### ASSESSMENT REPORT

on

### 1996 SOIL AND ROCK SAMPLING PROGRAM

Rockland Grid (Bell and Eye 1 Claims) and Oro Denoro Property

NTS 82E/2 E

Lat: 49° 07' 30" N Long: 118° 32' 45" W

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Kettle River Resources Ltd. Box 130, 330 Copper St. Greenwood, B.C. V0H 1J0

Linda Caron. P. Eng. October, 1996

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### 1.0 SUMMARY

A program of rock and soil sampling was conducted in the vicinity of the Oro Denoro Mine in the spring of 1996 to define the control and distribution of gold within the skarn zone, and to test the on-strike extension of the skarn zone for gold. A total of 144 soil samples were collected at 50 metre intervals. Eighty rock samples were also collected. Analysis was for 31 element ICP plus gold by Fire Geochern, AA finish.

The main northwest controlling structure of the Oro Denoro skam can be traced in a western direction by geochem. There are no zones of anomalous copper or gold associated with the structure west of the Oro Denoro.

Rock sampling showed that high gold values are, almost without exception, associated with high copper values (contrary to what one would except in a classical gold skarn model). Best gold values are obtained from steep, late, north trending structures, with pyrite and quartz, which cut both skarn and intrusive rocks. These structures tend to be very narrow with erratic gold values. They are not felt to be a good exploration target.

No further work is recommended to test for a gold enriched portion of the Oro Denoro skarn to the west.

### 2.0 INTRODUCTION

### 2.1 Location, Access and Terrain

Work described in this report was done on the Bell, Eye 1 and Oro Denoro claims are located about 10 kilometres east-northeast of Greenwood, B.C. (see Figure 1). Access to the property is east from Greenwood, via Highway 3, to the Phoenix road, south on the Phoenix road to approximately 1 kilometre to the railgrade, and west on the railgrade 2.5 kilometres to the open stopes at the Oro Denoro Mine. The Bell and Eye 1 claims adjoins the Oro Denoro to the west.

The claims are situated at an elevation of about 3,500 feet on the lower north facing slopes of Deadman Hill, just west of Highway 3 and about 3 kilometres southwest of Wilgress Lake. The terrain is gentle however except on road and rail cuts and in areas of old workings, the forest cover is very thick. Vegetation consists primarily of thick cedar and alder forest, with some pine and fir at higher elevations on more open sidehills.

The climate is generally quite dry, with hot summers and little rainfall. Snowfall is minimal, generally less than 1 metre. In the area of current exploration, water for drilling is available from old drill workings at the Emma mine.

#### 2.2 Property and Ownership

The property, grouped as the Sunny 96 Group for the purpose of this report, consists of 17 mineral claims and one crown granted mineral claim (a total of 73 units), as shown in Figure 2 and summarized below. All claims are owned 100% by Kettle River Resources Ltd.

Claim Name	Record #	# of units	Expiry Date
Sunny #1	338686	4	Aug 9, 1998
Sunny #2	338687	8	Aug 9, 1998
Sunny #3	341453	1	Oct 31, 1998
Sunny #4	341454	1	Oct 31, 1998
Sunny #5	341455	15	Oct 31, 1998
Prior #9	215587	1	Mar 23, 2002
Prior #10	215588	1	Mar 23, 2002
Prior #11	215589	1	Mar 23, 2002
Bat #3	215574	16	Mar 23, 2002
Bat #4	215908	18	Aug 27, 2002
Eye 1	216651	1	Jan 28, 2002
Eye 2	216652	1	Jan 28, 2002
Eye 3	216653	1	Jan 28, 2002
Pac 40 Fr.	216420	1	Aug 12, 2002
Bell	339164	1	Aug 10, 1999
Hopewell	341508	1	Nov 2, 1999
Balsam Fr.	341514	1	Nov 2, 1999
Oro Denoro	L 692	1	crown grant
			•

\* Expiry dates are after acceptance of this report.







### 2.3 History

The Oro Denoro has recorded production of about 113,000 tons at an average grade of 1.37% Cu, 0.03 opt Au and 0.23 opt Ag, from the period 1903 - 1917. A considerable amount of work has been done on the property since the 1950's, which was directed almost entirely for copper. The exploration history of the property, since 1950, is presented in point form below.

- 1951 1953 : Attwood Copper Mines Ltd. conducted mapping, biogeochem and ground mag surveys.
- 1955 1956 : Noranda Mines Ltd. did geological mapping, geophysics. Also 1,640 m diamond drilling in 17 holes at Oro Denoro.
- 1963 1966 : West Coast Resources Ltd. did ground magnetics, mapping, and 3,000 m of diamond drilling in 70 holes (including 20 underground holes) in the Oro Denoro area. Reserves for the Oro Denoro quoted at 300,000 tons @ 1.3% Cu (Kermeen, 1966), and at 46 million tons @ 0.9% Cu, 0.024 opt Au, and 0.32 opt Ag (Weymark, 1966).
- 1967 : Furakawa Mining Co. Ltd. did 3,800 m diamond drilling (39 holes) in Oro Denoro area.
- 1966 1968: King Resources held the Rockland crown grant (now the Bell claims) west of the Oro Denoro as part of the Stan-Rockland property. IP, mag, geological mapping, rock and soil sampling was completed.
- 1968 1970 : West Coast Resources Ltd completed 120 m drifting at Oro Denoro; a feasibility study by Dolmage, Campbell and Assoc. on Oro Denoro was positive 1.5 million tons of open pit (diluted) ore grading 0.95% Cu were calculated (drill indicated) with good potential to expand this.
- 1971: Jason Explorations did soil sampling, IP and hammer seismic on the Stan-Rockland property.
- 1974 1976 : Granby Mining Corp did mapping, ground geophysics, trenching and 36 percussion drill holes. Test mining was done from an open pit at Oro Denoro and 123,400 tonnes of material was taken to the Phoenix mill.
- 1979 : New Frontier Exploration Inc. optioned the property; sampled old workings and did minor surface work at Oro Denoro.
- 1981 1984 : Kettle River Resources Ltd. purchased claims outright. No work was done on the Oro Denoro claim.
- 1989 : Polestar Exploration completed a reserve calculation for garnet and copper in the Oro Denoro area.
- 1990 1991 : Canamax optioned the Oro Denoro as part of the larger Bluebell property; did geological mapping, rock and soil sampling, airborne geophysics.
- 1995: Kettle River Resources Ltd. acquired the old Rockland crown grant, west of the Oro Denoro by staking (the Bell claim).
- 1996: Kettle River Resources Ltd. completed the program described in this report, as part of a larger mapping and sampling program in the Summit Camp.

### 2.4 Summary of Work Done, April - May, 1996

One hundred fourty four soil samples were collected at 50 metre intervals on 50 metre spaced lines on the Rockland Grid. Sampling was done by Jerry Bennett. Samples were shipped to Min-En Labs in Vancouver for preparation and analysis for 31 element ICP plus gold by 10 gram Fire Geochem, AA finish. Eighty rock samples were collected by Barry Kyba and sent to Min-En Labs in Vancouver for preparation and analysis was for 31 element ICP plus gold by 30 gram, Fire Geochem plus AA finish. Ore grade assay was done for Cu, Pb, Zn, Ag and Au where required. A total of sixteen samples required assay. Field work was done April 30 to May 30, 1996. The program was under the supervision of Linda Caron.

