11-29-55 [illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

November 29, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Engineering Report of Examination, DMEA Docket 3874,
Louis E. Walker, Mystery Mine, Yavapai County, Arizona

I have reviewed the engineering report of Mystery Mine, DMEA Docket 3874, dated November 9 and received in this office November 22. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

A geologic report of September 6 and 7 on DMEA 3874 recommended denial of the application. It was later suggested that an engineering report be made of the subject property. This examination was made on September 11 and 12, 1955, and also resulted in a recommendation of denial of the application.

Inasmuch as we recommended denial of the application in a memorandum of July 6, 1955, and reaffirmed the denial in concurring with the geologic examination on October 26, it appears that the engineering examination is a duplication of effort. We concur in the recommendation of denial of the application for DMEA loan.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E Crawford
John E. Crawford

RECEIVED
NOV 2 9 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

November 29, 1955

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John E. Crawford

Surname Copy
700

Ching
Ellis
Guhen
Kiilsgaard
Martin
Fitzsimmons

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

5 1955

Mr. Louis E. Walker
5954 Macarthur Boulevard
Oakland, California

Re: Docket No. DMEA-3674
(Uranium-Tungsten)
Mystery Mine
Yavapai County, Arizona

Dear Mr. Walker:

Reference is made to your application for Government aid in an exploration project on the above-named property.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information, although noting some anomalous radioactivity on your property, indicates to us that the probability of disclosing minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you that, under these circumstances, your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention.

Sincerely yours,

C. O. Mittendorf

Administrator

MChing/izm 11-9-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Code 700
Mr. Ching
DMEA Field Team, Region III (2)
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

cc

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
NOV 17 1955

November 9, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Engineering Report of Examination, DMEA Docket 3874 (Uranium-Tungsten), Louis E. Walker, Mystery Mine, Yavapai County, Arizona

Enclosed are the original and three copies of the engineering report pertaining to the above application. The engineer examiner concurs with the survey examiner that the application be denied. The report of the survey examination was transmitted on October 14, 1955.

Will you please attach the copy of the Engineering Report of Examination to the Survey Report we forwarded you October 14, 1955.

W. M. Traver

By J. W. Townsend
J. W. Townsend

E. H. Harshman
E. H. Harshman

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
10-24-55
(date)

Box 4097
Tucson 5, Arizona

November 4, 1955

TRANSMITTED
NOV 9 - 1955

Memorandum

To : W. M. Traver, Executive Officer, DMEA Field Team, Region III

From : Superintendent, Southwest Experiment Station

Subject : Field Examination Report, Report DMEA-3874, Louis K. Walker's Mystery Uranium-Tungsten Prospect, Tip Top Mining District, Yavapai County, Ariz.

Enclosed are original and 10 copies of a short memorandum report on the above property by W. R. Hardwick of the Bureau of Mines. A Geological Report already has been submitted by the Geological Survey. At first it was thought that an Engineering Report was unnecessary, but later it was suggested that a Bureau of Mines examination be made, hence this report.

Both the Bureau engineer and the Survey geologist have recommended denial of Government exploration assistance because they believed that significant amounts of uranium and/or tungsten would not be found by further exploratory work. I concur with this recommendation.

Brochure was returned to you some time ago.

Walter R. Storms

Walter R. Storms

CC W. M. Traver (10)
J. E. Falck
DMEA-3874
DF

WRStorms:fr:j

Reviewed by
DMEA OPERATING COMMITTEE

10-24-55
(date)

RECEIVED
NOV 17 1955

Box 4097
Tucson 5, Arizona

November 4, 1955

Memorandum

TRANSMITTED
NOV 9 - 1955

To : Walter R. Stokes, Superintendent, Southwest Exploration Division, Region VIX

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Examination of Louis Milor Walker's Mystery Mine (Uranium-Vanadium), Yavapai County, Ariz., Docket [illegible].

The Mystery mine is located in Secs. 25 and 30, T. 6 N., R. 1 E., Yavapai County, Ariz., (Figure 1). The Mystery group consists of the unpatented Mystery and Mystery Extension claims (figure 2). The group is owned by J. R. Johnston of Hayward, Calif. Johnston hence negotiated with Louis M. Walker, 2014 Manchester Ave., Oakland, Calif., who acquired a lease and option on the claims and requested Government assistance under the provisions of the Defense Production Act of 1950, as amended, to explore the claims for uranium and vanadium ore.

The Mystery mine was examined by Leonid Bryner[1/] on September 6 and 7, 1955 with Johnston, the owner, acting as guide and representative of the applicant. Indicating that an examination by a U. S. Bureau of Mines engineer would not be made, Bryner submitted a complete geological report recommending denial of the applicant's request.

Later it appeared desirable to have a report on the property by an engineer and the property was examined by William R. Hardwick[2/] on September 11 and 12, 1955. The application, Docket [illegible], was not available to the examining engineer and no representative of the applicant was available during the field

1/ Geologist, U. S. Geological Survey
2/ Mining Engineer, U. S. Bureau of Mines

CC W. M. Tanner (Orig. & 1c)
DMEA-2074
RF

WRHardwick:dvj

Reviewed by
DMEA OPERATING COMMITTEE
10-24-55
(date)

examination. According to Leonid Dryzer, the applicant was not definite in describing the work for which he requested assistance. This work is described by Dryzer as follows: "The proposed work consists of about 800 feet of drifting south on the No. 1 adit, to where it intersects the tungsten vein #1, 2 and 3 - - - -. Other work would consist of cleaning out No. 1 workings, and 150-200 feet of additional shaft sinking on No. 3."

L. A. Stewart, mining engineer for the U. S. Bureau of Mines, examined the Mystery mine for uranium on April 27 and 28, 1949. In his report, Stewart states as follows: "As to the purpose of the examination, it appears that Johnston had previously bought a large, portable, ultra-violet light and found that the veins on his property exhibited large patches that had a greenish fluorescence. Several years ago, shortly before the last war, a German 'scientist' had spent some time on the property with Johnston's father. When the United States entered the war, the German was deported. Recently a letter from this German in Australia addressed to Johnston's father (now deceased) was delivered to the son. In part, the letter stated that the writer hoped there was uranium on the property, and that, if here, could find it in 48 hours. This, coupled with the fact that some uranium minerals fluoresce, led Mr. Johnston to believe he had uranium-bearing minerals in the various veins. The request for examination was merely to prove or disprove presence of radio-active minerals and to determine what the phosphorescent material was that fluoresced green.

"Use of the Geiger counter in the various adits and on outcrops of the veins, as well as on various rocks on the dump, showed absolutely no radi-activity. But the ultra-violet lamp did indicate much fluorescence in the adits, and a night trip over some of the outcrops showed the same fluorescence." Stewart determined the fluorescent mineral to be hyalite opal.

The geology of the Mystery mine has been described by Leonid Dryzer. The Mystery fault cuts the pre-Cambrian Deadman granite and Mesozoic schists. The fault can be traced for over 2,000 feet. It strikes north 50 degrees west and dips approximately 65 degrees to the northeast. Discontinuous lenses of quartz vein material occur along the Mystery fault. These vein segments are usually small but one lenses is 100 feet long and from 5 to 10 inches wide. Some parts of the vein quartz are mineralized. The lead minerals, vulfenite and cerussite, were identified and in the adits an occasional inconspicuous spot gave a cobaltite reaction under

a mineral light. No uranium minerals were observed nor did the Geiger counter indicate the presence of any radio-active mineral.

The Mystery mine has been explored by three adits and numerous pits. The amount of vein exposed in these workings is small. All of the work was done prior to 1926 and some work dates back to 1880 when the district was active as a gold producing area.

The exact production is unknown. A.L.Flagg, mining engineer for the Arizona Department of Mineral Resources, stated that a small shipment of ore believed to assay 1 oz. gold and 8 percent lead was sold, and J. H. Johnston, the owner, told Bayner that he had mined and sold 18 tons of ore from a dump at the mouth of No. 1 adit (Figure 2). Johnston reported that this ore came from a 15-inch band on the hanging wall and ran 25 percent lead. Numerous unnamed workings below the No. 1 adit but these are believed to be small. The total production is believed to be on the order of 100 tons or less.

As ore minerals are visible in very small quantities and the vein material is small and discontinuous, no samples were taken by the mining engineer. No ore can be considered as measured, indicated, or inferred.

Based on the complete absence of radio-activity as shown by the Geiger counter, the very small amount of scheelite as shown by the mineral light, the fact that none of the wolframite tungsten minerals were observed and the very small amount of vein material indicated, it is believed that a significant amount of uranium or tungsten ore would not be found on the Mystery claims. It is recommended that the application of Louis E. Walker for Government assistance (DMA-3974) be denied.

William R. Hardwick

William R. Hardwick
Mining Engineer
Southwest Experiment Station

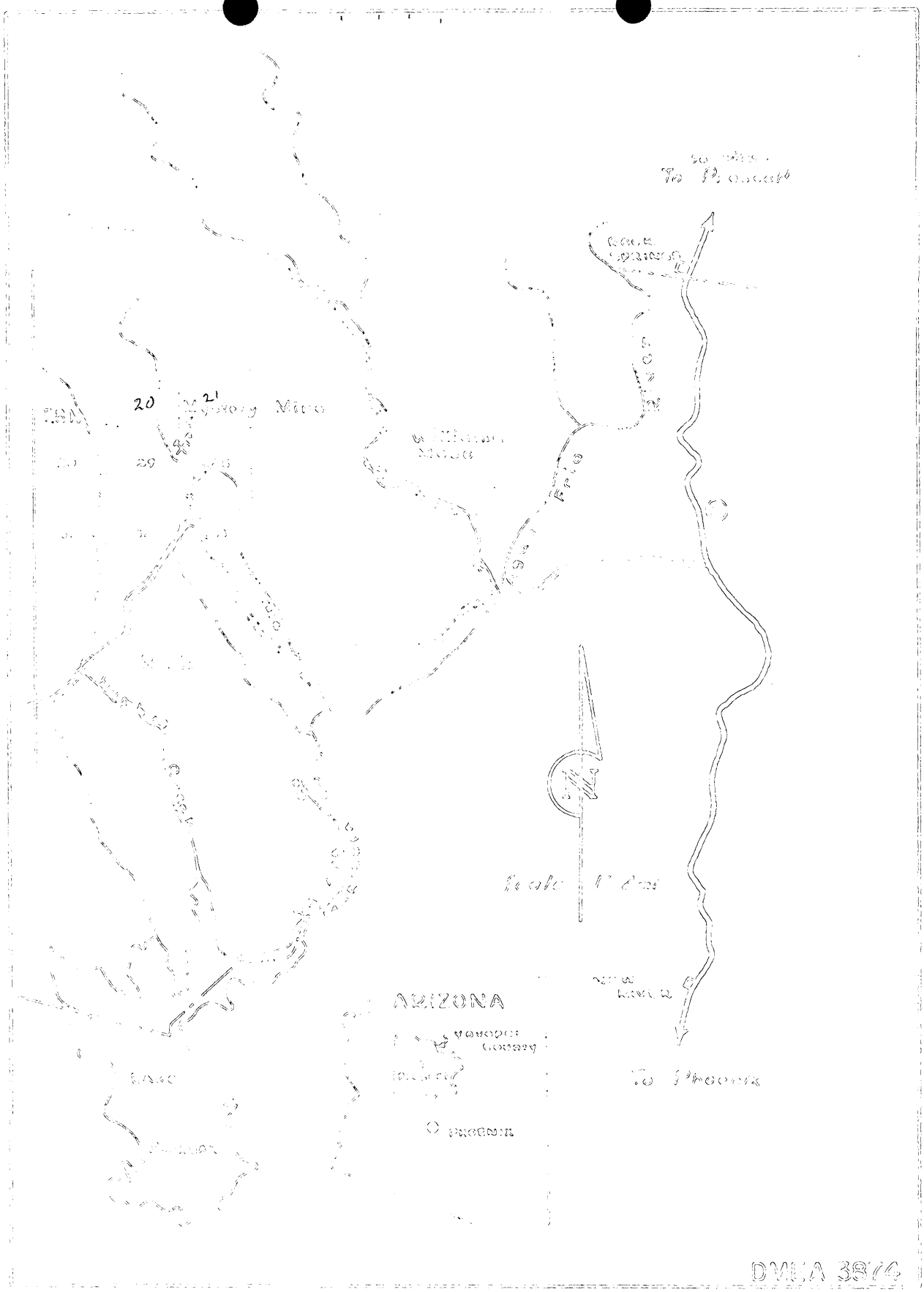

FIG 1 LOCATION MAP, MYSTERY MINE, ARIZ.

