



CONTACT INFORMATION

Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: DRAGOON TUNGSTEN

ALTERNATE NAMES:

CULVER MURPHY
HILLSIDE
OLD HAWK
WIEN
BOULDER CLAIM GROUP
HAWK

COCHISE COUNTY MILS NUMBER: 34

LOCATION: TOWNSHIP 16 S RANGE 22 E SECTION 10 QUARTER SW
LATITUDE: N 32DEG 03MIN 15SEC LONGITUDE: W 110DEG 05MIN 20SEC
TOPO MAP NAME: DRAGOON - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

TUNGSTEN

BIBLIOGRAPHY:

KEITH, S.B., 1973, AZBM BULL. 187, P. 55
USGS PP 416, P. 186
ADMMR DRAGOON TUNGSTEN MINE FILE
USBM RI 5650, P. 48-50
USBM "U" FILE

02/27/90

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: DRAGOON TUNGSTEN

ALTERNATE NAMES:

CULVER MURPHY
HILLSIDE
OLD HAWK
WIEN
BOULDER CLAIM GROUP

COCHISE COUNTY MILS NUMBER: 34

LOCATION: TOWNSHIP 16 S RANGE 22 E SECTION 10 QUARTER SW
LATITUDE: N 32DEG 03MIN 15SEC LONGITUDE: W 110DEG 05MIN 20SEC
TOPO MAP NAME: DRAGOON - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

TUNGSTEN

BIBLIOGRAPHY:

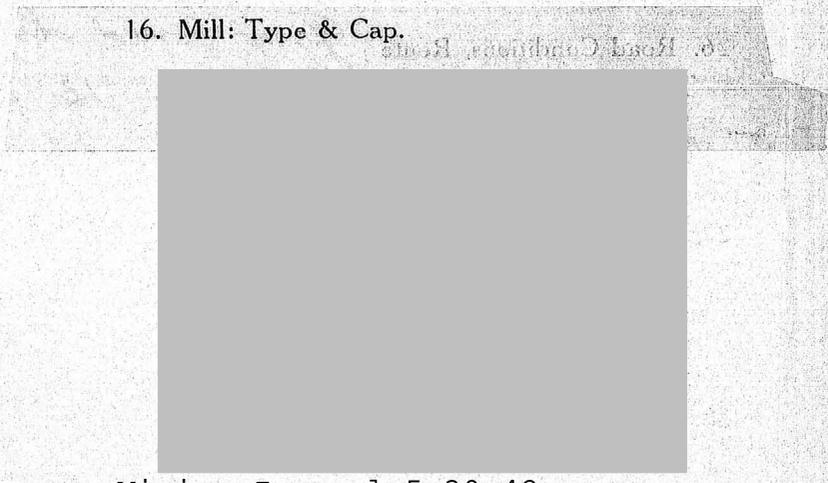
KEITH, S.B., 1973, AZBM BULL. 187, P. 55
USGS PP 416, P. 186
ADMMR DRAGOON TUNGSTEN MINE FILE
USBM RI 5650, P. 48-50
USBM "U" FILE

MD-26

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date 6/1/42

- 1. Mine DRAGON TUNGSTEN ✓
- 2. Mining District & County DRAGON MINING DISTRICT
COCHISE COUNTY.
- 3. Former name WIEN MINE.
- 4. Location 13 MILES E OF BENSON
ON HIGHWAY 86.
3 MILES FROM DRAGON -
- 5. Owner HARRY H. CULVER - AGENT. ✓
- 6. Address (Owner) ARIZONA CLUB
PHOENIX - ARIZ.
- 7. Operator _____
- 8. Address (Operator) _____
- 9. President _____
- 10. Gen. Mgr. _____
- 11. Mine Supt. _____
- 12. Mill Supt. _____
- 13. Principal Metals TUNGSTEN ✓
- 14. Men Employed _____
- 15. Production Rate _____
- 16. Mill: Type & Cap. _____
- 17. Power: Amt. & Type _____
- 18. Operations: Present _____



Mining Journal 5-30-42

- 19. Operations Planned _____
- 20. Number Claims, Title, etc. 9 unpatented mining claims.
- 21. Description: Topography & Geography Gentle sloping hills - desert vegetation
Elevation about 4200 ft.
- 22. Mine Workings: Amt. & Condition 2 shafts 50 & 70 ft deep - with some
driftung in each shaft - Numerous open shallow
cuts in ruins.

23. Geology & Mineralization

Quartz formation with massive veins -
quartz filling carrying ^{fluorite} fluorite as
hubnerite & scheelite
(HUBNERITE)

24. Ore: Positive & Probable, Ore Dumps, Tailings

24-A Vein Width, Length, Value, etc. Veins run 6000 ft in length on property &
short veins of from 2" to 30" in width.
Ore averaging 2% - WO₃

25. Mine, Mill Equipment & Flow Sheet

Small mill - crusher, screens, jig.

26. Road Conditions, Route

Good road direct to mine - 3 miles
from Dragon or 13 miles from Benson

27. Water Supply

Local water can be developed.

28. Brief History

Adjoining area has produced for years
by leases.

29. Special Problems, Reports Filed

30. Remarks

31. If property for sale: Price, terms and address to negotiate.

For sale - \$75,000 - \$10,000 cash
balance 10% royalty - ~~for~~ 8 years to fullfill.