#### 3.0 GEOLOGY AND STRUCTURE

The Greenwood area has been mapped on a regional basis by Fyles (1990), and prior to this, by Little (1983) and Church (1986). Fyles' mapping shows the pre-Tertiary rocks form a series of thrust or detachment slices, which lie above a basement high grade metamorphic complex. A total of at least five thrust slices are recognised, all dipping gently to the north, and marked in many places by bodies of serpentine. Fyles' interprets these serpentinite bodies as representing part of a disrupted ophiolite suite, belonging to the Knob Hill Group of late Paleozoic age. Commonly, these serpentinite bodies have undergone Fe-carbonate alteration to listwanite, as a result of the thrusting event.

The oldest rocks in the camp belong to the late Paleozic Knob Hill Group of dominantly volcanic affinity, and consist mainly of chert, greenstone and related intrusives, and serpentine. Overlying these rocks are sediments and volcanics (largely argillite, siltstone, limestone and andesite) of the late Paleozic Attwood Group. In many cases evidence for thrusting is seen by the older Knob Hill Group rocks resting over the younger Attwood Group rocks. Rocks of the Knob Hill and Attwood Groups are unconformably overlain by the Triassic Brooklyn Formation, represented largely by limestone, clastic sediments and pyroclastics. The historically important skarn deposits in the Greenwood area (i.e. Phoenix, Oro Denoro, Motherlode-Greyhound) area hosted within the Triassic rocks.

Three separate intrusive events are known regionally to cut the above sequence, the probable Jurassic aged Lexington porphyry, and the Cretaceous Nelson intrusives, and the Eocene Coryell pulaskite dykes and stocks. Tertiary sediments and volcanics unconformably overly the older rocks. The distribution of these Tertiary rocks is largely controlled by series of north-south trending faults which form the Toroda Creek graben in the western portion of the map area, and the Republic graben in the east.

Skam mineralization at the Oro Denoro consists of gamet, epidote and calcite, with magnetite, pyrite, pyrite, pyrite, and chalcopyrite, near the contact of probable Cretaceous aged Lion Creek granodiorite, with Triassic Brooklyn conglomerate, tuff and limestone. Controls for skam appear to be both stratigraphic and structural. Stratigraphy is steeply dipping, with a north-south strike. A prominent steeply dipping east-west (120° azimuth) structure also controls skamification, while steep north-south structures appear to post-date the skam. To the west on the Rockland (Bell claim), siliceous garnet skam and chloritic tuff is exposed in several pits in an area of heavy cover.

### 4.0 SOIL GEOCHEMISTRY

A total of 144 soil samples were collected from the Rockland grid. Samples were collected at 50 metre intervals on lines spaces 50 metres apart, as shown on Figure 3. They were then shipped to Min-En Labs in Vancouver for preparation and analysis for 31 element ICP plus gold by 10 gram, Fire Geochem, AA finish techniques. Complete analytical results are contained in Appendix 1. Results for Au, Cu, Zn, Bi and As are plotted on Figures 4 through 8.

#### Gold (Figure 4)

Gold values are low throughout the area sampled, generally less than 15 ppb. One sample returned greater than 40 ppb (198 ppb, from grid location 123+50W, 93+00S). This sample was collected from a disturbed area of possible fill, adjacent to the railway grade and is not believed to be representative of in-situ gold mineralization.

#### Copper (Figure 5)

As with gold, copper values are very low throughout the grid area, with only two samples exceeding 100 ppm Cu, and most less than 40 ppm. Of the two elevated samples, one occurs at grid location 123+50W, 93+00S, the site discussed above as being suspect due to proximity to the railgrade. The other anomalous location is at 126+00W, 95+50S, in an area of heavy cover.

#### Zinc (Figure 6)

Zinc values range up to 1276 ppm, with a large area of irregular shape, roughly northwest trending and approximately 150 - 200 metres in width by 400 metres in length which exceeds 200 ppm Zn. This appears to delineate the continuation of the "east-west" Oro Denoro structure. Gold and copper plots suggest that the structure is unmineralized in this area.

#### Bismuth (Figure 7)

Bismuth is strongly elevated throughout the grid. Typical background values in a similar geologic setting nearby (north of Emma) are 1-2 ppm, while in this area, the average bismuth is 90 ppm. Because of the association of gold with bismuth in a skarn environment, this is noteworthy.

#### Arsenic (Figure 8)

As with zinc, anomalous arsenic (greater than 5 ppm, compared to a background of 1 ppm), define a northwest trending anomalous zone, believed to represent the western continuation of the Oro Denoro structure. A second possible structure, this one north-northeast trending, occurs on line 121+00W. Rock sampling and mapping along the railgrade supports the position of such a structure.

In summary, no areas of elevated gold were found on the Rockland Grid. Anomalous levels of zinc and arsenic can be used to define structures, although in the grid area, these do not appear to be mineralized. Bismuth levels are elevated throughout the grid, compared to similar geologic settings nearby, but do not appear to be associated with elevated gold values.



#### 5.0 ROCK GEOCHEMISTRY

Eighty rock samples were collected from old workings and outcrop, as shown on Figure 9. The majority of the samples were collected from the Oro Denoro area, with only minor sampling done to the west on the Bell and Eye 1 claims. Samples were shipped to Min-En Labs in Vancouver for preparation and analysis (31 element ICP plus gold by 30 gram Fire Geochem, AA finish). Assay was done for samples returning greater than 1000 ppb Au, 100 ppm Ag, or 5000 ppm Cu, Pb or Zn. Analytical results are included in Appenxix 1. Rock sample descriptions, sorted by host rock type, are contained in Appendix 2. Results are discussed below, also by rock type.

#### <u>Skarn</u>

Detailed sampling of various skarn types, host rock, and structures was done in the Oro Denoro workings and surrounding area, to determine the distribution and control of gold mineralization within the skarn. Gold values rarely exceed 100 ppb Au in the skarn. Two samples (874 and 875) from the No. 3 Quarry, of massive magnetite-garnet-epidote skarn with chalcopyrite returned values of 0.067 opt and 0.037 opt Au. Both samples returned very high copper assays (4.61% and 2.25% Cu).

#### Late Cross-cutting Quartz-Pyrite Veins and Structures

Best gold values, in both the skarn zone and the Lion Creek granodiorite, occur in steep, late, north trending structures, with quartz and pyrite. Along the railgrade values to 1.97 opt Au can be obtained from select grabs of pockets of massive pyrite with chalcopyrite along one such structure (Sample 828). This sample assayed 3.46% copper. In the Oro Denoro workings similar structures contain anomalous gold values. Sample 856 in the upper pit returned 0.107 opt Au over 0.5 metres, with very high As, but low Cu values, while from Sample 872 from the No. 3 Quarry graded 0.043 opt Au and 1.09% Cu.

#### Granodiorite and Diorite

Samples of altered granodiorite adjacent to gold bearing structures as well as samples of endoskam, contain elevated gold values. A sample of altered intrusive near sample 828 descibed above, returned 0.043 opt Au over 1.5 metres (Sample 829). In the No. 2 Quarry of the Oro Denoro, massive epidote endoskam returns 386 ppb Au (Sample 867), while epidote-chlorite altered diorite from the upper pit grades 432 ppb Au (Sample 857). As above, elevated gold values are almost without exception associated with high copper values.

#### Limestone

Two samples (844 and 845) of limestone collected at the marble front, south of the Oro Denoro workings, returned very high zinc and lead values (to 16.5% Zn from sample 844). Gold and copper values are low.

There were no significant results from any other samples collected.



### 6.0 RECOMMENDATIONS

Gold appears to be controlled primarily by steep late structures cutting both skarn and intrusive rocks. High gold values are, almost without exception, associated with high copper values. No evidence for a distal gold zone west of the Oro Denoro skarn has been found through rock or soil sampling and further work is not recommended in this area.

