

GEOLOGICAL, GEOCHEMICAL & GEOPHYSICAL REPORT

ISKUT SILVER MINES LTD.

LIARD MINING DIVISION

CERRO MINING COMPANY OF CANADA LTD. Lat. 56° 40' Long. 131° 15' N.T.S. 104 - B - 11



D.K. Mustard and M.D. Kierans

Vancouver Office

April 1971

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D & A Carlotte

ILLUSTRATIONS

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#### INTRODUCTION

During the period of May 12 - May 20/1970, a crew consisting of Mssrs. M.D. Kierans, P. Eng. Consulting Geologist; J. Currie, Field Supervisor; P. Midgley, Field Assistant and D. Nicoll, Field Assistant carried out exploration on the Iskut Silver Property on the Iskut River. The party was accompanied by R. Wesemann, Director of Iskut Silver Mines and was under the general supervision of D.K. Mustard, P. Eng.

Reconnaissance, geology, geochemistry and ground magnetic survey was carried out. During the period of August 30 to September 1/1970, additional geochemical sampling was carried out by P. Midgley and D. Nicoll.

#### Location and Access

The property is located on the north bank of the Iskut River approx. 26 miles upstream from its junction with the Stikine River  $(57^{\circ} 131^{\circ} \text{ N.E.})$ Topography is rugged with altitudes ranging from 300 feet to approx. 2000 feet. Coniferous forest with thick undergrowth is present.

Access may be gained by air from Stewart, some 75 miles to the southwest, or from numerous bush airstrips to the northeast (i.e. Dease Lake, Burrage Creek, etc.) During bad weather conditions, access is usually possible from Wrangell, Alaska, about 65 miles down the Iskut and Stikine Rivers. Except during low water periods when small fixed-wing aircraft can be landed on exposed gravel bars, helicopter transportation is essential. There are several helicopter landing spots along the river bank, but none at higher altitudes on the property.

Several tent frames are located at the west end of the property, and a small creek provides clean water. An old trail has been recleared between this campsite is located at the junction of the trail, creek, and Iskut River.

#### Communications

A portable single sideband transceiver was rented from Okanagan Helicopter Ltd., and good daily communications was possible between the property and Terrace on the helicopter's company's assigned frequency.

#### Property

The property consists of 68 claims of the Grace and Ray groups as listed in Appendix II. Claim locations are illustrated in Figure 5A.



#### Regional Geology

The property lies on the east flank of the Coast Range Crystalline Complex.

The lower Iskut River represents an E.W. transverse fault or lineament which cuts the northwest trending flank of the Coast Range Complex.

The oldest formations in the region are Paleozoic sediments and volcanic rocks which are capped in places by Permia limestones. The Paleozic rocks are generally overlain by Treassic, a younger volcanic rock. The Paleozoic and Mezozoic rocks are cut by a variety of intrusive rocks generally diorite to quartz monzonite in composition but including the stocks of undersaturated rocks in the general area of the property.

Hoodoo Mountain and lavas lying to the east are evidence of volcanic activity which has continued during the Cenozoic until recent times.

#### \* Geological Mapping and Ground Magnetometer Survey

As the soil sampling traverses and the geological traverses showed (see Figure 6) there proved to be many more outcrops then originally indicated from information supplied by the owners. Overburden depth is also no excessive i.e. less than 30 feet over much of the property. The topography also proved to be controlled much more by underlying geological structures than by glacial action.

There is widespread pyrite mineralization carrying small amounts of copper (0.12%) which could account for many of the drainage and soil anomalies. The rocks found were mainly sedimentary types, i.e. argillite, shale, volcanic sediments and quartzites. A contact of fine grained syenite porphyry was mapped in the eastern end of the property. This rock contained fine grained pyrite, about 0.5% pyrite content. No copper minerals were seen in the syenite. However, it is considered an important rock type. In general most outcrop were massive and devoid of structural attitudes (e.g. bedding.) A few steep dipping attitudes were found but gave no useful structural pattern. It is possible a syncline with axis near the center of the claims may exist as postulated by R. Wesemann (President of Iskut Silver Mines Limited.)

We found a previously unknown outcrop of volcanic sediments near the western edge of the property in a stream bank. This showed weak copper strain. A grab sample which represented the best material I could find ran 0.16% Cu. The copper stain is found over a length of about 30'. To the north of the copper outcrop there are unmineralize shaley sediments.

We searched for the reported sharn type copper-magnetite mineralization at the west end of the property. It was not found. However, there is little possibility of a zone of extensive mineralization here.



### Fig. 2

#### REGIONAL GEOLOGY

"The rocks are well exposed in the stream beds and they were barren black massive argillites. Because of the very rugged topography and limited time available, it was not possible to run a magnetometer traverse across the reported magnetometer anomaly. We did run a line across the western extension of the magnetometer high and it is concluded (see fig. 6 and 7) that the Wesemann magnetometer traverse work was well done as we did locate a positive anomaly.

In general it seems clear that the most interesting possibilities for the property are to the north and east in the volcanic (andesite composition, sediments and andesite). The G.S.C. Memoir 246 map shows a change from predominantly sedimentary rocks to volcanic rocks in the above directions.

The porphyritic symple intrusive stock (which is a rock that elsewhere in the general area i.e. Galore Creek, is related to copper mineralization) also lies at the east end of the property. Its northern limits are not known. Obviously more prospecting and mapping should be done in the open ground to the N.E. of Iskut's claims.