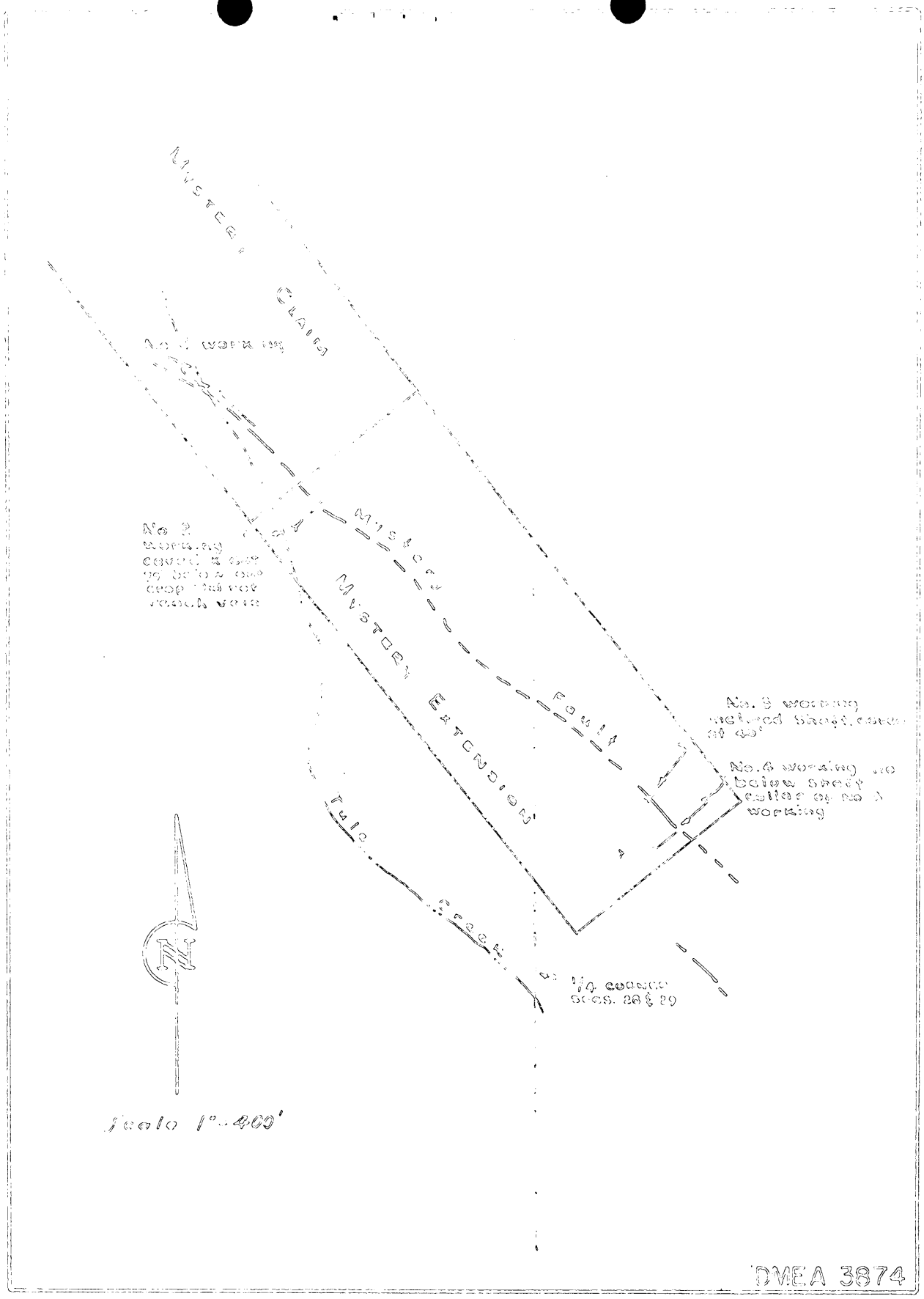

FIGURE NO. 2 CLAIM MAP, MYSTERY MINE

YAVAPAI COUNTY, ARIZ.

RECEIVED
NOV 17 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
NOV 17 1955

November 9, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Engineering Report of Examination, DMEA Docket 3874 (Uranium-Tungsten), Louis E. Walker, Mystery Mine, Yavapai County, Arizona

Enclosed are the original and three copies of the engineering report pertaining to the above application. The engineer examiner concurs with the survey examiner that the application be denied. The report of the survey examination was transmitted on October 14, 1955.

Will you please attach the copy of the Engineering Report of Examination to the Survey Report we forwarded you October 14, 1955.

W. M. Traver

By J. W. Townsend
J. W. Townsend

E. N. Harshman
E. N. Harshman

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
11/21/55
(date)

RECEIVED

NOV 17 1955

Box 4097
Tucson 5, Arizona

November 4, 1955

TRANSMITTED
NOV 9 - 1955

Memorandum

To : W. M. Traver, Executive Officer, DMEA Field Team, Region III

From : Superintendent, Southwest Experiment Station

Subject : Field Examination Report, Docket DMEA-3874, Louis E. Walker's Mystery Uranium-Tungsten Prospect, Tip Top Mining District, Navajo County, Ariz.

Enclosed are original and 10 copies of a short memorandum report on the above property by W. R. Hardrick of the Bureau of Mines. A Geological Report already has been submitted by the Geological Survey. At first it was thought that an Engineering Report was unnecessary, but later it was suggested that a Bureau of Mines examination be made, hence this report.

Both the Bureau engineer and the Survey geologist have recommended denial of Government exploration assistance because they believed that significant amounts of uranium and/or tungsten would not be found by further exploratory work. I concur with this recommendation.

Brochure was returned to you some time ago.

Walter R. Storms

Walter R. Storms

CC W. M. Traver (10)
J. N. Faick
DMEA-3874
RF

WRStorms:frj

Reviewed by
DMEA OPERATING COMMITTEE
11/21/55
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

TRANSMITTED
NOV 9 - 1955

Box 4097
Tucson 5, Arizona

November 4, 1955

RECEIVED
NOV 17 1955

Memorandum

To : Walter R. Storms, Superintendent, Southwest Experiment Station, Region III

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Examination of Louis Edgar Walker's Mystery Mine (Uranium-Tungsten), Yavapai County, Ariz., Docket DMEA-3874.

The Mystery mine is located in Secs. 28 and 29, T. 8 N., R. 1 E., Yavapai County, Ariz.,(Figure 1). The Mystery group consists of the unpatented Mystery and Mystery Extension claims (figure 2). The group is owned by J. B. Johnston of Hayward, Calif. Johnston became acquainted with Louis E. Walker, 5954 MacArthur Blvd., Oakland, Calif., who acquired a lease and option on the claims and requested Government assistance under the provisions of the Defense Production Act of 1950, as amended, to explore the claims for uranium and tungsten ore.

The Mystery mine was examined by Leonid Bryner 1/ on September 6 and 7, 1955 with Johnston, the owner, acting as guide and representative of the applicant. Indicating that an examination by a U. S. Bureau of Mines engineer would not be made, Bryner submitted a complete geological report recommending denial of the applicant's request.

Later it appeared desirable to have a report on the property by an engineer and the property was examined by William R. Hardwick 2/ on September 11 and 12, 1955. The application, Docket DMEA-3874, was not available to the examining engineer and no representative of the applicant was available during the field

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2/ Mining Engineer, U. S. Bureau of Mines

CC W. M. Traver (Orig. & 10)
DMEA-3874
DF

WRHardwick:frj

Reviewed by
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William R. Hardwick