### 7.0 REFERENCES

#### Anselmo, G., 1969.

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Geochemical Survey on the Eholt Claim Group, for King Resources. Assessment Report 1817.

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#### Anselmo, G. and G. White, 1971.

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Geophysical and Geochemical Report, Stan Claim Group, for Jason Explorations. Assessment Report 3334.

#### Church, B.N., 1976.

Geology in the Vicinity of the Oro Denoro Mine, in Geology in B.C., BCMEMPR, 1976 p. 1-13.

#### Church, B.N., 1986.

Geological Setting and Mineralization in the Mount Attwood - Phoenix area of the Greenwood Mining Camp, BCMEMPR Paper 1986-2.

#### Fyles, J.T., 1990.

Geology of the Greenwood-Grand Forks Area, British Columbia, NTS 82E/1,2. B.C. Geological Survey Branch Open File 1990-25.

#### Fyles, J.T., 1982.

Geology on the Phoenix - Oro Denoro Area, for Kettle River Resources Ltd. Filed for Assessment.

#### Hitchins, A.C., 1991.

1990 - 1991 Exploration Summary Report on the Bluebell Property, by Canamax Resources Inc.

#### Kermeen, J.S., 1966.

A Report on the Oro Denoro Property of Westcoast Resources Ltd, by The Granby Mining Company.

#### Mouritsen, G.A., 1966.

Report on the Stan Group of Mineral Claims, for Geofax Surveys Ltd. Assessment Report 889.

#### Robinson, M.C., 1966.

Geological Report on part of the Stan Group of Mineral Claims, Eholt Area, for King Resources. Assessment Report 768.

#### Robinson, M.C., 1968

Report on Geochemical Survey of the Eholt and Eholt West Claims, Eholt Area, for King Resources. Assessment Report 1162.

#### Saunders, C.R., 1968.

Feasibility Report - Oro Denoro Copper Deposit, Greenwood B.C., by Dolmage, Campbell and Assoc. for West Coast Resources Ltd.

#### Smith, A., 1969.

Geophysical Report on the Stan Claims, Eholt Area, for King Resources. Assessment Report 2113.

### Weymark, W.J., 1966.

Evaluation of the Copper, Gold and Silver Ore Deposits, Oro Denoro Claim, by Weymark Engineering Ltd., for West Coast Resources Ltd.



APPENDIX 1

Analytical Results - Rock and Soil Samples



ATTN: Linda Caron

### MIN-EN LABS ---- ICP REPORT 8282 SHERBROOKE ST., VANCOUVER, B.C. V5X 4E8

TEL:(604)327-3436 FAX:(604)327-3423

FILE NO: 6V-0244-SJ7 DATE: 96/06/07

\* \* (ACT:F31)

6 1 65 6 1 45 9 1 53 9 1 43 9 1 49 0 1 51	1 3 3
0 1 51	4
9 1 48 7 1 151 4 1 22 9 1 77	7 3 4 9 5
3 2 91 7 2 47 4 2 69 0 1 54 7 1 90	2 10 4 8 4
3 1 76 5 2 65 9 2 72 6 2 125 4 2 205	5 4 3 6 5
2 128 2 2 157	3 12
	.9 1 48   .7 1 151   .4 1 22   .9 1 77   .3 2 91   .7 2 47   .4 2 69   .0 1 54   .7 1 90   .3 1 76   .5 2 65   .9 2 72   .6 2 125   .4 2 205   .1 2 128   .2 2 157



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SMITHERS LAB: 3176 TATLOW ROAD SMITHERS, B.C. CANADA VOJ 2NO TEL (604) 847-3004 FAX (604) 847-3005

# Assay Certificate

# 6V-0205-RA1

LC-018-1

Date: MAY-16-96

Company:KETTLE RIVER RESOURCES LTD.Project:ORO DENEROAttn:Linda Caron

We hereby certify the following Assay of 1 rock samples submitted MAY-10-96 by L. Caron.

Sample	Zn	
Number	ę 	
813	1.76	

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0.7 1995

t/s Certified by

MIN-EN LABORATORIES



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SMITHERS LAB: 3176 TATLOW ROAD SMITHERS, B.C. CANADA VOJ 2NO TEL (604) 847-3004 FAX (604) 847-3005

# Assay Certificate

6V-0205-RA2

Date: MAY-16-96

# Company: KETTLE RIVER RESOURCES LTD.

Project: ORO DENERO Attn: Linda Caron

We hereby certify the following Assay of 6 rock samples submitted MAY-10-96 by L. Caron.

16.50
3.77
-

\* Au Gravimetric finish

Certified by

MIN-EN LABORATORIES



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SMITHERS LAB: 3176 TATLOW ROAD SMITHERS, B.C. CANADA VOJ 2NO TEL (604) 847-3004 FAX (604) 847-3005

# Assay Certificate

# 6V-0205-RA3

Date: MAY-16-96

Company:KETTLE RIVER RESOURCES LTD.Project:ORO DENEROAttn:Linda Caron

We hereby certify the following Assay of 6 rock samples submitted MAY-10-96 by L. Caron.

Sample	Au	Au	Cu	
Number	g/tonne	oz/ton	8	
850			3.120	
856	3.68	.107		
865			1.110	
868			.695	
871			.762	
872	1:48	.043	1.090	

Certified by

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SMITHERS LAB: 3176 TATLOW ROAD SMITHERS, B.C. CANADA VOJ 2NO TEL (604) 847-3004 FAX (604) 847-3005

# Assay Certificate

# 6V-0205-RA4

Date: MAY-16-96

Company:KETTLE RIVER RESOURCES LTD.Project:ORO DENEROAttn:Linda Caron

We hereby certify the following Assay of 2 rock samples submitted MAY-10-96 by L. Caron.

Sample	Au	Au	Cu	
Number	g/tonne	oz/ton	ð	
874	2.29	.067	4.610	
875	1.28	.037	2.250	

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MIN-EN LABORATORIES



COMP: KETTLE RIVER RESOURCES LTD.

