deep sampling methods in conjunction with trenching.

#### RECOMMENDATIONS

1.

2.

3.

A limited trenching and geochemical program should be carried out over the area of high I.P. response in an effort to locate any copper, lead, zinc zones associated with the geophysical anomaly. Six trenches 1,600 feet long and to a depth from 4 - 10 feet should be sufficient to test this zone.

The remainder of the claims should be systematically prospected and trenching done on any mineralized showings that may be found. Two prospectors using the cold extraction method of geochemical soil sampling should be able to cover the area.

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#### BUDGET FOR RECOMMENDED PROGRAM

1.	Trenching	
	Six trenches 4 - 10 feet deep and 1,600 feet long	\$16,000.00
	Soil sampling the area	2,000.00
2.	Prospecting	
	2 Prospectors for 1 month	2,500.00
	Geochemical Work	500.00
3.	Camp Support for Program	1,000.00
4.	Report & Engineering	1,000.00
	Misc. 10%	2,000.00

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TOTAL

\$25,000.00

#### PROPERTY & LOCATION

The property consists of 120 contiguous claims which are located near the Four Mile River some 100 miles southwest of Watson Lake, Yukon Territory.

All claims are registered in the name of Cry Lake Minerals Ltd. (N.P.L.) and are in good standing, some until 1973.

The claims are listed as follows:

Claim Name and No.	Tag No.	Number of Claims
Kirk 1 - 4	1 <b>8601 -</b> 18604	4
Kirk 5 - 10	19728 - 19733	6
Kirk 11 - 14	21943 - 21946	4
Kirk 15 - 20	34853 <del>-</del> 34858	6
Kirk 31 - 48	34859 - 34876	18
Kir <b>k 53 -</b> 56	34877 <b>-</b> 34880	4
Bob 1 - 10	21929 - 21938	10
Pete 11 - 14	21957 - 21960	4
Tom 1 - 4	21961 - 21964	4
Nizi 1 - 60	36589 - 36648	60
		-

TOTAL:

120

#### ACCESS

The property can be reached by a rough secondary road from McDame Post, a distance of approximately 18 miles. Wheel equipped light aircraft can land on the gravel airstrip 1/4 mile from the main camp.

### HISTORY

The property, which consisted of 60 claims was staked in 1966 by Mr. Bob Kirk and was held in the name of North Central Mining Limited, a private company owned by R. J. Keen.

In 1967 an option to acquire the ground was given Mr. W.S. Kennedy of Toronto, Ontario. This option was dropped.

In 1969 an additional 60 claims were staked.

Cry Lake Minerals Ltd. (N.P.L.) is now the owner of all 120 claims.

In the year 1966 a road was built from McDame Post to the property, a distance of some 18 miles.

An airstrip 1,200 feet by 100 feet was completed and limited bulldozer trenching was done on the number one showing.

The property was examined by Mr. E.D. Black, Consulting Geologist, in the fall of 1967 and a preliminary reconaissance geochemical soil survey (T.H.M.) and electromagnetic geophysical survey (V.L.F.) was carried out over part of the claim group. The results of this work are included in a report dated March 1, 1968, written by Mr. Black.

In October and November 1968 an induced polarization survey was carried out by Seigel Associates Ltd. over part of the claim group. The results of this work are included in a report by Jon G. Baird, geophysicist, dated November 25, 1968. In March of 1969 an aeromagnetic survey was carried out by Seigel Associates Ltd. The results of this work are included in a report by R.V. Crosby, geophysicist, dated April 15, 1969.

During August and September 1969 a geochemical soil survey, a bulldozer trenching program and some preliminary geological mapping was carried out under the direction of Mr. E.D. Black. The results of this work are included in a report by Mr. E.D. Black, consulting geologist, dated March 31, 1970.

In the month of October 1970 a preliminary diamond drilling program, minor trenching and some geochemical check work was done, under the direction of the writer. The recommendations and conclusions of this report are based on all the work done to date, the results of which are readily available.

#### REGIONAL GEOLOGY

According to the memoirs of the Geological Survey of Canada, the Cry Lake Minerals Ltd. (N.P.L.) property is underlain by sedimentary and volcanic rocks considered to be of Upper Devonian or Mrississippian age. These sediments are intruded by granitic rocks of the Cassiar Batholith, outcrops of which are found approximately two miles from the property.

#### LOCAL GEOLOGY

Locally there are two rock sequences: an altered, silicified and carbonatized rhyolite which appears to overlay a fairly massive, epidotized greenstone.

Copper - lead - zinc mineralization is found in both rock

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sequences and appears to be associated with shears and shatter zones rather than geological contacts.

The mineralization is patchy and irregular and is variable from one zone to another. In a general sense it is noted that the altered rhyolite hosts the lead - zinc mineralization and the greenstone hosts the copper mineralization.

