

GEOLOGICAL RECONNAISSANCE

ON THE

YSOO 1 CLAIM

MINING DIVISION: NTS: LATITUDE: LONGITUDE: FORT STEELE 82 G2/E 49 DEGREES, 12 MINUTES 114 DEGREES, 39 MINUTES

CLAIM OWNER: EASTFIELD RESOURCES LTD. **OPERATOR:** EASTFIELD RESOURCES LTD.

JAMES K. RYLEY, BA GEOL.

AUTHOR:

DATE:

DECEMBER 1999.

GEOLOGICAL SURVEY BRANCH



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INTRODUCTION

Location. Physiography and Access

The YSOO 1 claim is located in southeastern British Columbia, Canada, approximately 50 kilometres south of the city of Fernie. This eighteen unit claim block lies within the MacDonald Range of the Rocky mountains at an elevation range of 1400 to 1850 metres. The lowermost vegetation consists of moderately dense growth of lodgpole pine and balsam fir, while the higher elevations contain economic stands of mature spruce, and lesser larch. Deciduous growth is limited, marked by occasional thickets of alder, aspen and birch, which typically occur along the creeks. Topographical relief is moderate to locally strong, the latter developed within the south and eastern portions of the property. Access to the claims is south from Fernie along highway 3/95 for fifteen kilometres to the Morrissey secondary road junction. The Lodgepole road is traveled thirty-two kilometres to the Howell creek road junction (47 kilometre sign). On the Howell creek road travel is southwest approximately six kilometres to the Twentynine mile creek junction. The central north boundary is located where the access road crosses Twentynine mile creek. Access is restricted from May through to October owing to persistent snowfall during the winter months.

<u>Ownership</u>

The YSOO 1 is an eighteen unit claim, tenure number 366755. The claims are owned and operated by Eastfield Resources Ltd.

<u>Summary</u>

The YSOO 1 claim was staked for both gold and base metal potential. The claim is underlain by a transitional assemblage of Upper Proterozoic clastics through to Lower Devonian carbonates. Historically, the Cambrian Flathead and Elko formations have been the focus of exploration owing to localized intrusion of Cretaceous to Tertiary age syenite dykes and sills. Three exposures of syenite exist, two of which were drill tested in 1987 by Fox Geological Consultants Ltd. for Placer Dome Ltd.

The 1999 reconnaissance program of September 16-17 consisted of mapping and sampling within and proximal to these areas of interest. A total of seventeen rock samples were collected and field mapping was detailed at a scale of 1:5000. James Ryley performed the geological mapping and sampling, Francois Larocque accompanied as field assistant.

REGIONAL GEOLOGY

The MacDonald Range lies within the Rocky Mountain Foreland and Thrust Belt. In this region, this tectono-stratigraphic assemblage consists of Proterozoic to Cretaceous clastics and carbonates and upper Cretaceous syenite intrusive phases. To the northwest and forming a major portion of the YSOO 1 claim, are the Proterozoic Kintla, Cambrian Flathead, Elko, and Devonian Fairholme formations. These lie in juxtaposition with the upper Cretaceous Alberta Group via the regional scale Twenty-Nine Mile creek fault. Immediately north of the fault, two klippes lie within the Alberta Group. These thrust blocks, known as the eastern and western outliers, individually consist of the Kintla formation, and the Kintla through to the Fairholme assemblage, respectively. The Alberta Group is bound to the north by the Harvey Creek normal fault and on the west by the Northern Thrust fault. This fault block encompasses an area of ten square kilometres. Beyond these faults the Mississippian Rundle Group of carbonates form the base of the regional geological setting. These are overlain by a transitional sequence of carbonaceous shales, siltstones, sandstones and coal measures. This sequence forms the Permo-Pennsylvanian through to Tertiary stratigraphy.

The regional structural grain changes from southwest attitudes south of the Twenty-Nine Mile Creek fault to northeast north of it. These deviate along the leading edge of the allochtonous blocks. The Rundle Group lies with a moderately shallow southwestern dip, variably enhanced by regional northeast thrust sheets.

PROPERTY GEOLOGY

Introduction

The Proterozoic Kintla, Cambrian Flathead and Elko formations, and the Devonian Fairholme formation underlie two-thirds of the YSOO 1. The northeastern sector contains the Mississippian Rundle Group, a juxtaposion facilitated by the Twenty-Nine Mile creek fault. The upper Cretaceous syenite exposures are shallow to moderate northeast dipping sills within the Cambrian Flathead formation.