I looked briefly at three high grade showings on the property, accompanied by Wesemann. I did not spend more time on them than that. They are well described by W.G. Jeffrey of B.C. Department of Mines (See Appendix A). They are of no economic interest to Cerro as they are narrow (less than 2') and of only intermediate grade and certainly of limited extent.

> \*-excerpts from report by M.D. Kierans P. Eng.

#### Geochemical Sampling

The property was visited twice during the 1970 field season. In May a total of <u>176 soil</u>, <u>silt</u> and <u>rock</u> chip samples were collected. Fifty one more samples were taken during the second visit to the property late in August.

Standard sampling procedure was used during both visits. Sample were placed in 3½ inch by 6½ inch wet strength kraft paper bags and were shipped by air to Vancouver Geochemical Laboratories Ltd. for analysis. Soil samples were generally representative of an iron enriched B horizon and were obtained with a grub-hoe at depths in the order of 6 to 12 inches. Silt samples were taken from both wet and dry drainage channels using a large serving spoon. Rock chip samples of representative outcrops included small chips of relatively unweathered rock removed at random over a few feet of the exposures.

The samples were analyzed for Cu, Zn, pH and some for Mo. Techtron Model AA4 and AA5 Atomic Absorption Spectrophotometers were used for detection after acid extraction using HCIO<sub>4</sub> and MNO<sub>3</sub> and dilution with demineralized water. Sample preparations were filed and rejects were discarded. Sample analytical results are shown in Appendix III.

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Sample locations and analytical results were plotted on two maps. A Geochemical Map (figure 5) plotted at 200 feet to the inch and later reduced to 400 feet to the inch shows the Mag sampling as well as sampling by Iskut Silver Mines Ltd. in 1965 and 1966. The August sample sites and analytical results along with all but five of the Mag samples were plotted on a second map at 750 feet to the inch. (figure 5A)

Background values and orders of anomalies were established after plotting geochemical values versus cumulated frequency histograms on semi-log paper. This study as summarized in Appendix IV, yield the following breakdown:

| Background              | 0-60       | 0-250         | 0-7          |
|-------------------------|------------|---------------|--------------|
| Third Order Anomaly     | 61-150     | -             | ·            |
| Second Order Anomaly    | 151-300    | 251-600       | 8-14         |
| First Order Anomaly mor | e than 300 | more than 600 | more than 14 |

- \* The following conclusions were drawn by M.D. Kierans, Consulting Geologist, subsequent to the May visit to the property.
  - "(1) There is no significant large area of copper soil highs.
  - (2) Zinc results are all low except for a few highs near the west side of the area mapped.
  - (3) There are 5 areas shown on the geochemical map as areas A,B,C,D, & E, which should be closely prospected and soil sampled in detail for for narrow high grade type deposits similar to the lead-zinc veins which have already been found on the property. It should be noted that the lead-zinc showings did have some copper content. This work should be done by Iskut Silver Mines Limited.

The soil and drainage anomalies located by Iskut and Cerro can also be related to widespread very low grade copper content in pyritic sediments dispersed in soil of high acidity. This type of rock was observed in very widely scattered outcrops. A very good crossection of the rocks of the property is exposed along the North Bank of the Iskut River. Here a section at least 1000' long shows consistent pyritic content. The outcrop with the highest observed pyrite content (i.e. 10%) ran 0.02% Cu."

During the period Aug 30 - September 1, fifty one geochemical samples (soil, silt and rock chip) were collected on two traverses of the Joanne Claims (see Fig. 5A) These were collected and analysed and treated as described previously. Generally the order of value for Molybdenum was higher in this area which is adjacent to and at the fringes of the stock. Considering the distribution of zinc, copper and molybdenum, at mineral zoning centred on the east of the property, adjacent to the stock would probably be justified.



### APPENDIX I

#### List of Personnel

Mustard, D.K., P. Eng., Division Geologist 1430 9th Street, West Vancouver

Kierans, M.D., P. Eng., Consulting Geologist Denman Place, Vancouver

Currie, Jack, Field Supervisor 30th Avenue, Vernon

Midgley, P.T., Field Assistant 109 - 2425 York, Vancouver

Nicoll, D.G., Field Assistant 109 - 2425 York, Vancouver

## Time and Cost Distribution

May 1970

| M.D. Kierans<br>9 days @ \$150 - field<br>2 days @ \$150 - report preparation | \$ 1,350.00<br>300.00        |
|---|------------------------------|
| J. Currie<br>9 days @ \$40  | 360.00                       |
| P.T. Midgley<br>9 days @ \$20   | 180.00                       |
| D.G. Nicoll<br>9 days @ \$20  | <u>180.00</u><br>\$ 2,370.00 |
| Field Camp Maintenance<br>4 men x 9 days x \$12/day                           | 432.00                       |
| Equipment Rental<br>Magnetometer  | 210.00                       |
| Geochemical and Assay Analysis  | 427.20                       |
| Drafting and Reproduction   | 150.00                       |
| Transportation<br>Okanagan Helicopters  | 3,900.30                     |



### Time and Cost Distribution

### August 1970

D.G. Nicoll 5 days @ \$20 \$100,00 P.T. Midgley 5 days @ \$20 \$100.00 \$200.00 Field Camp Maintenance 2 men x 5 days x \$12/day \$120.00 Geochemical Analysis 125.25 Drafting and Reproduction 158.30 Transportation Frontier Helicopters