William R. Hardwick
Mining Engineer
Southwest Experiment Station

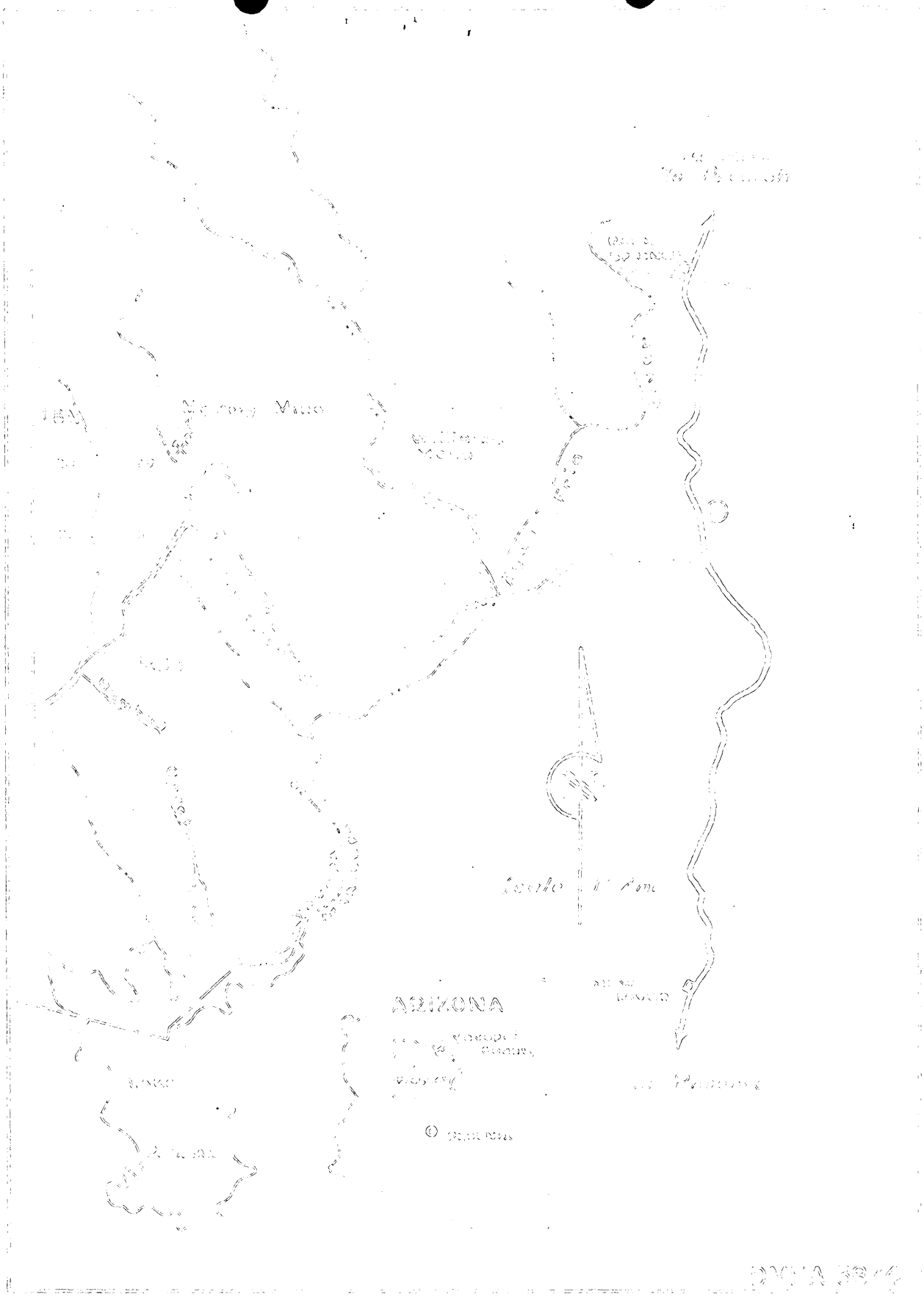

FIG 1 LOCATION MAP, MYSTERY MINE, ARIZ

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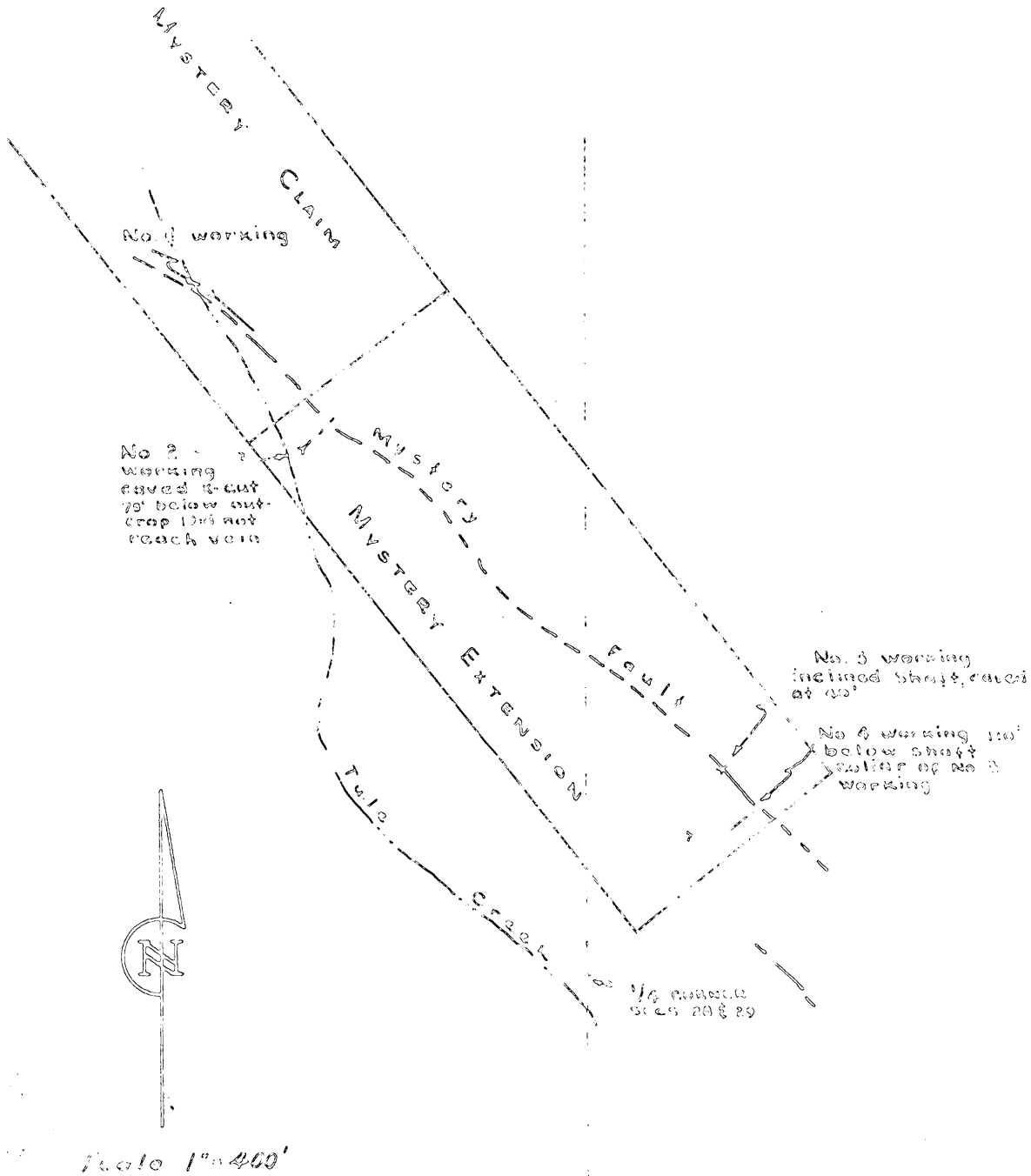
NOV 17 1955



DMEA 5814

FIGURE NO 2 CLAIM MAP, MYSTERY MINE

YAVAPAI COUNTY, AR

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NOV 17 1955

Docket Copy

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Ellis

November 9, 1955

Summary of Proposed Project

Object: Denial of application for an exploration project.

Docket No.: DMEA-3874

Commodities: Uranium and Tungsten

Applicant: Louis E. Walker
5954 MacArthur Boulevard
Oakland, California

Property: Mystery and Mystery Extension Claims, located in Sections 28 and 29, T. 8 N., R. 1 E., G. & S.R.M., Yavapai County, Arizona. Applicant is the Lessee with option to purchase.

Date of Application: June 24, 1955

Amount of Application: $50,200.00 (Estimated)

Work Proposed: Drift 800 feet along a main vein to where it intersects Tungsten Vein 1, 2, and 3. Clean out and sink old shaft to depth of 200 feet. Clean out a caved drift and a caved winze.

Estimated Cost:

800 ft. drifting @ $44.00/ft.	$35,200.00	
200 ft. shaft sinking @ $75.00/ft.	15,000.00	
Estimated total cost		$50,200.00
Government participation @ 75%		37,650.00

Field Team Report: October 4, 1955 - Leonid Bryner, USGS:

The country rock on the property is the Precambrian Bradshaw granite. Several old workings are located on narrow discontinuous quartz veins which follow the main structual feature, the northwesterly-trending Mystery Fault. The property was primarily a small lead producer.

Anomalous radioactivity was detected by scintillator in several places along the fault, but this radioactivity is of a very low order of magnitude. A sample taken from a

a belated report dated Nov. 4, 1955 by William R. Hardwick, USBM concurs with Bryner's conclusions

pit where the highest radioactivity was found, assayed 0.01% equivalent U_3O_8 radiometrically. Tungsten ore was found to be virtually non-existent in the old workings and outcrops. The whole area must therefore be considered as far below commercial in its uranium and tungsten content. There seems to be no geologic basis for believing that reserves of either metal might be found through an exploration project. Denial of the application is recommended.

Commodity Group Commments:

Geological Survey - N. E. Nelson, October 25, 1955:

Three short adits, two shallow shafts and a few shallow pits prospect the fault. Wulfenite was seen on one dump and other reporters mention having seen scheelite. A speck of yellow, which might be a secondary uranium mineral, was seen on vein quartz. A sample from the most radioactive dump assayed 0.01% e U_3O_8 radiometrically. Concurs with the Field Team recommendation of denial.

Bureau of Mines - John E. Crawford, October 26, 1955:

Discussed the report of examination with the AEC representative. Concurs with the Field Team that there seems to be no geologic basis for believing that uranium reserves might be found if exploration were undertaken. Recommends denial of the application.

Rare & Miscellaneous Metals Division - Michael Ching, Nov. 8, 1955:

The property was examined by Leonid Bryner of the USGS. A Bureau of Mines representative did not examine the property at this time, but L. A. Stewart examined it in 1949 and could find no uranium, and very little scheelite. The application contained no significant information and, as a result of the field examination, there can be no doubt that the proposed project has very little merit.

Conclusions and Recommendations:

The property has very little promise. It is recommended that the application be denied.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

10/27/55 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED
OCT 27 1955

October 26, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4443

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Report of Examination, DMEA Docket 3874, Louis E. Walker, Mystery Mine, Yavapai County, Arizona

I have reviewed the report of examination, dated October 14, and I have discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission. The report, Docket 3874, was received in this office October 24.

The applicant on June 24, 1955, requested DMEA participation in a uranium exploration program at the Mystery mine, Yavapai County, Ariz., at an unspecified expenditure.

An examination of subject property by a member of the DMEA field team was conducted on September 6 and 7. The conclusion contained in the field team report indicates that there seemsto be no geologic basis for believing that uranium reserves might be found if exploration were undertaken and consequently the field team recommends denial of the application.

We concur with the field team and reaffirm the recommendation contained in my memorandum of July 6, 1955, to DMEA that the application be denied.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the attached routing slip.

John E Crawford
John E. Crawford

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

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OCT 27 1955

October 26, 1955

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Uranium Commodity Committee, Room 4443

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DEPARTMENT OF THE INTERIOR
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OCT 27 1955

October 26, 1955

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The applicant on June 24, 1955, requested DMEA participation in a uranium exploration program at the Mystery mine, Yavapai County, Ariz., at an unspecified expenditure.

An examination of subject property by a member of the DMEA field team was conducted on September 6 and 7. The conclusion contained in the field team report indicates that there seems to be no geologic basis for believing that uranium reserves might be found if exploration were undertaken and consequently the field team recommends denial of the application.

We concur with the field team and reaffirm the recommendation contained in my memorandum of July 6, 1955, to DMEA that the application be denied.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the attached routing slip.

John E. Crawford

10/27/55 gla

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
OCT 27 1955

October 25, 1955

Re: DMEA 3874
Louis E. Walker
Mystery Mine
Yavapai Co., Arizona
Uranium-Tungsten

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team report.

The applicant sought assistance in exploring, by drifting and sinking, for tungsten and uranium in a fault from which a small amount of lead ore has been recovered. The fault cuts pegmatitic granite and cuts across included small masses of schist.

Three short adits, two shallow shafts and a few shallow pits prospect the fault. Wulfenite was seen on one dump and other reporters mention having seen scheelite. A speck of yellow, which might be a secondary uranium mineral, was seen on vein quartz. The highest radioactivity occurs on the dump of a pit and a sample, radiometrically assayed, showed 0.01% eU_3O_8.

The examiner concludes that tungsten and uranium are practically nonexistent on the claims and with the Field Team recommends that the application be denied.

I concur with their recommendations.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
OCT 27 1955

October 25, 1955

Re: DMEA 3874
Louis E. Walker
Mystery Mine
Yavapai Co., Arizona
Uranium-Tungsten

Memorandum

To: R. W. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team report.

The applicant sought assistance in exploring, by drifting and sinking, for tungsten and uranium in a fault from which a small amount of lead ore has been recovered. The fault cuts pegmatitic granite and cuts across included small masses of schist.

Three short adits, two shallow shafts and a few shallow pits prospect the fault. Autunite was seen on the dump and other reporters mention having seen scheelite. A speck of yellow, which might be a secondary uranium mineral, was seen on vein quartz. The highest radioactivity occurs on the dump of a pit and a sample, radiometrically assayed, showed 0.01% eU_3O_8.

The examiner concludes that tungsten and uranium are practically nonexistent on the claims and with the Field Team recommends that the application be denied.

I concur with their recommendations.

N. E. Nelson

N. E. Nelson

NENelson:iml
G-10/26/55
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
OCT 27 1955

October 25, 1955

Re: DMEA 374
Louis E. Walker
Mystery Mine
Yavapai Co., Arizona
Uranium-Tungsten

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team report.

The applicant sought assistance in exploring, by drifting and sinking, for tungsten and uranium in a fault from which a small amount of lead ore has been recovered. The fault cuts pegmatitic granite and cuts across included small masses of schist.

Three short adits, two shallow shafts and a few shallow pits prospect the fault. Wulfenite was seen on one dump and other reports mention having seen autunite. A speck of yellow, which might be a secondary uranium mineral, was seen on vein quartz. The highest radioactivity occurs on the dump of a pit and a sample, radiometrically assayed, showed 0.01% U_3O_8.

The examiner concludes that tungsten and uranium are practically nonexistent on the claims and with the Field Team recommends that the application be denied.

I concur with their recommendations.

N. E. Nelson

N. E. Nelson

NENelson:iml
G-10/26/55
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Nested, 3210

10/28/55 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

October 14, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Report of examination, DMEA Docket 3874 (Uranium-Tungsten), Louis E. Walker, Mystery Mine, Yavapai County, Arizona

Enclosed are the original and three copies of the report pertaining to the above application. The property was not examined by a Bureau of Mines engineer at this time because of a previous examination which is in agreement with the subject geologic report.

The following items are included:

(a) Summary, Conclusions and Recommendations, by Leonid Bryner, Geologist, U. S. Geological Survey
(b) Geology Examination Report, by Leonid Bryner
(c) Memoranda of transmittal and comment by John N. Faick and E. N. Harshman
(d) Memorandum By Walter R. Storms explaining why no examination was made by the Bureau

The examining geologist concludes that there is little chance for the discovery of significant reserves of tungsten or uranium by the proposed exploration, and therefore recommends that the application be denied.

We concur with this recommendation.

W. M. Traver

By J. W. Townsend
J. W. Townsend

E. N. Harshman
E. N. Harshman

Reviewed by
DMEA OPERATING COMMITTEE
10-24-55
(date)

TRANSMITTED

OCT 14 1955

DMEA
Date Rec'd
OCT 3 1955

Box 4097
Tucson 5, Arizona

September 1955

Memorandum

To : W. M. Traver, Executive Officer, DMEA Field Team, Region III

From : Superintendent, Southwest Experiment Station

Subject : Docket DMEA-3874, Louis E. Walker's Mystery Uranium Mine, Tip Top Mining District, Yavapai County, Ariz.

