February 6, 1951

Memorandum

To: Operating Committee, Defense Minerals Administration, Washington

From: Field Team, DMA, Region IV

Subject: DMA Docket 53, Moss Flower Property

We are attaching an original and two copies of the Field Team report on the Moss Flower Property, near Canon City, Colorado, Docket DMA 53.

The geologists who made the examination, M. G. Bingg, states, "Past production and field conditions indicate that this is a highly speculative exploratory proposition."

The Field Team recommends that the application for Government aid for Docket DMA 53 be denied.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

JHE/cl

Attachments.

Copy to: DMA files
AH Koschmann (has copy of report)
P.T. Allsman
Traver

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

460 New Customhouse
Denver 2, Colo.

February 5, 1951

Memorandum

To : Field Team, DMA, Region IV

From : Supervising Geologist, Colorado-Wyoming

Subject: Docket DMA 53 - Moss Flower Property.

Attached is report by M. G. Dings covering field investigation of Moss Flower Property, Docket DMA 53, requested by Nonferrous Lead-Zinc Commodity Committee, DMA, December 29, 1950. I concur in the conclusions of Mr. M. G. Dings.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Attachment

A BRIEF GEOLOGIC REPORT ON THE MOSS FLOWER AND SILVER KING MINES, GARFIELD QUADRANGLE, CHAFFEE COUNTY, COLORADO

By

M. G. Dings

The Moss Flower (formerly known as the Half Moon) and the Silver King mines are in the Garfield quadrangle of central Colorado (fig. 1). Specifically, the mines are 1½ miles northwest of Garfield at an altitude of about 11,500 feet, and are reached by a trail 1½ miles long that leaves the secondary road in Middle Fork at a point about 5/4 of a mile from Garfield. The surrounding area is mountainous and rugged. The climate is severe with long winters, and snow blocks the trail and road for about 8 months in a year. Under normal weather conditions the mines cannot be reached without great difficulty until about the first of July.

Geologically the mines are located near the western side of a belt of steeply dipping sedimentary rocks of Paleozoic age that are cut and bordered by the Princeton quartz monzonite stock of Tertiary age (see fig. 2).

The Moss Flower (Half Moon) and Silver King workings are in the Minturn formation (Pennsylvanian and Permian(?) age) which locally consists chiefly of quartzite and argillite beds that strike northeast and dip steeply (70-90°) northwest or southeast. The Minturn formation is cut off by the Princeton quartz monzonite about 500 feet west of the Moss Flower mine, and about 200 feet east of the mine a small intrusive body of the monzonite cuts the sedimentary beds (see fig. 2).

Locally, narrow (6 inches or less) and short (200 feet or less) quartz veins are very poorly indicated by float trains. These seem to strike northeast about parallel to the strike of the enclosing quartzite and argillite. Vein dips are not known, but they are probably steep and parallel the dip of the

sedimentary rocks. The vein matter is white quartz usually accompanied by pyrite. On the mine dumps of the Moss Flower and the Silver King mines a little galena, sphalerite, and, less commonly, chalcopyrite are associated with vein quartz containing much pyrite. Nothing is known definitely about the body of marcasite that Burrous reports was opened in the Silver King mine, but it probably is a highly pyritic shoot of a quartz vein, as material on the dump indicates pyrite rather than marcasite.

No information, other than that given by Mr. Burrous in his application, MMA 55, was obtained concerning the extent of the mine workings as all were caved when visited in 1950. No specific mention is made of either the Half Moon or Silver King mines by Crawford[1] who mapped and studied the area in 1910.

1/Crawford, R. D., Geology and ore deposits of the Monarch and Tomichi districts, Colorado: Colo. Geol. Survey, Bull. 4, 1913.

Crawford's work is the only published reference to the geology of this part of the Garfield quadrangle.

During the past fifty years (1901-1950) the only production on record[2] from the Moss Flower is 80 tons of crude ore produced in 1917 which yielded 2 ounces of gold, 328 ounces of silver, 20,000 pounds of lead, and 34,000 pounds of zinc.

2/Martin, A. J., Statistics Branch, Metal Economics Division, U. S. Bureau of Mines, Denver, Colorado.

