May 21, 1951

Memorandum

To: Landon Strobel, Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 155, Bull Canyon Project, Mohave County, Arizona

We enclose the report on the Bull Canyon Project, Mohave County, Arizona, DMA Docket 155.

You will note this property does not have ore reserves and that the applicant is not willing to participate in an exploration program.

We recommend the application be denied.

The original transmittal is enclosed.

J. H. Earl, Jr.
J. H. Earl, Jr.

A. K. Koschmann
A. K. Koschmann

Attachment
One copy by air mail
Five copies by regular mail

Copy to DMA files, Koschmann, Allsman, Storms and Anderson

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA DOCKET 155, BULL CANYON PROJECT
MOHAVE COUNTY, ARIZONA

FOR GOVERNMENT USE ONLY

Calvin S. Bromfield
Geologist
U. S. Geological Survey

Grant R. Ruhly
Mining Engineer
U. S. Bureau of Mines

Mining Division
Region IV

May 31, 1951

Memorandum

To: DMA FieldTeam, Region IV

From: Chief, Mining Division

Subject: DMA Docket 155, Dalton Robinette's Bull Canyon Tungsten Prospect, Mohave county, Arizona

The brochure for the subject docket, together with the original and eleven copies of the engineering report prepared as a result of a field examination are attached hereto.

It was not possible for the examining engineers to estimate any measured or indicated ore reserves. The applicant stated that he was neither willing nor able to participate in an exploration program.

Under these circumstances, there is no alternative but to recommend that the application be denied.

W. H. King

W. H. King
for P. T. Allsman
Chief, Mining Division

Attachments

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
200 New Customhouse
Denver 2, Colo.

May 31, 1951

Memorandum

To : Field Team, Region IV

From : A. H. Koschmann

Subject: Bull Canyon Project, Mohave County, Arizona - DMA Docket 155

I herewith transmit the geologic report covering the Bull Canyon Project by Calvin S. Bromfield. Note that the applicant is not willing to participate in an exploration program and that this application be denied.

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P.O. Box 4126, University Station
Tucson, Arizona

May 23, 1951
Registered Mail
Return Receipt Requested

Memorandum

To: Mr. A. L. Koschmann, Denver, Colorado

From: Mr. A. F. Shride, Tucson, Arizona

Subject: Bull Canyon Project, Mohave County, Arizona - RFC Docket #155

Enclosed are original and 11 copies of the above report by Calvin S. Cranfield. Please return one copy to us and one copy to Mr. Storms.

The tungsten deposits obviously are not explored well enough and therefore reserves are not known to warrant the proposed development loan. The applicant is not willing or able to participate in an exploration program. I agree with the recommendation that this loan be denied.

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

Enclosures 12

May 21, 1951

Memorandum

To : Paul T. Allsman, Denver, Colorado

From : Chief, Arizona-New Mexico Sr., Mining Div., Region IV

Subject : Report on DMA Docket 155, Dalton Robinette's Bull Canyon Tungsten Project, Mohave County, Ariz.

Enclosed are original and 11 copies of the Summary, Conclusions and Recommendations by Grant R. Rubly of the Bureau of Mines and Calvin S. Bromfield of the Geological Survey; and the same for the Engineering Report by Rubly on the above docket.

This report has my approval.

Walter R. Storms.

CC P. T. Allsman
C. A. Anderson
DMA 155
NF

WRS:orms:frj

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Grant R. Rubly[1] and Calvin S. Brenfield[2]

Dalton Robinett of Kingman, Arizona, applied for a Government loan of $100,000 under Sec. 302 of the Defense Production Act of 1950. This application was referred to the Field Team, Region IV as DMA Docket 155. The field examination was made on May 8, 1951.

The applicant definitely stated that he was not able or willing to participate in an exploration program and as there are no measured ore reserves to warrant a development and exploitation project, it is recommended that this application be denied.

1/ Mining Engineer, U. S. Bureau of Mines, Region IV, Mining Division, Arizona-New Mexico Branch, Tucson, Arizona
2/ Geologist, U. S. Geological Survey, Tucson, Ariz.