Rock Units

Proterozoic Kintla formation

The Kintla formation consists of thin to medium bedded pale green and red argillites, and a light to medium gray, sub-rounded to rounded, moderately sorted, medium grain quartz arenite. The Kintla formation has minimal exposure as it occupies the lower elevations, which are heavily vegetated or veneered with alluvial cover. Arenaceous samples collected may represent the Kintla or the basal Cambrian Flathead, as described below.

Cambrian Flathead

This relatively thin formation consists of impure quartz arenite, interbedded light green siltstone, shale, and limestone. The former has pyrite and/or pyrrhotite occurring variably in fine grain disseminations in the matrix at one to two percent and oxidize to impart a brown-red limonitic stain to weathered outcrops. Bedding is typically massive with minor interbeds of thin cross ripple lamination sets. Observed siltstones were in general fissile and thinly bedded.

Cambrian Elko

A light to medium gray micritic limestone, lesser dolomitic limestone, and minor thin interbeds of sub-planar silty limestone characterizes this unit. It is weakly biolithic with mollusc bivalves, and echinoderms in the form of crinoid stems. It has an average thickness of 80-90 metres and represents the beginning of the carbonate succession that persists through to the end of the Mississippian period. The Elko formation has been the focus of diamond drilling for gold and base metal potential. It hosts anomalous geochemical soil values for gold and zinc.

Devonian Fairholme

Uppermost stratigraphically within the YSOO 1, this is a thickly bedded medium to dark gray micritic limestone. It is variably coarsed with one to three centimeter scale calcite veinlets and weakly disseminated with accretionary oolitic hematite. Bedding thickness and a relatively thick, if not localized, calcareous siltstone to calcic mudstone interval serve as criteria for differentiation from the Cambrian Elko formation. Exclusive of this, the lithology and faunal types are common to both and hence has been noted as undifferentiated by previous authors.

<u>Structure</u>

The Kintla and Flathead formations have a northeastern strike in the western two thirds of the claim block. Bedding attitudes are to the southwest with shallow to moderate dips. The Elko and Fairholme formations assume an easterly strike that is consistent with the trend of the valley. Bed dips are to the south as well. Collectively, all the formations are influenced by late and post-Tertiary extensional tectonics. This is manifested in the geomorphology where the prominent creek drainages are associated with notable changes in bedding attitudes. At the easternmost drainage, stratigraphy is depressed on the west side of the drainage implying west side down normal faulting with a listric component. Property wide, the topography displays strong relief on the eastern sides of the drainages while the western flanks are considerably less pronounced.

Mineralization and Alteration

Visible mineralization consists of copper carbonates, and sulphides. These are malachite, azurite, galena, and pyrite. The copper carbonate sample (10987) is hosted in limestone of the uppermost Cambrian Elko formation. It is in association with one to two centimetre irregular masses of dark purple fluorite, botryoidal hematite and dendritic manganese. The mineralization has an irregular distribution as reflected in the original channel sample (10985), which produced only weakly anomalous copper values. Zinc and lead were moderately anomalous in sample 10987. Two samples taken within ninety metres of this location by Fox Geological Ltd. (1987) yielded 40330 parts per million (ppm) and >999999 ppm zinc.

The highest gold value at 1750 ppb was obtained from a moderate to strong argillic altered syenite sill. This sill lies on the periphery of an elevated soil contour plot which was drill tested by Fox Geological Ltd.. The next highest value at 439 ppb was derived from sandstone with rhythmically layered quartz veinlets. Molybdenum, silver, and lead are elevated as expected in keeping with the intrusive influence.

Sample 10981 contains rare mm-scale coarse galena in the selvage of a four-centimeter quartz vein with upper anomalous molybdenum and silver values. The sample is derived from the arenaceous portion of the Cambrian Flathead formation yet is interpreted as localized late stage mineralization related to intrusive activity. Historically, elevated molybdenum and silver in the region is associated with syenite, as reflected in sample 10980 at 7 ppm and 13.7 ppm, respectively. This association of molybdenum, silver, and lead hosted within quartz-bearing clastics is consistent to the geochemistry profile on the YSOO 1 claim.