#### PROJ: ORO DENERO

# MIN-EN LABS --- ICP REPORT

FILE NO: 6V-0205-RJ1+2

PPM

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DATE: 96/05/16

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>10000

1077

5

8282 SHERBROOKE ST., VANCOUVER, B.C. V5X 4E8 TEL: (604)327-3436 FAX: (604)327-3423 ATTN: Linda Caron \* rock \* (ACT:F31) AL AS BA BE BI CD CO CR SAMPLE AG CA CU FE GA K LI MG MN MO NA NI Ρ PR SB SN SR TH TI -U v - M NUMBER PPM % PPM PPM PPM PPM % PPM PPM PPM PPM % PPM % PPM % PPM PPM % РРМ РРМ PPM PPM PPM PPM PPM % PPM PPM PPM 44 801 72 1.26 41 2.37 .09 17 1.01 550 8.06 16 1140 11 2 126 .07 68.5 .5 1.14 1 .1 80 .1 11 1 1 1 65 37 .6 .95 .45 63 35 46 2.13 .08 10 .85 323 7.04 9 730 52 27 1.05 51.7 2 802 1 .1 .86 .1 6 8 1 1 1 1 61 331 .07 .53 .03 25 16 .1 65 .67 46 1.00 8 630 . 05 31.3 803 .1 1 4 1 1 1 1 1 6 2 17 3.66 354 186 1595 21 39 15 2 5 .11 8.01 340 23 7 3 1.04 44.1 804 .4 .43 1 1 .1 .1 61 4.45 1 .01 1 Ž .54 5 45 1.84 13 57 3.52 .03 .18 1225 8.01 16 380 1 1.04 32.4 2 805 .4 1 .1 .1 1 6 1 .1 16 1.71 38 806 .9 1.82 1 198 .1 123 .45 18 85 70 3.79 .52 1258 11.03 460 14 1 4 47 .10 79.3 5 1 1 1 180 13 807 24 35 .18 .1 16 63 4.66 .05 8 .45 302 10.01 19 250 4 3 31 1.03 30.3 .7 .60 .1 1 91 46 3.09 799 62 26 20 117 940 1 .1 3.08 82 .83 34 4.73 . 11 13.06 14 4 102 .02 141.7 808 .1 .1 1 1 1 29 10 . 19 111 3.01 9 880 809 2.0 .32 69 12.14 3 3 37 7.01 4 17 4 1 1362 1.02 42 . 1 . 1 .41 1 33.4 6 25 10 .74 11 .23 19 .75 1904 .56 126 77 .1 9 >15.00 .1 261 5.01 14 1010 1 5 1 1.01 38.1 4 810 .1 1 27 .15 113 10 .1 6 > 15.00 .1 12 6 .22 13.02 5 17 .22 191 3.01 5 9 7 1623 .01 11.2 811 .1 460 1 ź 7.04 20 2 1.6 .90 13 19 .1 56 11.74 .1 33 1.21 2 .11 .69 923 830 111 202 1 .05 44.8 812 1 - 3 21 71 5.73 >100.0 51 29 188 853 87 .01 20 720 150 11 20 25.8 31 >10000 10 1.12 .01 4 .06 813 3.7 .69 .1 1 .26 1 1 .3 1.45 30 110 26 29 1.26 12 1190 Ż .1 120 10 14 2.44 1.31 314 8.07 60 50 1.10 68.8 163 247 814 . 74 .1 1 1 1 1 22 48 453 50 .7 .92 1 86 .1 89 1.35 .1 14 2.15 1.05 13 .59 6.05 14 960 1 1 1.07 41.3 2 815 1 51 133 .1 15 54 .37 18 .64 122 9.20 47 950 29 11 7 140 68.4 816 .5 2.23 1 40 .1 111 1.66 2.31 1 1 1 .09 3 24 22 870 241 817 .5 2.12 1 12 .1 65 2.11 .1 19 1.44 .04 6 .16 50 6.18 9 1 .05 9.5 3 1 1 2 2 3 .6 2.03 13 534 229 .1 12 71 35 2.88 1.92 30 1.43 225 10.08 23 520 44 1.14 71.7 818 .1 .45 1 1 2 819 .1 1.61 7 142 .1 87 1.40 .1 10 40 13 2.73 1 .24 24 1.24 31 1.33 646 8 .07 13 810 1 1 123 1 .07 79.9 30 14 1250 820 .1 2.01 1 174 .1 124 1.03 .1 15 42 3.75 752 9.11 126 1.10 87.5 1 1 16 2 6.35 .1 9 28 69 2.53 .03 15 .99 2125 8.01 80 2 86 .01 10.6 .2 1.22 .1 16 10 1 1 821 1 1 1 28 7 5 .51 1463 9 880 ī **6**9 7.58 1.43 .01 5.01 1.01 822 .4 .76 .71 .16 6 .1 16 .1 4 1 1 13.5 2 6.01 12 823 41 14 1.88 .1 6 34 505 1.89 1.07 13 .99 1134 390 99 1.01 11.1 1 .1 1 824 39 94 6.14 .1 .1 5 25 18 77 1.81 .09 10 .76 1457 7.01 12 570 1 128 1.01 15.2 .3 1.04 .1 1 1 1 26.1 1.92 38 24 9036 .08 23 .69 2745 14 .01 30 280 5 175 11.55 7.38 20 40 163 1.01 40.0 825 1 . 1 1 1 1 12 15 826 .8 1.73 13 65 93 1.67 .1 10 37 130 2.38 .09 21 .99 304 7 .04 770 o 1 151 .07 54.2 . 1 716 827 49 . 9 23 2423 5.23 18 1.11 11 .02 18Õ 4.3 1.46 1 .92 .1 16 .22 2 4 84 .01 14.4 . 1 1 1 1 1231 23 29 .1 210 42 >10000 43 .01 205 18 828 191.6 .31 1 .1 1 2.41 15.00 1.03 4 .13 681 210 1 80 124 1 .01 7.8 12 11 .06 12 56 .56 740 .07 829 4.2 .81 1 83 .60 .1 10 42 691 2.53 .08 168 1 1 47 1 50.4 2 .1 1 830 .95 39 9 53 3.25 7 43 1.58 .01 6 .47 1112 5.01 10 800 2 96 .04 20.6 4 .1 60 1 1 1.1 .1 1 1 45.6 831 .9 .91 66 46 .1 66 1.67 .1 6 48 79 1.59 .05 14 .83 519 5.05 11 810 1 1 1 112 1.05 3 1 .22 34 1.82 26 2.13 .5 2.92 57 82 3 2.02 .1 13 67 63 26 3.53 702 11 .01 33 1930 8 3 110 1.01 50.7 832 .1 1 34 1710 .8 1.65 120 184 .1 115 .1 15 93 676 9.04 3 138 1.10 80.2 2 833 2.41 3.44 1 1 .10 32 1.15 37 1.11 ž .4 1.77 43 15 .1 95 77 1.97 .1 14 15 255 3.35 .08 557 8 14 1130 1 1 119 .08 1 118.6 834 1 1 835 .8 2.22 1 26 .1 12.49 .1 16 13 125 4.48 1.06 1695 13.07 16 750 4 28 4 97 1.07 1 80.4 1 101 21 34 1092 .67 .59 5.03 10 145 1.03 16.8 2 836 2.5 .71 72 .1 42 2.41 .1 7 1.33 1.03 10 640 770 1 1 1 2057 10 .01 .4 1.20 8 21 69 .03 837 1 5 .1 31 8.03 .1 10 42 151 5.71 1.01 260 6 6 4 1 33.9 1 23 31 13 11 29 >10000 23 13 38 21 220 .1 33 2 85 11 7.82 2.87 .01 6 .60 3634 11 .01 40 560 27 .01 18.2 838 .4 .64 .1 14 1 1 1 .03 .36 21 183 10 .2 10 >15.00 .35 588 .01 10 430 .01 11.5 2 839 .1 13 6 4 1 1 30 .14 1187 2 13.01 64 1340 28 4 1 .02 840 12.0 .67 1 1 .1 14 7.62 .1 62 6.37 1 .01 1 1 13.0 19 3 .21 1524 15.01 24 5 .02 26.5 841 4.1 .85 2 .1 21 7.88 .1 35 6393 4.72 .01 40 1530 11 42 1 1 1 .25 .31 .23 7.70 1722 6.01 890 30 1 842 .3 1.28 42 .1 5 38 43 3.37 .01 12 7 .04 33.4 7 4 1 .1 843 14 51 175 3 1452 6.01 18 530 2 1 8 .01 13.2 773 .4 .38 6.89 .1 10 2.62 .01 1 4 1 .1 3.6 .14 136 21 .01 820 414 5 400 8.8 309 >10000 844 16 11.98 >100.0 36 19 52 .97 .01 4 10000 39 26 .01 6 .1 ğ Ĩ 139 99 49 560 9 .32 14 .01 920 5285 9 .01 75 >10000 845 .1 3.78 >100.0 11 .85 .03 2112 13 13.1 5.1 .36 6 1 1 1 .23 3 2 5 36 60 1729 3.25 .01 5 .17 1006 8.01 52 110 204 5 2 .01 3.4 846 2.2 .1 5.65 .1 6 1775 7.51 66 5 12 .01 78 330 201 8 3 2 5.3 .29 .1 .1 43 3450 .01 .17 1080 .01 3 1194 847 2.8 1 4 4.66 1 1 37 1 21 49 .10 9.05 35 920 86 1 120 ŝ 848 1.8 1.07 3 .1 67 2.90 365 2.63 18 .78 1202 .06 36.0 2438 1 1 1