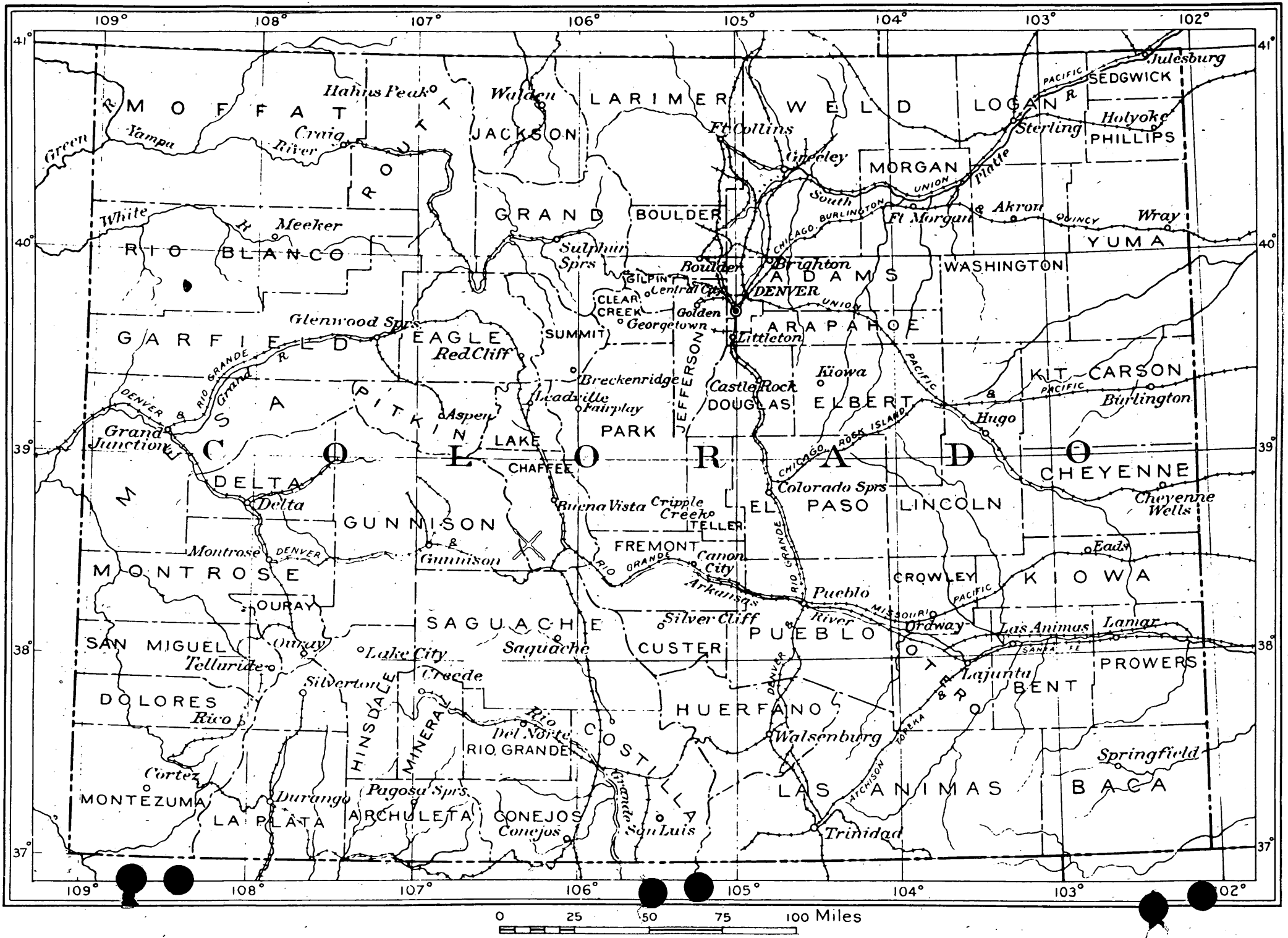
The only mine in the vicinity of the Moss Flower that has been a substantial past producer of ore is the Columbus mine which is about 1,000 feet north of the Moss Flower. The workings are very old and were even inaccessible to Crawford in 1910. The ore, with values reported to be chiefly in silver and

copper, was contained in a vein located along the contact of the Princeton quartz monzonite and metamorphosed sedimentary rocks of the Minturn formation.