The individual showings of copper lead and zinc mineralization are well documented in Mr. E.D. Black's report of March 31, 1970.

#### DIAMOND DRILLING - 1970

Eight diamond drill holes of core size B.Q., having a combined footage of 1,671 feet were used to sample the bedrock under the main showings and the extensions of these zones.

Diamond drill holes 1 to 5 were located in the area containing showings No. 1, No. 2 and No. 3 and holes 6 to 8 were located in the vicinity of showing Number 4. These holes are plotted on map of scale 1" = 100 feet included with this report.

A total of 48 samples were split from the core and sent to Technical Services Laboratories in Vancouver where they were assayed for copper, lead and zinc. Seven of the samples were assayed for gold and silver and two of the samples were submitted for spectrographic determination. The results of these analyses are included in Apendix B of this report.

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#### RESULTS

Six of the eight diamond drill holes cut sections containing interesting but sub economic copper - lead - zinc mineralization. The mineralization does not appear to be a continuous sheet which can be projected from drill hole to drill hole. It appears to be contained in small shatter and shear zones of undetermined length, which are felt to be contained in one large belt of altered rock.

There is a possibility that the area of high I.P. response is an extension of this zone of altered rock containing the mineralization.

Future work should be directed towards the area of high I.P. response.

#### GEOCHEMICAL WORK - 1970

During the diamond drilling program the number two showing and the number four showing were trenched and some soil samples were taken from these trenches.

Some of the old trenches were cleaned and soil samples taken from them.

In all, a total of 96 soil samples were gathered and sent to Crest Laboratories in Vancouver where they were analyzed for copper and lead.

The location of these samples and the results obtained are plotted on maps of scale 1" = 100' included with this report.

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RESULTS

It is apparent that the results of the samples taken from the trenches are numerically higher than the samples taken from surface, particularly in the area of the number one, two and three showings. It is also noted that the samples taken near Pond Lake were not anomalous and so effectively closed the anomaly in this direction.

The samples taken from the area around the number four showing do not appear to be much higher than the original sampling, except in the area of the known mineralization where the the difference is critical. Surface samples down slope from known mineralization contained only 12 to 78 parts per million copper while samples taken from the trenches, contain from 12 to +1000 parts per million copper.

There is the possibility that the surface samples taken in 1969 were taken from the leached zone and are therefore not a reflection of possible sub surface mineralization. Individual high values such as Line 48 East, 12 + 00 S., Line 52 East 14 + 00 S. to 16 + 00 S. and most of Line 60 East are worthy of future work. Since this area is one of high I.P. response it is recommended that trenching be done and deep geochemical soil samples be taken from this area.

Respectfully submitted,

James Cloten

James R. Glass

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#### CERTIFICATE

I, James R. Glass of 910 Ash Street, Vancouver, B.C. certify that:

- 1. I graduated from McGill University in Montreal in 1961 and hold a Bachelor of Science in Geology.
- 2. I am a Fellow of the Geological Association of Canada, a member of the American Institute of Engineers and have practised my profession continuously for nine years.
- 3. I have based the Conclusions and Recommendations for this report on experience and knowledge gained during my work on the property between October 12th, 1970 and October 31st, 1970 and on the results obtained by staff personnel who carried out the geochemical and geophysical surveys.
- 4. I hold no interest directly or indirectly in this property or the Companies mentioned in this report and do not expect to receive any such interest.

Vancouver, British Columbia February 15, 1971

James R. Glass, B.Sc.

## APPENDIX A

## Diamond Drill Logs

#### D.D.H. NO. 1

DIP 45<sup>°</sup> BEARING S. 20<sup>°</sup> W. LENGTH 217' CORE RECOVERY - 98% CORE SIZE B.Q. HOLE STARTED - OCTOBER 12, 1970 HOLE FINISHED - OCTOBER 13, 1970

LOCATION - 12 + 20 E. 0 + 69 N.

FOOTAGE	LENGTH	DESCRIPTION
0 - 6		Casing
6 - 19.5	13.5'	Quartz. Brecciated with epidote along fractures. Core is broken. 4" containing calcite crystals at 7' - 7.3'.
19.5 - 25.5	6'	Greenstone with small amount of epidote.
25.5 - 31.0	4.5'	Greenstone with more epidote. Epidote makes up 20% of rock in some 1" sections.
31.0 - 37.5	6.5'	Greenstone with small amount of epidote.
37.5 - 44.0	6.5'	Greenstone with small amount of epidote. Pyrite fairly abundant - Up to .5% of rock. Larger blebs are enclosed in epidote.
44.0 - 48.8	4.8'	Greenstone with small amount of epidote.
48.8 - 53.3	5.5'	Silica zone.
53.3 - 59.0	5.7'	Mixture of silica and epidote.
59.0 - 65.0	6.0'	Silica - wormy texture in parts. Some epidote. Lead mineralization.
65.0 - 71.8	6.8'	Greenstone with some epidote in places. Lead mineralization throughout, although very scarce in volume.
71.8 - 80.0	8.2'	Greenstone with epidote.
80.0 - 86.6	6.6'	Porphyritic texture to rock. Quartz eyes in rhyolite groundmass. Banding is not the pre- dominant structure. Silicified. Contains epidote - 10%