 $\frac{1,800.00}{$2,403.55}$ 

### APPENDIX II

### APPENDIX II

## Iskut Silver Mines Ltd. Claims

| RAY GROUP     | RECORD NO.    |   | GRACE GROUP    | RECORD NO.      |
|---------------|---------------|---|----------------|-----------------|
| #1            | 15899         |   | #43            | 43088           |
| #2            | 15900         |   | #44            | 43089           |
| #3            | 15901         |   | #45            | 43090           |
| #4            | 15902         |   | #46            | 43090           |
| #5            | 15903         |   | #47            | 43092           |
| #6            | 15904         |   | #49<br>#48     | 43093           |
| 10            | <b>13</b> 304 |   | #40            | 43094           |
| CRACE CROUP   |               | , | #50            | 43094           |
| GIROL GROOT   |               |   | #51            | 43035           |
| #1            | 43064         |   | ポリエー           | 40715           |
| #2            | 43065         |   | #52            | 40710           |
| #3            | 43066         |   | 1733<br>· 467  | 40717           |
| #4            | 43067         |   | #55            | 40710           |
| #5            | 43068         |   | 11 J J<br>45 C | 40719           |
| #6            | 43069         |   | #20<br>#57     | 40720           |
| #7            | 43070         |   | #37<br>#F0     | 48721           |
| #8            | 43071         |   | #08<br>#ro     | 48722           |
| <b>#9</b>     | 43072         |   | #59            | 48723           |
| #10           | 43073         |   | #60            | 48/24           |
| #11           | 43074         |   | #61            | 48725           |
| #12           | 43075         |   | #62            | 48726           |
| #13           | 43076         |   | #63            | 48727           |
| #14           | 43077         |   | #64            | 48728           |
| #15           | 43078         | • |                |                 |
| #16           | 43079         |   | JOANN GROUP    |                 |
| #17           | 43080         |   | #1             | 19567           |
| #18           | 43081         |   | #3             | 19569           |
| #19           | 43082         |   |                |                 |
| #20           | 43083         |   |                |                 |
| #21           | 43084         |   |                |                 |
| #22           | 43085         |   |                |                 |
| #23           | 43086         |   |                | er.             |
| #24           | 43087         |   |                |                 |
| #25           | 48701         |   |                |                 |
| #27           | 48702         |   | **Free Miner's | Certificate No. |
| #29           | 48703         |   |                |                 |
| #30           | 48704         |   |                | 89504           |
| #31           | 48705         | · |                |                 |
| #32           | 48706         |   |                |                 |
| #33           | 48707         | • |                |                 |
| #34           | 48708         |   |                |                 |
| #37           | 48709         |   |                |                 |
| #38           | 48710         |   |                |                 |
| #39           | 48711         |   |                |                 |
| #40           | 48712         |   |                |                 |
| #41           | 48713         |   |                |                 |
| # マエ<br># ム つ | 40710         |   |                |                 |

### APPENDIX III

## Geochemical Analysis Results

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| MARKING     | Mo       | Cu   | Zn       | нa   | MARKING     | Mo       | Cu   | Zn      | pН       |
|-------------|----------|------|----------|------|-------------|----------|------|---------|----------|
| 020, 0001 L | 2        | 75   | 73       | 6.25 |             |          |      |         |          |
| 020, 0002   | 3        | 68   | 64       | 6.95 | 020, 058 T  | 1        | 58   | 32      |          |
| 020, 006    | 14       | 75   | 120      | 6.40 | 64          | 43       | 750  | 105     |          |
| 11          | 23       | 375  | 245      | 6.65 | 65          | 55       | 133  | 18      | ļ        |
| 13          | 5        | 830  | 156      | 6.05 | 95          | 3        | 165  | 54      |          |
| 27          | 17       | 580  | 790      | 6.25 | 105         | 350      | 780  | 145     | <b> </b> |
| 55          | 14       | 1600 | 150      | 6.00 | 08          | 18       | 108  | 1080    |          |
| 80          | 9        | 580  | 230      | 6.85 | 12          | 4        | 80   | 1800    |          |
| 92          | 12       | 500  | 225      | 6.85 | 31          | 2        | 68   | 103     |          |
| 123         | 26       | 440  | 610      | 6.30 | 48          | 2        | 65   | 2640    | .<br>  . |
| 25          | 13       | 460  | 245      | 6.60 | 020, 154 T  | 1        | 35   | 100     | <u> </u> |
| 27          | 8        | 150  | 370      | 6.75 | 020, 0003 S |          | 72   | 95      | 4.95     |
| 30          | 13       | 470  | 305      | 6.80 | 04          |          | 40   | 43      | 5.05     |
| 39          | 3        | 40   | 740      | 6.95 | 5           | ·        | 1080 | 26      | 4.90     |
| 74          | 4        | 160  | 88       | 6.85 | 7           |          | 43   | 31      | 5.20     |
| 020, 176 L  | 3        | 72   | 60       | 6.00 |             |          | 18   | 26      | 4.85     |
| 020, 0016 T | 13       | 114  | 50       |      | 9           |          | 20   | 32      | 5.15     |
| 25          | nd       | 39   | 20       |      | 10          |          | 47   | 108     | 6.50     |
| 43          | 1        | 830  | 45       |      | 12          |          | 1020 | 130     | 6.10     |
| 020, 0051 T | 1        | 195  | 34       |      | 020, 014 S  |          | 18   | 48      | 5.05     |
| REMARKS     | <u>"</u> | //   | <u> </u> | ·    |             | <u>4</u> |      | <b></b> |          |

All values are reported in parts per million unless specified otherwise. All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.

