Cripple Creek Fluorite Deposit,
Fairbanks Mining District

by R.V. Berryhill

Field Report

Nov, 1963
Memorandum

To: R. L. Thomas, Project Coordinator, Area VIII Mineral Resource Office

From: Project Leader, Area VIII Mineral Resource Office

Subject: Cripple Creek Fluorite Deposit Summary Report

November 4, 1963

Attached is Form 8-303, Summary Report of Minerals Examination for the examination of a fluorite deposit on Cripple Creek in the Fairbanks district, Alaska.

A mineralized fault zone in which fluorite occurs was exposed several years ago during stripping in preparation for dredging operations on Cripple Creek by the United States Smelting Refining and Mining Company. The fluorite mineralization apparently was not recognized until the spring of 1963. Most of the fault zone by then had been covered with muck sloughed from cut banks which surround the dredging area. A small amount of additional stripping was done by the company in June 1963 to indicate the quantity of fluorite. They found highly fractured masses of fluorite irregularly dispersed along a large fault zone; other needs for equipment did not permit full stripping of the deposit.

At the time of my examination, most of the deposit was covered with muck and/or had been recovered by sloughing; only one small outcrop was observed. It was not possible to properly sample and attempt a valuation of the fluorite occurrence. Work consisted of making a Be meter survey in the deposit area; no beryllium was detected. Select specimens of fluorite were taken for petrographic analysis. Schist and limestone float indicate the bedrock type in the area.

The company plans to expose the fault zone by dragline stripping in 1964. Stripping will be done after they have completed their dredging operations in the Cripple Creek hole. The deposit should be re-examined when it has been reopened. The mineralogy is favorable for beryllium and the company has expressed an interest in Bureau of Mines assistance, particularly with the beryllium detector.

I have attached a photograph of the deposit area.

R. V. Berryhill

Attachments
Area VIII

November 4, 1963

Mr. J. D. Crawford, Vice President
and General Manager of Alaskan Operations
United States Smelting Refining and Mining
Company
P. O. Box 1170
Fairbanks, Alaska

Dear Mr. Crawford:

On September 20 I discussed with you the fluorite mineralization along
the fault zone on the right limit of your Cripple Creek cut. I was later
able to examine the cut and complete a rough beryllium survey using our
portable detector; no beryllium was found. Our detector source (Sb 124)
was approximately two months old at the time of the survey; our lowest
limit of detection (by check against our standard samples) was between
0.1 and 0.2 percent BeO.

As you are aware, most of the fault zone was covered with sloughed muck
and it is entirely possible that we may have missed any beryllium
mineralization. I did observe a moderate amount of limestone float
which is a favorable host rock.

Because the mineralogy is favorable for beryllium, the fault zone should
be scanned in detail when and if it is reopened. If we can be of
assistance, please let us know.

Sincerely yours,

R. V. Berryhill
Mine Examination and Exploration
Engineer

CC:
Bruce I. Thomas, Fairbanks
Berryhill
Min. Files

RVBerryhill:je
February 14, 1964

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Area VIII

Memorandum

To: R. L. Thorne, Project Coordinator, Area VIII Mineral Resource Office

From: Project Leader, Area VIII Mineral Resource Office

Subject: Supplement to Summary Report and Form 6-803, Cripple Creek CaF2

Attached are a sketch map showing sample locations and sample laboratory reports for the Cripple Creek fluorite deposit. Also attached is a copy of a letter to Mr. Crawford of the USGS Co. dated November 4, 1963. The laboratory data confirm the conclusions given in the summary report and in the letter to Mr. Crawford; virtually no beryllium is indicated; no radioactivity and fluorescence were detected.

The samples submitted by Bruce I. Thomas (petrographic report 3-128) contain predominantly fluorite and are quite similar to my sample No. 900 (report 3-171). Virtually no beryllium is present intimately associated with the better fluorite. Sample 901 represents the limonite-stained quartz fault gouge containing lesser fluorite; the fluorite is mostly ground to powder. Field observations indicated bedrock is predominantly quartz and micaeous schist but sample 902 confirms the presence of some limestone.

No further laboratory or field work is presently planned, but as previously suggested, the deposit should be evaluated for the fluorite and/or possible beryllium content when it is reopened.

R. V. Berryhill

Attachments

cr:
Thomas
Berryhill
Min. Files

RVBerryhill:je
Sample Locations, Cripple Creek Flourite Occurrence.
SUMMARY REPORT OF MINERALS EXAMINATION

State: Alaska
County: Mineral Products
Mineral Products: CaF₂ and B₃O₃

Name of property or deposit: Cripple Creek Fluorite Deposit

Date examined: 9/27/51
Engineer: V. V. Bennett

Date of this report: 10/22/51

Reason for examination: To ascertain if Bar occur associated with recently discovered fluorite

Engineer accompanied by: J. P. Corning
Address: Juneau, Alaska

Extent of property: To be determined

Owner: United States Mining Company
Address: Box 1140, Fairbanks, Alaska

Leased or optioned to: To be determined
Address: To be determined

Location of property (be specific): 100 yards upstream from the lowest dredging on right of Cripple Creek in the historic mining area, Fairbanks, Alaska

Type of deposit and mineralogy (brief description): Green to purple fluorite in fault zone, highly fractured and occurring as 10-foot to 15-foot masses. Limestone and schist float found in vicinity of the fluorite mineralization.