32. Signed

from Harry H. Coulter -

33. Use additional sheets if necessary.

M.S. 26

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date

6/1/42

- 1. Mine *DRAGON TUNGSTEN* ✓
- 2. Mining District & County *DRAGON MINING DISTRICT COCHISE COUNTY.*
- 3. Former name *WIEN MINE.*
- 4. Location *13 MILES E OF BENSON ON HIGHWAY ~~86~~ 86. 3 MILES FROM DRAGON*
- 5. Owner *HARRY H CULVER - AGENT* ✓
- 6. Address (Owner) *ARIZONA CLUB PHOENIX - ARIZ*
- 7. Operator _____
- 8. Address (Operator) _____
- 9. President _____
- 10. Gen. Mgr. _____
- 11. Mine Supt. _____
- 12. Mill Supt. _____
- 13. Principal Metals *TUNGSTEN* ✓
- 14. Men Employed _____
- 15. Production Rate _____
- 16. Mill: Type & Cap. _____
- 17. Power: Amt. & Type _____
- 18. Operations: Present _____

19. Operations Planned



Mining Journal 5-30-42

- 20. Number Claims, Title, etc. *9 unpatented mining claims.*
- 21. Description: Topography & Geography *Gentle sloping hills - desert vegetation. Elevation about 4200 ft.*
- 22. Mine Workings: Amt. & Condition *2 shafts 50 & 70 ft deep - with some drifting in each shaft - numerous open shallow cuts on mine.*

23. Geology & Mineralization

Quartz formation with pressure veins -
quartz filling carrying tungsten as
bertholite & scheelite
(HENDERSON)

24. Ore: Positive & Probable, Ore Dumps, Tailings

24-A Vein Width, Length, Value, etc. Veins run across in length on property &
show veins of from 2" to 30" in width.
Ore averaging 2% - WO_3

25. Mine, Mill Equipment & Flow Sheet

Small mill - crusher, screens, jig.

26. Road Conditions, Route

Good road direct to mine - 3 miles
from Daogon or 13 miles from Bensen.

27. Water Supply

Local water can be developed.

28. Brief History

Adjoining area has produced for years
by leases.

29. Special Problems, Reports Filed

30. Remarks

31. If property for sale: Price, terms and address to negotiate.

Asks - \$75,000 - \$10,000 cash
balance 10% royalty - 10 years to fulfill.

32. Signed

for Harry H. Carlson -

33. Use additional sheets if necessary.

Geology & Mining - Carrying tungsten
mineralite and arsenite

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

MD-26

Date: June 1, 1942

1. Mine: Dragoon Tungsten Mine
2. Mining District & County: Dragoon 4. Location: 13 miles E. of Benson on Highway 86. 3 miles from Dragoon
3. Former name: Wien Mine
5. Owner: Harry H. Culver, Agent 6. Address (Owner) Arizona Club, Phoenix, Ariz.
7. Operator 8. Address (Operator)
9. President 10. Gen. Mgr.
11. Mine Supt. 12. Mill Supt.
13. Principal Metals: Tungsten 14. Men Employed
15. Production Rate 16. Mill - Type & Cap.
17. Power - Amt. & Type
18. Operations - Present
19. Operations Planned:
20. Number Claims, Title, etc.: 9 unpatented mining claims.
21. Description - Topography & Geography: Gentle sloping hills - desert vegetation
Elevation about 4200 ft.
22. Mine Workings - Amt. & Condition: 2 shafts 50 & 70 ft. deep - with some drifting in each shaft - numerous open shallow cuts in veins.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date May 11, 1942

1. Mine Hawk Group
2. Mining District & County Dragoon Dist., Cochise Co.
3. Former name
4. Location 5 miles SW Dragoon in Little Dragoon Mts.
5. Owner Jess Wien
6. Address (Owner) Benson, Ariz.
7. Operator Mr. Langford
8. Address (Operator) Benson, Ariz.
9. President
10. Gen. Mgr.
11. Mine Supt.
12. Mill Supt.
13. Principal Metals Hubnerite, scheelite, sericite and small amounts of lead and copper minerals.
14. Men Employed 2
15. Production Rate None
16. Mill: Type & Cap. None
17. Power: Amt. & Type None
18. Operations: Present Develop
19. Operations Planned Develop mine and mill.
20. Number Claims, Title, etc. 5 claims held by location
21. Description: Topography & Geography Fairly rugged mountains. Fair amount of precipitation. Elevation 4500'.
22. Mine Workings: Amt. & Condition Several hundred feet of drifting. Some trenching. Maximum depth from surface about 75'. Fair condition.

