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# Keithly Circle ann Pizperty File

Canadian Geophysical Technologies, Ltd.

Report То

## Cascadia Mines and Resources, Ltd.

Covering the

### HARD ROCK CLAIMS

in the

Cariboo Mining District British Columbia, Canada

Réjected Asses. Report



#### CANADIAN GEOPHYSICAL TECHNOLOGIES, LTD.\*

REPORT

ΤO

CASCADIA MINES AND RESOURCES, LTD.

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HARD ROCK CLAIMS

IN THE

CARIBOO MINING DISTRICT

BRITISH COLUMBIA, CANADA

SEPTEMBER 3, 1987

#### HARD ROCK MINING CLAIMS OF THE CASCADIA CLAIM GROUP

- TO: Ms. Dorothy Dennis President Cascadia Mines and Resources, Ltd. 730 - 736 Granville Street Vancouver, B.C. V62 1G3
- FROM: Lewis A. Manson Geophysical Consultant 1007 Briar Park Drive Houston, Texas 77042

DATE: September 3, 1987

This report concerns the examinations I have made of the hard rock claims held by Cascadia Mines and Resources, Ltd. in the Cariboo Mining District of British Columbia, Canada.

The writer was engaged to examine the hard rock claims held by Cascadia Mines and Resources, Ltd. in the Keithley Creek area to determine potential commercial grade mineralization as related to results of a survey conducted by Canadian Geophysical Technologies, Ltd.\* in which an instrument was employed that measures the true specific density of the crust with extreme accuracy. Values measured are in milligrams of differential.

The work began July 25, 1987, and was completed August 10, 1987.

#### LOCATION OF CLAIMS

The claims owned and operated by Cascadia are served by a well maintained gravel road for approximately 22 miles, which leads to paved highway beginning at Likely, B.C. \*Canadian Geophysical Technologies, Ltd. name is pending approval by the Canadian government.



This area, first discovered by local miners in 1858, soon became the focal point of one of Canada's major gold rushes. It quickly blossomed to a town of 15,000 as prospectors from the world over made their way to Keithley Creek. By 1918 they had taken 400,000 ounces out in nuggets, which have sold for more than \$6 million in an era of \$26 per ounce gold. The boom was conducted primarily with hand tools and homemade sluice boxes. Some hydraulic work was conducted in adjacent areas around the early 1920's, but until Cascadia first started work on their claims there had never been a major mining operation conducted in the area.

#### WORK SCOPE

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The reconnaissance survey just completed covered several claims in the vicinity of Keithley Creek. (See location map of claims.) Approximately 26 kilometers of survey lines were conducted in spacings ranging from 16 meters to 80 meters. 950 stations were measured in the "hard rock" survey and processed.

#### SURVEY PROCEDURE OF CANADIAN GEOPHYSICAL TECHNOLOGIES, INC.

A series of surveys consisting of 49 lines and 1,350 stations were run to measure the specific density of the earth's crust at selected locations. This included not only the hard rock claims, but also the surrounding area.

This new class of high precision instruments, the Crustal Density Meter was employed in this survey. Two identical instruments are used in the work: one is employed as a base station which remains in one location and measures the daily

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Indicate claim boundaries, permanent watercourses, access road and distance to nearest town, proposed surface disturbances including roads, test pits, trenches, portals, drill sites, and camp sites.



diurnal curve; the other is the field unit which travels over the surface and is stopped at each station and measures the differential of the crustal density below.

At the outset, the field unit is taken off the property quite a distance and is run to obtain a standard of crustal density value for the area. The survey is then begun, which at each of the 1,350 stations a measurement was taken to determine in milligrams the proportional density of the crust within a 5° conical area, with the apex at the center of the instrument. The instrument can measure the differential for several miles down in the crust, with the value being inversely proportional to the square of the distance down. The equipment is designed to locate faulting, potential mineralization and various structural features where density changes are highly pronounced.