Leonid Bryner of the Geological Survey examined this property and is submitting his report today, recommending denial of Government exploration assistance. Because of Mr. Bryner's negative recommendation, the Bureau of Mines will not examine this property. Our L. A. Stewart examined it in 1949 for the owner, could find no uranium, and very little scheelite.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC W. M. Traver (8)
W. H. King
J. N. Faick
DMEA-3874
DF

WRStorms:frj

DMEA OF

10-24-55

TR... ED

OCT 14 1955

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

October 7, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3874 (Uranium-tungsten), Louis E. Walker, Mystery mine, Yavapai County, Arizona

Enclosed are the original and nine copies of a geologic report by Leonid Bryner, U. S. Geological Survey, in which denial of the subject application for exploration assistance is recommended.

No engineering report will be made.

I concur with the recommendation.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (10)

ENHarshman:arh

10-24-55

TRANSMITTED

OCT 14 1955

Box 4126 University Station
Tucson, Arizona

October 4, 1955

MEMORANDUM

TO: Mr. E. N. Harshman

FROM: John N. Faick

SUBJECT: DMEA 3874, Examination Report on Louis E. Walker's Mystery Mine, Yavapai County, Arizona (Uranium)

Enclosed are the original and 10 copies of a report on the above subject property by Leonid Bryner, geologist. The applicant requested Government participation in exploration for tungsten and uranium. Bryner's examination showed that tungsten is virtually non-existent and a radiometric analysis of a sample of the most radioactive material revealed only 0.01 percent equivalent U_3O_8. As geological conditions indicate that neither tungsten nor uranium is present in significant amounts, it is recommended that the application be denied. I concur with this recommendation.

John N. Faick

John N. Faick

JNF:mm

cc. Harshman (10)
Storms

10-24-55

Reviewed by
DMEA OPERATING COMMITTEE
10-24-55

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Leonid Bryner[1]

In an application to the Defense Minerals Exploration Administration dated June 24, 1955, Louis E. Walker requested government participation in an unspecified expenditure to explore for uranium and tungsten at the Mystery Mine, Yavapai County, Arizona.

The property consists of two unpatented claims known as the Mystery and the Mystery Extension. The country rock is the Precambrian Bradshaw granite. The workings are mostly on the Mystery Extension claim and consist of 3 short adits (one of them caved), two shallow shafts (both caved), and a few shallow pits. These are located on narrow discontinuous quartz veins which follow the Mystery Fault, a northwesterly-trending feature that is inferred to extend the length of the Mystery Extension, and some distance into the Mystery Claim.

Small amounts of lead ore have been extracted from the quartz veins. Apparently, in the past, coatings of scheelite, wulfenite, descloizite, and mimetite have been recognized in a few places along the veins. No tungsten minerals were seen during the examination, and the uranium that is present in the vein is in concentrations on the order of 0.01 percent equivalent U_3O_8.

The applicant proposed exploration to consist mainly of drifting along the vein by extending the most northerly adit a distance of 800 feet in a southerly direction. The target of this drifting was a hypothetical, westerly trending vein system supposed to carry tungsten and to intersect the Mystery Fault veins, but which, in the writer's opinion, does not exist on the Mystery property.

1/ Geologist, U. S. Geological Survey, Tucson, Arizona.

In view of the scarcity of tungsten and uranium on this property, and the lack of geologic justification for expecting significant quantities of these metals, denial of the DMEA application is recommended.

U. S. DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY
DEFENSE MINERALS EXPLORATION ADMINISTRATION

REGION III

GEOLOGY

EXAMINATION REPORT

DMEA 3874

LOUIS E. WALKER'S MYSTERY MINE

YAVAPAI COUNTY, ARIZONA

(Uranium, Tungsten)

By
Leonid Bryner
Geologist
U. S. Geological Survey

October 4, 1955

10-24-55

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
FIELD TEAM III

GEOLOGY
EXAMINATION REPORT
DMEA-3874

LOUIS E. WALKER'S MYSTERY MINE
YAVAPAI COUNTY, ARIZONA

(Uranium, Tungsten)

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INTRODUCTION

In an application to the Defense Minerals Exploration Administration dated June 24, 1955, Louis E. Walker requested government participation in an unspecified expenditure to explore for uranium and tungsten at the Mystery Mine.

The Mystery Mine is located in the northwest quarter of Section 28 and the northeast quarter of Section 29, T. 8 N., R. 1 E., Yavapai County, Arizona. An iron pipe marked "USGS 1925", and labeled as the quarter corner between sections 28 and 29, is about 150 feet southwest of the southwest corner monument of the Mystery Extension Claim (fig. 2).

The property is reached from Phoenix by State Highway 69, then by a dirt road that leaves the highway about halfway between New River and Rock Springs, and starts down the canyon of the Agua Fria River (fig. 1). A right-hand branch from this road is taken at the Ojo Bonito Ranch, 12.2 miles from the highway. From the ranch the mine is 6.3 miles. It is a four-wheel-drive route, but might be negotiated by passenger car after the completion of some repair work which had just gotten under way at the time of the examination.

The property consists of two unpatented claims, the Mystery and the Mystery Extension, owned by Jim Johnston of Hayward, California. According to Johnston these claims trend northwest and are located end to end, the Mystery being to the northwest of the Mystery Extension (fig. 2). All but the most northerly workings (fig. 2) are on the Mystery Extension. The applicant holds these claims under lease with option to purchase, including owner's consent to lien.

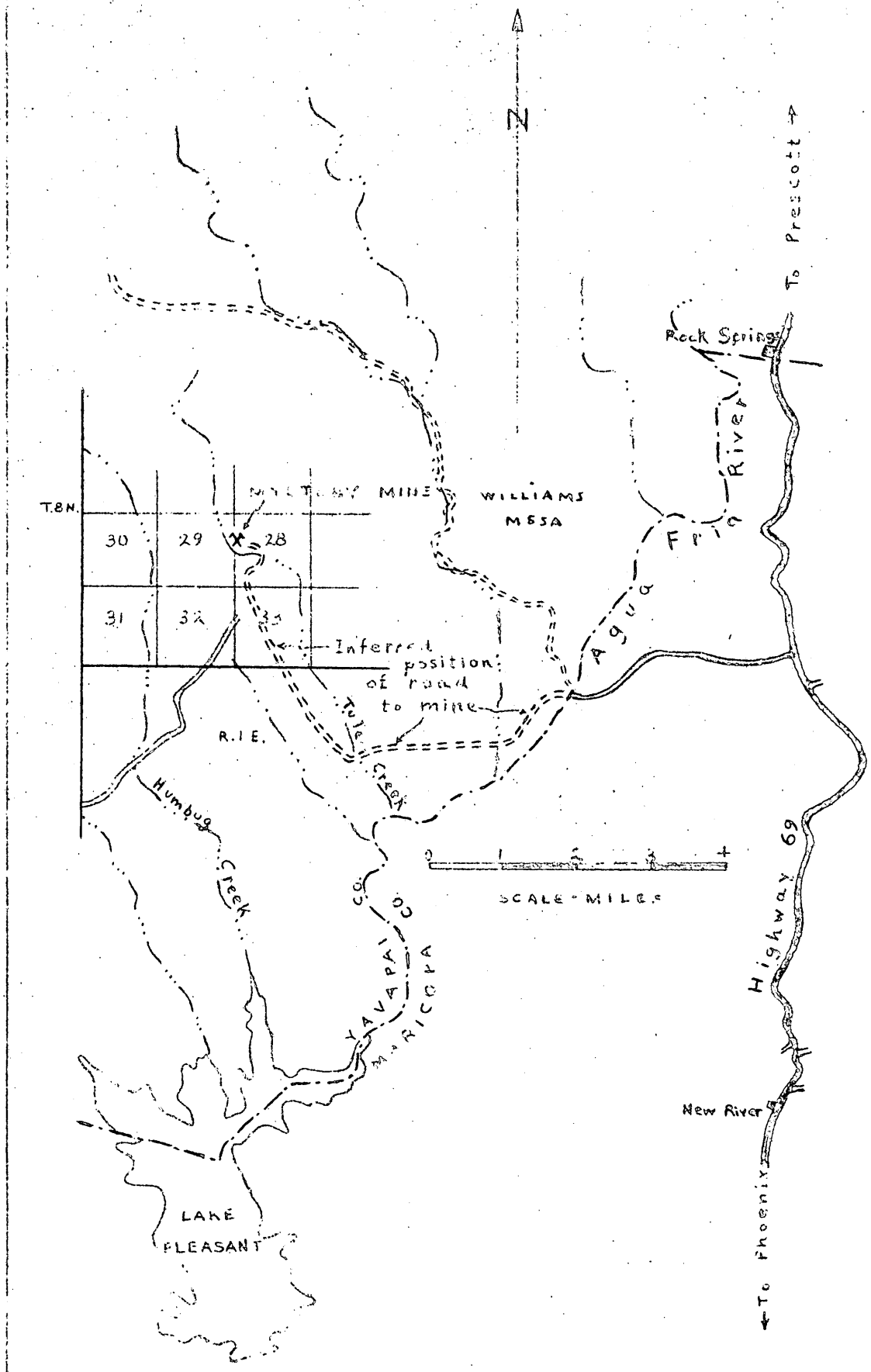


FIG. 1 - LOCATION MAP - MYSTERY MINE, ARIZ.

1.MFA 3874

The examination was made by the writer on the afternoon of September 6 and the morning of September 7. A U. S. Bureau of Mines engineer was not available at the time, and the Bureau does not plan a later examination or report. Johnston acted as guide over the property and as the applicant's representative. The examination was conducted under the handicap of an application that was practically devoid of any pertinent information.

The application was discussed with AEC geologists in Phoenix and an unpublished U. S. Bureau of Mines report was consulted. This report by L. A. Stewart, dated May 1949, indicated that there is no radioactivity on the property but that traces of wulfenite and scheelite were seen on the hanging wall in the most northerly working (fig. 2). Johnston told the writer that there were no tungsten showings at all in the project area. Stewart's and Johnston's reports seemed to the writer to justify omitting further investigation of the tungsten resources here. From talking to Johnston, the writer concludes that the tungsten potentialities attributed by the applicant to his mine are based on an assumed extension into the project area of a westerly-trending vein system which shows wolframite and scheelite a mile or so to the east. The writer found no persistent tungsten-bearing vein on the property. Some radioactive anomalies were recognized, but these proved to be traces that are unlikely to represent any appreciable tonnage of radioactive rock.

GEOLOGY

The Mystery claims are in an area of Precambrian Bradshaw granite. This granite is remarkably coarse-grained in the area of the claims. It fits well into the description given it by Jaggar and Palache[1/] who, in describing the Bradshaw granite, say "Pegmatitic facies are extremely abundant in the great southern stock, particularly along the eastern contact, where extensive areas, practically all of pegmatite, are found." Some of the granite in the project area contains biotite books up to 3 inches in diameter. The granite also contains large to small inclusions of schist (fig. 2). The inclusions as well as their schistosity are oriented nearly due east. Dips range from almost vertical to about 65 degrees north (fig. 2). The granite as well as the schist contains isolated lenses of coarsely crystalline quartz with large clots or crystals of black, opaque tourmaline. The most prominent structural feature is the so-called Mystery Fault, a northwesterly fault which can be recognized in places over a distance of 2,000 or more feet. Where this fault cuts schist inclusions it is easily recognized by the gouge and the distorted schistosity, but in the granite its expression consists only of an inconspicuous shattering more or less parallel to its direction. The continuity of the fault as shown in figure 2 is an inferred rather than an observed feature.

The workings consist of three short adits (one of them caved), two shallow shafts (both caved), and a few shallow pits located either near the south or north ends of the fault as shown in figure 2. Numbers 1 to 5 have been assigned to these workings for the purposes of this report.

1/ Jaggar, T.A., jr. and Palache, Charles, U.S.Geol.Survey Atlas, Bradshaw Mountains folio (No.126), 1905.

