UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

Air Mail

August 28, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 127, Nebo Iris Mining Company, Draper, Utah

We are enclosing original and two copies of the above report.

The field men recommend that the exploration grant be denied. We concur with this recommendation.

J. H. East, Jr.

for Ogden Tuvell
A. H. Koschmann

enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Administration
200 New Customhouse
Denver 2, Colorado

August 22, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 127, Nebo Iris Mining Company, Draper, Utah

Enclosed are 8 copies of the geologic report by J. W. Hasler and D. C. Arnold of the U. S. Geological Survey covering the above docket.

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Room 307, 320 South Main
Salt Lake City 1, Utah
13 August 1951

Memorandum

To: A. H. Koschmann, Field Team, Region IV

From: Ralph J. Roberts

Subject: Docket DMA-127, Nebo Iris Mining Company, Draper, Utah.

Enclosed are 8 copies of a report on the Nebo Iris Mining Company, Draper, Utah.

In response to a request, dated February 20, 1951, from Field Team IV for a field examination of the Nebo Iris Mining Company, an examination was made on July 5, 1951.

The ore deposits of the Nebo Iris Mine are bedded replacement deposits in coarse grained dolomitic limestones of Mississippian age. There has been very little production, and no information available on the tonnage and grade of ore shipped.

No commercial ore of any consequence was found in either workings. There are no measured or indicated ore reserves in the present workings, and the outlook for discovery of ore bodies of significant size is small. It is recommended that the exploration loan be denied.

I concur with the examining geologist that the request for an exploration loan be denied.

Ralph J. Roberts

AUG 1951
RECEIVED
U.S. Geological Survey
Minerals Deposits Branch
Denver

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

Docket DMA-127, Nebo Iris Mining Company

Mount Nebo Mining District, Nephi, Utah

J. W. Hasler and D. C. Arnold, Geologists
U. S. Geological Survey

August 10, 1951

CONTENTS

	Page
Introduction	1
History and production	2
Geology	2
Ore deposits	2
Reserves	3
Proposed exploration	3
Conclusions and recommendations	4

Illustrations

Figure 1. Index map of Utah.

Figure 2. Claims and workings of the Nebo Iris Mining Company, Nebo Mining district, Juab County, Utah

Figure 3. Geologic map of Nebo Iris Mining Company, Tunnels No. 1 and 2.

Docket DMA-127, Nebo Iris Mining Company

Mount Nebo Mining District, Nephi, Utah

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Nebo Iris Mining Company, Draper, Utah, Docket DMA-127, has made application to the Defense Minerals Administration for an exploration loan amounting to $125,000 for driving 1,400 feet of adit, and 1,000 feet of cross-cutting, and 500 feet of raising to intersect a bedding replacement ore body stoped on the Tip-top No. 1 claim.

There has been some early production reported, but no information is available on the tonnage and grade of ore shipped.

The ore deposits of the Nebo Iris mine are bedded replacement deposits in the Eva bed, a coarse-grained dolomitic limestone, which has been stoped in the upper workings. The lower tunnel, however, followed a persistent fault and brecciated zone quite different in character from the Eva bed above. The ore consists of cerusite, smithsonite, hydrozincite, with calcite and abundant iron oxide. Some galena is present in small pods.

Although a small production has been recorded, there has been little commercial ore of any consequence found in either workings. There are no measured or indicated ore reserves in the present workings of the Nebo Iris Mine.

As the ore body which has been mined was small and pockety, no inferred ore reserves can be calculated. It is concluded that the indicated and inferred ore reserves at the Nebo Iris Mine are small and that the outlook for the discovery of new ore bodies is not promising.

As it is extremely doubtful that enough ore will be discovered by the proposed work to repay the exploration loan, it is recommended that the application be denied.

Docket DMA-127, Nebo Iris Mining Company

Mount Nebo Mining District, Nephi, Utah

INTRODUCTION

The Nebo Iris Mining Company, Draper, Utah, Docket DMA-127, has made application to the Defense Minerals Administration for an exploration loan amounting to $125,000 for driving a 1,400-foot tunnel, plus 1,500 crosscutting and raising to intersect a bedding replacement ore body stoped on the Tip Top No. 1 claim.

