EMBA _____

DOCKET INDEX

ACTION DOCUMENTS

1. APPLICATION DATE RECEIVED

2. CONTRACT 1059 DATE 31 JAN 1957

3. TERMINATION AGREEMENT: DATE

   a. Mutual (with/without repayment provision).
   b. Unilateral.
   c. Amendment with automatic termination clause and with/without repayment provision.

4. CERTIFICATION DATE

5. AUDIT REPORT DATE

6. AMENDMENTS - NUMBERS DATE

DMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

DMEA NO. 4343

Application (Denied
(Withdrawn
(After disposition, delete items not applicable)

Contract (Terminated - not Certified
(Cancelled
(Terminated - Certified
(Royalty Agreement

This is the official contract file containing all official records of the project. The records contained in the files are checked and are arranged in this order:

**Left Side**

Interim Royalty Audits
Reports of Royalty Review
Certification of Discovery
Certificate of Audit (Final)
Interim Audit(s)
Report of Review
Termination Notice or Agreement
Recision Notice
Assignment of Contract
Contract Amendments (latest on top)
Contract with all exhibits and annexes
Owner's Consent to Lien
Subordination Agreement
Leases and assignments of leases
✓ Application and attachments
(3) ✓ Envelope for maps

**Right Side**

Project summary
Work completed analysis
All other material is filed in chronological order with correspondence including the following reports as checked:

Final Field Team Report (Tab)
Operator's Final Report
(2R) Interim Reports
(2R) Operator's monthly reports and all attachments (latest on top)
✓ On-site Exam Report(s) (Tab)
(4) Settlement Sheets

When the volume of records is expected to warrant additional folders, or when convenience of reference warrants separate folders for certain records, they should be set up in this order:

**Left Side**

Folder No. 2: (In chron. order) Interim Summary Reports by W. O. Engineers

**Right Side**

Operator's Semi-Annual Report for Certified Project, Field Team Interim Reports, Operator's Monthly Report with transmittal, narrative, maps, and Field Team review.

Folder No. 3: Maps (Use pocket folder or envelope. Fold maps with title block out and show reference to related document or correspondence.)

Folder No. 4: Settlement Sheets

Folder No. 5: Drill Logs

9775

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

RECEIVED
JUN 18 1956

June 15, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Copper) Tuab Mineral, Corp. (San Juan Mine), Graham County, Arizona

Enclosed are three copies of the subject application in the amount of $32,949.00. One copy of the application is being retained in our file.

The Applicant submitted no copies of deeds conveying the 52 Blue Bird claims to Tuab Mineral Corp. The H. Grattan Lynch Report, which accompanies the application, states: "The titles to the ten patented claims are in the name of Ralph H. Pfeffer".

No drilling bids were furnished by the Applicant to support his estimate of drilling costs.

DMEA Field Team, Region III

By W. M. Traver
Executive Officer

Enclosures

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 18 1956

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

DMEA
Date Rec'd. JUN 14 1956
BUREAU OF MINES
Denver, Colorado

*Not to be filled in by applicant*

Docket No. DMEA-4343
Metal or Mineral COPPER
Date Received 6/18/56
Estimated Cost $32,949.00
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: TUAB MINERAL CORP., an Arizona corporation; John W. Bibb Jr.-Pres.; 2517 E. Glenn, Tucson, Ariz.; V. P.-Charles Steen, Moab, Utah; Bert A. Gibbs, V. P., 4117 E. Waverly, Tucson, Ariz.; Hymen D. Goldberg, Sec-Treas., 201 N. Stone, Tucson, Ariz.; Mitchell Melich Asst. Sec-Treas., Moab, U.

(*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 San Juan mining claims, 9 patented claims; Blue Bird Nos. 1 thru 52 unpatented mining claims; all in Lone Star mining district, Graham County, Arizona

(*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

(*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 none

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

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 Copper

(*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 60 days and be completed within 6 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)?

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

[X] 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 April, 1956

TUAB MINERAL CORP.
(Applicant)

By John W. Bibb, Jr.
John W. Bibb, Jr., President

**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

ALUE BIRD Mining Claims Recorded as follows by the County Recorder of Graham County, Arizona:

RECEIVED
JUN 18 1956

| Claim No. | Docket | Page | Claim No. | Docket | Page |
|---|---|---|---|---|---|
| 1 | 34 | 511 | 27 | 34 | 568 |
| 2 | 34 | 512 | 28 | 34 | 569 |
| 3 | 34 | 513 | 29 | 34 | 570 |
| 4 | 34 | 514 | 30 | 35 | 82 |
| 5 | 34 | 515 | 31 | 35 | 83 |
| 6 | 34 | 516 | 32 | 35 | 84 |
| 7 | 34 | 517 | 33 | 35 | 85 |
| 8 | 34 | 518 | 34 | 35 | 86 |
| 9 | 34 | 519 | 35 | 35 | 87 |
| 10 | 34 | 520 | 36 | 36 | 151 |
| 11 | 34 | 521 | 37 | 38 | 165 |
| 12 | 34 | 522 | 38 | 37 | 457 |
| 13 | 34 | 523 | 39 | 37 | 458 |
| 14 | 34 | 524 | 40 | 37 | 459 |
| 15 | 34 | 525 | 41 | 37 | 460 |
| 16 | 34 | 526 | 42 | 37 | 461 |
| 17 | 34 | 527 | 43 | 37 | 462 |
| 18 | 34 | 559 | 44 | 37 | 463 |
| 19 | 34 | 560 | 45 | 37 | 464 |
| 20 | 34 | 561 | 46 | 37 | 465 |
| 21 | 34 | 562 | 47 | 38 | 166 |
| 22 | 34 | 563 | 48 | 38 | 167 |
| 23 | 34 | 564 | 49 | 37 | 466 |
| 24 | 34 | 565 | 50 | 37 | 467 |
| 25 | 34 | 566 | 51 | 37 | 468 |
| 26 | 34 | 567 | 52 | 37 | 469 |

Claims numbered 1 through 36 were conveyed by W. D. Roper to Bert A. Gibbs by deed recorded in Docket 36, page 192, and were conveyed by Bert A. Gibbs and John W. Bibb, Jr. to Tuab Mineral Corp. by deed recorded in Docket 37 at page 261.

Blue Bird No. 37 through 52 were conveyed by Bert A. Gibbs and John W. Bibb, Jr. to Tuab Mineral Corp. by deed recorded in Docket 38 at page 281.

ARTICLES 4, 5, 6, and 7

APPLICATION FOR AID IN AN EXPLORATION PROJECT
DEFENSE MINERALS EXPLORATION ADMINISTRATION

## ARTICLE IV. PHYSICAL DESCRIPTION

### Section (a) Previous Operations:

Practically all the development and production on the San Juan property took place prior to World War I. Most of the old workings are either flooded or caved, and thus inaccessible, but apparently there is one main shaft, reported to be 370 ft. deep, and at least four additional shafts or winzes of unknown depth. A report prepared by H. Gretton Lynch in 1951 states that maps of the property made in 1915 show a 130 ft. level with 700 ft. of drifts and crosscuts and a 230 ft. level with 320 ft. of drifts and crosscuts. There is a 140 ft. crosscut that is in good repair entering the hill about 50 ft. north of the old mill site. It was driven easterly to cut the ore body at depth, but was stopped just as higher grade copper mineralization was encountered. A sample cut across the face reportedly assays 2% copper.

Surface development consists of numerous pits and trenches in addition to open stopes that were worked to the surface from below. Surface croppings of the richer veins were stripped to depths ranging from 5 to 30 ft. Where major vein intersections occurred, the wall rock was mined, resulting in irregularly shaped pits.

In recent years, several attempts have been made to sample the exposed portions of the oxidized zone. Surface sampling was evidently confined to the trenches, pits, and shallow shafts along the veins so is not representative of the deposit as a whole if block caving or open pit mining is to be considered.

One drilling program of eight churn drill holes sampled the deposit to depths ranging from 200 to 500 ft. Location of these holes on the property is shown in Fig. 1.

No mining or exploration operations are being conducted upon the property at the present time.

There are no facilities or equipment on the property.

Section (b) Past and Present Production and Ore Reserves:

Records showing past production are not available. However, the old workings and the remaining portions of the tailing pond indicate a production and treatment of many thousands of tons of selectively mined ore over a period of several years.

There is no present production from the property.

Estimates of ore reserves are given in the attached engineer's report and also in Fig. 2 which shows the results of the churn drilling program. Estimates range from about 1 1/2 million to 5 million tons of rock of from 1% to 3% copper content.

Section (c) Geology:

The San Juan Mining property, consisting of 61 contigious claims in Section 2, T. 6 S., R. 26 E., and Section 35, T. 5 S., R. 26 E., is located 18 miles southwest of Morenci, Arizona, the site of the second largest open pit copper mine in the United States. The mining centers of Globe, Douglas, and Miami are all within a radius of 125 miles from the San Juan claims.

Exposed mineralization on the property is practically all limited to the Poorman claim. The zone of heaviest mineralization is along the south edge of a plug of quartz monzonite porphyry that has intruded flat lying volcanics. The porphyry and surrounding rocks have been shattered by two systems of fractures, one striking north easterly and dipping from 55° southeast to vertical, and the other striking northwesterly and dipping from 65° to the southwest to vertical. The fractures are from a few inches to 8 ft. in width and are filled with ore grade material. The rock between and around the major fractures is shattered and contains inumerable small veins and veinlets of copper oxides and sulfides.

The highly mineralized zone has been developed over an area of approximately

600 by 300 ft. Surface indications are such that fairly strong mineralization may extend for twice the above length.

Figure 3 is a geologic and topographic map of the area of heaviest mineralization.

The reason for wishing to explore this deposit by core drilling is to determine the size and grade of the deposit, and if warranted by drilling results, to start mining operations.