- General parallel quartz veins in coarse grained granite. Veins
23. **Geology & Mineralization** In width from a few inches to a few feet. Local faulting of a small degree is present but general structure is regular to N. where this property joins Little Fanny group. Mineralization is hubnerite with small amounts of copper, lead and iron oxides. Whenever extreme sericitization is encountered scheelite occurs. Stem N-15° W - Dip 40° - 60° TE.
24. **Ore: Positive & Probable, Ore Dumps, Tailings** No positive ore. There is a good possibility that a moderate capacity can be attained. This property should be considered along with the Primos, and Little Fanny groups.
- 24-A **Vein Width, Length, Value, etc.** Veins are exposed in places for about 1500' in length. They occur in a mineralized zone 600' wide. Over 4 veins are discernable.
25. **Mine, Mill Equipment & Flow Sheet**
26. **Road Conditions, Route** Good to within 1 mile of mine. Turn off main Benson-Wilcox highway 1/2 mile south of Triangle T ranch to west. Go 1 mile NW.
27. **Water Supply** Fair. Considerable water could be developed.
28. **Brief History** Located in 1898 by Walker as gold mine. Might have produced 3000 units of WO₃.
29. **Special Problems, Reports Filed** Tungsten Deposits of Arizona. Wilson, 1941.
30. **Remarks** The presence of several well defined veins in this district give promise that a goodly amount of tungsten can be obtained from here. There are three properties on this structure that should be grouped together for large operational consideration. The Little Fanny and Primos groups. Under proper conditions this district might produce 30,000 units a year.
31. **If property for sale: Price, terms and address to negotiate.** Do not know. No one on property when visited.
32. **Signed**.....
33. **Use additional sheets if necessary.**

REFERENCES:

See: USBM RI 5650 1960 pp-40-50 (Hillside Group)

T16S R22E Sec. 10

Claim map in maps from the Library and Archives (See microfilm - Dragoon
Tungsten mine - Tungsten operations) Upstairs in the flat file - Drawer 7

USBS "U" File

ABM Bul. 187, p. 55

USGS PP 416, p. 186

MILS Sheet sequence number 0040030105

MEMORANDUM

SEPTEMBER 9, 1942

SUBJECT: * Culver-Murphy Company
Docket No. B-1D-4203

We have suggested that Mr. Culver send his entire file to Ira B. Jorolemon in San Francisco. Mr. Jorolemon is so interested in increasing tungsten production that he would certainly give the matter the benefit of the doubt, and should he desire to have it developed, could unquestionably arrange for this to be done. It would be better not to risk antagonism like forcing study of the RFC files or to question too loudly any of their decisions.

The above handling of the situation would leave it entirely in Mr. Jorolemon's hands just how far to go in helping Mr. Culver obtain his loan.

Earl F. Hastings

MEMORANDUM

SEPTEMBER 9, 1942

SUBJECT: Culver-Murphy Company
Docket No. B-10-4203
July 2 RFC (Charles W. Tully)

The Department wrote back for additional data and we sent mining engineer, Roy Sunderland who spent one week on the property and took samples and had assay sketches made of all ore exposures, map showing underground working accompanied by detailed description of size and shape of all ore exposures in each place supported by photographs.

We gave the Department just what it called for and all this data was forwarded on July 27, 1942. We have an acknowledgement of the receipt of same by the Department under date of August 1, 1942.

We were advised about 10 days ago that the material sent forward was not sufficient in their opinion to justify further consideration of the loan. In fact, there was a complete turn-down. The RFC office here did not receive any work from it nor any official orders to make a field examination. In other words, the Department in Washington does not have any field examination because it did not request it. Therefore, we are stymied. We know we have a mine with good ore and need this money to get it out, but under the circumstances our hands are tied.

(This is Mr. Culver's reaction to your Memo of August 25)

DEPT. MINERAL RESOURCES
RECEIVED
AUG 27 1942
PHOENIX, ARIZONA

Washington, D.C.
Aug. 25, 1942

SUBJECT: Mine Loan, Class B
- Tungsten,
- Culver & murphy

The enclosed is self-explanatory.

I am not answering it as you will be in touch with Culver by phone as soon as my letter could reach him.

As you know, it is out of the question to ask to go through his file. I might insist on it, but the RFC does not take to that sort of thing and it would not do us any good.

You will remember my original report on this... Culver had supported his application by reports on adjacent mines and nothing on his own, according to the Examiner.

I cannot tell from Culver's letter if a field examination was made, and would rather not go into the application for this information until I am ready to take up the whole matter at one time, so please ask him about this. If it was rejected without field examination, it is evident the application was never properly supported.

If it was rejected after field examination, I would not want to ask for reconsideration and second examination unless the Department has reason to believe the field engineer's judgement is faulty.

Please advise me what action you wish to have taken under the circumstances. The Engineer Examiner who handled this application is fairly hard-boiled as I know, having had one small spat with him. But still he is a pretty good fellow.

Bill
Bill Broadgate

?
This was later corrected by
The Dept at Washington requesting us to send reports, samples, photos, maps etc under date of
See letter dated Sept 9 - by Culver
There in the office

CULVER-MURPHY COMPANY

GENERAL OFFICES
 SUITE 326 HEARD BUILDING
 TELEPHONE 4-4010
 PHOENIX, ARIZONA

OWNERS
 DRAGON TUNGSTEN MINE
 BENSON, ARIZONA

Aug 24, 1942

Dear Bill -

RE: Culver-Murphy Co.
 Docket No. B-ND-4203

We have just heard unfavorably from Chas. W. Tully, Asst. Chf. Mining Sec. P7 @ re our application for \$20,000 loan, on the ground "unhappy showing."