FOOTAGE	LENGTH	DESCRIPTION
86.6 - 89.0	2.4'	Greenstone with epidote.
89.0 - 107.0	18'	Porphyritic greenstone. Silicified.
107.0 - 124.0	17'	Greenstone - small amount of pyrite, a few specks.
124.0 - 126.0	2'	Silicified section. Small pyrite.
126.0 - 151.6	25.6'	Greenstone.
151.6 - 159.6	8.0'	Silicified zone.
159.6 - 169.0	9.4'	Greenstone.
169.0 - 172.6	3.6'	Silicified zone.
172.6 - 174.0	1.4'	Fault zone. Gouge material.
174.0 - 189.0	15.0'	Greenstone with a lot of calcite veining. No mineralization.
189.0 - 198.0	9.0'	Greenstone. Silicification and some calcite veins.
198.0 - 198.6	0.6'	Fault zone with pyrite crystals and a small bleb of galena.
198.6 - 217.0	18.4'	Greenstone with few pyrite crystals.

END OF HOLE

## SAMPLING

Sample No.	Intersection	Length			<u>A</u>	ssays	
			Cu.%	Pb.%	Zn.%	Au. oz/ton	Ag. oz/ton
1.	43.8 - 48.8	5'	tr.	0.01	0.02	-	· _
2.	48.8 <b>-</b> 53.5	5'	tr.	0.32	0.52	-	-
3.	53.3 - 59.0	5.7'	0.01	0.15	0.66	-	-
4.	59.0 - 65.0	6.0'	0.03	1.04	2.10	tr.	0.3
5.	65.0 - 71.8	6.8'	tr.	0.03	0.31	-	-
6.	71.8 - 76.8	5.0'	tr.	0.02	0.04	-	-

## D.D.H. NO. 2

DIP 45° BEARING S. 10° W. LENGTH 213' CORE RECOVERY 99% CORE SIZE B.Q. STARTED - OCTOBER 14, 1970 FINISHED - OCTOBER 15, 1970

LOCATION - 12 + 25 E. 1 + 32 S.

FOOTAGE	LENGTH	DESCRIPTION
0 - 13.0		Casing
13.0 - 41.0	28.0'	Broken silicified greenstone. Porphyritic in parts. Rust fractures. Not much epidote.
41.0 - 50.6	9.6'	Greenstone. Some silicification. Some epidote.
50.6 - 57.7	71'	Greenstone with fair pyrite.
57.7 - 63.5	5.8'	Greenstone: First portion is fractured and contains faulting.
63.5 - 63.8	0.3'	Fault.
63.8 - 70.4	6.6'	Greenstone with epidote. Fracturing. Some brecciation.
70.4 - 106.9	36.5'	Greenstone with usual epidote. Small silici- fication in parts.
106.9 - 160.5	53.6	Greenstone with less epidote - roughly 10%. Some pyrite throughout. (127.5 - One crystal of galena 1 m.m. in diameter)
160.5 - 161.0	0.5'	Fault zone.
161.0 - 162.6	1.6	Slight galena - few crystals, one small bleb. Zone is silicified and fractured.
162.6 - 170.0	7.4	Greenstone
170.0 - 197.0	27.0	Greenstone. Fractured in parts with up to 20% epidote. Some calcite veining and silicification. Altered.

FOOTAGE	LENGTH	DESCRIPTION
197.0 - 205.6	8.6	Greenstone
205.6 - 207.6	2.0	Fault: rusty, broken
207.6 - 213.0	5.4	Greenstone

END OF HOLE

## SAMPLING

Sample No.	Intersection	Length			As	says	
			Cu.%	Pb.%	Zn.%	Au.	Ag.
						02/001	02/001
7.	161.0 - 162.0	1.6'	tr.	0.02	0.02	-	-

## D.D.H. NO. 3

DIP 45° BEARING S.56° W. LENGTH 237' CORE RECOVERY 99% CORE SIZE B.Q.

LOCATION - 13 + 77 E. 0 + 36 N.

FOOTAGE	LENGTH	DESCRIPTION
0 - 6.0	6.0'	Casing
6.0 - 120.7	114.7'	Banded (45 <sup>0</sup> ) silicified rock. Light grey in colour. Very hard. Rhyolite.
112.0 - 120.7	8.7'	Rhyolite, silicified with carbonate veins and some epidote. Lead mineralization.
120.7 - 127.0	7.0'	Greenstone, massive, with epidote.
127.0 - 128.5	1.5'	Fault zone, fault gouge.
128.5 - 166.0	37.5'	Greenstone. At 165.2 there are some specks of galena.
166.3 - 169.9	3.6'	Greenstone.
169.9 - 172.0	2.1'	Greenstone with a lot of pyrite.
172.6 - 180.0	3.4	Greenstone with slight chalco.
180.0 - 187.1	7.1	Greenstone with good pyrite, fair chalco and slight galena.
187.1 - 237.0	49.9	Greenstone. A speck of galena at 193.0.