In response to the field teams request for an examination to evaluate the proposed exploration, the property was visited July 5, 1951 by J. W. Hasler and D. C. Arnold of the U. S. Geological Survey.

Location and accessibility

The Nebo Iris Mine is in the Mount Nebo Mining District at the head of North Canyon at an elevation of 9,500 to 10,000 feet above sea level (fig. 1). The property is accessible by two roads. One is a Forest Service scenic road from Nephi, Utah that passes through Salt Creek Canyon for 5 1/2 miles, then continues northeast behind Mount Nebo for 10 miles; at this point a road branches northwestward for 2 1/2 miles to within 1 mile of the mine. This road is a good dirt road, but it is open only from July to late October due to heavy winter snows. The other road is a jeep road which branches from Highway 91 about 1 mile north of Mona, Utah, cuts across the alluvial fan and up Pole Canyon, over into North Canyon and joins the Nebo Mountain road about a mile below the workings. The latter road is only an access road constructed by the Privateer Mine Company, and is not suitable for continued ore haulage because of its steep grades.

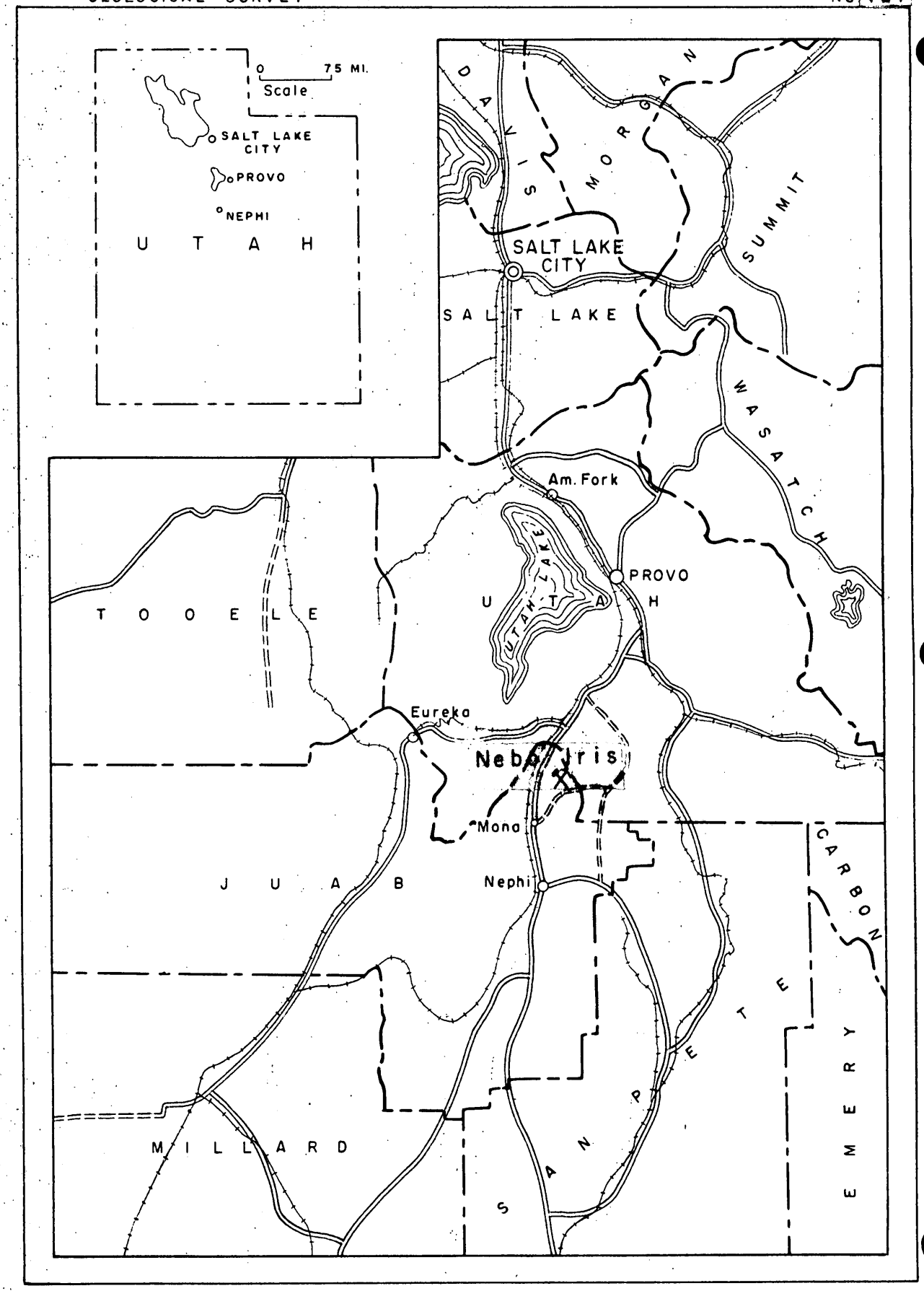

FIG. 1 INDEX MAP OF UTAH

0 5 10 15 20 MILES
Scale

History and production

The property of the Nebo Iris Mining Company was formerly known as the Tip Top Mine and is in an unsurveyed part of T. 11 S., R. 1 and 2 E., S. L. B. and M. (fig. 2).

The Tip Top No. 1 claim was located September 10, 1924 and surveyed for patent October 15, 1927. Six other unpatented claims have been located since that date. The present holdings of the company consists of a rectangular block of ground of approximately 132 acres and includes most of the saddle extending from North Canyon northwesterly into Wash Canyon. During 1950 the owners built about 4 1/2 miles of road to the proposed adit site from the Mount Nebo Forest Service scenic road. No other improvements have been made to date.

Some early production is reported, but no information is available on the tonnage and grade of ore shipped. The mine is now inactive.

GEOLOGY

The rock at the Nebo Iris Mine is a coarse grained dolomitic limestone of Mississippian age that strikes from N. 25° - 43° E. and dips about 30° E. (fig. 3). The limestone is very similar to the limestone of the Eva bed of the adjoining property on the west, the Privateer Mining Company. The limestone in the No. 2 tunnel is a similar dark, coarse grained dolomitic limestone with ribbon bands of light colored dolomite, but it differs in that it is extremely brecciated, and contains angular limestone fragments 1 to 2 inches in diameter in a matrix of calcite.

Ore deposits

The ore deposits of the Nebo Iris mine are bedded replacement deposits similar to replacement deposits in the Eva bed of the Privateer Mine to the