This seems quite unfair - for if we had the Tungsten blocked out, we wouldn't need a loan. Was down to the mine the other day and they struck a pocket running about 70% woz. The further we go - the better it gets. But we are stopped for lack of funds. What would you suggest? Am going to see Sam + Chas this P.M. I didn't, nor do I wish to bring any political influence in on the matter - the showing should stand on its own; and if you go over + go through the file yourself you will see we have the making of a real mine. Three different engineers enjoy the same opinion.

See what you can do on the Bill and let me hear from you at your earliest.
 With all good wishes
 Harry H. Culver

Address re
 Arizona Club

August 17, 1942

MEMORANDUM

MINE LOAN
CULVER MURPHY TUNGSTEN

TO: W. C. Broadgate

FROM: J. S. Coupal

I met Harry Culver the other day and asked him regarding his mine loan application. He said that they were carrying on the work and hoped that their application would eventually come through.

Washington, D.C.
Aug. 12, 1942

10-107
SUBJECT: Mine Loan,
Class B
* Culver and Murphy
* Tungsten

Do you have any information as to what Culver may have
done to support his application, or has he abandoned the
project?

Bill

Bill Broadgate

DEPT. MINERAL RESOURCES
RECEIVED
JUL 3 1942
PHOENIX, ARIZONA

Washington, D.C.
July 2, 1942

W

SUBJECT: Mine Loan, class B,
Culver and Murphy
Tungsten.

I am very much disturbed about this application, and it indicates again what happens when everything is not filtered through the office. However, it is also my fault for not checking Culver's application or a copy of it, I suppose.

However, as Sam sent Culver here with a note to me, I supposed all was well.

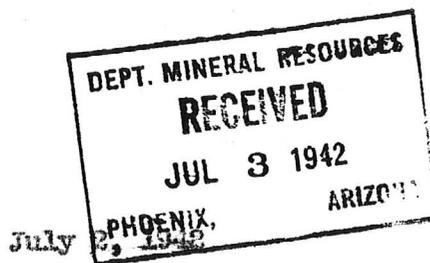
At my request, the RFC pushed the Culver and Murphy application ahead of some 15 others so as to get it ~~into~~ into the field by the 10th.

The examining engineer called me up a few minutes ago and stated that the application has no assays whatever and no supporting data other than a mere statement of the owners, and that two reports attached are of the Dragoon mine. In other words, he has nothing to work on and is having to call to the attention of the applicants the necessity of more data.

Naturally, the Culver and Murphy docket will go into the general stream in its regular place now, behind more meritorious or better supported applications.

I apologized to them for pressing this and explained it is not our purpose to press anything but meritorious cases, and that generally I have supporting data from our staff as to merits, but that in this case the episode happened due to Culver contacting me here in Washington.

Bill
Bill Broadgate



Mr. George G. Gallagher,
Mine Loans Section,
Reconstruction Finance Corporation,
Washington, D.C.

Hotel Harrington,
Washington, D.C.

Dear Mr. Gallagher,

I appreciate your calling me this afternoon regarding the Culver and Murphy application, and regret I did not have first-hand information on the property.

I am sorry that the Culver and Murphy application was not properly supported by assays and other data.

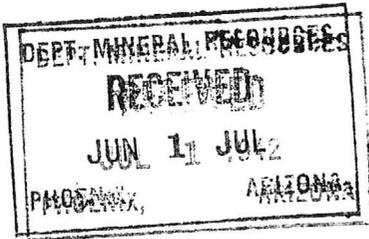
As a general rule, I am not requested to ask the R.F.C. for special attention unless a property has merit known to our engineers and I have independent information from our staff in corroboration.

Our function is to attempt to coordinate the Arizona minerals program with Federal agencies to advantage the war effort and we do not knowingly press cases we are not personally familiar with.

As I explained, Mr. Culver was here and I believed it would be to the advantage of all parties if his application could have reached Arizona when he and his associates could have gone on the property with the examining engineer, which would have been about July 10th. It was not our intention to ask you to send an improperly prepared application into the field.

Very truly yours,

W. C. Broadgate,
Asst. Director.



June 29, 1942

Hotel Harrington,
Washington, D.C.

Mr. Harry H. Culver,
Astor Hotel,
45th & Broadway,
New York City.

Dear Harry,

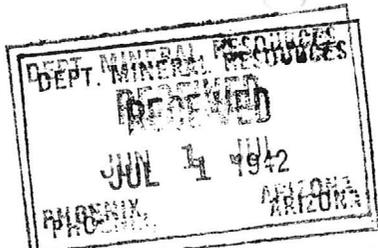
I have today contacted the R.F.C. on your application.

They are simply swamped with new applications, but I was assured that if it is possible, your application will get to the Field office by July 10th.

Trusting that your leg continues to mend, and with best personal regards,

Sincerely yours,

W. C. Broadgate



Washington, D.C.
June 29, 1942

SUBJECT: Mine loans, Class B
Tungsten,
Application of Culver and Murphy

I have requested the R.F.C. to get this into the Field office if possible by ~~xxxxx~~ July 10, 1942.

I understand Culver will be back in Arizona by that time.

W. C. Broadgate

Washington, D.C.
June 22, 1942

W

SUBJECT: Mine Loans, Class B.
Tungsten,
Application of Culver & Murphy.

At luncheon this noon, Mr. Harry Culver discussed with me his application for \$20,000 under Class B, RFC.