STARTED - OCTOBER 16, 1970

FINISHED - OCTOBER 17, 1970

END OF HOLE

## SAMPLING

Sample <u>No.</u>	Intersection	Length	Assays						
		、	Cu.%	Pb.%	Zn.%	Au. oz/ton	Ag. <u>oz/ton</u>		
8.	107.0 - 112.0	5.0	tr.	0.02	0.01	-	-		
9.	112.0 - 116.0	4.0	tr.	0.03	0.01	-	-		
10.	116.0 - 120.7	4.7	0.01	0.45	0.25	-	-		
11.	120.7 - 125.0	4.3	tr.	0.01	0.01	-	-		
12.	163.0 - 167.0	4.0	tr.	0.03	0.04	-	•		
13.	169.9 - 172.0	2.1	tr.	0.01	0.03	-	-		
14.	172.0 - 176.6	4.6	tr.	0.01	0.04	-	-		
15.	176.6 - 180.0	3.4	0.07	0.11	0.11	-	-		
16.	180.0 - 184.0	4.0	0.39	0.44	0.27	-	-		
17.	184.0 - 187.1	3.1	0.68	0.80	1.72	tr.	0.4		
18.	187.0 - 192.0	5.0	0,01	0.01	0.03	-	-		

#### D.D.H. NO. 4

DIP 60° BEARING S. 56° W. LENGTH 203' CORE RECOVERY 99% CORE SIZE B.Q.

LOCATION - 13 + 77 E. 0 + 36 N.

FOOTAGE	LENGTH	DESCRIPTION
0 - 10.0		Casing
10.0 - 89.6	79.6'	White silicified rock. Carbonate veins. Some epidote in parts.
89.6 - 101.0	10.4'	Greenstone.
101.0 - 107.0	6.0'	Porphyritic texture - quartz eyes. Same as last hole.
107.0 - 135.5	28.5	Greenstone. Last foot rusty.
135.5 - 142.5	12.0	Black, slickensided, alteration rock hosting pyrite, minor chalco and galena. Last 6" best.
142.5 - 151.5	9'	Greenstone with about 5% epidote.
151.5 - 156.5	5'	Brecciated silicified greenstone. Looks very much like the mineralized section in previous hole. Very little pyrite and slickensiding.
156.5 - 203	46.5'	Greenstone with little epidote: from 1% - epidote.

STARTED - OCTOBER 18, 1970 FINISHED - OCTOBER 19, 1970

5%

END OF HOLE

### SAMPLING

Sample No.	Intersection	Length		•	Assa	iys	
			Cu.%	Pb.%	Zn.%	Au. oz/ton	Ag. <u>oz/ton</u>
29. 30. 31. 32. 33.	130.0 - 135.5 135.5 - 140.0 140.0 - 142.5 142.5 - 147.5 151.5 - 156.5	5.5 4.5 2.5 5.0 5.0	tr. 0.14 0.32 0.01 tr.	0.07 0.13 0.19 0.02 0.08	0.04 1.08 1.10 0.05 0.08	- tr. tr.	0.6 0.8 -

## D.D.H. NO. 5

DIP 45° BEARING S. 80° W. LENGTH 203' CORE RECOVERY 99% CORE SIZE B.Q. STARTED - OCTOBER 20, 1970 FINISHED - OCTOBER 21, 1970

LOCATION - 14 + 57 E. 0 + 40 S.

FOOTAGE	LENGTH	DESCRIPTION
0 - 18.6		Casing
18.6 - 47.0	28.4	White silicified carbonate rock. Minor to no epidote. Black banding.
47.0 - 80.9	33.9	Greenstone.
80.9 - 81.9	1.0	Fault.
81.9 - 85.0	3.1	Mottled siliceous greenstone with slight epidote. Slight lead mineralization.
85.0 - 87.0	2.0	Fault zone. Rusty.
87.0 - 89.3	2.3	Mottled siliceous greenstone with slight epidote. Lead.
64.0 - 77.0	7.0	Rusty, brecciated zone. Silica and dark green chloritic biorite material.
109.8 - 110.6	1.8	Mottled siliceous rock with slight lead mineralization.
125.0 - 130.0	5.0	Slightly brecciated greenstone.
135.0 - 136.3	1.3	Fault zone.
136.3 - 155.6	19.3	Greenstone. 5 - 10% epidote.
155.6 - 171.0	15.4	Porphyritic looking rock.
171.0 - 184.9	15.9	Greenstone.
184.9 - 186.3	2.6	Mottled siliceous rock. Slight lead mineralization.
186.3 - 203.0	16.7	Greenstone.
135.0 - 136.3 136.3 - 155.6 155.6 - 171.0 171.0 - 184.9 184.9 - 186.3 186.3 - 203.0	1.3 19.3 15.4 15.9 2.6 16.7	<pre>Fault zone. Greenstone. 5 - 10% epidote. Porphyritic looking rock. Greenstone. Mottled siliceous rock. Slight lead mineralization. Greenstone.</pre>