Sample Description Summary

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Sample #	-	Au ppb	As ppm	Sb ppm	Zn ppm	Cu ppm
10973	Limestone, micritic, gray brown.	4	4	<3	1	1
10974	Limestone, gray brown.	21	17	3	2	2
10975	Limestone, dark gray.	7	17	3	4	1
10976	Limestone, dark gray.	<1	3	<3	19	1
10977	Boulder of limestone breccia.	<1	2	<3	3	<1
10978	Talus, limestone, gray.	<1	2	3	10	1
10979	Quartz arenite, medium gray.	212	471	7	69	15
10980	Syenite, argillic alteration.	1750	705	15	39	44
10981	Regolith, 4cm quartz vein.	38	208	21	5	11
10982	Limestone, medium gray.	17	43	<3	10	18
10983	Limestone, medium gray, with calc silicate veinlets.	166	77	3	255	44
10984	Regolith, quartz vein with purple?	2	11	5	18	18
10985	Limestone, medium gray.	11	52	<3	27	86
10986	Limestone, with fluorite and malachite, 1.2 meter channel sample	6	51	<3	9	106
10987	Limestone, with fluorite and malachite.	5	988	33	212	5119
10988	Quartz sandstone, impure.	5	29	3	7	61
10989	Rhythmically layered quartz veinlets, in quartz sandstone.	439	216	7	59	140

DISCUSSION

The YSOO 1 claim has been subjected to inclusive exploration programs in the past. Gold in the alkalic intrusives has been the focus with lesser attention paid to the sediment-hosted style. Economic grade copper and zinc values in the area of sample 10987 within the Cambrian Elko/Devonian Fairholme formations lend consideration to sediment hosted models. These mineralized sample sites occur on the southern edge of the gold soil anomaly that warrants additional prospecting, particularly within the Devonian Fairholme formation. This formation is regularly mineralized in excess of one gram/tonne gold in the Howell claims located immediately to the north.

APPENDIX I

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ITEMIZED COST STATEMENT

<u>Property Visits</u>	<u>Individual</u>	<u>Rate/Day</u>	<u>Truck</u>	<u>Use</u>	<u>Amount</u>
September 16-17	J. Ryley F. Larocque	\$ 300.00 \$ 160.00	\$ 60.0	0	\$ 720.00 \$ 320.00
				Sub-total	\$ 1040.00
<u>Report Preparation</u>					
J. Ryley Report writing and di September 21, Decen	rafting,. aber 14-15; 3 c	lays @ \$ 300.00	0/day	Sub-total	\$ 900.00
Sample Geochemistr	Ľ				L
Acme Analytical Lab 17 samples @ \$20.21	oratories Ltd. /sample (freigh	nt and taxes incl	luded)	Sub-total	\$ 343.58
				<u>Total</u>	<u>\$ 2283.58</u>

(\$1400 geological work claimed on Statement of Work dated Sept 29, 1999 – event # 3139933)

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APPENDIX II

STATEMENT OF QUALIFICATIONS

I, James Kendall Ryley, resident of British Columbia, Canada, and currently residing at, 1504-12th Avenue South, Cranbrook, British Columbia, Canada, do hereby certify that:

- 1. I obtained a Bachelor of Arts, Professional Emphasis, in Geology from the University of Montana in 1989.
- 2. I obtained an Associate Degree in Petroleum Geology from the Southern Alberta Institute of Technology in 1981.
- 3. I have practiced my profession as a geological technologist and geologist in the areas of petroleum, industrial, base and precious metal exploration for over a period of thirteen years.
- 4. I personally performed the geological mapping and collection of samples on the YSOO 1 claim. Francois Larocque acted as field assistant.
- 5. I have authored a number of professional reports under the employ of junior and major mining companies in contract and salaried positions.
- 6. I have a 15000 share stock option with Eastfield Resources Ltd. and a 15000 share stock option with their affiliate company, Wildrose Resources Ltd.

James K. Ryley, BA

Dated December 29, 1999

APPENDIX III

BIBLIOGRAPHY

Fox Geological Consultants Ltd., et al

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Howell Property Geology Map, Project No. 189, 1:10,000, Ft. Steele Mining District, NTS 82G02E, 1987.