I told him that I should be pleased to take him over to the RFC Building and introduce him, but that I believed it to be bad poker to present the application to Rait personally. They are acting very promptly on tungsten applications.

I advised him, therefore, that I thought it would be best to drop the application to Rait special delivery this afternoon.

On Monday, I will check up to see that it has been sent to Arizona, and if not, try and move it out.

When it has gone, you will be able to check with Gohring on the examination date. As a matter of fact, Mr. Culver would prefer to be in Arizona when the examination is made. He will be back there July 6th.

Bill

Bill Broadgate

CC/ Mr. Harry Culver.

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

413 Home Builders Bldg.

June 1, 1942

Mr. Harry H. Culver
Arizona Club
Phoenix, Arizona

Dear Mr. Culver:

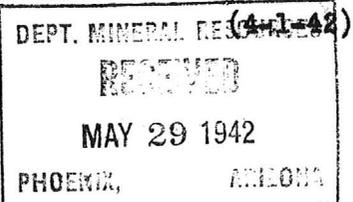
Many thanks for your letter of May 30
with the complete description of the Wein property.

Yours very truly,

J. S. Coupal, Director

JSC:LP

(Dragon Tungsten Min -- sometimes called Wien proper).



TUNGSTEN

9 Claims -- 188 miles southeast of Phoenix, Arizona - 15 miles east of Benson, Arizona.

Property only 400 feet from Highway 86 -- good roads.

Continuous veins.

Can go into immediate production.

\$25,000 taken out in ore.

The Tungsten bearing veins are continuous, between seams, or a continuous hanging wall and foot wall. Six main ore structures, and many other lateral veins.

Mine workings clean and in a good state of development for large or small operation.

Greater part of the mining has been done by open shallow cuts.

2 shafts -- 1 - 50 feet deep; 1 - 70 feet deep and some drifting at both places.

Fissure veins. The mining district is purely granitic of pre-cambrian or igneous formation.

Tungsten is deposited in white quartz - some lime layers next to quartz veins.

Scattered or small deposits of iron and copper.

Ore veins 6,000 feet lengthwise of property. Veins run in thickness from 2 inches to 30 inches.

Tungsten market \$23 per unit. They are mining ^{running higher now} 2% ore including vein and gangue.

Huebnerite Tungsten; some Scheelite.

Small equipment - crusher screens gigs - power unit, etc.

Mine headquarters $\frac{1}{2}$ mile off Highway. Trucks and low type cars can travel in high gear to property headquarters.

We are informed that there has been 350 tons of Tungsten shipped from the adjoining property.

Price \$75,000

\$10,000 cash and \$65,000 payable from 10% royalty, continuous operations, all to be paid within eight years.

While we assume no responsibility for the statements made above, yet we believe they have been accurately stated by the owners of the property.

ARIZONA DEVELOPMENT COMPANY
326 Heard Building
Phoenix, Arizona
Phone 4-4010

or

Harry H. Culver
Arizona Club
Phoenix, Arizona

agent

Eastern owners

REPORT OF MY FINDINGS AT DRAGOON TUNGSTEN PROPERTIES

February 21, 1942

I was employed by Harry H. Culver to examine and investigate the operations then being carried on at the Dragoon Tungsten mines, being operated by him under contract to George E. Hartin. Since that time I have made a thorough investigation of this property and the entire surrounding area.

GEOGRAPHY AND LOCATION

The Dragoon Tungsten property, consisting of 8 lode claims and one placer claim, is located in the Dragoon mining district, Cochise County, State of Arizona, approximately 3 miles north of Dragoon, Arizona and 16 miles east of Benson, Arizona; about $\frac{1}{2}$ mile north of U. S. Highway 86. There is a good road leading directly to the working locations on this property. The area in which these claims are located is gently sloping hills, with a sharp rise at the eastern end of the property, said rise being approximately 600 feet on a 40° angle. The drainage of the area is to the southwest, draining into the San Pedro River which flows through the town of Benson. The general slope of the area is to the east and southeast.

GEOLOGY

This area is a granite formation of the pre-cambrian deposition in which there are many gas veins which have been filled with quartz in which the ore beds occur. This granite area is approximately $3\frac{1}{2}$ miles on a north-south axis and approximately $2\frac{1}{2}$ miles on an east-west axis, lying in the shape of a pear with the stem to the east. Encircling and surrounding this area is a sedimentary lime deposit with an occasional schist block for intrusion between the granites and the limes. This entire lime-granite contact surrounding this immediate vicinity is impregnated with scheelite deposits. It seems to be a case of gas pressures creating gas veins throughout the granite deposit, in which the tungstic acid was concentrated in the quartz failures in the form of huebnerite, and there are occasional showings of wolframite and scheelite also in these veins. The main and most important veins strike in an east-west direction with many small side veins running off through the country rock on each side.

MINERALIZATION

All the veins found on this property have been checked for continuity and size by the writer, and he finds that there are 3 major veins which continue through the entire length of this property and on through other property until they disseminate upon getting to the lime-granite contact, approximately one mile to the east. These veins have been worked by leaser methods, namely, as deep as can be mined without equipment, or approximately an average of 10 feet, at a considerable number of places. The writer has not been able to locate a single place where they fail to expose and mine Tungsten of a very good grade.