BULL CANYON GROUP
MOHAVE COUNTY, ARIZONA

Geology

By Calvin S. Bromfield
Geologist, U. S. Geological Survey

Geology

BULL CANYON GROUP
MOHAVE COUNTY, ARIZONA

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GEOLOGY AND ORE RESERVES

General Geology

The rocks in the area of the Bull Canyon and Tungstenite claims are granite and phyllite of probable Pre-Cambrian age. Tungsten minerals are present in veins in the phyllite and in veins and disseminated deposits in the granite. Scheelite and wolframite are found in placers along the washes.

In the vicinity of Dalton Robinette's claims the phyllite is present as an attenuated roof pendant within the granite. The phyllite pendant has subparallel sides which strike northeasterly across the divide of the Hualpai Mountains. The applicant's claims adjoin the Boriana Mine on the northeast and east and extend in a northerly direction across the crest of the range. In general the schistosity of the phyllite parallels the elongation of the roof pendant. Bedding and schistosity are parallel and have a nearly vertical to steep southeasterly dip. In places the granite is gneissoid and it is commonly cut by aplitic dikes.

Occurrence of Ore

<u>Bull Canyon Group</u>

The Bull Canyon claims are on and near the contact of granite and phyllite just east of the divide. These claims are on veins which are a northerly continuation of the veins in the Boriana Mine. Here granite and phyllite interfinger, and the phyllite band narrows but continues to the north. The veins decrease in size on entering the granite and change abruptly in strike from N. 50°-60° E. in the phyllite to N. 30°-40° E. in the granite. The veins are

discontinuous within the granite and tungsten mineralization is irregularly distributed in the veins. The granite bordering the veins is commonly greisenized. Scheelite and wolframite are the ore minerals. Molybdenite and chalcopyrite are present in minor amounts. The gangue is dominantly quartz with some calcite and a little fluorite.

Of interest is the occurrence of scheelite disseminated through the granite mass on the Bull Canyon claims. In places this has been sufficiently abundant to encourage "high grading." This granite mass may constitute a large low-grade tungsten deposit if it contains sufficient amounts of scheelite. Exploration in this area should include a determination of the grade of this mass.

Tungstenite Claims

This group of 16 claims is on veins which are east of and parallel to the Boriana veins. The veins, known locally as the "green ledge", strike N. 40° E. on the south end where paralleling the Boriana veins, but about 6,000 feet northeast of the Boriana Mine on Tungstenite No. 11 claim a similar vein strikes N. 10° E. The vein is concordant with the foliation which has changed direction.

The "green ledge" consists of a coarse to fine grained dark green amphibole of radiate-fibrous habit. The rock is apparently conformable with the bedding and schistosity of the quartz-mica phyllite. Within the amphibolite layer which is 4 to 6 feet wide are numerous quartz stringers and in a few places where the vein has been exposed fine scattered scheelite was observed with an ultra-violet light. One of the wolframite group minerals is also present. On Tungstenite No. 11

claim lessees are digging a trench along the vein. Some sporadic gophering in the past has been done at this location. One or two units of tungsten have been sorted from this claim by the present lessees. Exploration on Tungstenite No. 11 claim seems justified to determine the lateral limits of the mineralization and to assess its vertical continuity. Wherever the "green ledge" has been exposed by desultory exploration, scheelite is present. A systematic exploration of the "green ledge" would be desirable.

Ore Reserves

No measured or indicated reserves are present on the claims held entirely or in part by Dalton Robinette.

During World War II 3,000 units of 69 percent WO_3 concentrates were mined from the Bull Canyon claims. An additional 3,000 units can reasonably be inferred as remaining on these claims.

Sufficient amounts of tungsten occur in portions of the "green ledge" on the Tungstenite Claims to allow lessees to mine a small tonnage. Exploration of a hit or miss character has been insufficient to delineate the vein or assess its potentiality. Estimates of tonnage are not warranted at the present time because the "green ledge" is too poorly exposed.