### COMP: KETTLE RIVER RESOURCES LTD.

#### PROJ: ORO DENERO

ATTN: Linda Caron

# MIN-EN LABS - ICP REPORT

FILE NO: 6V-0205-RJ3+4

### 8282 SHERBROOKE ST., VANCOUVER, B.C. V5X 4E8

TEL:(604)327-3436 FAX:(604)327-3423

DATE: 96/05/16 \* \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AL %	AS PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	GA PPM	К % Г	LI M PPM	IG M % PP	N MC M PPN	) NA 1 %	N I PPM	P PPM	PB PPM	SB PPM P	SN	SR PPM	TH PP <b>m</b>	ТІ % Р	U PM	V PPM P	W PPM	ZN A PPM	u-fire PP <b>B</b>
849 850 851 852 853	.5 4. 23.6 .9 .5 .1	.00 .80 .58 .30 .29	1 36 1 1	22 1 2 1 1	.1 .1 .1 .1	30 6 42 10 1	.96 6.59 2.77 7.08 >15.00	.1 .1 .1 .1	254 146 10 8 6	115 29 26 32 20	309 >10000 281 168 33	7.20 7.58 .75 2.67 5.22	1 . 1 . 1 . 1 .	15 01 01 01 01	68 4.2 2 .2 9 .6 2 .1 3 .1	25 457 22 114 33 73 0 120 8 131	6 39 0 25 7 10 2 5 0 8	2 .01 5 .01 5 .01 5 .01 5 .01 8 .01	283 94 13 10 10	900 900 900 480 10	1 20 1 1 7	1 49 1 5 6	7 6 1 1 4	95 1 106 1 1	1 1 1 1	.03 .01 .03 .01 .01	1 1 1 1	74.3 22.7 9.4 7.6 2.0	1 1 2 4 1	2394 321 29 10 9	18 116 1 1 1
854 855 856 857 858	.1 .2 .1 1. .1 2. .1 4.	.41 .86 .23 .15 .64	1 1 1092 1 1	1 1 3 16 5	.1 .1 .1 .1 .1	6 19 1 1	10.47 10.12 10.18 10.57 9.48	.1 .1 .1 .1 .1	7 6 11 13 16	24 26 30 23 29	158 37 18 8 11	5.50 4.05 8.90 9.65 14.07	1 .0 1 .0 1 .0 1 .0	01 01 03 01 01	5 .2 5 .3 7 .6 11 1.1 33 2.2	25 125 1 187 5 266 1 392 27 322	5 9 2 9 7 14 6 16 6 32	01 01 01 01 01 01 01	13 13 20 25 31	240 80 280 490 730	5 15 7 5 1	5 6 35 32 54	4 3 7 7 11	1 20 388 486 308	1 1 1 1	.01 .02 .01 .01 .01	1 1 1 1 1	5.5 13.4 31.8 52.9 12.1	1 1 1 1	10 10 12 20 34	2 3 3600 432 37
859 860 861 862 863	1.1 1. .8 .9 1. .3 .4	.54 .95 .34 .30 .34	1 1 1 1	20 7 24 1 1	.1 .1 .1 .1 .1	1 1 2 4 7	10.65 >15.00 10.67 10.31 10.75	.1 .1 .1 .1	18 11 20 49 28	30 23 18 28 18	515 60 157 3114 1918	6.63 5.40 4.48 10.96 10.26	1 .0 1 .0 1 .0 1 .0	01 03 03 01 01	19 .7 14 .8 18 .6 4 .2 4 .1	78 270 15 335 17 266 13 139 3 149	5 20 9 11 0 10 7 14 9 13	0.01 .01 .01 .01 .01	23 25 20 37 29	350 730 680 520 490	12 15 18 1 14	32 33 33 31 31	54477	336 226 138 1 27	1 1 1 1	.01 .01 .01 .01 .01	1 1 1 1	40.8 31.6 34.2 16.9 16.8	1 1 1 1	43 67 22 9 22	35 7 2 22 34
864 865 866 867 868	.7 3.41. 2.7 3.5 2.11.	.75 .14 .74 .72 .63	1 67 2 1	2 1 17 3 12	.1 .1 .1 .1 .1	19 36 48 51 1	11.51 10.33 4.96 4.11 6.41	.1 .1 .1 .1	8 16 12 8 20	32 38 18 22 27	148 >10000 898 2888 7281	5.45 6.10 1.05 1.42 >15.00	1 .0 1 .0 1 .0 1 .0	02 01 02 01 01	7 .2 8 .6 10 .7 6 .5 18 .5	9 271 7 194 9 92 5 73 2 391	5 9 1 13 0 19 0 51 6 34	01. 01. 01. 02. 01. 01.	18 29 11 10 28	1100 860 1550 820 960	18 10 1 22	32 38 3 6 47	4 5 1 1 12	58 115 219 98 151	1 1 1 1	.02 .03 .04 .04 .04	1 1 1 1	28.0 34.8 34.7 10.0 52.4	1 1 2 1	20 18 76 58 80	5 14 37 386 318
869 870 871 872 873	.91. 1.11. 8.51. 38.3. 4.21.	.27 .22 .01 .33 .45	60 80 1 1 1	215 54 5 82 32	.1 .1 .1 .1	2 3 33 28 1	3.66 4.36 9.54 8.55 10.15	.1 .1 .1 .1 .1	5 6 10 60 16	24 19 50 34 18	53 15 7472 >10000 1999	2.10 2.09 4.18 6.36 5.52	1 . 1 .( 1 .( 1 .( 1 .)	16 09 01 01 11	17 .8 20 1.1 9 .9 4 .4 16 .8	3 79 0 89 4 200 0 126 7 192	0 6 5 6 7 13 1 10 9 13	.02 .01 .01 .01 .01	10 12 18 43 19	770 780 1570 320 2240	10 2 6 5 14	4 29 34 27	1 2 4 5 4	100 120 151 165 537	1 1 1 1	.01 .01 .03 .03 .01	1 1 1 1	34.2 37.9 30.7 7.2 57.9	1 1 9 1	34 25 234 990 51	3 4 380 1520 211
874 875 876 877 878	17.6 22.3 2. .2 1. .2 1. 1.7	.50 .01 .46 .62 .98	1 1 6 1	1 11 50 23 57	.1 .1 .1 .1 .1	12 9 86 74 269	6.77 5.61 .87 .96 2.70	.1 .1 .1 .1 .1	57 25 11 19 20	26 26 33 35 61	>10000 >10000 297 79 171	11.47 11.02 3.15 2.91 3.43	1 .( 1 .( 1 .2 1 .0	01 01 35 05 20	1 .2 22 1.4 14 1.2 29 1.6 23 1.2	2 116 2 176 8 50 2 53 0 32	7 15 3 18 7 7 6 7 9 9	.01 .01 .07 .05 .01	26 32 12 16 23	1540 1170 790 800 430	20 1 1 1 1	51 37 1 1	8 3 2 3	15 53 95 113 507	1 1 1 1	.02 .01 .07 .06 .19	1 1 1 1	23.2 58.8 84.1 71.0 45.5	1 1 1 1	482 90 30 21 130	2170 1152 11 5 17
879 880	.9 1. .1 .	.82 .32	36 66	232 26	.1 .1	201 33	3.27 >15.00	.1 .1	17 3	154 23	54 16	3.76 .43	11.0	11 02	33 2.7	0 65	8 9 6 3	.02	55 10	2310 1080	1 9	67	1 2	809 2564	1	. 14 . 03	1 1	11.7 30.9	1 5	47 20	6
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**APPENDIX 2** 