END OF HOLE

## SAMPLING

Sample <u>No.</u>	Intersection	Length	Assays						
			Cu.%	Pb.%	Zn.%	Au. oz/ton	Ag. oz/ton		
19	79.0 - 81.9	3.9	0.01	0.04	0.04	- -	_ *		
20	81.9 - 85.0	3.1	tr.	0.70	0.62	-	-		
21	85.0 - 87.0	2.0	tr.	0.64.	0.55	-	-		
22	87.0 - 89.3	2.3	tr.	0.55	0.38	-	-		
23	89.3 - 94.0	4.7	0.03	0.04	0.07	•	-		
24	98.4 - 102.4	4.0	0.01	0.02	0.02		-		
25	109.8 - 110.6	1.8	0.01	0.88	0.72	-	-		
26	110.6 - 115.6	5.0	tr.	0.02	0.02	-	-		
27	125.0 - 130.0	5.0	0.01	0.02	0.03	-	· 🕳		
28	184.9 - 186.3	1.4	0.01	0.01	0.05	-	-		

#### D.D.H. NO 6

DIP 50<sup>°</sup> BEARING S. 32<sup>°</sup> W. LENGTH 201' CORE RECOVERY 99% CORE SIZE B.Q.

LOCATION - 44 + 95 E. 1 + 15 S.

FOOTAGE	LENGTH	DESCRIPTION
0 - 22.0		Casing
22.0 - 37.0	15'	White to light grey siliceous rock: very small amount of pyrite. Rhyolite.
37.0 - 40.0	3'	Mixture of white and black. Rusty veins from 22.0 - 42.0.
40.0 - 46.0	6.0'	Black secondary mineral with quartz veins.
46.0 - 62.0	16.0'	Grey silicified rhyolite.
62.0 - 82'	20.0	Black and white.
82.0 - 114.0	32.0	Gray rock.
114.0 - 157.0	43.0	Black and white rock made up of quartz and black bands.
157.0 - 178.6	21.6	Greenstone.
178.6 - 186.5	7.9	Black
186.5 - 201	14.5	Greenstone.

STARTED - OCTOBER 22, 1970 FINISHED - OCTOBER 24, 1970

END OF HOLE

## SAMPLING

C

Sample <u>No.</u>	Intersection	Length	Assays						
			Cu.%	Pb.%	Zn.%	Au.	Ag.		
				<u></u>		<u>oz/ton</u>	oz/ton		
34	30.0 - 36.0	5.0	0.01	0.05	0.05	-	-		
35	96.0 - 101.5	5.5	tr.	0.01	0.02	-	-		
36	107.0 - 109.8	2.5	tr.	0.01	0.01	-	- -		

## D.D.H. NO. 7

DIP 55<sup>°</sup> BEARING W. 9<sup>°</sup> S. LENGTH 201' CORE RECOVERY 99% CORE SIZE B.Q.

LOCATION - 45 + 80 E. 1 + 25 S.

FOOTAGE		LENGTH	DESCRIPTION
0 -	21.0		Casing
21.0 -	31.0	10.0	Light grey siliceous rock with rusty weathering in fractures.
31.0 -	39.4	7.6	Grey sil.rock with heavy pyrite, small chalco. and some lead.
39.4 -	71.8	32.4	Light grey siliceous rock with carbonate veins in places. Veins run $80^{\circ}$ and $30^{\circ}$ to core. Fair pyrite in parts.
71.8 -	73.0	2.2	Barite and silica with small chalco and lead.
73.0 -	88.6	15.6	Light green dense silicified greenstone with a lot of very fine pyrite.
88.6 -	95.0	14.4	Light grey siliceous rock with carbonate veins.
95.0 <b>-</b>	102.0	7.0	No core - fault.
102.0 -	142.5	30.5	Dark grey to grey sil.rock with carbonate veins. Some pyrite: veins 80° and 45°.
142.5 -	156.0	13.5	Greenstone with 7 - 10% epidote and pyrite.
156.0 -	159.5	3.5	Flow zone, altered with very fine linear structure; dark grey in colour.
159.5 -	192.0	30.5	Greenstone with good pyrite in parts. Last foot grading into next rock type.
192.0 -	201.0	9.0	Black rock with white veins. Blebs white in both calc and silica. Looks like a flow

section of the lava.