Engineering

HELL CANYON TUNGSTEN PROJECT
MOHAVE COUNTY, ARIZONA
RMA DOCKET 153

ENGINEERING REPORT

By Grant R. Ruhly,
Mining Engineer
U. S. Bureau of Mines

BULL CANYON TUNGSTEN PROJECT
MOHAVE COUNTY, ARIZONA

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INTRODUCTION

In December 1950 Walton Robinett of Kingman, Arizona, applied for a Government loan, under Sec. 302 of the Defense Production Act of 1950. The request was for a loan of $100,000 to cover construction, manpower, plant and equipment, transportation and building. The application is not specific as to requirements or program.

A field examination was requested by the Tungsten Branch of the Defense Minerals Administration with the comment that the property might be considered for an exploration loan as data on deposit is rather scanty. The application was referred to the DMA Field Team, Region IV, as DMA Docket 155, for further action.

The field examination was made on May 8, 1951.

ACKNOWLEDGMENTS

The field examiners are indebted to Walton Robinette for transportation to and from his property and for the courtesies extended during the trip.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The Bull Canyon Tungstenite tungsten claims are located about 20 miles northeast of the town of Yucca, in Mohave County, Arizona. They are in Section 7, T. 18 N., R. 15 W., Gila and Salt River Base and Meridian, and adjoin the Doriana mine on the northeast.

The property is reached from Yucca over 20 miles of desert and mountain road, of which some 5.8 miles are quite narrow and rough. The last 2.6 miles is a very steep, narrow mountain road.

The Bull Canyon mine is at an altitude of about 4,000 feet, in a rugged mountain area. Winter snowfalls are heavy at times. Summers are mild. The winters are moderately cold at this altitude. Sufficient water for camp use and small mill operations can be developed from nearby springs. There is no timber in the area for mining purposes although sufficient fire wood can be obtained for camp usage.

HISTORY AND PRODUCTION

The Bull Canyon claims were located in 1928 by Jim Craig and William Duke. Dalton Robinsette acquired a two-thirds interest by purchase in 1933 or 1934 and later traded off a one-third interest to R. Fotis. The remaining one-third interest was held by the Burinna Mining Co. The Burinna interest was purchased by Dye and Bathrick of Kingman and the Molybdenum Corp. of America acquired the interest held by R. Fotis. At present there is no working agreement as to the mining of any area by any of these interested parties.

The Tungstonite group of claims was located in 1945 and 1947 by Dalton Robinsette. No production has been made from this group although some surface trenching is being done.