At one place located on Hillside #1 claim, an open cut approximately 240 feet in length and 40 feet at the deepest point, has been mined out. There is no possibility of getting a definite production record from this operation, although the writer has been able to check on approximately 14,000 lbs. of Tungsten being sold, with an estimated equivalent amount that is not accounted for. The apparent values seem to increase to a considerably greater amount at greater depth. Also the veins seem to enlarge, and the mineral content appears to be much more concentrated. It is the opinion of the writer that were sufficient work done to give 100 feet of depth to this property and exploratory work from this depth done, a real mine would be developed.

RECOMMENDATIONS

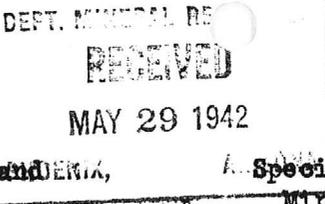
It is the opinion of the writer that the present workings on Hillside #1 should be continued to a depth of 100 feet at which depth exploration would be carried on both ways on the vein. From the same small amount of exploration work done, one could expect this work to very nearly pay its own way; and while this work was being done, I would recommend that a tunnel be started on Hillside #2 along the exposed vein, and also that a tunnel be started on Hawk #4 along the vein as exposed there, and also that open cutting and tunneling be done on Hillside #3-4 claims along the vertical vein exposed there. The latter three operations would be on ore immediately available and would be showing some profit while the work on Hillside #1, consisting of sinking the shaft, was being carried forward.

CONCLUSIONS

This is a mining operation that calls for selected mining and careful milling operation. Working at this property one must not try to handle an enormous tonnage, but must concentrate upon efficient recoveries on as small a tonnage as is possible. I believe sufficient water is available for milling operations on the property. If not, the writer has investigated mill sites adjacent to this property where there is plenty of water.

Leonard Patterson.

Examinations
and Reports



WRIGHT EXPLORATION

Exploration and
Development

Organization and
Management

Specializing in the Industrial
Minerals of the Southwest

Plant Design and
Construction

Established 1913

Phoenix, U. S. A.

.....
(The following was copied from Percy E. Wright's rather lengthy report of December 18, 1941. Original on file with Arizona Development Company, 326 Heard Building, Phoenix, Arizona).

DRAGOON TUNGSTEN MINE

Location and Description
of Property

Few tungsten mines, or mines of any kind, are so favorably situated as is the Dragoon Tungsten Mine, recently taken over for operation by the DRAGOON TUNGSTEN SYNDICATE, of 326 Heard Building, Phoenix. In the Little Dragoon Mountains, it lies at an elevation of 4200 feet above sea level, and is reached by a paved highway, the distance between the mine and Benson, Arizona being 14 miles. Dragoon Station on the Southern Pacific Railroad is 3 miles distant. Thus the mine situated on the Main Line of the Southern Pacific, and, except for freight shipments, may be considered as an outlying industry from Benson, which is the Post Office, Telegraph and Telephone Office, as well as the source of local supplies.

It is in Northwestern Cochise County, wherein the Little Dragoon Mountains form a range about 10 miles in length and 7 miles in width, their northern portion being of Pre-Cambrian Schist overlain by Deformed Paleozoic Beds.

The Dragoon Tungsten Mine embraces two groups of claims, the Hawk Group of Five and the Hillside Group of four, making in all nine contiguous claims comprising the property.

Development

There has been no extensive development on this particular property, although extensive prospecting has been carried on and small shipments from hand mining and milling operations have proved the deposits and their average tungsten values, which are in Huebnerite and Scheelite.

December Visit and
Field Examination

Although considerable accumulated information was available thru the owners from whom the claims were acquired by the Dragoon Tungsten Syndicate, a few days were spent on the ground early in December and samples were taken from present workings, the returns from which are given in the following chapter.

Everything learned in the field and in checking past operations and the products marketed therefrom points to the Dragoon Tungsten Mine having an easily mined and treated Huebnerite Scheelite ore that requires only good equipment and good management to make for profitable operations. These conclusions are supported by what has already been accomplished in hand mining and hand jigging, as well as what has been done on a large scale at the two adjoining properties, the Primos and the Little Fanny.

Adjoining Mines
Described

The property of the Primos Chemical Company consists of 21 patented claims, owned and operated by the Primos Chemical Company since 1903. Several hundred feet of tunnels and open cuts make up the development on the Primos, and during January 1940, when the property was visited by Eldred D. Wilson, Geologist, Arizona Bureau of Mines, it was reported that about 4,500 pounds of huebnerite concentrates per month were being produced.

The Little Fanny Mine is another adjoining property, and consists of 14 unpatented claims. Development consists of surface workings and some 1,600 feet of tunnels. During 1934 to 1938 leasers are reported to have produced 55,000 pounds of concentrates. Production by the Dragoon Mining Corporation in 1937 to 1939 amounted to approximately 8,000 pounds of concentrates.

Source of Foregoing
Information

As already indicated under this chapter, most of the general information as concerning production is from Published Information, verified so far as is possible from talks with Owners and from records reviewed.

Conclusions

Taking into account the Assays and Laboratory Tests, as reported in the following chapter, together with what was learned in observing hand mining and milling operations, it is apparent that values much higher than the average for most tungsten deposits are present at the Dragoon Tungsten Mine, and that these values can be recovered in modern milling operations, up to some 90% and higher.