The deposit was opened originally for lead and perhaps also silver and gold. Stewart, in the unpublished report mentioned on page 2, found coatings of mimetite, descloizite, wulfenite, and scheelite on the dump of the No. 1 working. He also found hyalite opal, which has been mistaken for scheelite. This dump has, since then, been almost completely eroded away. A small amount of the lead ore that was shipped from the caved shaft near the adit portal is reported by Johnston to have contained cerussite and galena. None of these minerals except wulfenite on the dump of the No. 5 working was seen by the writer. No tungsten or uranium minerals were seen either, with the possible exception of a speck of yellow on some vein quartz from the No. 2 working. This might be a secondary uranium mineral. M. R. Reynor of the AEC Phoenix office[1/] stated that small quantities of uranium have been found in veins associated with stibnite in this district. But the writer recognized no stibnite in the project area.

The chief metallics seen during the examination were oxides of iron, that is, hematite, limonite and goethite. These minerals, together with copper oxides, are in quartz veins which follow the Mystery Fault.

The quartz occurs as intergrowths of coarse, subhedral crystals. Hematite, which seems to be the predominant iron mineral, fills the spaces between quartz crystals, and, judging by the irregular boundaries separating the two minerals, the hematite has partly replaced the quartz. The veins show crude banding in places and, along some of the banding, cavities lined with radiating needles of goethite.

1/ Oral communication, August 29, 1955.

The quartz veins are discontinuous along the Mystery Fault. The longest vein, about 150 feet in outcrop length, is in the slope above the caved adit of the No. 2 working. Probably not over 400 feet of vein occurs in a fault length of 2000 feet. The veins are 1/2 to 1-1/2 feet in average width.

Anomalous radioactivity, as shown in figure 2, was detected by scintillator in several places along the Mystery fault, but this radioactivity is of a very low order of magnitude. The radioactivity is mainly in parts of the veins along the fault where small amounts of lead ore were extracted. The veins in these places contain iron oxides, copper oxides, and possibly, though the writer did not recognize them in place, lead minerals.

PRODUCTION AND GRADE

The only production information available was Johnston's information. This is to the effect that the area was primarily a lead producer; that from the caved shaft at the No. 1 working 18 tons of 55 percent lead ore were extracted from a 15-inch band of cerussite and galena; and that a small tonnage of 1-ounce gold-, and 8 percent lead-ore was shipped from the inclined shaft at the No. 3 working. This last is an item reported to Johnston by A. L. Flagg.

The examination showed that tungsten ore is virtually non-existent in the present workings and outcrops, and that the uranium is in "trace" concentrations. A sample was taken of rock extracted from, and piled near a pit above the No. 2 working, where the highest radioactivity was found, and this sample was radiometrically assayed by the U. S. Bureau of Mines with a result of 0.01

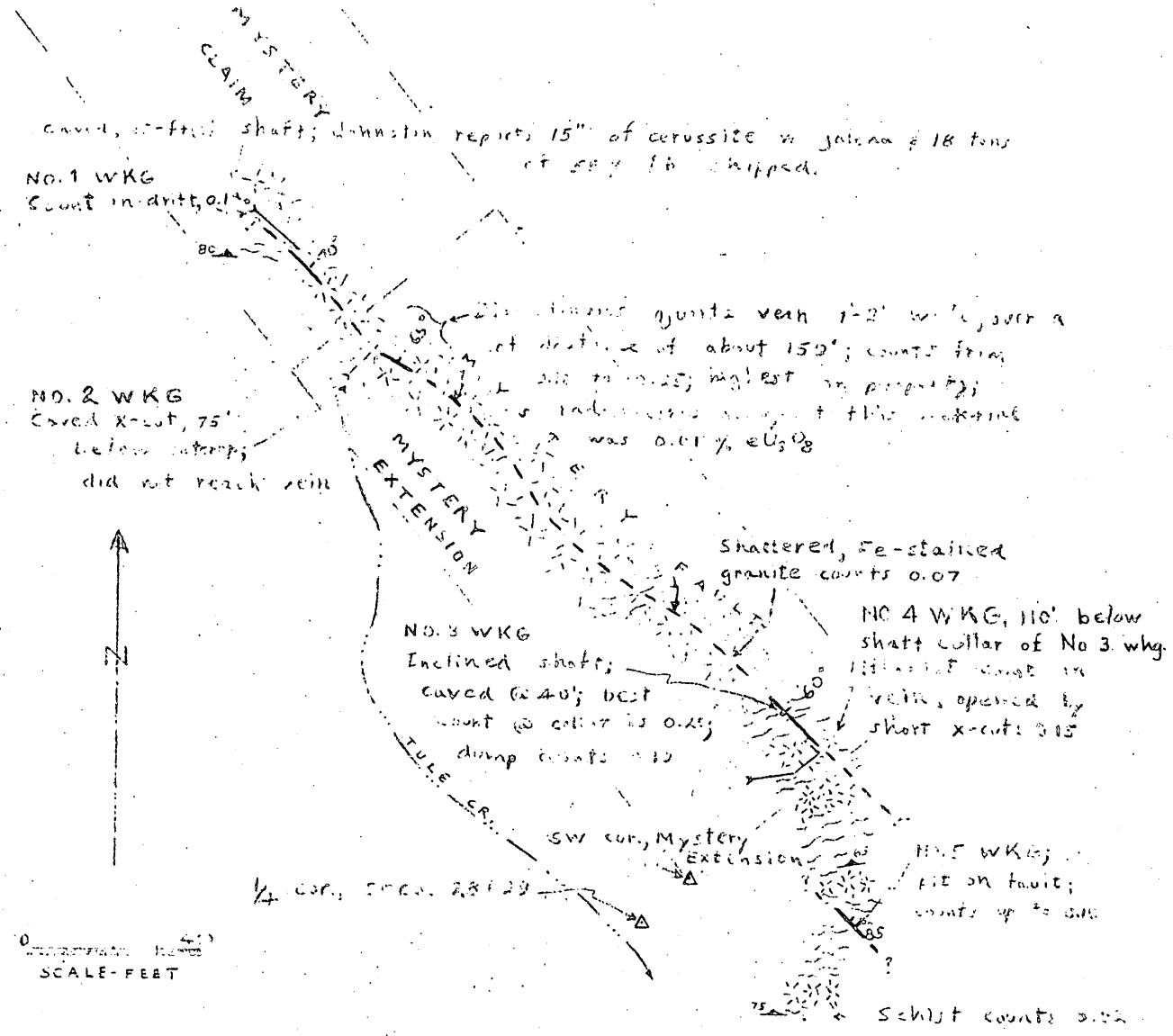
percent equivalent U_3O_8. Because of the low radiometric result, the sample was not assayed chemically. As shown in figure 2, by the lower counts, other parts of the project area are lower grade than the pit at the No. 2. The whole area must therefore be considered as far below commercial in its tungsten and uranium content.

EXPLORATION

The proposed work consists of about 800 feet of drifting south on the No. 1 adit "to where it intersects the tungsten vein #1, 2, and 3", the hypothetical vein system mentioned on page 2. Other work would consist of cleaning out the No. 1 workings, and 150 to 200 feet of additional shaft-sinking on the No. 3.

CONCLUSIONS AND RECOMMENDATIONS

No reserves of tungsten or uranium can be assigned to this property, and there seems to be no geologic basis for believing that such reserves might be found if exploration were undertaken. It is recommended, therefore, that the government not participate in this exploration project.



EXPLANATION

80 Schistosity, showing strike and dip

Precambrian schist

Precambrian pegmatitic granite

Underground workings

Claim lines, only approximately located

"Counts" are readings on .005 scale of Scintillator

Map based on Brunton traverse by L. Bryner, 9/7/55

FIG. 2 - GEOLOGIC AND CLAIM MAP, MYSTERY MINE, YAVAPAI COUNTY, ARIZONA

SMEA-2571

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

October 14, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Report of examination, DMEA Docket 3874 (Uranium-Tungsten), Louis E. Walker, Mystery Mine, Yavapai County, Arizona

Enclosed are the original and three copies of the report pertaining to the above application. The property was not examined by a Bureau of Mines engineer at this time because of a previous examination which is in agreement with the subject geologic report.

The following items are included:

(a) Summary, Conclusions and Recommendations, by Leonid Brymer, Geologist, U. S. Geological Survey
(b) Geology Examination Report, by Leonid Brymer
(c) Memoranda of transmittal and comment by John H. Faick and E. N. Harshman
(d) Memorandum By Walter R. Storms explaining why no examination was made by the Bureau

The examining geologist concludes that there is little chance for the discovery of significant reserves of tungsten or uranium by the proposed exploration, and therefore recommends that the application be denied.

We concur with this recommendation.

W. M. Treyer

By J. W. Townsend
J. W. Townsend

E. N. Harshman
E. N. Harshman

Enclosures

10/24/55

TRANSMITTED

OCT 14 1955

RECEIVED

OCT 20 1955 DMEA Date Rec'd

Box 4097
Tucson 5, Arizona

September 6, 1955

Memorandum

To : W. M. Traver, Executive Officer, DMEA Field Team, Region III

From : Superintendent, Southwest Experiment Station

Subject : Docket DMEA 3874, Louis E. Walker's Mystery Uranium Mine, Tip Top Mining District, Yavapai County, Ariz.

Leonid Bryner of the Geological Survey examined this property and is submitting his report today, recommending denial of Government exploration assistance. Because of Mr. Bryner's negative recommendation, the Bureau of Mines will not examine this property. Our L. A. Stewart examined it in 1949 for the owner, could find no uranium, and very little scheelite.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC W. M. Traver (8)
W. H. King
J. N. Faick
DMEA-3874
DF

WRStorms:frj

TRANSMITTED

OCT 14 1955

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

October 7, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3874 (Uranium-tungsten), Louis E. Walker, Mystery mine, Yavapai County, Arizona

Enclosed are the original and nine copies of a geologic report by Leonid Bryner, U. S. Geological Survey, in which denial of the subject application for exploration assistance is recommended.

No engineering report will be made.

I concur with the recommendation.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (10)

ENHarshman:arh

TRANSMITTED

OCT 14 1955

Box 4126 University Station
Tucson, Arizona

October 4, 1955

MEMORANDUM

TO: Mr. E. N. Harshman

FROM: John N. Faick

SUBJECT: DMEA 3874, Examination Report on Louis E. Walker's Mystery Mine, Yavapai County, Arizona (Uranium)

Enclosed are the original and 10 copies of a report on the above subject property by Leonid Bryner, geologist. The applicant requested Government participation in exploration for tungsten and uranium. Bryner's examination showed that tungsten is virtually non-existent and a radiometric analysis of a sample of the most radioactive material revealed only 0.01 percent equivalent U_3O_8. As geological conditions indicate that neither tungsten nor uranium is present in significant amounts, it is recommended that the application be denied. I concur with this recommendation.

John N. Faick

John N. Faick

JNF:ms

cc. Harshman (10)
Storms

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Leonid Bryner[1]

In an application to the Defense Minerals Exploration Administration dated June 24, 1955, Louis E. Walker requested government participation in an unspecified expenditure to explore for uranium and tungsten at the Mystery Mine, Yavapai County, Arizona.

The property consists of two unpatented claims known as the Mystery and the Mystery Extension. The country rock is the Precambrian Bradshaw granite. The workings are mostly on the Mystery Extension claim and consist of 3 short adits (one of them caved), two shallow shafts (both caved), and a few shallow pits. These are located on narrow discontinuous quartz veins which follow the Mystery Fault, a northwesterly-trending feature that is inferred to extend the length of the Mystery Extension, and some distance into the Mystery Claim.

Small amounts of lead ore have been extracted from the quartz veins. Apparently, in the past, coatings of scheelite, wulfenite, descloizite, and mimetite have been recognized in a few places along the veins. No tungsten minerals were seen during the examination, and the uranium that is present in the vein is in concentrations on the order of 0.01 percent equivalent U_3O_8.

The applicant proposed exploration to consist mainly of drifting along the vein by extending the most northerly adit a distance of 800 feet in a southerly direction. The target of this drifting was a hypothetical, westerly trending vein system supposed to carry tungsten and to intersect the Mystery Fault veins, but which, in the writer's opinion, does not exist on the Mystery property.

1/ Geologist, U. S. Geological Survey, Tucson, Arizona.

In view of the scarcity of tungsten and uranium on this property, and the lack of geologic justification for expecting significant quantities of these metals, denial of the MMRA application is recommended.