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APPENDIX IV

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SAMPLE DESCRIPTIONS

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APPENDIX IV

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SAMPLE DESCRIPTIONS

<u>Sample Number</u>	Description
10973	Cambrian Elko, medium gray brown micritic limestone, medium thick bedded, abundant subordinate mm-size calcite veinlets, interbeds thin sub-planar silty limestone. One metre chip sample.
10974	Cambrian Elko, medium gray micritic limestone, variably calcarenite sucrosic texture. 30 cm chip sample.
10975	Devonian Fairhome, dark gray micrite with high percentage 1-3 cm calcite veinlets forming microbrecciation texture, minor accretionary hematitic oolite, dendritic manganese. 80 cm ship sample.
10976	Devonian Fairholme, dark gray micrite with chaotic mm-scale calcite and hematite lined veinlets, minor boytroidal hematite. Grab sample, proximal transport.
10977	Devonian Fairholme, carbonate breccia, matrix supported angular clasts dolomitic calcarenite within coarse crystalline calcified cement. Transported boulder.
10978	Devonian Fairholme, gray crinoid biomicrite, mottled irregular texture. Talus debris from base of headwall.
10979	Proterozoic Kintla or Cambrian Flathead, medium gray sub rounded to rounded coarse grain quartz arenite with 5-7% medium to coarse disseminated pyrite, rare arsenopyrite. Sulfide development within grain boundaries, road regolith sample.

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<u>Sample Number</u>	<u>Description</u>
10980	Cretaceous to Tertiary syenite, leuco to mesocratic, strong argillic alteration with indistinct groundmass and depletion of mafics, strong limonitic stain, manganese alteration rind. Chip sample, syenite sill.
 10981	Cambrian Flathead, four centimetre clear quartz vein with 2 mm coarse galena on selvage. Road recontour regolith sample.
10982	Cambrian Flathead, medium gray micrite with weakly disseminated to fracture bound fine grain pyrite.
10983	Cambrian Flathead, medium gray micrite with numerous mm-scale calc-silicate veinlets Road recontour regolith sample.
10984	Cambrian Elko formation, quartz vein bound dark gray to black/purple subplanar mineral, possibly phosphate or fluorite. Road recontour regolith sample.
10985	Cambrian Elko, medium gray micrite with inter-growths of euhedral calcite, minor thin interbeds sandstone. 1.4 m channel sample.
10986	Cambrian Elko, as at 10985 with open fractures consisting of granular fluorite and rare fibrous stellar malachite. Grab sample at base of 1.4 m channel sample.
10987	Cambrian Elko, malachite and azurite coating as 2-4 mm blebs on strong limonitic stained limestone, localized manganese as coating and dendritic, minor boytroidal hematite. Select sample immediately next to 1.4 m channel sample.
109 88	Proterozoic Kintla or Cambrian Flathead, impure fine grain quartz sandstone with 1 percent coarse disseminated pyrite. Grab sample from roadbed.
10989	Proterozoic Kintla, rhythmically layered quartz veinlets hosted within quartzitc sandstone, strong limonitic alteration. Grab sample from roadcut exposure.

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ACME ANALL CAL LABORATORIES LTD. 852 E. HASTINGS ST. V. JOUVER BC **V6A 1R6** PHONE(604)253-3158 FAX(60-)253-1716 (ISO 9002 Accredited Co.) GEOCHEMICAL ANALYSIS CERTIFICATE Eastfield Resources Ltd. PROJECT YSO0-1 File # 9903794 110 - 325 Howe St., Vancouver BC V6C 1Z7 Submitted by: James Ryley SAMPLE# Ma Cu PЬ Zn Ag Ni Co Mn Fe As U Sr Au Th Cd Sb Bi v Са P La Cr Mg 8a Τi B Αl Na W ppm ppm pom ngq DDm ppm ppm ppm % ppm ppm ppm ppm ppm ppm ppm ppm % % ppm ppm ppm % % % ppm ppm ppm % % 10973 <1 <3 39 .10 <.3 4 <8 <2 <2 230 <.2 <3 <3 5 39.47 .001 2 .23 31 < .01<3 .03 .01 .02 <2 2 10974 1 4 2 <.3 5 2 147 .47 17 <8 <2 <2 159 <.2 3 <3 4 25.91 .013 3 <1 3.55 20 <.01 .15 13 .03 .10 <2 10975 5 <1 1 4 <.3 1 1 239 .15 17 <8 <2 <2 206 <.2 3 <3 17 41.30 .001 1 <1.09 5 <.01 <3 .02 -01 .01 <2 10976 <1 19 1 <3 <.3 2 1 70 .15 3 <8 <2 <2 199 <1 38.90 .004 <.2 <3 <3 2 <1 .22 11 <.01 <3 .05 .01 .04 <2 10977 <1 3 3 <1 <.3 <1 1 209 -06 2 <8 <2 <2 55 <.2 <3 <3 2 29.22 .004 2 <1 4.02 2 <.01 <3 .02 .03 .01 <2 10978 <1 1 3 10 <.3 52 . 14 2 1 1 <8 <2 <2 <1 32.40 .006 146 <.2 3 <3 <1 2.13 7 <.01 1 <3 .05 .02 .03 <2 10979 15 9 10 69 .5 25 17 3317 4.66 471 21 <8 <2 7 <.2 7 3 41 .35 .009 23 30 .22 41 .01 <3 .10 .02 5 212 .12