METALLURGICAL TEST

AND FLOW SHEET

Laboratory Work of the
Arizona Bureau of Mines

Samples taken from the hand operations at the Dragoon Tungsten Mine during the pilot examination made early in December were turned over to the Arizona Bureau for Metallurgical tests and flow sheet recommendations, and these were made by E. H. Crabtree, Jr., Metallurgist, and were reported on December 16, 1941 under Ore No. 759. From this report the following paragraphs are quoted:

The sample as received contained 8.4% of WO_3 . Most of the tungsten was contained as huebnerite disseminated thru a quartz gangue; a small portion of scheelite was also present. Most of the huebnerite was free at 10-mesh size, but the majority of the scheelite required crushing to 20-mesh for liberation.

The entire sample as received was crushed in a jaw crusher and rolls to one-fourth inch. One-fourth of the sample was then riffled out and crushed in rolls to 10-mesh. From this portion, samples for head analysis and for testing were obtained.

The test sample was passed twice over a Denver laboratory mineral jig using steel shot as bedding material. The concentrates from each pass were combined as representative of a two cell jig in practice. The jig tails were ground to 20-mesh and passed over a Wilfley laboratory table, producing a table concentrate and a table tailing.

Conclusions

The test on this ore shows that jiggling after crushing to 10-mesh can be expected to 79.4% of the tungsten in a jig concentrate assaying 61.2% WO_3 . Grinding of the jig tails to 20-mesh followed by tabling will recover an additional 15.5 per cent of the tungsten in a table concentrate assaying 47.8% WO_3 .

The combination of the two operations recovers 94.9 per cent of the total tungsten in a combined jig concentrate-table concentrate assaying 58.3 WO_3 .

In commercial practice on ore of a tungsten content even approaching the same grade of the sample upon which this work was done, a concentrate averaging better than 60% WO_3 and a recovery of better than 90% may be expected.

The Flow Sheet recommended in the Arizona Bureau of Mines report provides for Jaw Crusher, Rolls, 10-Mesh Screen, 2-Cell Jig, Hydraulic Classifier, 2 Concentrating Tables (Sand and Slime) and the returning of Middling Product from the Sand Table.

Evidently the work of the Bureau, under the supervision of E. H. Crabtree, Jr., was both carefully and thoroughly done, and in the main, the procedure he outlines for treatment is recommended.

At the time of closing this Pilot Report the question of deliveries on Mining and Milling and Power Equipment is being looked into, and it is planned to re-write and amplify the pilot when the question of Machinery Equipment is decided upon.

(I certify that this is a true and accurate copy of a portion of the original report.)

S. Landau



Ann Couper

8/30/12

Here are the answers to many
of Miss Montgomery's questions.

Re - 9 Clavin's Temptation -

known as Wien property.

Sincerely

Harry H. Culler
agt

+ full charge

~~DEPARTMENT OF MINERAL RESOURCES~~

News Items

✓ Date Oct. 30, 1940

Mine "Dragoon Mining Camp"

Location Tex. Canyon

Owner Ralph O. Wise

Address Penna.

Operating Co. "Dragoon Mining Corp"

Address 520 Illinois Bldg. Indianapolis, Ind.

W. J. Guenther, Sec'y-Treas.

Pres. About 10/1/40

Genl. Mgr.

Mine Supt. Emelia Molina, Dragoon.

Mill Supt. & Lessee 8/14/40 Authority to sell

Principal Metals Huebnerite

Men Employed 3 Leasers

Production Rate (Molina reports that corp.

Mill, Type & Capacity has till Nov 10 to make
payments in arrears.

Power, Amt. & Type Same

Signed

M. M. C.
(Over)

DEPARTMENT OF MINERAL RESOURCES

Service Report

Nature of Call ^{Date} Mr. Attwater
Place _____
Name Here from East -
Address Didn't give address
will come in next
week -
Subject Name of Mine
Weim Mine -
wants all information
Called Mr. Colver
He is sending us a
Action report -

Signed EGM

Use other side if necessary

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date May 11, 1942

1. Mine Hawk Group
2. Mining District & County Dragoon Dist., Cochise Co.
3. Former name
4. Location 5 miles SW Dragoon in Little Dragoon Mts.
5. Owner Jess Wien
6. Address (Owner) Benson, Ariz.
7. Operator Mr; Langford
8. Address (Operator) Benson, Ariz.
9. President
10. Gen. Mgr.
11. Mine Supt.
12. Mill Supt.
13. Principal Metals Hubnerite, scheelite, sericite and small amounts of lead and copper minerals.
14. Men Employed 2
15. Production Rate None
16. Mill: Type & Cap. None
17. Power: Amt. & Type None
18. Operations: Present Develop
19. Operations Planned Developm mine and mill.
20. Number Claims, Title, etc. 5 claims held by location
21. Description: Topography & Geography Fairly rugged mountains. Fair amount of precipitation. Elevation 4500'.
22. Mine Workings: Amt. & Condition Several hundred feet of drifting. Some trenching. Maximum depth from surface about 75'. Fair condition.