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| MARKING    | Мо | Cu  | Zn  | pН   | MARKING    | Мо | Cu            | Zn  | Hq   |
|------------|----|-----|-----|------|------------|----|---------------|-----|------|
| 020, 015 S |    | 22  | 63  | 5.40 |            |    |               |     |      |
| 17         |    | 36  | 28  | 4.85 | 020, 038 S |    | 5             | 15  | 4.95 |
| 18         |    | 195 | 84  | 4.25 | 39         |    | 25            | 65  | 5.20 |
| 19         |    | 37  | 58  | 4.90 | 40         |    | 34            | 210 | 5.85 |
| 20         |    | 13  | 42  | 5.10 | 41         | -  | 363           | 103 | 5.40 |
| 21         |    | 20  | 26  | 5.20 | 42         |    | 275           | 73  | 5.35 |
| 22         |    | 55  | 110 | 5.80 | 44         |    | 470           | 58  | 5.25 |
| 23         |    | 26  | 155 | 5.30 | 45         |    | 200           | 80  | 5.35 |
| 24         |    | 1.7 | 220 | 5.65 | 46         |    | 26            | 35  | 5.10 |
| 26         |    | 20  | 50  | 4.35 | 47         |    | 720           | 55  | 5.10 |
| 28         |    | 30  | 58  | 4.85 | 48         | -  | 102           | 210 | 5.25 |
| 29         |    | 34  | 29_ | 5.25 | 49         |    | 37            | 93  | 5.00 |
| 30         |    | 55  | 218 | 5.10 | 50         |    | 23            | 68  | 5.40 |
| 31         |    | 24  | 155 | 5.05 | 52         |    | 23            | 180 | 5.35 |
| 32         |    | 42  | 180 | 5.75 | 53         |    | 305           | 155 | 5.35 |
| 33         |    | 43  | 200 | 5.25 | 54         |    | 190           | 110 | 5.50 |
| 34         |    | 29  | 111 | 5.30 | 56         |    | 63            | 78  | 5.20 |
| 35         |    | 31  | 320 | 5.40 | 57         |    | 97            | 60  | 5.40 |
| 36         |    | 17  | 45  | 5.45 | 59         |    | 60            | 50  | 5.20 |
| 020, 037 S |    | 15  | 45  | 5.15 | 020, 060 S |    | 55 <b>3</b> 0 | 85  | 6.10 |
| REMARKS    |    |     |     |      | •          |    |               |     | 1    |

All values are reported in parts per million inless specified otherwise. All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.

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NORTH VANCOUVER, B.C. CANADA

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| MARKING    | Мо        | Cu   | Zn          | рH            | MARKING    | Мо   | Cu  | Zn  | рĤ           |
|------------|-----------|------|-------------|---------------|------------|------|-----|-----|--------------|
| 020, 061 S |           | 2700 | <b>27</b> 5 | 6.10          |            |      |     |     |              |
| 62         |           | 1130 | 82          | 4.95          | 020, 084 S |      | 310 | 150 | 5.50         |
| 63         |           | 415  | 42          | 5.70          |            |      | 50  | 110 | 5.85         |
| 66         |           | 120  | 10          | 4.95          | 86         |      | 53  | 75  | 5.40         |
| 67         |           | 810  | 40          | 5.60          | 87         |      | 11  | 18  | 5.45         |
| 68         |           | 355  | 38          | 5.65          | 88         |      | 15  | 35  | 5 <b>.25</b> |
| 69         |           | 465  | 150         | 5.70          | 89         |      | 20  | կկ  | 5.15         |
| 70         |           | 180  | 73          | 5.45          | 90         |      | 19  | ւկ  | 5.15         |
| 71         |           | 260  | 83          | 5 <b>.3</b> 5 | 91         |      | 27  | 45  | 5.15         |
| 72         |           | 73   | 33          | 5.40          | 93         |      | 122 | 100 | 5.55         |
| 73         |           | 175  | 58          | 5.35          | 94         |      | 455 | 120 | 5.55         |
| 74         | · · · · · | 148  | դդ          | 5.25          | 96         |      | 14  | 82  | 5.35         |
| 75         |           | 180  | 60          | 5.35          |            |      | 52  | 110 | 5.30         |
| 76         | <br>      | 310  | 104         | 5.60          | 98         | <br> | 275 | 112 | 5.10         |
| 77         |           | 600  | 205         | 5.65          | 99         |      | 13  | 67  | 5.40         |
| 78         |           | 68   | 125         | 5.55          | 100        |      | 28  | 55  | 5.40         |
| 79         |           | 30   | 150         | 5.80          | 01         |      | 300 | 57  | 5 <b>.30</b> |
| 81         |           | 67   | 93          | 5.60          | 2          |      | 30  | 68  | 5.25         |
| 82         |           | 21   | 35          | 5.40          | 3          |      | 46  | 50  | 5.40         |
| 020, 083 S |           | 68   | 150         | 5.60          | 020, 104 S |      | 65  | 50  | 5.45         |

**REMARKS** 

All values are reported in parts per million unless specified otherwise. All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.