U. S. DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY
DEFENSE MINERALS EXPLORATION ADMINISTRATION

REGION III

GEOLOGY

EXAMINATION REPORT

DMEA 3874

LOUIS H. WALKER'S MYSTERY MINE

YAVAPAI COUNTY, ARIZONA

(Uranium, Tungsten)

By
Leonid Bryner
Geologist
U. S. Geological Survey

October 4, 1955

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
FIELD TEAM III

GEOLOGY
EXAMINATION REPORT
DMEA-3874

LOUIS E. WALKER'S MYSTERY MINE
YAVAPAI COUNTY, ARIZONA

(Uranium, Tungsten)

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PRODUCTION AND GRADE	5
EXPLORATION	6
CONCLUSIONS AND RECOMMENDATIONS	6

ILLUSTRATIONS

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Fig. 2 Geologic and Claim Map	6

INTRODUCTION

In an application to the Defense Minerals Exploration Administration dated June 24, 1955, Louis E. Walker requested government participation in an unspecified expenditure to explore for uranium and tungsten at the Mystery Mine.

The Mystery Mine is located in the northeast quarter of Section 28 and the northeast quarter of Section 29, T. 8 N., R. 1 E., Yavapai County, Arizona. An iron pipe marked "USGS 1985", and labeled as the quarter corner between sections 28 and 29, is about 150 feet southeast of the southwest corner monument of the Mystery Extension Claim (fig. 2).

The property is reached from Phoenix by State Highway 69, then by a dirt road that leaves the highway about halfway between New River and Rock Springs, and starts down the canyon of the Agua Fria River (fig. 1). A right-hand branch from this road is taken at the Ojo Benito Ranch, 12.2 miles from the highway. From the ranch the mine is 6.3 miles. It is a four-wheel-drive route, but might be negotiated by passenger car after the completion of some repair work which had just gotten under way at the time of the examination.

The property consists of two unpatented claims, the Mystery and the Mystery Extension, owned by Jim Johnston of Hayward, California. According to Johnston these claims trend northwest and are located end to end, the Mystery being to the northwest of the Mystery Extension (fig. 2). All but the most northerly workings (fig. 2) are on the Mystery Extension. The applicant holds these claims under lease with option to purchase, including owner's consent to lien.

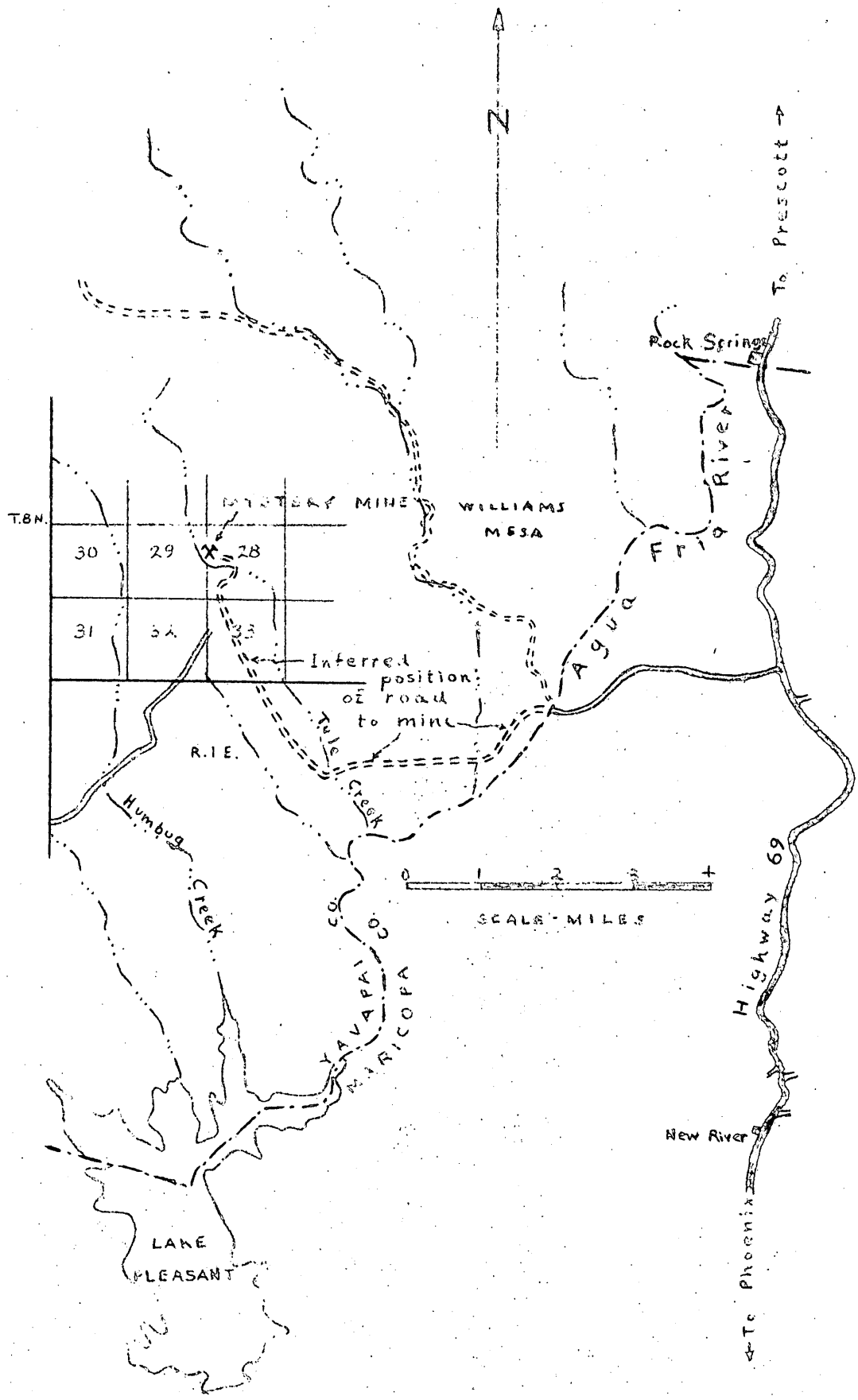


FIG. 1 - LOCATION MAP - MYSTERY MINE, ARIZ.

2MEA-3874

RECEIVED
OCT 3 0 1954

The examination was made by the writer on the afternoon of September 6 and the morning of September 7. A U. S. Bureau of Mines engineer was not available at the time, and the Bureau does not plan a later examination or report. Johnston acted as guide over the property and as the applicant's representative. The examination was conducted under the handicap of an application that was practically devoid of any pertinent information.

The application was discussed with AEC geologists in Phoenix and an unpublished U. S. Bureau of Mines report was consulted. This report by L. A. Stewart, dated May 1949, indicated that there is no radioactivity on the property but that traces of wulfenite and scheelite were seen on the hanging wall in the most northerly working (fig. 2). Johnston told the writer that there were no tungsten showings at all in the project area. Stewart's and Johnston's reports seemed to the writer to justify omitting further investigation of the tungsten resources here. From talking to Johnston, the writer concludes that the tungsten potentialities attributed by the applicant to his mine are based on an assumed extension into the project area of a westerly-trending vein system which shows wulfenite and scheelite a mile or so to the east. The writer found no persistent tungsten-bearing vein on the property. Some radioactive anomalies were recognized, but these proved to be traces that are unlikely to represent any appreciable tonnage of radioactive rock.

GEOLOGY

The Mystery claims are in an area of Precambrian Bradshaw granite. This granite is remarkably coarse-grained in the area of the claims. It fits well into the description given it by Jaggar and Palache[1] who, in describing the Bradshaw granite, say "Pegmatitic facies are extremely abundant in the great southern stock, particularly along the eastern contact, where extensive areas, practically all of pegmatite, are found." Some of the granite in the project area contains biotite books up to 3 inches in diameter. The granite also contains large to small inclusions of schist (fig. 2). The inclusions as well as their schistosity are oriented nearly due east. Dips range from almost vertical to about 65 degrees north (fig. 2). The granite as well as the schist contains isolated lenses of coarsely crystalline quartz with large clots or crystals of black, opaque tourmaline. The most prominent structural feature is the so-called Mystery Fault, a northwesterly fault which can be recognized in places over a distance of 2,000 or more feet. Where this fault cuts schist inclusions it is easily recognized by the gouge and the distorted schistosity, but in the granite its expression consists only of an inconspicuous shattering more or less parallel to its direction. The continuity of the fault as shown in figure 2 is an inferred rather than an observed feature.

The workings consist of three short adits (one of them caved), two shallow shafts (both caved), and a few shallow pits located either near the south or north ends of the fault as shown in figure 2. Numbers 1 to 5 have been assigned to these workings for the purposes of this report.

1/ Jaggar, T.A., jr. and Palache, Charles, U.S.Geol.Survey Atlas, Bradshaw Mountains folio (No.126), 1905.

The deposit was opened originally for lead and perhaps also silver and gold. Stewart, in the unpublished report mentioned on page 2, found coatings of mimetite, descloizite, wulfenite, and scheelite on the dump of the No. 1 working. He also found hyalite opal, which has been mistaken for scheelite. This dump has, since then, been almost completely eroded away. A small amount of the lead ore that was shipped from the caved shaft near the adit portal is reported by Johnston to have contained cerussite and galena. None of these minerals except wulfenite on the dump of the No. 5 working was seen by the writer. No tungsten or uranium minerals were seen either, with the possible exception of a speck of yellow on some vein quartz from the No. 2 working. This might be a secondary uranium mineral. N. R. Rayner of the AEC Phoenix office[1] stated that small quantities of uranium have been found in veins associated with stibnite in this district. But the writer recognized no stibnite in the project area.

The chief metallics seen during the examination were oxides of iron, that is, hematite, limonite and goethite. These minerals, together with copper oxides, are in quartz veins which follow the Mystery Fault.

The quartz occurs as intergrowths of coarse, subhedral crystals. Hematite, which seems to be the predominant iron mineral, fills the spaces between quartz crystals, and, judging by the irregular boundaries separating the two minerals, the hematite has partly replaced the quartz. The veins show crude banding in places and, along some of the banding, cavities lined with radiating needles of goethite.

1/ Oral communication, August 29, 1955.

The quartz veins are discontinuous along the Mystery Fault. The longest vein, about 150 feet in outcrop length, is in the slope above the caved adit of the No. 2 working. Probably not over 400 feet of vein occurs in a fault length of 2000 feet. The veins are 1/2 to 1-1/2 feet in average width.

Anomalous radioactivity, as shown in figure 2, was detected by scintillator in several places along the Mystery fault, but this radioactivity is of a very low order of magnitude. The radioactivity is mainly in parts of the veins along the fault where small amounts of lead ore were extracted. The veins in these places contain iron oxides, copper oxides, and possibly, though the writer did not recognize them in place, lead minerals.

PRODUCTION AND GRADE

The only production information available was Johnston's information. This is to the effect that the area was primarily a lead producer; that from the caved shaft at the No. 1 working 18 tons of 55 percent lead ore were extracted from a 15-inch band of cerussite and galena; and that a small tonnage of 1-ounce gold-, and 8 percent lead-ore was shipped from the inclined shaft at the No. 3 working. This last is an item reported to Johnston by A. L. Flagg.