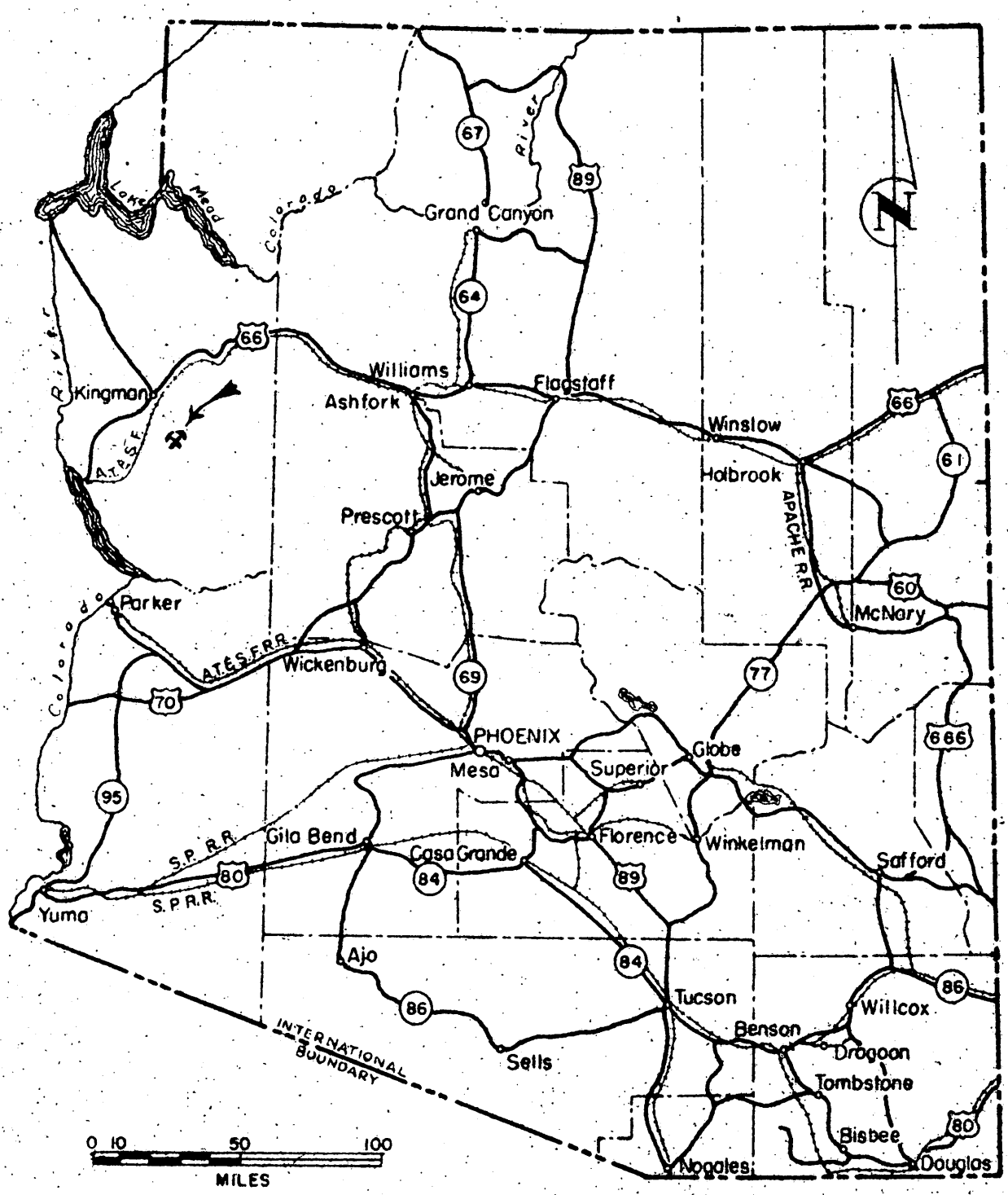

Fig. I, Location Map **DMA I55**

The entire known production has come from the Bull Canyon group, more specifically from the Ignacio No. 2 claim. During the years of 1941, 1942 and 1943 a total of 68,856 pounds of tungsten concentrate averaging 65 percent WO_3 were produced.

OWNERSHIP AND EXTENT

The seven claims comprising the Bull Canyon group are owned by Dalton Robinett, Molybdenum Corp. of America, and Rye and Rathbick in three equal shares. The claims are held by location and annual assessment work. Although there is no working agreement pertaining to working of these claims, Robinette has been mining in the old tunnels.

There are 16 claims in the Tungstonite group, held by location and annual assessment work by Dalton Robinette. These claims are in part approximately parallel with those of the Marianna group to the west and extend over the phyllite outcrop toward the northeast.

DESCRIPTION OF DEPOSITS

The deposits of the Bull Canyon-Tungstonite area occur in granite and phyllite which are of probable pre-Cambrian(?) age. The phyllite forms an attenuated roof pendant with sub-parallel sides which strike in a northeasterly direction across the Hualapai Mountains.

Scheelite and wolframite occur in greisenized veins in the phyllite and granite, as disseminated grains in the granitic rocks, and in placers.

MINEABLE ORE RESERVES

There are no measured or indicated ore reserves.

It is possible to infer sufficient tonnage to warrant a small operation over quite a period of time. All the washes and draws show scheelite under the Mineralight and there are several veins containing scheelite in the phyllite zone.

PRESENT STATUS

Three men are working on the property as lessees, producing a very small tonnage of ore.

CONCLUSIONS

In as much as there are no measured ore reserves the application for aid cannot be considered as a loan for development and exploitation. The applicant cannot and will not consider the project for an exploration loan.

RECOMMENDATION

It is recommended that this application be denied.