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| MARKING    | Мо                                    | Cu   | Zn   | pН    | MARKING     | Мо | Cu  | Zn   | рН           |
|------------|---------------------------------------|------|------|-------|-------------|----|-----|------|--------------|
| 020, 106 S |                                       | 23   | 65   | 5.75  |             |    |     |      |              |
| 7          |                                       | 37   | 1520 | 5.45  | 020, 133 S  |    | 337 | 124  | 5.45         |
| 9          |                                       | 52   | 900  | 5.70  | 34          |    | 74  | 114  | 5.35         |
| 10         |                                       | 55   | 470  | 7.65  | 35          |    | 15  | 180  | 5.70         |
| 11         |                                       | 87   | 760  | 6.60  | 36          |    | 26  | 153  | 5 <b>.60</b> |
| 13         |                                       | 60   | 490  | 5.50  | 37          |    | 150 | 4200 | 5.50         |
| 14         | · ·                                   | 372  | 168  | 5.90  | 38          | l  | 10  | 90   | 5 <b>.70</b> |
| -15        | [<br>                                 | 47   | 105  | •5.90 | 40          |    | 17  | 165  | 5.80         |
| 16         |                                       | 27   | 150  | 5.70  | 1+ <b>1</b> |    | 47  | 150  | 5.75         |
| 17         |                                       | 22   | 85   | 6.20  | 42          |    | 23  | 180  | 5.60         |
| 18         | · · · · · · · · · · · · · · · · · · · | 33   | 55   | 6.30  | 43          |    | 27  | 630  | 5.35         |
| 19         |                                       | 32   | 150  | 5.55  | ւ՝ կկ       |    | 27  | 82   | 5.60         |
| 20         |                                       | 85   | 122  | 5.65  | 45          |    | 31  | 114  | 5.20         |
| 21         |                                       | 163  | 155  | 5.45  | 46          |    | 30  | 164  | 5.60         |
| 22         |                                       | 172  | 157  | 5.55  | 47          |    | 233 | 1500 | 5.75         |
| 24         |                                       | 180  | 425  | 6.05  | 49          |    | 15  | 30   | 4.80         |
| 26         |                                       | 30   | 135  | 6.65  | 50          |    | 7   | 10   | 5.05         |
| 28         |                                       | 37   | 134  | 5.35  | 51          |    | 28  | 64   | 5.75         |
| 29         |                                       | 175  | 166  | 5.50  | 52          |    | 30  | 180  | 5.80         |
| 020, 132 S |                                       | 360. | 136  | 5.25  | 020, 153 S  |    | 27  | 175  | 5.80         |

REMARKS

All values are reported in parts per million unless specified otherwise. All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.

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| MARKING           | Мо | Cu  | Zn·  | pH   | MARKING |   |        |      |
|-------------------|----|-----|------|------|---------|---|--------|------|
| 020,0155 S        |    | 10  | 33   | 5.10 |         |   |        |      |
| 56                |    | 5   | 20   | 4.95 |         |   |        |      |
| 57                |    | 75  | 105  | 5.70 |         |   |        | <br> |
| 58                |    | 75  | 150  | 5.70 |         |   |        | <br> |
| 59                |    | 30  | 100  | 5.40 |         |   | ······ |      |
| 60                |    | 27  | 130  | 5.40 |         |   |        |      |
| 61                |    | 25  | 133  | 5.50 |         | - |        | <br> |
| 020,0162 S        |    | 50  | 90   | 5:45 |         |   |        |      |
| 020, 163 S        |    | 30  | 1120 | 6.30 |         |   |        |      |
| 020,0164 S        |    | 19  | 192  | 5.10 |         |   |        |      |
| 65                |    | 123 | 1340 | 6.00 |         |   |        |      |
| 66                |    | 147 | 1740 | 6.30 |         |   |        |      |
| 67                |    | 102 | 1500 | 6.40 |         |   |        |      |
| 68                |    | 153 | 3600 | 6.50 |         |   |        | <br> |
| 020,0169 <b>S</b> |    | 196 | 5500 | 6.40 |         |   |        | <br> |
| 020, 170 S        |    | 92  | 72   | 6.00 |         |   | ·      | <br> |
| 71                |    | 168 | 114  | 5.90 |         |   |        |      |
| 72                |    | 150 | 103  | 6.05 |         |   |        |      |
| 73                |    | 140 | 95   | 5.85 |         |   |        | <br> |
| 020, 175 S        |    | 154 | 106  | 6.10 |         | - |        |      |

REMARKS

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NORTH VANCOUVER, B.C. CANADA