When both units are operated, the time of day is noted continuously at the base station, and the time of the reading of the field unit is also noted when a measurement is taken at each station. At the base station the time and the value are noted, while in the field the time, the station number and the station value are noted. These are combined at the completion of the project and sent in to be processed by computer, at which time the base station values are deducted from the field values to eliminate the diurnal curve which is developed by extraterrestrial gravitational attraction created by the Sun, Venus, the Moon and so forth.

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#### EXPLANATION AND INTERPRETATION OF GRAPHS

The resulting graphs printed by the computer include several columns of data: the base station time and milligram value, the field unit time, reading value in milligrams at each station, diurnal correction value, net milligram value and the station number.

The graph printout also indicated the end of a traverse line and change of direction for a new traverse line.

The graph provides the <u>average</u> crustal density in the area, any fault zones, changes in composition of different rock types (densities) and where high density occurs, a drastic dip from the average crustal density line appears. The amount of change indicates a greater or lesser degree of specific density.

Where a large degree of mineralization is present within the rock, the dip of the graph is very pronounced. (See line #46, 47, 48 and 49 and stations #1301 through 1350 on the graph, also line #40, stations #1071 through station #1093. The placer traverses line 33, stations 905 and 906, the density was so high that the density values reached 80.71 milligrams more than the average crustal density line value of 18.5 milligrams. Here the stations were 50' apart - thus indicating a vein (near surface) having a width of around 135' + or -.

Also in this placer area, traverse lines 34, 35, 36, and 37 - a total of 71 stations 17 meters apart were of sufficiently high density to warrant a serious examination of the rock

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content in addition to the alluvial material.

Any differential of 24 or more milligrams density must be considered of interest - having potential mineralization. Certain cautions have to be considered, i.e., possible veins of barite, for example. This mineral, of high density, will show a drastic density value as compared to adjacent rock.

Once the computer processing has been done, the maps are then prepared, onto which are placed all of the station numbers and then the net specific density value (in milligrams) of potential mineralization. An orange dot or circle indicates an area that should be examined and cored to determine what type of mineralization exists below. Some areas on the map are marked with either two or four orange circles, which indicate that the instrument has found an area of very high density and of unusual value.

The writer found that the precision of the equipment is very high, and repeatability was quite pleasing.

Map 1 covers several lines conducted in the survey with the specific density instruments in the immediate vicinity of Keithley, Weaver and Four Creeks. Map 2 covers Lines 5, 6, 12, 14, 31, 32, 33, 38, 39, 40, 43, 44, 45, and 46 through 49. Map 3 contains lines 41 and 42. Several other lines were run ranging from 10 to 65 stations in which little change was detected by the meter. These lines were run at various points of the claims. Since no differential was indicated on these lines, they were not processed. They are, however, noted on the maps.

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On map 1, line 24, thence through to line 1 and 26, and additionally lines 34 through 37 were found to be of unusual interest, and a very high density material was indicated below.

Additionally, at the junction of Weaver and Keithley Creeks on lines 14, 15 and 18, an area of interest is indicated. Here, as in the other, surface mineralization in the rock was found. On mile High Hill at lines 5 and 6, high density indications were found instrumentally. At line 43 a small area of high density again was indicated, with mineralization in the rocks at the surface. At lines 44 and 45, where previous coring had been conducted, an area of interest was indicated similar to lines 5 and 6. A close grid survey should be conducted over lines 44 and 45; in fact, over the knoll which extends toward Keithley Creek.

However, on Outcrop Hill, where lines 38, 39, 40 and 46 through 49 were conducted, a very unusual high density area was found. Additionally, some of the rocks were broken open and free gold, arsenic pyrites and sulphides were found in the outcrops. The intensity of the specific density of this area was sufficient to drive the values off the scale of the meter, indicating near surface mineralization and extending to a considerable depth which I estimate to be at 2,000 to 3,000 feet down.