Rock Sample Descriptions

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# ORO DENORO Project Rock Samples: Skarn

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No.		Date		Location	Description
	col	sot	rec		
874	06.05			ORO DENORO No. 3 Quarry	very select chip across massive and banded magnetite - cpy green garnet skarn I area of McArthur high gold values from 1950s
875	96.05			ORO DENORO No. 3 Quarry	0.25m sample over gossan - malachite stained contact of massive magnetite - cpy, green garnet skarn and epidote altered hornblende granodiorite in area of high gold from 1950s
868	06.05			ORO DENORO No. 3 Quarry	0.8m chip across brecciated, chlorite altered diorite / magnetite band at 280 / 55N, fault zone, magnetite dragged into fault or parallels fault strike and bedding? at 040 / 90?
850	05.05			ORO DENORO Central	select chip of rock fall from back of short tunnel, sample of massive red garnet skarn with 5% mm scale blebs of cpy throughout, abundant malachite and azurite
840	04.05			ORO DENORO Central	select grab from caved very deep trench of shaft?, sample of very best mineralization of massive green - brown garnetite with cm scale blebs of pyrite and cpy, malachite and azurite stain common, minor coarse crystalline calcite in cm scale "shrinkage vugs"
841	04.05			ORO DENORO Central	grab from same dump as #840, sample of red-brown, fine crystalline garnetite, blebs of cpy to 0.2%, no magnetite noted
863	06.05			ORO DENORO No. 2 Quarty	1m chip across parallel band of "ore" of massive magnetite - pyrite - cpy in green garnet skarn, banding here at 025 / 75E
862	06.05			ORO DENORO No. 2 Quarty	0.3m chip across stope wall of cm and mm scale banded magnetite - pyrite - cpy "ore" band at 030 / 80E, trace aspy?, total sulphides at 10 to 60% in green garnet skarn
807	30.04			BELL MC	0.5m chip from north wall of same pit as #806, sample of lt. gy - brown, siliceous garnet - marble skarn with diss and fracture pyrite to 1%, narrow band along fault zone? width not exposed
837	04.05			ORO DENORO Central RR	select grab from same dump as #836, sample of dark green, epidote - chlorite - red-brown garnet skarn, siliceous in part?, minor disseminated pyrite, magnetite and cpy, looks like skarn from Bell MC to West?
846	05.05			ORO DENORO Central	select grab from cart scrape / subcrop of white, microcrystalline, quartz - garnet skarn, coarse crystalline quartz in cm and 10 cm scale vugs, trace disseminated, very fine pyrite and cpy, mal stain common, vugs later partially filled with coarse crystalline calcite, siliceous skarn band at 045 / 90
847	05.05			ORO DENORO Central	3m composite across o/c, sample of red-brown garnet skarn to garnetite with scattered blebs of pyrite, cpy, mal, minor cm scale vugs filled with coarse crystalline calcite, siliceous in part
865	06.05			ORO DENORO No. 2 Quarry	2.0m chip across shoulder of stope floor, sample of light green brown mm scale banded garnetite, 1% disseminated fine and blebs of cpy, banding at 040 / 90
821	03.05			ORO DENORO N/2 RR	2.5m chip across o/c, sample of massive, blocky jointed, coarse crystalline bright green epidote - chlorite - magnetite skarn, block within granodiorite?, cpy blebs to 0.5%, minor bright yellow pyrite mm scale stringers, hematite common on fractures, minor coarse crystalline "pink" calcite filling cm scale "shrinkage vugs"

823	03.05	ORO DENORO N/2 RR	1.5m chip across fault zone explored by old caved shaft on RR right of way, sample of white crystalline quartz, dark green chlorite and bright green epidote, 3% disseminated and massive coarse crystalline bright yellow pyrite, 0.5% cpy,
813	02.05	ORO DENORO W/2	0.5m chip across o/c, sample of contact light green coarse crystalline garnet skarn, trace disseminated very fine grained pyrite, Fe stain very common, contact at 045 / 90
805	30.04	BELL MC	2.5m chip across old pit wall in same area as #804, sample of cm scale banded siliceous garnet skarn, marble and chl alt'd tuff?, garnet skarn bands to 10cm wide with diss and fracture po / pyrite to 0.5%
804	30.04	BELL MC	grab from dump of 1.5m deep test pit, sample of dk gy - brown, siliceous garnet skarn, very hard, diss and fracture po / pyrite to 0.5%, heavy Fe staining,
838	04.05	ORO DENORO Central	1.5m chip over o/c, sample of black - brown weathering, Mn stained, red-brown garnet - calc silicate banded skarn in white marble, no visible sulphides, near southern limit of massive skarn
854	05.05	ORO DENORO Pit, Bench 2	very select sample of green brown garnet skarn, massive with trace disseminated pyrite and cpy, this is the most common skarn developed in this part of the pit, geochem sample
842	04.05	ORO DENORO Central	2m chip across o/c, sample of light green-brown, fine crystalline diopside - garnetite, massive rock with no visible sulphides, rare euhedral diopside crystal on mm scale and very dark green
843	04.05	ORO DENORO Central	select grab from dump of old caved decline? of deep pit, sample of light and dark gray - green, siliceous garnet skarn, discontinuous white and pale blue fine crystalline quartz stringers and blebs very common, trace disseminated very fine grained pyrite, very hard rock, minor cm scale open vugs lined with cm scale white quartz crystals
851	05.05	ORO DENORO Pit, Bench 1	select grab of massive apple green epidote - chlorite skarn, trace disseminated pyrite and cpy, non-magnetic, geochem sample
852	05.05	ORO DENORO Pit, Bench 1	select chip from subcrop of light gray, white and dark green siliceous garnet skarn, green-brown garnets common on cm scale, minor blebs of pyrite and cpy, minor segregation of coarse crystalline calcite
853	05.05	ORO DENORO Pit, Bench 2	very select grab of red brown garnet skarn, cm scale euhedral garnets common in coarse crystalline calcite matrix, geochem sample

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# ORO DENORO Project Rock Samples: Late Quartz - Pyrite Veins