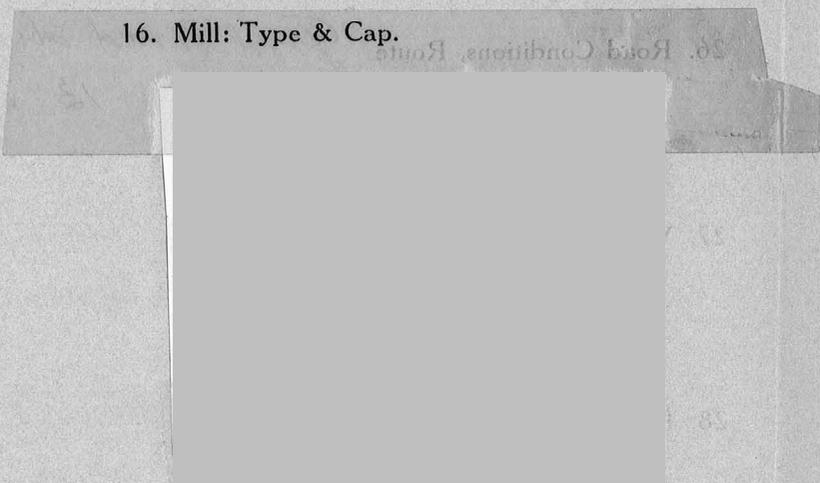
- Several parallel quartz veins in coarse grained granite. Veins
23. **Geology & Mineralization** Veins in width from a few inches to several feet. Local faulting of a small degree is present but general structure is regular to N. where this property joins Little Fanny group. Mineralization is hubnerite with small amounts of copper, lead and iron oxides. Whenever extreme sericitization is encountered scheelite occurs. Stem N-15° W - Dip 40° - 60° TE.
24. **Ore: Positive & Probable, Ore Dumps, Tailings** No positive ore. There is a good possibility that a moderate capacity can be attained. This property should be considered along with the Primos, and Little Fanny groups.
- 24-A **Vein Width, Length, Value, etc.** Veins are exposed in places for about 1500' in length. They occur in a mineralized zone 600' wide. Over 4 veins are discernable.
25. **Mine, Mill Equipment & Flow Sheet**
26. **Road Conditions, Route** Good to within 1 mile of mine. Turn off main Benson-Wilcox highway 1/2 mile south of Triangle T ranch to west. Go 1 mile NW.
27. **Water Supply** Fair. Considerable water could be developed.
28. **Brief History** Located in 1898 by Walker as gold mine. Might have produced 3000 units of WO₃.
29. **Special Problems, Reports Filed** Tungsten Deposits of Arizona. Wilson, 1941.
30. **Remarks** The presence of several well defined veins in this district give promise that a goodly amount of tungsten can be obtained from here. There are three properties on this structure that should be grouped together for large operational consideration. The Little Fanny and Primos groups. Under proper conditions this district might produce 30,000 units a year.
31. **If property for sale: Price, terms and address to negotiate.** Do not know. No one on property when visited.
32. **Signed**.....
33. Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

M.D.-26

Date 6/1/42

- 1. Mine DRAGON TUNGSTEN ✓
- 2. Mining District & County DRAGON MINING DISTRICT
COCHISE COUNTY.
- 3. Former name WIEN MINE.
- 4. Location 13 MILES E OF BENSON
ON HIGHWAY # 86.
3 MILES FROM DRAGON -
- 5. Owner HARRY H. CULVER - AGENT. ✓
- 6. Address (Owner) ARIZONA CLUB
PHOENIX - ARIZ
- 7. Operator _____
- 8. Address (Operator) _____
- 9. President _____
- 10. Gen. Mgr. _____
- 11. Mine Supt. _____
- 12. Mill Supt. _____
- 13. Principal Metals TUNGSTEN ✓
- 14. Men Employed _____
- 15. Production Rate _____
- 16. Mill: Type & Cap. _____
- 17. Power: Amt. & Type _____
- 18. Operations: Present _____



19. Operations Planned

20. Number Claims, Title, etc. 9 unpatented mining claims.

21. Description: Topography & Geography Gentle sloping hills - desert vegetation
Elevation about 4200 ft.

22. Mine Workings: Amt. & Condition 2 shafts 50 & 70 ft deep - with some
driftling in each shaft - Numerous open shallow
cuts on ruins.

23. Geology & Mineralization

quartz formation with arsenic veins -
quartz filling carrying ^{vanadium} Tungsten as
hubnerite & scheelite
(HUBNERITE)

24. Ore: Positive & Probable, Ore Dumps, Tailings

24-A Vein Width, Length, Value, etc.

Veins run across in length on property &
short veins of from 2" to 30" in width.
Ore averaging 2% - WO₃

25. Mine, Mill Equipment & Flow Sheet

Small mill - crusher, screens, jig.

26. Road Conditions, Route

Good road direct to mine - 3 miles
from Dragon is 13 miles from Benson

27. Water Supply

Local water can be developed.

28. Brief History

Adjoining area has produced for years
by leases.

29. Special Problems, Reports Filed

30. Remarks

31. If property for sale: Price, terms and address to negotiate.

For sale - \$75,000 - \$10,000 cash
balance 10% royalty - ~~for~~ 8 years to fulfill.

32. Signed

for Harry H. Carlson -

33. Use additional sheets if necessary.