It is recommended that in the vicinity of lines 38, 39, 40, and 46 through 49, a series of core holes be drilled to determine the class of minerals involved in this area. It is further recommended that additional survey work in close grid

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work be conducted by the Specific Density instruments to determine the extent of this area. This should be followed by a coring program and then assaying to determine values.

On lines 41 and 42, the survey conducted in this area did not indicate sufficient interest to warrant further work at this time.

The classes of rock in the district are mainly andesite, quartz and a variety of other igneous forms. Included are veins of arsenical pyrite, sulphides, etc.

#### RECOMMENDATIONS

It is recommended that an extensive geological examination be conducted not only based upon these findings, but by geophysical evaluation on site, and that coring be conducted after a more detailed Specific Density survey.

The computer printouts supplied along with the maps of this hard rock area are the first precision evidence I have encountered of instrumental examination of these properties. The high density areas indicated are of sufficient size to warrant the additional work as recommended, and certainly should be followed upon. As a result, this may produce a viable and commercial operation.

The length of survey on Outcrop Hill was 1,000 feet, of which the total length was indicated to be a very high density material below. Therefore, it is of keen interest at this point. See map of lines 38, 39, 40 and 46 through 49.

Yanks Peak, just to the North of the Cascadia claims group, has several claims held by others on the northeastern

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side of the mountain. It is within those claims that commercial grade ores of gold, silver, etc. have been found.

Cascadia has claims on the southwestern side of the peak. These lie in an area of high density values and hold promise for commerical ores. More preliminary surveys should be conducted in this zone.

One suggestion I might make in recommendation is that a series of shallow channels be cut across the outcrops on lines 41, 42, 43 and 46 through 49, with samples taken for assay under the supervision of a competent geologist.

Respectfully submitted,

May

Lewis A. Manson

Enclosed with this report are three maps (Numbers 1, 2 and 3). Also included are the graphs produced by the computer printout, the field worksheets and the data master for all of the material.



- DATAMASTER : CASCADIA SBACING -ATE LORE FINE STATION SPACE ACROSS BLAZED TRAIL ALONG ENTIRE HOLDINGS KEIT - " Www 21 1-45 /16/11 ETCIV FROM E. SETTING POND TO INTERSECTION OF KEITHEY SNOWS -128 P & 85-2231300 1/3TRAM KEITELE, FROM FOUR Mile CREEK X W/OLD LUCREER TO SHOUSEDGE ( " | H " | . 5 234-240 3400'PEAK N-5 LING at 32M INTERVALS 6 241-258 " " E-W LINE ab 32 M. W/5M Closegrii -1/29 P 7 259-308 IN KEITHLEY CREEK Pom SNow show down To E END Post of Cla "" " 10 353-394 "" " 10 375-413 "" " 10 375-413 DIAGRAM A 3M. CLOSE Grid of WORKSITE -3/2 H 12 +14-518 N. In The 3400 PERK ROAD AT 66 M. INTERVALS P. B 519-623 E. alone KEITHIEY Ce. from Moushoe CR. TO WEAVER CR.C. 16 M. \$/3 H 14 62.4 654 EXTENSION OF LINE 12 NE AT GOM. INTERVALS From STASI. 11 -84 P 15 635-590 FROM A FT. 32m. W. of NERVER C. A. DANN. of KETHLEY: N.C. 3M. . 15 611-684 • : - " 10 685-691 DIAGRAM B 312 CLOSE GRUD OF - " 18 692-706 Lines 15-26 FLACK CLAIMS . . 19 707-713 - . 20. 714- 730 - 11 " 22 745-759 " 23 760-774 \_%= 44 ": 24 775-789 " 790-205 *t* 1 . 26 806-850) D. KRAMC LINES 27-30 to P 11 753-861 CREDER GRID AND STATION 535 (E.R. STATION & " 23 262-369 Uphill CRASIGNON SEN. ER-C, 2019. W. of STN. 5:

12 DRIGHASSER CASCADIA DRP 8/17/87 - 1 CASE LIDE STATIONS CORATINS P. 29 8170 - MAR FROM 2M W.of SIN 521 HOCKEY STAK AT FRITHLEY + SNOWSHOR " 30 878-262 - Shaped SEARCH GRID FROM STN. 527 H 31 283-891 RECON LINE EX. 3 FAULT ZONE From Re TOWEAVER (R. CAT, 32 892-876 CIRCULAR GRID OF STATIONS EGI DIAKSKAM D LINES 31-33 - 11 33 897-910 CLOSE GRID OF J FAULT INTERSETION BETWEEN STATIONS 880-801 34 911-920 DIAGRAME / CROSSERID OF STN. 820  $\rho$ -51 11 35 921-943 LINES 34-37 / CROSSGRID OF STN. 823 " " 827 36 945-957 -11 - 11 " 839 37 958 170 )) 38 971-1024 N-5 RECON Grid & OUTCROP PEAK & 5m. ~13 H 39 193.7-1011 PERPENDILALAR E-W Turn ON OUT CROP PK. C. 16M. 11 40 1012-1094 LING ACROSS LIMESTONE PIT DIAGRAM Flines 38-4. 13 17 41 1095-1135 E-W LINE AROSS HILL ACROSS From LAMP 1.6 M. 42 1136-1155 N-5 LINE BERSS Hill access from Camp 16m (570.1117) 11 11 43 1156-1185 YOU-SE LINE ACROSS Mile KIGH HILL CIGM. 14 300 1614 STU. NOI BORGHOLE AREA SURVEY AT 5M. INTERVAL. 15 1215-1232 + ; DingRAM G, Lass 41-43 46 1300 - 1309 Closegnid of OUTEROPPING, OIT AN 77 1310- 1325 Sugarop Hill Diagram H. Lin : 46-49 48 1326-1335 49 1336-1350 OPERATORS LEASE COUE LAM LEWIS DAVE P - placer PRP MB MERUIN BOE 45 - UCRKSITE 83 H - HARDRUCK BYRON BAXTER CiNO: BiollA ĊB 57 SHANE JUTHANS

CASCADIA REPORT MAP INDEX 8130/87 MAP NO. 1 LINE 1: TID-T19 : Une 2: 1 - 45 LINE 3: 46-84 LINE 4: 192 - 223 V LINE 7: 259- 308 LINE 8: 309-330 LINE 9: 331-352 V LINE 10: 353-394 JIAGERIN H 1 CINE 11: 395-413 +) LINE 3: 519-623 LINE 15: 635-610 LINE 16: 671-684 LINE 17: 685-691. LINE 18: 692-706 LINE 19: 707 - 713 Lin : 20:714-732 LINE 21: 731-744 DIRgram B 1 CINE 22: 745-759 LINE 23: 760-774 CINE 24: 775-789 LINE 25: 790- 805 1 LINE 34: 911-920 LINE 26: 806-852 LINE 35: 921-943 LINE 27: 353-861 LINE 28: 862-869 (DIAGRAM V CINE 36. 945-957) V LINE 57: 958-970 Ć LINE 29: 8 170 - 871 LINE 30. 878-882,

CASCADIA MAG INDEX HALPARED BY DRI 8/3018 Map No. 2 LINE 5: 224-240 LINE 6: 241 - 258 -LINE 31: 883-891 LINE 12: 414-518 1 LINE 32: 892-896 LINE 14: 624-654 ····· LINE 38: 971-1024 / LINE 33: 897-910  $\mathbf{V}_{\mathbf{r}}$ LINE 39: 1027-1071  $\sqrt{2}$ LINE 40: 1072-1094 1, LINE 44: 1200-1214 LINE 43: 1156-1185  $\sim$ LINE 45: 1215-1232-LINE 46: 1300-1309 LINE 47: 1310-1325 LINE 48: 1326-1335 V LINE 49: 1336-1350 J والمتعادية المراجع الم 

MASCADIA MAP INDEX DATE L 91301 MAD NO.3 UNE 41: 1095 - 1135 3 ue 42:1136-1155