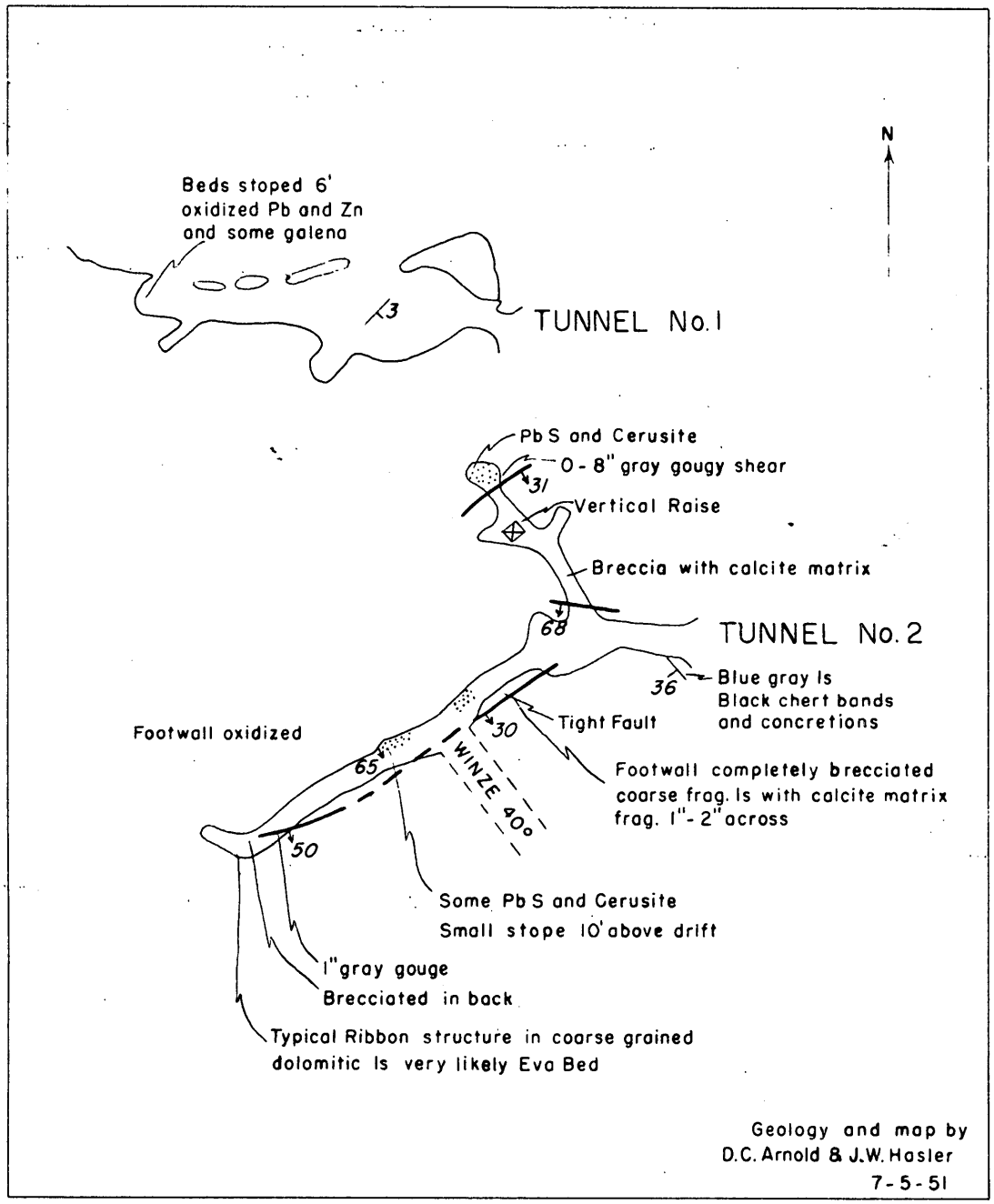

FIG. 3 NEBO IRIS MINING COMPANY

No. 1 and No. 2 TUNNELS

0 40 80 FEET

Scale

west. The ore minerals are mainly cerusite, smithsonite, and hydrozincite associated with occasional remnants of primary galena locally in pods and along thin calcite veinlets throughout the limestone.

Tunnel No. 1 is an open stope which has been worked down the bedding from the exposed outcrop. Approximately 540 tons of ore have been mined from this working, but the grade of ore was never recorded.

A lower tunnel, No. 2, was driven along a tight but rather persistent fault striking N. 58° - 70° E. and dipping from 30° to 50° SE. Both the footwall and hangingwall of this fault are extremely brecciated and contain abundant iron oxide and calcite pods. The breccia consists of angular limestone fragments 1 to 2 inches in diameter in a matrix of calcite. Small fault zones along the northeast wall of the No. 2 tunnel contain only small pockets of galena.

The breccia zone in the No. 2 tunnel may well cut off the bedding plane ore bodies of the Eva bed as the ore in the No. 2 tunnel is not as persistent as it should be, and is more highly brecciated than the ore beds above.

Reserves

No commercial ore of any consequence was found in either of the workings. There are no measured or indicated ore reserves in the present workings of the Nebo Iris Mine. As the ore body which has been mined was small and pockety, the outlook for the discovery of new ore bodies is not promising. The reserves of inferred ore are therefore considered to be small.

Proposed exploration

The Nebo Iris Company has proposed the following exploration projects:

1. Drive an adit N. 35° W. for 1,400 feet to intersect the main bedding

fissure which strikes N. 55° E. and dips about 35° SE. from the stoped area on the Tip Top No. 1 claim (fig. 2).

2. Drift northeast and southwest along the ore zone 1,000 feet and drive 500 foot raises on the ore beddings.

The cost of the crosscutting, drifting and raising is estimated to be $78,500 and costs listed by applicant for equipment and supplies is $44,550.00.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that the ore reserves at the Nebo Iris Mine are small and that the outlook for the discovery of new ore bodies is not promising.