STARTED - OCTOBER 25, 1970 FINISHED - OCTOBER 27, 1970

## SAMPLING

Sample No.	Intersection	Length	Assays						
			Cu.%	РЬ.%	Zn.%	Au. oz/ton	Ag. oz/ton		
						and the second se			
37	28.0 - 31.0	3.0	0.01	0.06	0.13	-	-		
38	31.0 - 35.0	4.0	0.26	0.43	4.16	tr.	0.9		
39	35.0 - 39.4	4.4	0.08	0.19	1.64	tr.	tr.		
40	71.8 - 73.0	1.2	0.03	0.01	0.04	-	-		
41	73.0 - 78.0	5.0	tr.	0.01	0.02	-	-		
42	78.0 - 83.0	5.0	tr.	tr.	0.01	-	-		
43	159.5 - 165.0	5.5	tr.	0.01	0.01	-	-		

## D.D.H. NO. 8

DIP 38° BEARING E.9° N. LENGTH 204' CORE RECOVERY 99% CORE SIZE B.Q.

LOCATION - 45 + 18 E. 1 + 95 S.

FOOTAGE	LENGTH	DESCRIPTION
0 - 10		Casing
10 - 12.3	2.3	Leached weathered looking siliceous rock.
12.3 - 19.1	6.8	Siliceous rock with good pyrite, slight chalco and slight lead.
19.1 - 39.0	19.9	Light grey siliceous rock with carbonate veins.
39.0 - 41.6	1.4	Black rock. Silicified.
41.6 - 46.6	5	Light grey rock.
46.6 - 47.6	1	Black.
47.6 - 49.6	2	Light grey.
49.6 - 52.6	3	Dark grey to black. Very fine lineations 11 to core. Looks like movement and flow lines.
52.6 - 64.0	11.4	Light grey.
64.0 - 94.5	30.5	Black with white veins. Veins at 15 <sup>0</sup> , mainly silica - very minor calc.
94.5 - 138.0	44.5	Greenstone.
138.0 - 148.0	10.0	Light grey siliceous rock.
148.0 - 160.0	12.0	Greenstone.
160.0 - 180.0	20.0	Light grey. Silicified.
180.0 - 183.6	3.6	Greenstone with fair pyrite. Silicified and fractured. (182.6 - 183.6 - Good sulphide, some chalco and lead.)
183.6 - 204.0	20.4	Greenstone

STARTED - OCTOBER 27, 1970

FINISHED - OCTOBER 28, 1970

## SAMPLING

Sample No.	Intersection	Length			Assa	ys	
			Cu.%	Pb.%	Zn.%	Au. oz/ton	Ag. oz/ton
44	10.0 - 12.3	2.3	0.18	tr.	0.14	_	-
45	12.3 - 15.0	2.7	0.45	0.10	0.44	-	-
46	15.0 - 10.1	4.1	0.15	0.42	0.96	-	•
47	180.0 - 182.6	2.6	tr.	0.02	0.02	-	-
48	182.6 - 183.6	1.0	0.18	2.16	2.08	tr.	tr.

# APPENDIX B

Assay Results

CREST LABORATOR ES (L.C. / LID.

1068 HOMER JREET VANCOUVER 3, B.C. PHONE 688-8586 CREST DRATORIES LTD. 791 ARGYLL ROAD EDMONTON 82, ALBERTA PHONE 469-2391

# CERTIFICATE OF ASSAY

TO Mr. J.R. Glass

November 18, 1970

Lab No. 1964

515 - 355 Burrard Street

VANCOUVER, B.C.

I hereby certify that the following are the results of assays made by us upon the herein described samples.

MARKED	G	OLD	SILVER	COPPER	LEAD	ZINC					TOTAL VALUE
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	PER TON (2000 LBS.)						
1				trace	0.01	0.02					
2				trace	0.32	0.52					
3				0.01	0.15	0.66					
4				0.03	1.04	2.10					
5				0.03	0.03	0.31					
6				trace	0.02	0.04		· .			
7				trace	0.02	0.02					
8	(			trace	0.02	0.01					
9				trace	0.03	0.01					
10				0.01	0.45	0.25	- -				
11				trace	0.01	0.01					
12				trace	0.03	0.04					
13				trace	0.01	0.03					
14				trace	0.01	0.04					
15 /				0.07	0.11	0.11					

#### NOTE:

Rejects Retained One Month Pulps Retained Three Months Unless Otherwise Airanged.

Gold calculated at \$

per ounce

CREST LADORATOR ES (L.C., L.D. 1068 HOME, STREET VANCOUVER 3, B.C. PHONE 688-8586

CRES DRATORIES LTD.

79. ARGYLL ROAD EDMONTON 82, ALBERTA PHONE 469-2391

# CERTIFICATE OF ASSAY

TO Mr. J.R. Glass

November 18, 1970

Page 2,...