Known dimensions of the deposit: Not determined

Length: Width: Depth:

Attitude of the deposit (strike, dip, etc.): Not determined

Possible extensions; correlation of known showings: The deposit was exposed during the placer mining on the right limit of the Cripple Creek area. Subsequent slopping of the alluvial cut bank has covered most of the deposit. The company management reports the fluorite occurs as large irregular masses along a fault zone or in the cut bank. The fluorite occurs at least 100 feet wide.

Mine workings (brief description or attach map or sketch) (indicate whether accessible): Accessible

(over)
Mining and milling equipment on property

Past production (if any)

Present rate of production (if any)

Sampling (describe briefly, or attach sketch)

Tentative Estimate of Reserves
(Subject to revision when assays are received or after engineering calculations)

<table>
<thead>
<tr>
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<th>Measurable</th>
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Mining method (actual or suggested)

Milling or processing method (actual or suggested)

Processing tests suggested

Tentative conclusion and decision

To be accompanied by brief letter giving examining engineer's general impression of the deposit, his impression of the owner, and any other confidential information he may care to submit. Refer to any known prior examinations and reports. May be executed in pencil. Should be mailed within 24 hours after examination is completed.

Send original and one copy to Washington Office.
**PETROGRAPHIC REPORT**

**Bureau of Mines**

**Area VIII**

**Report to:** R. B. Thorne

**Sample source:** East Limit Crapple Cr. Fairbanks

**Sample numbers:** 800, 900, & 902-BBB-63

**Date received:** September 1963

**Submitted by:** N. V. Barryhill

**Reported by:** Walter L. Comay

**Date reported:** 12-20-63

**Request:** Rock type; minerals major minor

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<th>SAMPLES</th>
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**Minerals:**

- **Fluorite vein:** C
- **Limonite:** C
- **Saltite:** F
- **Chlorite:** A
- **Arpilite:** -
- **Fluorite:** P A
- **Limonite:** T
- **Muscovite:** M
- **Quartz:** M P S
- **Feldspar:** -

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**Remarks:** Radioactivity and fluorescence were not detected.

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**Legend:**

- **F** - Predominant Over 50 percent Numerals Percent
- **A** - Abundant 10 - 50 percent
- **S** - Subordinate 2 - 10 percent
- **M** - Minor 5 - 2 percent
- **F** - Few 1 - .5 percent
- **T** - Trace Less than .1 percent
- **N** - Detected in sample
- **R** - Radioactive
- **C** - Rock classification
- **H** - Highly magnetic
- **W** - Weakly magnetic
- **F** - Fluorescent
- **M** - Magnetically
- **S** - Subjected to analysis
- **B** - Basis for analysis
- **G** - Not determined

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**Note:** Sought but not detected.
PETROGRAPHIC REPORT

Report to: A. L. Thorne
Sample source: Limit Creek, Fairbanks
Sample numbers: 900, 901, 902
Date received: October 1963

Reported by: Walter L. Gossy
Date reported: 12 - 20 - 63

Request: Rock type: minerals major minor

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### SAMPLES

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### Remarks

Radioactivity and fluorescence were not detected.

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Legend:
- **F** - Predominant: Over 50 percent
- **A** - Abundant: 10 - 50 percent
- **S** - Subordinate: 2 - 10 percent
- **M** - Minor: .5 - 2 percent
- **F** - Few: .1 - .5 percent
- **T** - Trace: Less than .1 percent
- **X** - Detected in sample
- **-** - Sought but not detected

- **H** - Highly magnetic
- **W** - Weakly magnetic
- **F** - Fluorescent
- **R** - Radioactive
- **C** - Rock classification
Petrographic Report

Proj: 14.4280.2 Central
Bureau of Mines
Area VIII

Report to: R. L. Thorne
Sample source: Cripple Creek Pit
Requested by: Walter L. Gnas

Sample numbers:

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Sample numbers:

| 9-6-63                                       |

Date reported: 12-4-63

Sample numbers:

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Geochmical:

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Spectroscopic:

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Minerals:

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Fluorescence:

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</table>

Remarks:

* 196-CC-63 Lab. No. 63-885
   197-CC-63  "  63-886
   198-CC-63  "  63-887

Legend:

- P - Predominant Over 50 percent
- A - Abundant 10 - 50 percent
- S - Subordinate .2 - 10 percent
- M - Minor .5 - 2 percent
- F - Few .1 - .5 percent
- T - Trace Less than .1 percent
- X - Detected in sample
- H - Highly magnetic
- W - Weakly magnetic
- F - Fluorescent
- R - Radioactive
- C - Rock classification
- Sought but not detected
August 15, 1963

Fluorite; Grab

Cripple Creek pit

Bruce I. Thomas

Be

196-CC-63
197-CC-63
198-CC-63
**Fluorite; Grab**
Cripple Creek pit
Ref.: Petro. #3-128
Report to Mr. Bruce I. Thomas

**Chemical Laboratory Report**

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Date received: August 15, 1963  
Date reported: March 30, 1964

Signed: C. Birch (Analyst)