5 10.0 11 2851 5 <1 66 .54 208 <8 <2 7 4 <.2 21 43 8 .08 .010 90 25 .01 144 <.01 <3 .09 .02 .13 38 6 10982 1 18 24 10 .4 14 6 475 1.52 43 <8 <2 89 <.2 <3 22 5.37 4 <3 9 18, 14 .031 14 106 - 02 26 .74 .02 .53 <2 17 10983 <1 44 26 255 2.2 3 988 .78 1 77 12 <2 7 135 1.0 3 243 21.86 .034 <3 5 5.97 17 67 .01 15 .29 .01 .16 <2 166 10984 18 1 8 18 <.3 <1 241 .10 11 34 1 <2 10 419 <.2 5 24 30.49 .134 <3 4 <1 1.85 68 <.01 340 .15 .08 2 .11 <2 RE 10984 7 <1 18 19 <.3 <1 1 249 .11 9 36 <2 9 423 4 <.2 <3 24 30.74 .136 3 <1 1.88 68 <.01 346 .14 .08 .11 <2 3 10985 27 1 86 43 .5 1 576 .30 52 <8 1 <2 <2 74 <.2 <3 <3 50 21.43 .004 1 <1 7.25 22 <.01 <3 .02 .01 .02 <2 11 10986 <1 106 14 9 .8 <1 648 .25 1 51 <8 <2 2 101 <.2 <3 35 23.23 .005 <3 2 <1 6.71 22 <.01 156 .06 .04 .05 <2 6 10987 2 5119 130 212 3.6 -3 2 410 .72 988 <8 <2 6 136 3.1 33 9 138 14.32 .014 22 6 5.91 <3 16 .01 .10 .02 . 11 4 5 10988 1 61 11 7 .5 13 16 6639 6.18 29 53 <8 <2 <2 <.2 3 <3 5 20.82 .068 6 3 4.38 155 <.01 .24 4 .02 .13 <2 5 10989 4 140 506 59 4.2 5 1 92 1.68 216 8 <2 4 8 <.2 7 6 106 .09 .011 14 22 .05 <3.24 215 .01 .02 .31 439 6 STANDARD C3/AU-R 26 64 36 174 5.9 36 12 778 3.31 59 28 21 30 24.1 4 19 22 77 .62 .088 17 165 .63 147 .08 17 1.89 .05 .17 17 514 STANDARD G-2 2 5 45 4 <.3 8 5 553 2.06 <2 9 <2 4 96 <.2 <3 <3 40 .74 .097 8 77 .62 260 .13 <3 1.25 .17 .60 2 <1

> GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HN03-H20 AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES. UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB - SAMPLE TYPE: ROCK AU* GROUP 3A - 10.00 GM SAMPLE, AQUA-REGIA, MIBK EXTRACT, ANALYSIS BY GF/AA. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE REPORT MAILED: Oct 13/99 OCT 6 1999 DATE RECEIVED:

10980

10981

7

11

44

91

39 13.7

7

8

161 7.19

705

15

3

7

91 <.2 15

7 440 .22 .082

11

23 .70 63 .49

<3 .56 .05

.79

Au*

ppb

4

7

21

<1

<1

<1