No.	Date I		Location	Description	
	col	snt	rec		
828	03.05			ORO DENORO N/2 RR	0.33m chip across massive coarse crystalline pyrite pod of #825, pod is 1/2 way up rail cut and forms a prominent gossan stain on railway cut
856	05.05			ORO DENORO Pit, Bench 4	0.5m chip across 025 / 90 calcite - quartz - pyrite filled fault zone, very fine dark yellow pyrite disseminated and as cm scale masses to 3%, heavy gossan stain on pit wall
872	06.05			ORO DENORO No. 3 Quarty	very select sample over 3cm of bright orange gossan zone in North wall of stope, sample of white, quartz - pyrite - cpy veinlet at 035 / 90, dark green feldspar porphyry sill to East of vein - small fault zone?
871	06.05			ORO DENORO No. 3 Quarty	1.5m chip across same breccia zone as #870, sample from North wall of stope, sample of light and dark green fault breccia with "milled" fragments and "cobbles" of chlorite - epidote altered granodiorite, 60%, chloritized feldspar diorite, 20%, green garnet skarn ,15%, and massive magnetite, 5%, in chlorite rich matrix, breccia zone at 010 / 90
827	03.05			ORO DENORO N/2 RR	0.5m chip across fault zone of #823, sample of massive coarse crystalline bright yellow pyrite in dark green chlorite - epidote - quartz vein, vein filling a fault splay? at 045 / 70S
825	03.05			ORO DENORO N/2 RR	0.3m chip from o/c, sample of massive coarse crystalline bright yellow pyrite and chalcopyrite in "pod" 30cm wide and at least 1.5m long, "pod" is hosted in shattered, epidote altered, hornblende granodiorite, fault at 00 / 70W
878	06.05			ORO DENORO E/2 Hwy. 3	0.3m chip across gossan filled fault zone in new o/c of highway, sample of bright orange clay gouge and chlorite altered feldspar diorite sill, bedding, sill and fault at 010 / 85E
835	04.05			ORO DENORO S/2 RR	1m chip across o/c, sample of quartz - chalcedony - pyrite vein filling fault zone at 020 / 90, vein in shattered and hematite stained dark greenstone, mm scale laminations common, fine crystalline pyrite to 1%, small gossan zone on rail grade
860	05.05			ORO DENORO Central, RR	1m chip across heavy gossan in 270 / 70N fault zone, sample of gossan, quartz-calcite-pyrite veinlets and brecciated dark green feldspar diorite - dyke?
864	06.05			ORO DENORO No. 2 Quarty	very select chip across cm scale of calcite - quartz - pyrite - hematite veinlets at 255 / 70N, hematite as selvages to fractures up to 3cm wide

# ORO DENORO Project Rock Samples: Granodiorite

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No.	Date		Location	Description				
	col	sut	rec					
829	03.05			ORO DENORO N/2 RR	1.5m chip from o/c, sample of "freshest" light gray hornblende granodiorite along rail cut, geochem background sample			
867	06.05			ORO DENORO No. 2 Quarry	Im composite chip across o/c, sample of bright green, fine to medium crystalline massive epidote and epidote altered hornblende granodiorite, trace disseminated and fracture coating pyrite and cpy, hematite common on fractures			
836	04.05			ORO DENORO Central RR	select grab from old caved shaft? Northeast of No. 1 quarry, across rail grade, sample of epidote veined and altered hornblende granodiorite, disseminated and blebs of pyrite and cpy to 0.5%, hematite stain very common of fractures			
830	03.05	ORO DENORO N/2 RR 1.5m chip across o/c, sample of blocky jointed, intensely epidote - garnet skarned hornblende granodiorite?, at con fresh granodiorite, skarn has trace disseminated very fine grained pyrite, magnetite and rare blebs of cpy, contact a		1.5m chip across o/c, sample of blocky jointed, intensely epidote - garnet skarned hornblende granodiorite?, at contact to fresh granodiorite, skarn has trace disseminated very fine grained pyrite, magnetite and rare blebs of cpy, contact at 035 / 90				
831	03.05			ORO DENORO N/2 RR	2m chip across o/c, sample of weakly chloritized hornblende granodiorite, no visible sulphides, adjacent to contact with #830			
824	03.05			ORO DENORO N/2 RR	select grab from dump of old caved decline, South of RR grade, sample of massive epidote altered hornblende granodiorite, disseminated pyrite to 1%, cpy disseminated and as irregular cm scale blebs to 0.5%, hernatite common on fractures, old decline appears to test same fault zone explored in sample #823			
826	03.05			ORO DENORO N/2 RR	1m chip across o/c, sample of "bleached" and intensely argillized light gray, medium grained hornblende granodiorite, crumbling o/c, intensely fractured at 055 / 80N, no visible sulphides			
801	30.04			ORO DENORO N/2	3m chip across o/c on rail grade, sample of lt. and dk gray, f to m xl hbl granodiorite, fresh rock, blocky jointed			
822	822 <sup>03.05</sup> ORO 2m chip across o/c, sample of blocky jointed bright green epidote altered, hornblende granodiorite, very contractor of the second sec		2m chip across o/c, sample of blocky jointed bright green epidote altered, hornblende granodiorite, very coarse epidote on fractures and in cm scale veins, minor disseminated and fracture pyrite, trace cpy					
870	ORO DENORO No. 3 Ouarry granodiorite are "milled" to cobbles in chlorite rich matrix, trace disseminated very fine grained pyrite in matrix		1.5m chip on South wall of stope, across brecciated and sheared, intensely chloritized hornblende granodiorite, fragments of granodiorite are "milled" to cobbles in chlorite rich matrix, trace disseminated very fine grained pyrite in matrix					
855	05.05	<sup>05</sup> ORO DENORO Pit. Bench 4 1.5m chip across footwall of fault contact to epidote - chlorite altered granodiorite dyke, sample of green brown mass						
869	ORO   ORO   Im chip across o/c on stope wall, sample of footwall sheared, chlorite altered hornblende granodiorite, trace dissem     No. 3 Quarry   very fine grained pyrite		Im chip across o/c on stope wall, sample of footwall sheared, chlorite altered hornblende granodiorite, trace disseminated very fine grained pyrite					
802	02 30.04			ORO DENORO N/2	2m chip across o/c in rail grade at Eholt Jt, sample of lt. grey and green, fine to med. xl hbl - feldspar - granodiorite, weak chloritization of mafics, mnr diss f gr magnetite, epidote veinlets and fracture coatings common, hematite - calcite on fractures, locally highly fractured at 335 / 35N			



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ORO DENORO Project Rock Samples: Limestone, Calc-silicate, Hornfels

No.	Date		Location	Description				
	col	sut	rec					
844	04.05			ORO DENORO Central	1m chip across banding in o/c, sample of black, dark brown weathering Mn stained, calc silicate skarn and hornfels, hornfels with massive red brown medium crystalline sphalerite common, masses to 10cm across and discontinuous over 15cm, cat cut here exposes gradational contact over 3m from massive siliceous garnet skarn and garnetite to hornfels and marble, banding at 045 / 90			
815	02.05			ORO DENORO W/2	2m chip across o/c, sample of Fe stained, dark green banded calc-silicate skarn, bands up to 2m wide in white coarse crystalline marble, trace disseminated very fine grained dull yellow pyrite			
845	04.05			ORO DENORO Central	select grab from same cut as #844, sample of white silicified marble, minor galena blebs on mm scale, whit-blue hydro- zincite coating very common			
816	02.05			ORO DENORO W/2	2.5m chip across o/c, sample of very heavy Fe stained light and dark gray, pink, red-brown, calc-silicate skarn and hornfels disseminated and fracture very fine grained pyrite and pyrrhotite to 1%, colour banding on 10cm scale, pink "alteration" selvages on cm scale parallel to well healed fractures, soft sediment deformation features common, banding at 015 / 90			
880	06.05			ORO DENORO E/2 Hwy. 3	3m composite chip across o/c of light and dark green, very fine crystalline calc-silicate banded marble, no visible sulphides, weak skarn is exposed below dark gray feldspar porphyry dyke and on West limb of tight anticline			
810	02.05			ORO DENORO W/2	select chip of light and dark green, brown, very fine grained. calc silicate bands from o/c			
812	02.05			ORO DENORO W/2	3m chip across o/c, sample of dark green cm scale banded calc silicate skarn, trace disseminated very fine grained pyrite			
817	02.05 ORO DENORO W/2 very select chip from loose on cat scrape of #816, sample of pyrite - lacey quartz - dark green chlorite and manganese stringer in hornfels, fine crystalline bright yellow pyrite to 20% in cm scale stringers, discontinuous over 10cm, not se o/c							
809	30.04			ORO DENORO W/2	1m chip across overgrown road access, sample of lt. green, buff calc-silicate banded white med. xl marble, calc silicate bands to 5cm wide, no visible sulphides			
811	1 02.05 ORO DENORO W/2 select chip over 8m cat scrape along overgrown access road, sample of whit medium crystalline marble, calc silicate of #811 at 015 / 80		select chip over 8m cat scrape along overgrown access road, sample of whit medium crystalline marble, calc silicate bands of #811 at 015 / 80					
839	839 04.05 ORO DENORO Central 1.5m chip over o/c of white medium crystalline massive marble, geochem background sample		1.5m chip over o/c of white medium crystalline massive marble, geochem background sample					