Lab No. 1964

I hereby certify that the following are the results of assays made by us upon the herein described samples.

MARKED	GC	DLD	SILVER	COPPER	LEAD	ZINC					TOTAL VALUE
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	PER TON (2000 LBS.)						
16				0.39	0.44	0.27					
17				0.68	0.80	1.72				-	
18				0.01	0.01	0.03					
19				0.01	0.04	0.04					
20				trace	0.70	0.62					
21				trace	0.64	0.55					
22	1			trace	0.55	0.38					
23				0.03	0.04	0.07					
24				0.01	0.02	0.02					
25				0.01	0.88	0.72					
26				trace	0.02	0.02					
27				0.01	0.02	0.03					
28				0.01	0.01	0.05					
29				trace	0.07	0.04					
30 /				0.14	0.13	1.08					

NOTE:

Rejects Retained One Month Pulps Retained Three Months Unless Otherwise Arranged.

Gold calculated at \$ ...... per ounce

Fe Present

# CREST LADORATOR ES (D.C. / LID.

1068 HOME: JTREET VANCOUVER 3, B.C. PHONE 688-8586

75 ARGYLL ROAD EDMONTON 82, ALBERTA PHONE 469-2391

# CERTIFICATE OF ASSAY

TO Mr. J.R. Glass

November 18, 1970

Page 3...

.....

Lab No. 1964

I hereby certify that the following are the results of assays made by us upon the herein described samples.

MARKED	GOLD	SILVER	COPPER	LEAD	ZINC					TOTAL VALUE
	Ounces Valu per Ton per	e Ounces Ion per Ton	Percent	PER TON (2000 LBS.)						
31			0.32	0.19	1.10					
32 (			0.01	0.02	0.05					
33			trace	0.08	0.08					
34			0.01	0.05	0.05					
35	•		trace	0.01	0.02					
36			trace	0.01	0.01					
37			0.01	0.06	0.13					
38			0.26	0.43	4.16					
39			0.08	0.19	1.64					
40			0.03	0.01	0.04					~
41			trace	0.01	0.02					
42			trace	trace	0.01					
43			trace	0.01	0.01					
44			0.18	trace	0.14					
45 /			0.45	0.10	0.44					

#### NOTE:

Rejects Retained One Month Pulps Retained Three Months Unless Otherwise Arranged.

Gold calculated at \$ ...... per ounce

11. Cost

# CREST LADURATOR ES (B.C.) LID.

1068 HOMEL STREET VANCOUVER 3, B.C.

PHONE 688-8586

CRES DRATORIES LTD. 79, ARGYLL ROAD EDMONTON 82, ALBERTA PHONE 469-2391

1.0

# CERTIFICATE OF ASSAY

TO Mr. J.R. Glass

November 18, 1970

......Page 4...

.....

Lab No. 1964

I hereby certify that the following are the results of assays made by us upon the herein described samples.

MARKED	GC	DLD	SILVER	COPPER	LEAD	ZINC					TOTAL VALUE
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	PER TON (2000 LBS.)						
46				0.15	0.42	0.96					
47				trace	0.02	0.02					
(48)				0.18	2.16	2.08					
										-	
							•				
•											
1	1	[					1	1		[	

NOTE:

Rejects Retained One Month Pulps Retained Three Months Unless Otherwise Airanged.

Gold calculated at \$ \_\_\_\_\_ per ounce

1040

# CREST LABORATOR ES (B.C.) LID.

1068 HOMER STREET

VANCOUVER 3, B.C. PHONE 688-8586 CRES DRATORIES LTD. 791. ARGYLL ROAD EDMONTON 82, ALBERTA PHONE 469-2391

# CERTIFICATE OF ASSAY

TO Mr. J.R. Glass

November 25, 1970

515 - 355 Burrard Street

Lab No. 1964

VANCOUVER, B.C.

I hereby certify that the following are the results of assays made by us upon the herein described samples.

Ounces per TonValue per TonOunces per TonPercent <t< th=""><th>MA</th><th>RKED</th><th>GC</th><th>DLD</th><th>SILVER</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>TOTAL VALUE</th></t<>	MA	RKED	GC	DLD	SILVER								TOTAL VALUE
4     trace     0.3       17     trace     0.4       30     trace     0.6       31     trace     0.8			Ounces per Ton	Value per Ton	Ounces per Ton	Percent	PER TON (2000 LBS.)						
17     trace     0.4       30     trace     0.6       31     trace     0.8	4		trace		0.3								
30     trace     0.6       31     trace     0.8	17		trace		0.4								
31 trace $0.8$	30		trace		0.6								
	31		trace		0.8								
38 trace 0.9	38		trace		0.9								
39 trace trace	39		trace		trace								
48 trace trace	48		trace		trace								
		•										-	
		·											
	,												

NOTE:

Rejects Retained One Month Pulps Retained Three Months Unless Otherwise Arranged.