TELEPHONE 604-988-2172

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|     |   |  |   |  |   |  | - <b>,</b>  |  |
|-----|---|--|---|--|---|--|---|--|
| Мо  | Cu  | рӉ   |   | MARKING  | Мо  | Cu   | рН  |  |
| 1   | 38  | 7.7  |   |  |   |  |   |  |
| 2   | 46  | 7.8  |   | 40-020 - S - 206   | 10  | 13   | 4.7   | · · · · · ·  |
| 2   | 38  | 7.9  |   | .08  | 43  | 200  | 6.7   |  |
| 27  | 95  | 5.4  |   | 11   | 36  | 183  | 5.1   |  |
| 60  | 37  | 5.7  |   | 12   | 12  | 18   | 5.6   |  |
| 6   | 13  | 4.5  |   | 14   | 12  | 17   | 5.3   |  |
| 3   | 76  | 5.6  |   | 15   | 37  | 56   | 6.7   |  |
| 4   | 97  | 6.2  | •   | 17`  | 3   | 9  | 4.5   |  |
| 1   | 54  | 5.7  |   | 18   | 102   | 46   | 6,1   |  |
| 4   | 89  | 5.5  |   | 19   | 7   | 5  | 4.3   |  |
| 6   | 94  | 5.3  |   | 20   | 27  | 16   | 5.0   |  |
| 4   | 111   | 6.6  | -   | 21   | 45  | 21   | 5.6   |  |
| nd  | 46  | 7.2  |   | 23   | 26  | 22   | 5.2   |  |
| - 4 | 120   | 7.2  |   | 25   | 9   | 149  | 6,1   |  |
| 20  | 79  | 5.4  |   | 26   | 4   | 118  | 6.3   |  |
| 29  | 132   | 5.6  |   | 27   | 5   | 161  | 6.6   |  |
| 52  | 17  | 5.4  |   | 28   | 5   | 202  | 6.5   |  |
| 12  | 3480  | 6.4  |   | 29   | 5   | 142  | 5.3   |  |
| 470 | 212   | 4.9  |   | 40-020 - S - 230   | 5   | 203  | 5.9   |  |
| 61  | 387   | 5.3  |   | 40-020 - L - 188   | 5   | 102  | 6.5   |  |
|     | Mo 1 2 2 2 27 60 6 3 4 1 4 6 4 1 4 6 4 20 29 52 12 470 61 | Mo         Cu           1         38           2         46           2         38           27         95           60         37           6         13           3         76           4         97           1         54           4         89           6         94           4         111           nd         46           4         120           20         79           29         132           52         17           12         3480           470         212           61         387 | Mo         Cu         pH           1         38         7.7           2         46         7.8           2         38         7.9           27         95         5.4           60         37         5.7           6         13         4.5           3         76         5.6           4         97         6.2           1         54         5.7           4         97         6.2           1         54         5.7           4         89         5.5           6         94         5.3           4         111         6.6           nd         46         7.2           4         120         7.2           20         79         5.4           29         132         5.6           52         17         5.4           12         3480         6.4           470         212         4.9           61         387         5.3 | Mo         Cu         pH           1         38         7.7           2         46         7.8           2         38         7.9           2         38         7.9           27         95         5.4           60         37         5.7           6         13         4.5           3         76         5.6           4         97         6.2           1         54         5.7           4         89         5.5           6         94         5.3           4         111         6.6           nd         46         7.2           20         79         5.4           29         132         5.6           52         17         5.4           12         3480         6.4           470         212         4.9           61         387         5.3 | Mo         Cu         pH         MARKING           1         38         7.7         40-020 - 8 - 206           2         46         7.8         40-020 - 8 - 206           2         38         7.9         08           27         95         5.4         11           60         37         5.7         12           6         13         4.5         111           60         37         5.7         12           6         13         4.5         14 <sup>4</sup> 3         76         5.6         15           4         97         6.2         17 <sup>7</sup> 1         54         5.7         18           4         89         5.5         19           6         94         5.3         20           4         111         6.6         21           nd         46         7.2         23           4         120         7.2         25           20         79         5.4         26           29         132         5.6         27           52         17         5.4         28 | Mo         Cu         pH         MARKING         Mo           1         38         7.7         1 | MoCupHMARKINGMoCu1 $38$ $7.7$ 40-020 - S - 2061013246 $7.8$ 40-020 - S - 20610132 $38$ $7.9$ 08432002795 $5.4$ 111361836037 $5.7$ 121218613 $4.5$ 14 <sup>4</sup> 1217376 $5.6$ 153756497 $6.2$ 17 <sup>7</sup> 391 $54$ $5.7$ 1810246489 $5.5$ 19975694 $5.3$ 2027164111 $6.6$ 214521nd46 $7.2$ 2326224120 $7.2$ 2591492079 $5.4$ 26411829132 $5.6$ 2751615217 $5.4$ 28520212 $24.9$ $40-020 - S - 230$ 520361 $387$ $5.3$ $40-020 - L - 188$ 5102 | Mo         Cu         pH         MARKING         Mo         Cu         pH           1         38         7.7         Image: Constraint of the constraint |

**REMARKS** 

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| MARKING          | Mo  | Cu   | рӉ  | Remark | MARKING |   |   |   |   |
|------------------|-----|------|-----|--------|---------|---|---|---|---|
| 40-020 - L - 202 | 5   | 120  | 6.9 | Silt   |         |   |   |   |   |
| 3                | 2   | 46   | 6.9 |        |         |   |   |   |   |
| 7                | 14  | 242  | 7.3 |        |         |   |   |   |   |
| 209              | 9   | 108  | 7.7 |        |         |   |   |   |   |
| - L - 224        | 9   | 172  | 7.7 | Silt   |         |   |   |   |   |
| <b>- T - 183</b> | 10  | 27   |     | Kock   |         |   | J |   |   |
| / 85             | 21  | 21   |     |        |         |   |   |   |   |
| 205              | 21  | 37   |     |        |         |   |   |   |   |
| 10               | 84. | 5900 |     |        |         |   |   |   |   |
| 13               | 4   | 55   |     |        |         | - |   |   |   |
| 216              | 8   | 41   |     |        |         |   |   |   |   |
| 40-020 - T - 222 | 2   | 7    |     | Rock   |         |   |   |   | × |
|                  |     |      |     |        |         |   |   |   |   |
|                  |     |      |     |        |         |   |   |   |   |
|                  |     |      |     |        |         |   |   |   |   |
|                  |     |      |     |        |         |   |   |   |   |
|                  |     |      |     |        |         |   |   |   |   |
|                  |     |      |     |        |         |   |   |   |   |
|                  |     |      |     |        |         |   |   |   |   |
|                  |     |      |     |        |         |   |   | 1 |   |