The examination showed that tungsten ore is virtually non-existent in the present workings and outcrops, and that the uranium is in "trace" concentrations. A sample was taken of rock extracted from, and piled near a pit above the No. 2 working, where the highest radioactivity was found, and this sample was radiometrically assayed by the U. S. Bureau of Mines with a result of 0.01

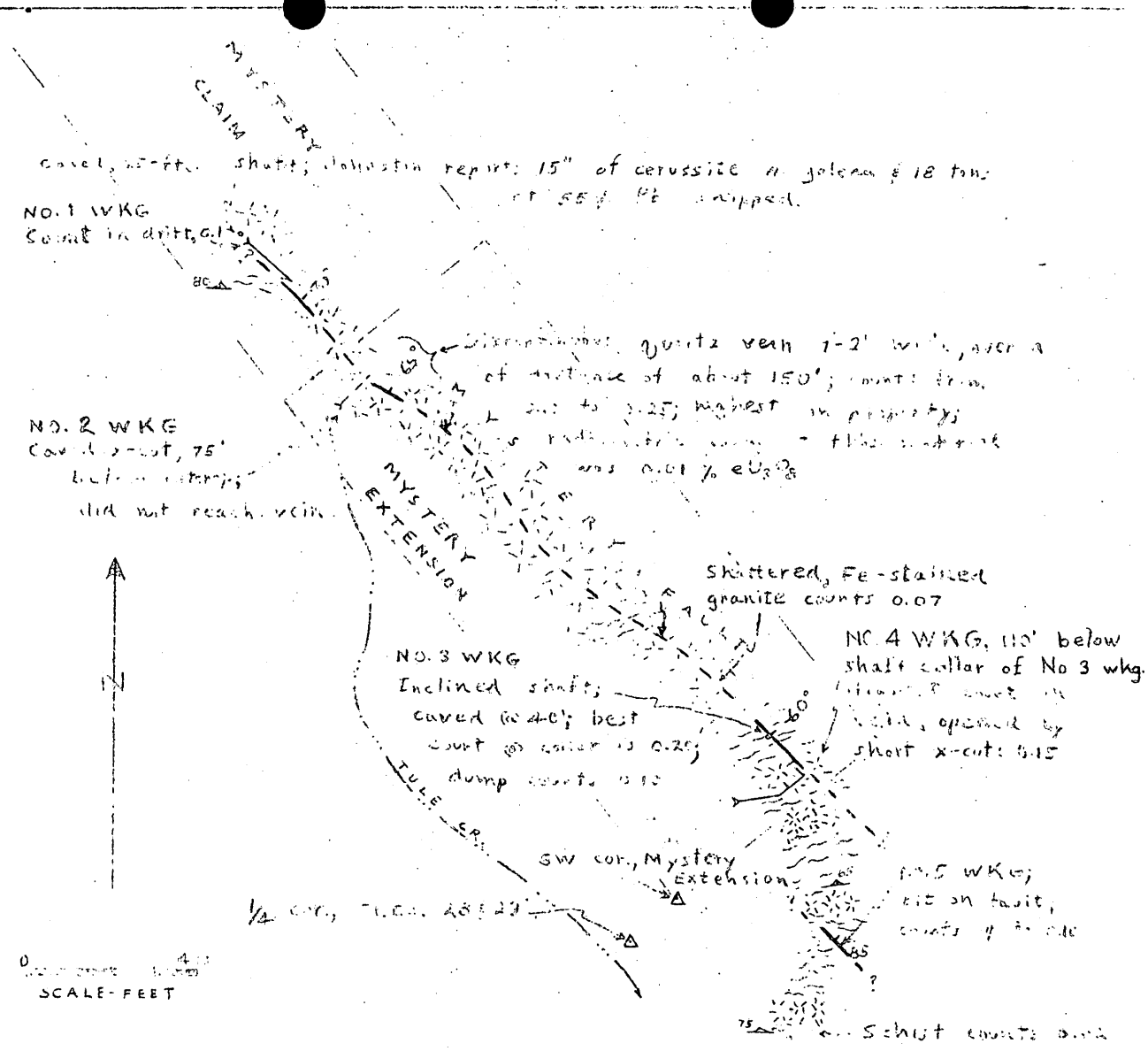
percent equivalent U_3O_8. Because of the low radiometric result, the sample was not assayed chemically. As shown in figure 2, by the lower counts, other parts of the project area are lower grade than the pit at the No. 2. The whole area must therefore be considered as far below commercial in its tungsten and uranium content.

EXPLORATION

The proposed work consists of about 800 feet of drifting south on the No. 1 adit "to where it intersects the tungsten vein #1, 2, and 3", the hypothetical vein system mentioned on page 2. Other work would consist of cleaning out the No. 1 workings, and 150 to 200 feet of additional shaft-sinking on the No. 3.

CONCLUSIONS AND RECOMMENDATIONS

No reserves of tungsten or uranium can be assigned to this property, and there seems to be no geologic basis for believing that such reserves might be found if exploration were undertaken. It is recommended, therefore, that the government not participate in this exploration project.



EXPLANATION

Schistosity, showing strike and dip

Precambrian schist

Precambrian pegmatitic granite

Underground workings

Claim lines, only approximately located

"Counts" are readings on 0.05 scale of Scintillator

Map based on Brunton traverse by L. Bryner, 9/[illegible]/55

FIG. 2 - GEOLOGIC AND CLAIM MAP, MYSTERY MINE, YAVAPAI COUNTY, ARIZONA.

DMEA-3874

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
AUG - 4 1955

224 New Customhouse
Denver 2, Colorado

July 29, 1955

Memorandum

To: W. R. Storms W/Brochure
J. N. Faick

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3874 (Uranium-Tungsten), Louis Edgar Walker, Mystery Mine, Yavapai County, Arizona

Enclosed is the subject inadequate application on the subject docket.

A field examination and suitable report are requested.

Enclosed for your information is a copy of a letter from the Chairman of the Operating Committee with attached memoranda from the Uranium Commodity Committee.

W. M. Traver

W. M. Traver

Enclosures

HMC:sr

cc Subject
Chairman Op. Comm. (2)
Harshman w/enc WO letters
Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
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HMC:sr

cc Subject
Chairman Op. Comm. (2)
Harshman w/enc WO letters
Chron

Crawford

(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED

JUN 2 2 1955

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 3874
Metal or Mineral Uranium-Tungsten
Date Received 6-28-55
Estimated Cost No amount
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: LOUIS EDGAR WALKER, sole operator
5954 MacArthur Blvd.,
Oakland, California

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Mystery Mine and Mystery Extension recorded County Seat, Yavapia County, Arizona (Mystery) Book 157, page 304, (Extension) Book 157, page 305.

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee with option to purchase including owner's consent to lien

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Uranium and Tungsten

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 120 days and be completed within 24 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes

(*b*) How do you propose to furnish your share of the costs?

[XX] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated 24 June, 1955

Louis Walker
(Applicant)

By

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

4. PHYSICAL DESCRIPTION: Sometime in the past, I understand a shaft has been sunk on the vein to an approximate depth of 30 feet in the creek bottom which is now sluffed full. A drift of approximately 100 feet has been run but which is now caved and faulted and a winze of unknown depth which is now caved, has been sunk.
   (b) Past production and ore reserves unknown.
   (c) Mystery is a strong mineralized vein cutting numerous smaller veins an analysis of which is included and made a part of this application showing an assay containing 0.005% of Uranium oxide amongst other minerals.
   (d) The property lies about 50 miles from Phoenix, 35 miles of which are paved State Highway, the balance dirt roads. A small amount of road repair will be necessary before exploration work should start.
   (e) The Mystery vein makes sufficient water for mining needs while manpower, materials, etc., are readily available in the area.

5. THE EXPLORATION PROJECT:
   (b) I propose drifting on the Mystery to where it intersects the Tungsten vein #1, 2, and 3 a distance of approximately 800 feet. This includes cleaning out the present caved drift and I should also like to clean out the caved winze to check the formation at the bottom. Secondly, the present owner believes that the filled shaft should be cleared and it should be sunk on to 150 or 200 feet in depth.
   (d) I am at the present time engaged in the Real Estate and Insurance business in Oakland and my mining experience has been limited to financing and acquiring various mining properties however, the owner of the property who has had 25 years mining experience in various capacities, will be on the property representing my and his interests.

6. ESTIMATE OF COSTS:
   (a) I intend all work to be on a contract basis and although no contracts have yet been let, I have a tentative understanding with a contractor that he can drift in this ground at $44.00 a foot and sink at $75.00.
   (b) Including in contract.
   (c) Included in contract.
   (d) Included in contract.
   (e) Included in contract.
   (f) None needed.
   (g) Included in contract.
   (h) None foreseen.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Surname 700
A. G. Keating
Ellis
Kilcoyne
Geehan
Martin
Hoffman

Mr. Louis E. Walker
5954 MacArthur Blvd.
Oakland, California

JUL 25 1955

Re: Docket No. DMEA-3874
(Uranium-tungsten)
Mystery Mine
Yavapai County, Arizona

Dear Mr. Walker:

The application for assistance in exploring the subject property in Yavapai County, Arizona, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred for review to the Executive Officer of Region III at the following address:

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado.

The Regional Office will communicate with you in regard to your project if additional information is required.

Sincerely yours,

C. O. Mittendorf

Administrator

AGKeating:am
7-20-55
cc to: Admr. Reading File
Docket
Code 700
Mr. Keating
DMEA Field Team, Region III(2)

R.C.S.

700

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Surname copy
A.G. Keating
Ellis
Martin
Johnson

JUL 2 5 1955

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-3874
(Uranium-tungsten)
Louis E. Walker
Mystery Mine
Yavapai County, Arizona

Dear Mr. Traver:

The subject application is being referred to Region III Field Team for review and recommendation. A copy of the application was forwarded to your office on June 28.

Enclosed are copies of memoranda from Mr. J. E. Crawford, dated July 6, and Mr. N. E. Nelson, dated July 12, 1955, members of the Uranium Commodity Committee.

You will note that the application is deficient in the data required for its proper consideration. It appears that any additional information the Applicant might be able to supply would be insufficient. However, it is possible that the Field Team may have knowledge of the property and information not available to us in Washington.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (HB)

Enclosures

APPROVED:

/s/ Robert W. Geehan (HB)
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey (HB)

AGKeating/am/gla
(7-20-55) 7-21-55
cc to: Admr. Reading File
Operating Committee
Docket ✓
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5222
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Keating

A.G.K.

7/13/55 gla

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
JUL 13 1955

July 12, 1955

Re: DMEA 3874
Louis Edgar Walker
Mystery Mine
Yavapia Co., Arizona
Uranium-tungsten

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Application.

The applicant should be asked to furnish more information concerning this possible project and a program. I have no information concerning a tungsten bearing Mystery vein.

Probably the Field Team knows enough about the Mystery, if there is one, to recommend the denial which the application, as it now stands, appears to deserve.

A referral to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
JUL 13 1955

July 12, 1955

Re: DMEA 3074
Louis Edgar Walker
Mystery Mine
Yavapai Co., Arizona
Uranium-tungsten

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A referral to the Field Team is recommended.

N. E. Nelson

NENelson:iml
G-7/12/55

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. R. Crawford, 3641
J. O. Hosted, 3210

7/7/55 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED
JUL - 7 1955

July 6, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: Bureau of Mines Member
Uranium Commodity Committee

Subject: Application for assistance, DMEA Docket 3874, Mystery Mine, Louis Edgar Walker - sole operator, Yavapia County, Arizona

I have reviewed the attached application, Mystery Mine, DMEA Docket 3874; and I have discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

Based on information contained in the application, we recommend that the application be denied insofar as uranium is concerned.

John E. Crawford

John E. Crawford

Attachment

June 28, 1955
Subject: DMEA-3874
Re: Exploration Assistance

Louis E. Walker
5954 MacArthur Blvd.
Oakland, Calif.

Dear Mr. Walker:

The receipt of your application dated June 24, 1955 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3874 and referred to the Rare and Miscellaneous Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED
JUN 2 1955

555 Battery
Gus 6-3111

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 3874
Metal or Mineral Uranium-tungsten
Date Received 6-28-55
Estimated Cost No amount
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: LOUIS EDGAR WALKER, sole operator
5954 MacArthur Blvd.,
Oakland, California

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

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(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee with option to purchase including owner's consent to lien

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(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes

(*b*) How do you propose to furnish your share of the costs?

[XX] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated 29 June, 1955

(Applicant)

By

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

4. PHYSICAL DESCRIPTION: Sometime in the past, I understand a shaft has been sunk on the vein to an approximate depth of 30 feet in the creek bottom which is now sluffed full. A drift of approximately 100 feet has been run but which is now caved and faulted and a winze of unknown depth which is now caved, has been sunk.
   (b) Past production and ore reserves unknown.
   (c) Mystery is a strong mineralized vein cutting numerous smaller veins an analysis of which is included and made a part of this application showing an assay containing 0.005% of Uranium oxide amongst other minerals.
   (d) The property lies about 50 miles from Phoenix, 35 miles of which are paved State Highway, the balance dirt roads. A small amount of road repair will be necessary before exploration work should start.
   (e) The Mystery vein makes sufficient water for mining needs while manpower, materials, etc., are readily available in the area.