Gold calculated at \$ ...... per ounce

# ~ CREST LABORATORIES (B.C.) LTD.

B.C. REGISTERED ASSAYERS GEOCHEMISTS 1068 HOMER STREET, VANCOUVER 3, B.C.

January 7, 1971

Mr. J.R. Glass 515 - 355 Burrard Street VANCOUVER, B.C.

#### Lab No. 1694:

Sample Marked: #48:

Dear Sir:

. The results of the above mentioned spectrographic analysis are as follows:

Aluminum, Calcium, Iron, Potassium.

Copper, Lead, Magnesium, Zinc.

Major:

Intermediate:

Approx. 1%:

0.01% - 0.1%:

1%: Manganese, Sodium, Titanium.

0.001% - 0.01%:

Vanadium.

Silver.

Silicon.

Trace:

Not Detected:

Antimony, Arsenic, Beryllium, Bismuth, Cobalt, Molybdenum, Nickel, Niobium, Tantalum, Tin, Tungsten.

Barium, Boron, Cadmium, Chromium, Strontium,

Yours truly,

CREST LABORATORIES (B.C.) LTD.

plat F.C. Burgess

Chief Assayer

FCB/seb

# -- CREST LABORATORIES (B.C.) LTD.

B.C. REGISTERED ASSAYERS GEOCHEMISTS 1068 HOMER STREET, VANCOUVER 3, B.C.

January 7, 1971

Mr. J.R. Glass 515 - 355 Burrard Street VANCOUVER, B.C.

Lab No. 1964:

Sample Marked: #17:

Silicon.

Dear Sir:

The results of the above mentioned spectrographic analysis are as follows:

Major:

Intermediate: Aluminum, Calcium, Iron, Manganese, Potassium.
Approx. 1%: Copper, Lead, Magnesium, Sodium, Zinc.
0.01% - 0.1%: Barium, Titanium.
0.01% - 0.01%: Bismuth, Cadmium, Chromium, Cobalt, Nickel, Silver, Strontium, Vanadium,
Not Detected: Antimony, Arsenic, Beryllium, Boron, Molybdenum, Niobium, Tantalum, Tin, Tungsten.

Yours truly,

CREST LABORATORIES (B.C.) LTD.

تشنيه سراير

F.C. Burgess Chief Assayer

FCB/seb

# ~ CREST LABORATORIES (B.C.) LTD.

B.C. REGISTERED ASSAYERS GEOCHEMISTS 1068 HOMER STREET, VANCOUVER 3, B.C.

November 16, 1970

Mr. K. Glass 515 - 355 Burrard Street VANCOUVER, B.C.

#### Lot No. 407 G:

#### Geochemical Analysis for Copper and Lead:

Mesh Size:-80Analytical Method:Atomic AbsorptionDigestion Method:HCLO4 - HNO3

Sample No.	Copper ppm	Lead ppm	Sample No.	Copper ppm	Lead ppm
1	32	190	23	18	55
2	92	850	24	16	45
3	+1000	+1000	25	22	75
4	212	800	26	24	175
5	+1000	+1000	27	96	135
6	64	+1000	28	8	20
7	28	120	29	12	20
8	256	80	30	16	65
9	332	490	31	46	130
10	208	450	32	12	30
11	90	310	33	8	35
12	116	440	34	10	30
13	104	420	35	12	35
14	148	915	36	570	60
15	74	470	37	52	40
16	84	570	38	26	30
17	570	230	39	30	20
18	20	45	40	20	30
19	38	120	41	18	60
20	68	150	42	18	60
21	16	50	43	92	25
<b>22</b>	74	145	44	180	30

Mr. K. Glass Lot No. 407 G November 16, 1970 Page 2...

Sample No.	Cop <b>per</b> ppm	Lead ppm	Sample No.	Copper ppm	Lead ppm
45	12	20	71	18	50
46	56	20	72	40	105
47	116	750	73	16	120
48	66	140	74	32	70
49	20	60	75	16	90
50	18	80	76	13	30
51	68	170	77	12	30
52	12	40	78	42	35
53	16	40	79	20	40
54	84	410	80	26	30
55	140	165	81	700	350
56	48	80	82	14	30
57	36	75	83	24	50
58	40	50	84	+1000	560
59	18	70	85	+1000	+1000
60	16	85	86	16	40
61	20	40	87	12	35
62	20	60	88	10	20
63	12	60	89	34	50
64	14	56	90	40	30
65	26	50	91	16	20
66	32	45	92	10	30
67	16	20	93	12	30
68	12	55	94	124	60
69	12	50	95	26	30
70	12	40	96	900	+1000

Yours truly,

CREST LABORATORIES (B.C.) LTD. Buce Scalerm

Bruce Graham Chemist

BG/seb