As it is extremely doubtful that enough ore will be discovered by the proposed work to repay the exploration loan, it is recommended that the application be denied.

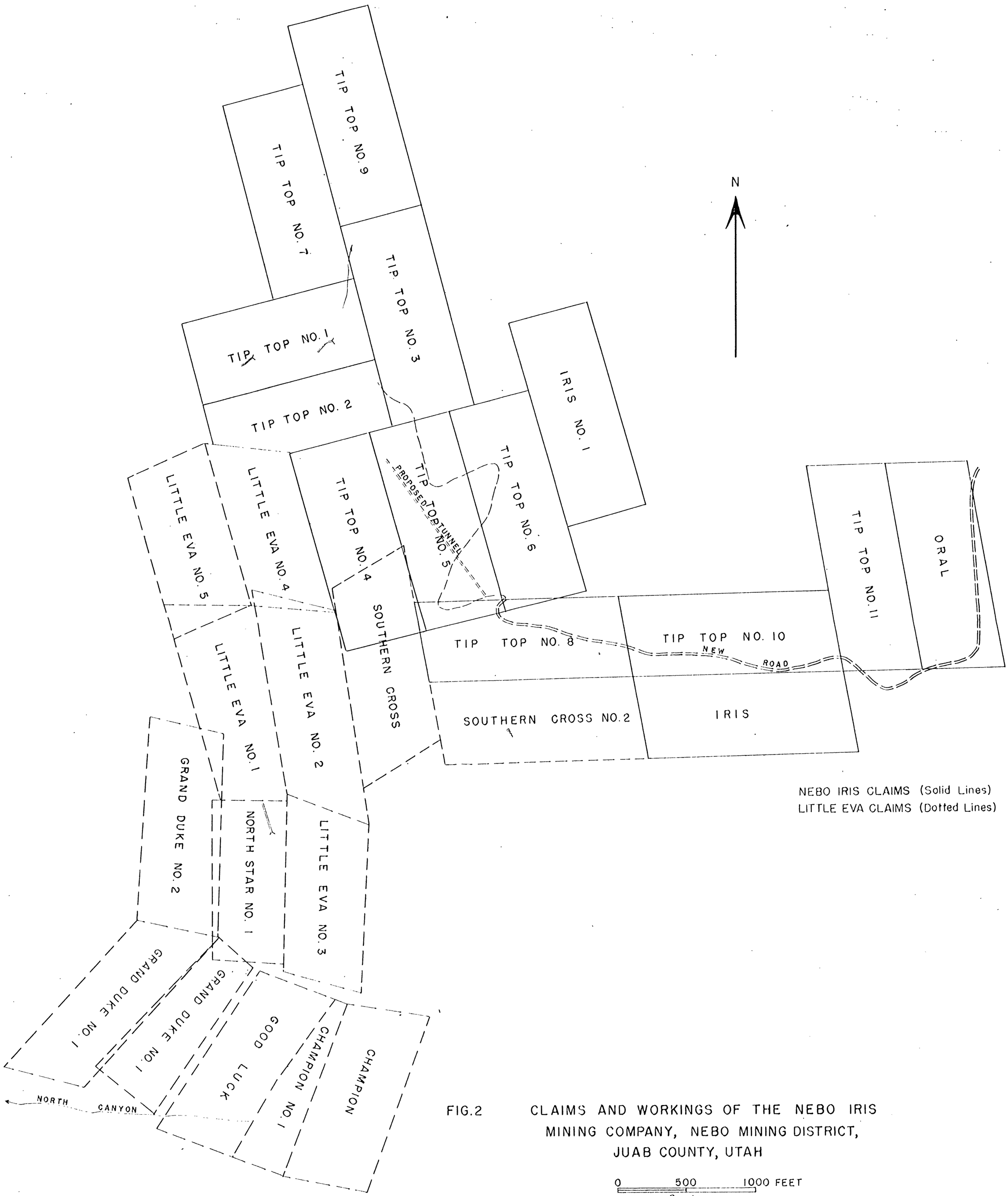

FIG. 2 CLAIMS AND WORKINGS OF THE NEBO IRIS MINING COMPANY, NEBO MINING DISTRICT, JUAB COUNTY, UTAH