5. THE EXPLORATION PROJECT:
   (b) I propose drifting on the Mystery to where it intersects the Tungsten vein #1, 2, and 3 a distance of approximately 800 feet. This includes cleaning out the present caved drift and I should also like to clean out the caved winze to check the formation at the bottom. Secondly, the present owner believes that the filled shaft should be cleared and it should be sunk on to 150 or 200 feet in depth.
   (d) I am at the present time engaged in the Real Estate and Insurance business in Oakland and my mining experience has been limited to financing and acquiring various mining properties however, the owner of the property who has had 25 years mining experience in various capacities, will be on the property representing my and his interests.

6. ESTIMATE OF COSTS:
   (a) I intend all work to be on a contract basis and although no contracts have yet been let, I have a tentative understanding with a contractor that he can drift in this ground at $44.00 a foot and sink at $75.00.
   (b) Including in contract.
   (c) Included in contract.
   (d) Included in contract.
   (e) Included in contract.
   (f) None needed.
   (g) Included in contract.
   (h) None foreseen.

REPORT OF ASSAY

ABBOT A. HANKS, INC.

ASSAYERS, CHEMISTS, ENGINEERS
624 SACRAMENTO STREET
SAN FRANCISCO.

May 18, 1955

DEPOSITED BY Louis Walker
5954 MacArthur Blvd.,
Oakland, California

SAMPLE OF ORE

Labty. No.	Mark	GOLD, per ton of 2,000 lbs.		SILVER, per ton of 2,000 lbs.		Percentages
		Troy Ounces	Value @ $35.00 oz.	Troy Ounces	Value @	
					$	URANIUM OXIDE
82556						0.005 %

ABBOT A. HANKS, INC.
Original Signed by
MARTIN P. QUIST

bob

LABORATORY REPORT
ABBOT A. HANKS, INC.
ENGINEERS, ASSAYERS, CHEMISTS, METALLURGISTS
CONSULTING - TESTING - INSPECTING
ESTABLISHED 1866
624 SACRAMENTO STREET
SAN FRANCISCO 11, CALIFORNIA
TELEPHONE GARFIELD 1-1697

Lab. No. 82556 Date May 18, 1955

Submitted by Louis Walker
5954 MacArthur Blvd.,
Oakland, California

Sample Mark —

QUALITATIVE SPECTROGRAPHIC ANALYSIS
Metals Found and Estimated Percentage Range

Less than .03%	.03% to .30%	.30% to 3%	3% to 30%	30% to 100%
Sodium Potassium Titanium Bismuth Nickel Cobalt Strontium Vanadium Chromium Silver	Zinc Aluminum Calcium Magnesium Manganese Molybdenum	Copper Arsenic	Iron Silicon Lead	

Remarks

RESPECTFULLY SUBMITTED,
ABBOT A. HANKS, INC.
Original Signed by
By MARTIN P. QUIST
Spectro-Chemist

bob

FORM A-5

MINING LEASE AND PURCHASE OPTION
with
Owner's Consent To Lien

THIS MEMORANDUM OF AGREEMENT made and entered into this 1st day of June, 1955, by and between JAMES B. JOHNSTON AND GLADYS JOHNSTON, hereinafter termed First Party, and LOUIS EDGAR WALKER, hereinafter termed Second Party,

W I T N E S S E T H

First Party hereby agrees to sell to Second Party for and in consideration of the rents, royalties, covenants and agreements hereinafter contained, that certain property belonging to First Party and the minerals rights pertaining thereto, situated in the County of Yavapai, State of Arizona, and more particularly described as follows, to-wit:

Mystery Mine and Mystery Extension recorded County Seat, Yavapia County, Arizona (Mystery) Book 157, page 304, (Extension) Book 157, page 305.

TO HAVE AND TO HOLD under the following express terms and conditions for a period of five (5) years, to-wit: from the 1st day of June, 1955 to the 1st day of June 1960.

1. Second Party shall have the right, and is hereby granted the right to the extension of this agreement for five (5) additional years after the specified term hereof, at his option, provided Second Party shall give written notice of his intention to exercise said option at least thirty (30) days prior to the end of the term hereof, such notice to be given to First Party at its address herein designated, or such other place as may hereafter designated, in writing, by personal delivery or by registered mail, with postage prepaid.

2. Second Party shall have the exclusive right to the possession of the above described premises and the exclusive right to prospect and mine for Uranium and Tungsten ores contained in said premises (and other valuable metals

or minerals), take the product thereof into possession, sell the same and account for the proceeds, subject to rent or royalty herein provided for.

3. Second Party agrees to work said premises in a good minerlike manner, with due regard to the preservation thereof, as a workable mine, and agrees not to make or suffer any waste or strip thereof, provided however, that the term "waste or strip" shall not be deemed to include reasonable use, depletion or wear thereof incident to the proper working thereof under the terms of this agreement.

4. Second Party shall comply with all the safety and accident laws or other laws pertaining to mining, of the State of Arizona, and the United States, in the working of said premises.

5. Second Party agrees to make payment to the First Party during the term of this agreement and any extension of extensions thereof, expressly as follows, until the entire purchase price of Fifty thousand ($50,000) dollars, legal tender has been received by the First Party under the following terms and conditions:

(a) Twenty-five (25) persent of the net proceeds received from the sale of all uranium and tungsten ores and or other valuable minerals or metals produced from said premises until said purchase price of Fifty thousand dollars ($50,000) has been paid. Payments to be computed and made on the 1st day of each calendar month for proceeds received by Second Party during the preceding calendar month.

6. All mills, equipment, machinery or other supplies furnished by Second Party, to or for the use of said premises, shall remain the property of the Second Party and may be removed by said Second Party in the event default in this agreement except in such case as may impair, mar or react to the value or safety of said premises in which case said equipement or supplies shall

remain on said premises and become the property of First Party.

7. All payments for rent or royalty or purchase shall be made to First Party at 386 Smalley Avenue, Hayward, California, or such other place as First Party may in writing designate from time to time.

8. Second Party shall post on the property a Notice of Non-Responsibility furnished by First Party and shall continue to keep the same posted during the life of this agreement.

9. Second Party agrees, during the life of this agreement that it will not permit any liens, except, it being understood by the Party of the First Part and the Party of the Second Part that loan is to be solicited by Party of the Second Part from the U.S. Government under the Defense Minerals Exploration Program, and Party of the First Part understands that if the Government enters into contract with Party of the Second Part, any production will be subject to the Governments royalty and if the Government makes a certification of discovery or development under the provisions of the contract all of the production will be subject to the Governments percentage royalty;

10. Second Party agrees to keep true books of account, to be open to the inspection of First Party at all reasonable times, showing the quantities and values of the ore mined, and the proceeds derived therefrom. First Party shall have access to said premises at all reasonable times, for the purposes of inspecting the same.

11. Second Party agrees to furnish to First Party copies of all documents showing the value of ores mined, milled or otherwise treated, the value of the mineral product therefrom, and the proceeds received from the sale thereof.

12. Second Party agrees to furnish to First Party, at First Party's request, a complete report of progress and development made by Second Party upon

said premises, and will furnish to First Party, at First Party's request, a copy of all maps, surveys, sample data, assays taken, tests made, or other data which may be accumulated from time to time, relating to the mining operations of Secont Party upon the demised properties.

13. It is also agreed that at its option, and upon thirty (30) days written notice, the Second Party may at any time terminate and/or cancel this agreement without further liability on its part, except to surrender said premises to the First Party and to pay any accrued royalties not then paid.

14. Upon the termination of this agreement prior to final sale, Second Party shall have the right within a reasonable time thereafter to remove from the demised premises all tools, machinery, supplies, equipment and personal property of whatsoever character which it may have installed or placed thereon, but buildings or permanent structures are excepted herefrom and shall remain on the property of the First Party.

15. Each and all of the terms, conditions, covenants and priviledges herein mentioned, shall inure to the benefit of, and be binding upon First Party, its successors and assigns, and the Second Party, its successors and assigns.

16. It is further agreed that should this contract be invalidated for any reason, all water rights will remain in possession of Jim Johnston, Party of the First Part. That no mining operation will be undertaken without Party of the First Part passing on such operation so as not to knowledgeably jeopardise that present flow of water.

IN WITNESS WHEREOF the parties hereto have executed these presents the day and year first above written, in triplicate.

James B. Johnston

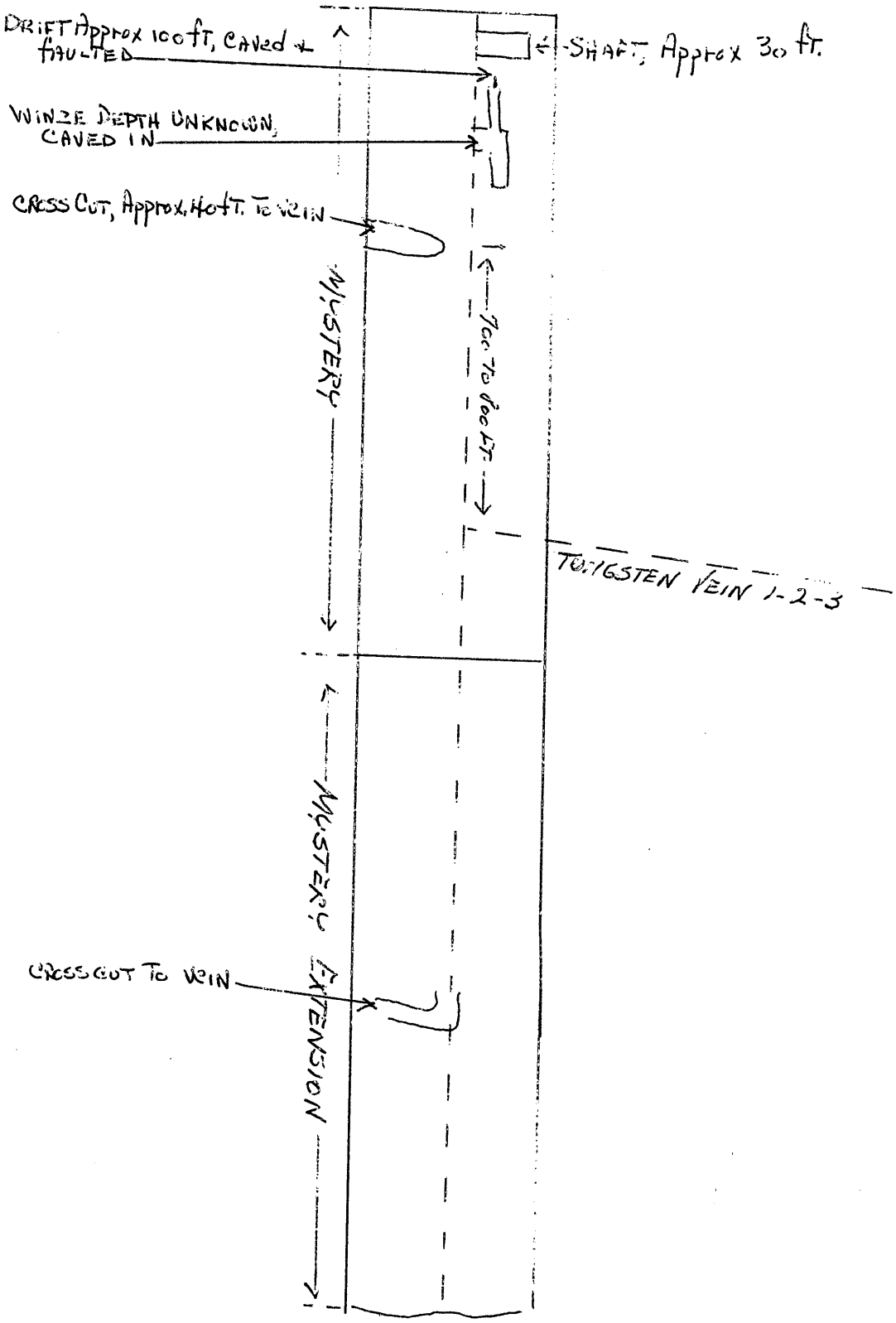
JAMES B. JOHNSTON, First Party

GLADYS JOHNSTON, First Party

Louis Edgar Walker

LOUIS EDGAR WALKER, Second Party.

WITNESS: _____


DRIFT Approx 100 ft, CAVED + FAULTED
SHAFT, Approx 30 ft.
WINZE DEPTH UNKNOWN, CAVED IN
CROSS CUT, Approx. 40 ft. To VEIN
MYSTERY
70 To 100 FT.
TUNGSTEN VEIN 1-2-3
MYSTERY EXTENSION
CROSS CUT TO VEIN