# ORO DENORO Project Rock Samples: Tuff / Andesite

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No.	Date		Date Loca		Description
	col sut rec		rec		
808	30.04			BELL MC	2m chip over south wall of old test pit, sample of dark green, very fine xl tuff with trace fracture and diss pyrite, mnr hematite staining on fractures, mnr white calcite veinlets on cm scale, discontinuous over 10 cm
877	06.05			ORO DENORO E/2 Hwy. 3	3m composite chip across o/c, sample of dark and light green, mottled epidote - chlorite altered greenstone, trace disseminated very fine grained pyrite
806	30.04		BELL MC	1.5m chip across south wall of old test pit in area of #804, 805, sample of dark green, very fine grained, chl alt'd tuff, sheared in fault zone at 330 / 70E	

# ORO DENORO Project Rock Samples: Sharpstone Breccia

No.	Date		Location	Description	
	col	sut	rec		
803	30.04			BELL MC	1m chip from road cut on overgrown access trail, sample of light grey - green, chlorite alt'd, v f xl granodiorite? - bx'd ipt?, trace diss v f gr pyrite, RR lt. green epidote veinlets

# ORO DENORO Project Rock Samples: Diorite

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No.		Date		Location	Description			
	col	snt	rec	1				
857	05.05			ORO DENORO Pit, Bench 4	0.3m chip of dark green epidote - chlorite altered feldspar diorite sill in fault zone of #856, diorite brecciated in fault v calcite - pyrite matrix, 0.5% disseminated very fine grained pyrite in diorite			
873	06.05			ORO DENORO No. 3 Quarty	1m chip across fault zone at 280 / 40N, sample of light green, sheared feldspar porphyry dyke, trace disseminated very fine grained pyrite, minor broken quartz - pyrite veinlets discontinuous over 10cm			
858	05.05			ORO DENORO Pit, Bench 4	0.3m chip across dark and light green clay gouge of fault zone in #856, 857, soft clay with 1% disseminated bright yello pyrite			
866	05.06			ORO DENORO No. 2 Quarty	1m chip across floor of stope, sample of intensely chloritized - epidote altered feldspar diorite dyke, trace disseminated very fine grained pyrite			
859	05.05			ORO DENORO Pit, Bench 4	0.5m chip across fault zone at 270 / 30N, sample of light and dark green sheared feldspar diorite, intense chlorite alteration disseminated very fine grained pyrite to 0.5%			
832	04.05			ORO DENORO S/2 RR	0.8m chip across argillized FP? dyke, fault zone at 025 / 85, minor Fe stain and cm scale calcite stringers, FP could be highly altered diorite?			
849	05.05			ORO DENORO Central	select chip of black chloritic fault gouge that marks contact between diorite dyke and skarn, gouge with trace disseminated very fine grained pyrite			
848	Q5.05			ORO DENORO Central	Im chip across o/c of dark and light green, very fine crystalline feldspar diorite dyke?, poor exposure, 0.5% disseminate and irregular blebs of dull yellow, very fine grained pyrite, diorite is weakly chloritized and epidotized?			
834	01.05			ORO DENORO S/2 RR	2m chip across o/c, sample of shattered and brecciated, calcite veined, light green, very fine grained "chill margin" greenstone, chill of the stock FB diorite of #833, minor hematite stain in fault zone at 295 / 90, no visible sulphides			
876	Q5.05			ORO DENORO Central RR	3m composite chip across o/c, sample of dark gray - green, very fine grained feldspar diorite, rare light gray fragments included, trace disseminated and fracture very fine grained pyrite, minor epidote fracture selvages			
833	01.05	ORO DENORO S/2 RR 3m chip across o/c, sample of blocky jointed, massive, dark gray, fine to medium crystalline feldspar - biotite granod diorite?, disseminated very fine grained pyrrhotite to 0.25%, fresh "stock rock", mapped by Canamax as part of the C Gabbro?						
820	02.05			ORO DENORO W/2	select grab from dump of old trench in same area as #819, sample of moderately well Fe stained, dark gray, very fine crystalline, feldspar diorite, white feldspar phenos on mm scale to 10%, trace disseminated very fine grained pyrite			
814	4 02.05			ORO DENORO W/2	Im chip across o/c, sample of dark gray, medium to fine crystalline, feldspar - biotite - diorite, white feldspar phenos on mm scale to 20%, irregular "knots" of black biotite to 10%, rock with a "red-brown-pink" hue, disseminated and fracture very fine grained pyrite to 0.25%			
879	79 6.05 ORO 1 DENORO 2 E/2 Hwy. 3 2		ORO DENORO E/2 Hwy. 3	1m chip across low angle fault that shears and shatters dark green chlorite altered diorite? dyke, trace disseminated very fine grained pyrite				

**APPENDIX 3** 

Cost Statement

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			TOTAL	\$ 8 884 00
Office	Expenses Phone, fax Drafting and off	fice supplies		\$ 10.00 <u>100.00</u> \$ 110.00
Transp	ortation Vehicle rental	10 days @ \$50/day		<u>\$500.00</u> \$500.00
Supplie	es General Field S	Supplies		<u>\$200.00</u> \$200.00
Geoch 31 eler	emical Analyses nent ICP, plus An 144 soil sample 80 rock sample 16 samples for	u Min-En Labs, Vanco s @ \$18.00 (including s @ \$20.50 (including assay @ \$12.00	ouver. g shipping) g shipping)	\$ 2,592.00 1,640.00 <u>192.00</u> \$ 4,424.00
Labour	: B. Kyba J. Bennett L. Caron	5 days @ \$450/day 5 days @ \$200/day 2 days @ \$200/day		\$ 2,250.00 1,000.00 <u>400.00</u> \$ 3,650.00

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APPENDIX 4

Statement of Qualifications

### STATEMENT OF QUALIFICATIONS

- I, Linda J. Caron, certify that:
- 1. I am an exploration geologist residing at Bubar Road (RR #2), Rock Creek, B.C.
- 2. I obtained a B.A.Sc. in Geological Engineering (Honours) in the Mineral Exploration Option, from the University of British Columbia (1985).
- 3. I graduated with an M.Sc. in Geology and Geophysics from the University of Calgary (1988).
- 4. I have practised my profession since 1987 and have worked in the mineral exploration industry since 1980.
- 5. I am a member in good standing with the Association of Professional Engineers and Geoscientists of B.C. with professional engineer status.
- 6. I am employed by Kettle River Resources Ltd. as an exploration geologist.

4. Cano Oct 16/86

Linda Caron, P. Eng.