**REMARKS** 

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## APPENDIX IV

## Geochemical Frequency Distribution

| No. | of Samples | RAnge in p.p.m. | No. of Samples |
|-----|------------|-----------------|----------------|
|     | Copper     | -               | 7.inc          |
|     | 19         | 0-20            | 3              |
|     | 36         | 21-40           | 11             |
|     | 15         | 41-60           | 21             |
|     | 7          | 61-80           | 13             |
|     | 4          | 81-100          | 13             |
|     | 2          | 101-120         | 16             |
|     | 3          | 121-140         | 7              |
|     | 4          | 141-160         | 10             |
|     | 6          | 161-180         | 8              |
|     | 3          | 181-200         | 1              |
|     | 1          | 201-250         | 5              |
|     | 3          | 251-300         | 1              |
|     | ۵<br>۵     | 301-350         | 1              |
|     | 3          | 351-400         | <b>.</b>       |
|     | 2          | 401-450         | 1              |
|     | <b>_</b> * | 451-500         | 1              |
|     | 2          | 501-750         | 1              |
|     | 1          | <b>751–1000</b> | 1              |
|     | 4          | more than 1000  | 5              |

| No. of Samples<br><u>Molybdenum</u>          | Range in p.p.m. |
|--|-----------------|
| <u> </u>                                     |                 |
| 4 <b>4 4</b>                                 | 1-2             |
|  | <b>3-4</b>      |
| 9  | 5-6             |
| 2  | . <b>7–8</b>    |
| 5  | 9-10            |
| 4  | 11-12           |
| 5  | 13-14           |
|  | 15-16           |
| 1 <b>1</b> 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 17-19           |
| 1  | 10 00           |
|  | 19-20           |
| •  | 21-22           |
| 1  | 23-24           |
| 2  | 25-26           |
| 2  | 27–28           |
| 1  | 29-30           |
|  |                 |
| 2  | 31-40           |
| - 2  | 41-50           |
| -<br>-                                       | 41-JU           |
| 2  | 00-10           |
| 5  | more than 60    |



| 1   | LEGEND  |  |  |  |
|---|---|--|--|--|
| T   | Predominantly Black Argillite and Black shale very minor limestane<br>with varying amounts of disseminated pyrite from 0% to 5%<br>usually very low pyrite.         |  |  |  |
| 2   | Predominantly Siliceous and silicified fine grained sediments<br>quartzite with varying pyrite content usually 5 % fine grained<br>diss. Black and white varieties. |  |  |  |
|   | Predominonity Dark green fine grouned Vokonic (?) massive sedments with usually about 5 % fine grained diss, pyr some chalcopyrite                                  |  |  |  |
| 4   | Predominantly partially hornfrised black shale. No pyrite.<br>Fine grained massive and dark grey to black varieties   |  |  |  |
| Porphyritic Syenite fine to medium grained intrusive Contact<br>phase contains about 0.1% das five grained pyrite   |   |  |  |  |
| NOTE<br>Contour lines are very approximate, really are "form lines"<br>based on altimeter sevation. They do not show minor draws<br>and ridges Tapographic locations are very approximate<br>based on air photos, estimation, poce and compass and<br>tape and compass lines. This map <u>Not</u> for engineering use |   |  |  |  |
| CERRO MINING CO OF CANADA LTD.<br>WESTERN DIVISION<br>VANCOUVER BC  |   |  |  |  |
| GEOLOGICAL MAP  |   |  |  |  |
| ISKUT RIVER PROPERTY  |   |  |  |  |
| ISKUT SILVER MINES LTD.   |   |  |  |  |
| Liord Mining Division - British Columbia  |   |  |  |  |
| * 0   | KIERANS, P ENG Siche 1"+ 200 feet Drown by A O  |  |  |  |





| OS192;4,89    | Sample site, sample number, p.p.m. Mo, p.p.m. Cu<br>(S-, L-, T- : denotes soil, silt and rock chip samples). |
|---------------|--|
| ⊙ 45 : 200,80 | Soil sample site, sample number, p.p.m. Cu, p.p.m. Zn.   |
| 27:580,790,17 | Silt sample site, sample number, p.p.m. Cu, p.p.m. Zn, p.p.m. Mo.  |
| @112:80,1800  | Rock chip sample site, sample number, p.p.m. Cu, p.p.m. Zn, p.p.m. Mo.                                       |
| FP IP         | Claim boundary, final claim post, initial claim post.  |
|               | Creek.   |
| WP            | Witness post.  |
| 1             | Claim aroun houndary   |

| Range of Cu. in s    | oils | and silt.        |
|----------------------|------|------------------|
| Background           | 0    | 0 - 60 p.p.m.    |
| Third order anomaly  | 0    | 60 - 150 p.p.m.  |
| Second order anomaly | 0    | 150 - 300 p.p.m. |
| First order anomaly  | 0    | > 300 p.p.m.     |

| Range of Zn. in      | soils | and .   |
|----------------------|-------|---------|
| Background           | •     | 0 - 25  |
| Second order anomaly | •     | 251 - 6 |
| First order anomaly  | •     | >600    |



# LEGEND

| O5192;4,89     | Sample site, sample number, p.p.m. Mo, p.p.m. Cu<br>(s-, L-, T- : denotes soil, silt and rock chip samples). | MAR . |
|----------------|--|-------|
| ⊙ 45 : 200,80  | Soil sample site, sample number, p.p.m. Cu, p.p.m. Zn.   |       |
| 27:580,790,17  | Silt sample site, sample number, p.p.m. Cu, p.p.m. Zn, p.p.m. Mo.  | 613)  |
| 8112:80,1800   | Rock chip sample site, sample number, p.p.m. Cu, p.p.m. Zn, p.p.m. Mo.                                       |       |
| FP IP<br>FP IP | Claim boundary, final claim post, initial claim post.  |       |
| -              | Creek.   |       |
| WP             | Witness post.  |       |
| ~              | Claim group boundary   |       |