Summary and recommendations

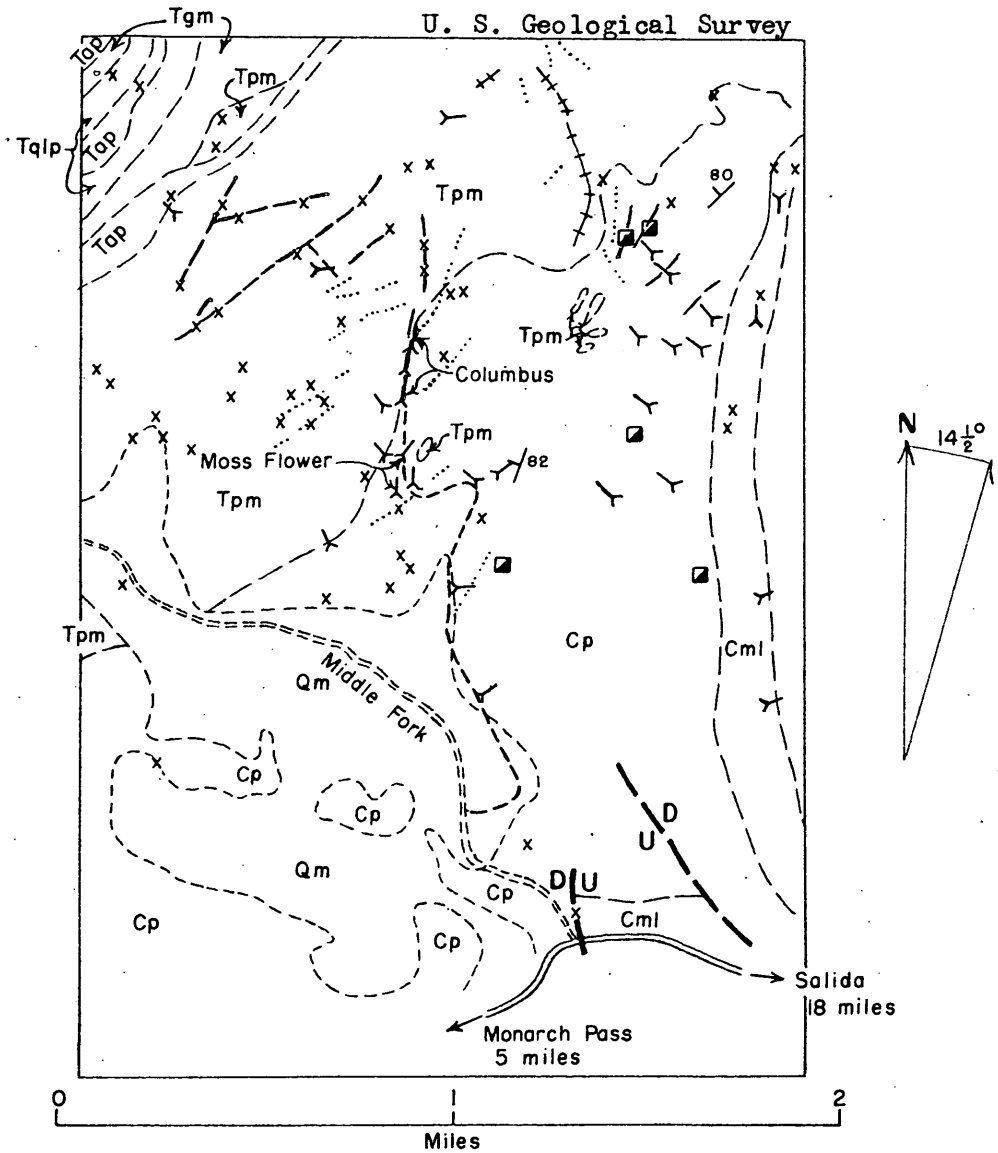
The mine workings are inaccessible and have been for many years, and according to records very little ore has been produced. The area has been mapped and studied by the Geological Survey during 1948 and 1950 and the general geologic conditions, particularly in the Minturn formation, are not considered favorable for deposition of extensive ore bodies and provide no basis for believing a detailed geologic study of the mine and its surroundings would alter this conclusion. Past production and field conditions indicate that this is a highly speculative exploratory proposition.

Index map of Colorado showing the location of the Moss Flower Property. Figure 1



GPO 88-0600257

FIGURE 2



Explanation

Qm	Glacial moraine	Pleistocene
++ ++	Rhyolite dike	Tertiary
.....	Monzonitic and latitic dikes	"
Tap	Aetna quartz monzonite porphyry	"
Tqlp	Quartz latite porphyry	"
Ta	Andesite	"
Tpm	Princeton quartz monzonite	"
Tgm	Gneissic quartz monzonite	"
Cb	Belden shale and Minturn formation undifferentiated	Pennsylvanian and Permian(?)
Cml	Leadville limestone	Mississippian

Contact, showing dip (dashed where approximately located)

Indefinite contact

Fault, approximately located

30 Strike and dip of beds

Vein (dashed where approximately located)

Vertical shaft

Portal of adit or tunnel

x Small prospect pit or open cut

GEOLOGIC MAP OF THE MOSS FLOWER AREA

By M. G. Dings