613197

| Range of Cu. in so   | oils | and silt.        | Range of Zn. in      |
|----------------------|------|------------------|----------------------|
| Background           | •    | 0 - 60 p.p.m.    | Background           |
| Third order anomaly  | •    | 60 - 150 p.p.m.  | Second order anomaly |
| Second order anomaly | •    | 150 - 300 p.p.m. | First order anomaly  |
| First order anomaly  | •    | > 300 p.p.m.     |                      |

GRACE CLAIMS 23 37 17 19 21 39 MILEELI 119917 M 119913 M 119915 M 119948 M 119946 M KARIN FP IP FPIP 1.00 38 20 24 22 119918 M 119912 M 1/9916 M 119914 M 119947 M 119945 M 5 25 27 29 31 33 613181 119919 M 11992CM 119921 M 119923 M 119927 M 2004:01 FP IF EP | FP IP 174 : 160, 88, 4 FP I 173:140,95 \$197:20,79 \$230:5,203 \$196:4,120 \$196:4,120 \$195:nd,46 \$194:4,110 \$193:6,94 30 32 34 0 T205:21,37 0 S206:10,13 0 L207:14,242 OS229 : 5,142 119928 M 119924 M S208: 45,60 ANN L209: 9,108 T210: 84,5900 S211: 36,183 119922M 3190 \$228: 5,202 CLAIMS \$192:4,890 S227: 5,161 S191 : 1,540 OS226:4,118 85212:12,18 7213: 4,55 S225: 9,149 L 224: 9,172 OS214: 12,17 OS223:26,22 85215: 37,56 47 49 .51 53 55 119905 M 119929 M 119932M 119901M 119903 M 119931 M : E.D. FP 1. .... 44 6 46 48 50 52 54 56 P 119934M M 206611 [19904M 119906 M 119930 M 119932 M ~···) 59 60 62 63 61 in it 0:2 119937 M 119938 M 119939 M 119940 M 119941 M D. AWP V E A TS soils and silt Range of Mo in soils and silt 0 0 - 250 p.p.m. 0 0 - 7 p.p.m. Background 0 251 - 600 p.p.m. Second order anomaly O 8 - 14 p.p.m. 0 >600 p.p.m. First order anomaly O 15 p.p.m. JOE 3002 M-7 0 12





| 0\$19214,69    | Sample site, sample number, p.p.m. Mo, p.p.m. Cu                       | 133 |
|----------------|--|-----|
|                | (S-, L-, T- : denotes soil, silt and rock chip samples).               | 1   |
| ⊙ 45 : 200,80  | Soil sample site, sample number, p.p.m. Cu, p.p.m. Zn.                 |     |
| 27: 580,790,17 | Silt sample site, sample number, p.p.m. Cu, p.p.m. Zn, p.p.m. Mo.      |     |
| 8112:80,1800   | Rock chip sample site, sample number, p.p.m. Cu, p.p.m. Zn, p.p.m. Mo. | L   |
| FP IP          | Claim boundary, final claim post, initial claim post.                  |     |
|                | Creek.   |     |
| WP             | Witness post.  |     |
| -              | Claim group boundary   |     |

| Range of Cu. in se   | oils | and silt.        |
|----------------------|------|------------------|
| Background           | 0    | 0 - 60 p.p.m.    |
| Third order anomaly  | 0    | 60 - 150 p.p.m.  |
| Second order anomaly | 0    | 150 - 300 p.p.m. |
| First order anomaly  | 0    | > 300 p.p.m.     |

| Range of Zn. in      | soils | and silt    |
|----------------------|-------|-------------|
| Background           | 0     | 0 - 250 p.  |
| Second order anomaly | 0     | 251 - 600 p |
| First order anomaly  | 0     | >600 p.p.   |

613198

GRACE CLAIMS 17 23 37 19 51 39 119911 M 119917 M 119913 M 119915 M 119948 M 119946 M KARIN FP IP 20 24 38 40 18 22 119.912 M 119918 M 119914 M 119916 M 119947 M 119945 M 25 29 33 31 119921 M 613181 119919 M 119926 M 119923 M 119927 M FP FP 32 34 30 \$197:20,790 \$230:5,2030 0 T205:21,37 0 S206:10,13 0 L 207:14,242 S196+4,120 S195:nd,460 S194:4,111 OS229:5,142 119928 M 13190 \$\$228: 5,202 • 5208: 45, 20 ANN 0 L209: 9, 108 0 T210: 84, 5900 • S211: 36, 183 119922 M 119924 M CLAIMS 5193:6,940 05227:5,161 OS226:4,118 85212112,18 87213: 4,55 S225: 9,149 L 224: 9,172 S223: 26,22 05214:12,17 -S215: 37,56 S186: 60, 37 47 49 51 53 55 119905 M 119929 M 119931M 119932M 119901M . 19903 M EP. V 44 Fil 50 .48 52 5.4 56 10 119904M 119906 M 119930 M 119932 M 119934 M MSOREIT 1:0 59 60 62 63 61 0.2 119937 M 119938 M 119940 M 119941 M 119939 M D FP IP A w' V E A 7 S Range of Mo in soils and silt Background ● 0 - 7 p.p.m. First order anomaly • > 15 p.p.m. 3005 3002 M-8-M S