Section (d) Accessibility of Project:

The property is easily accessible in the low foothills of the Gila Mountains, 9 miles north of Safford, Graham County, Arizona. From Safford, the property is reached by traveling over 2 miles of blacktop road and 7 miles of easily maintained dirt road that has no steep grades. Safford is the county seat of Graham County and is served by a main line of the southern Pacific Railroad.

Section (e) Manpower, Water, and Power:

Safford has a population of 3800 and the mining centers of Globe, Douglas, Miami, and Morenci are within a radius of 125 miles. It would be possible to obtain manpower, materials, supplies and equipment from these towns in the event a mining operation is justified by drilling results. The property is within commuting distance of Safford, so housing at the claims would not be necessary.

Water for drilling could possibly be pumped from the old mine workings. The water level is about 50ft. below the collar of the main shaft. Two other possibilities are to haul water by tank truck or develop a small spring that is approximately 1 mile north of the property.

Electric power is not available at the property, but if needed for the drilling program, approximately 10 miles of power line would be necessary to connect with existing power sources.

## ARTICLE V. THE EXPLORATION PROJECT

### Section (a) Purpose:

The purpose of the project is to determine by exploratory drilling whether or not a commercial ore body of copper minerals is existent on the San Juan property.

### Section (b) Proposed Work:

The proposed drilling program will consist of 5 drill holes totaling 3000 ft. of core drilling of AX size .

Proposed length of each hole follows:

| | |
|---|---|
| Hole 1 | 700 ft. |
| Hole 2 | 600 ft. |
| Hole 3 | 500 ft. |
| Hole 4 | 700 ft. |
| Hole 5 | 500 ft. |
| Total | 3000 ft. |

The location and direction of the proposed holes can be seen in Figs. 3 and 4.

Because of the near vertical nature of the mineralized veins, the drill holes will be put down at a 45° angle so that the veins will be cut and not followed by the drill holes, thus eliminating the risk of obtaining exaggerated mineral content in the core.

All drilling will be conducted in a manner to comply with best drilling practices.

### Section (c) Length of Project:

The work will start within 60 days and be completed within six months from the date of an exploration project contract.

### Section (d) Operating Experience and Background of Applicant:

The Tuab Mineral Corporation, 201 North Stone Ave., Tucson, Arizona, is a stockholding firm formed in February of 1956. The officers of the firm are as follows:

J.W. Bibb, Jr., President, Charles A. Steen, Vice President, B.A. Gibbs, Vice President, H.D. Goldberg, Sec. Treas., Mitchell Melich, Asst. Sec. Treas.

This group of men represent successful businessmen, a lawyer, and a uranium mine owner and operator.

Competent geological and engineering personnel has been and will be employed by this firm to insure proper exploration and development proceedures.

## ARTICLE VI. ESTIMATE OF COSTS

### Section (a) Independent Contracts:

(1) Diamond Core Drilling

The diamond core drilling of the San Juan Copper property shall be accomplished by open bid from independent contractors. An estimate of the cost per foot of diamond drilling (AX) alone is as follows:

| | |
|---|---|
| 0 - 250 ft. | $7.00 |
| 250 - 500 ft. | 7.80 |
| 500 - 750 ft. | 8.80 |
| 750 - 1000 ft. | 9.80 |

According to this drilling rate, the cost of drilling each exploratory hole is as follows:

| | |
|---|---|
| Hole # 1 - 700 ft. | $ 5970.00 |
| Hole # 2 - 600 ft. | 5010.00 |
| Hole # 3 - 500 ft. | 4050.00 |
| Hole # 4 - 700 ft. | 5970.00 |
| Hole # 5 - 500 ft. | 4050.00 |
| Total | $25050.00 |

(2) Estimate of Miscellaneous Charges related to Diamond Core Drilling

(a) Casing

Approximately 20 ft. of casing will be required for each of five holes.

100 ft. of 3" casing @ $2.19 per ft. = $219.00.

(b) Cement and Cementing

The cost of drill hole cementing is $9.50 per hour, plus the cost of materials. Estimates of cementing are as follows:

20 hrs. @ $9.50 per hour = $190.00

25 bags of cement @ $3.25 each = $81.25.

$271.25

(c) Reaming

At least 20 ft. of reaming will be required for each hole at the following rate:

100 ft. reaming @ $2.40 per ft. = $240.00.

(d) Mobilization and Demobilization

Transportation costs of drill rig and attendant equipment to the drilling site will vary with the drilling contractor chosen. The minimum charge for this service is estimated to be $400 and the maximum $812.00.

(e) Water, Water Truck, and Driver

Water for drilling purposes is available from old mine workings on the property. Water can be piped to each of the 5 drill sites.

(3) Location Work

It is estimated that approximately 32 hours of location preparation will be required, these costs are as follows:

| | |
|---|---|
| Tractor and Operator @ $12.00 per hr. for 32 hrs. | $384.00 |
| Compressor & Operator @ $7.00 per hr. " " " | 224.00 |
| Tractor & Compressor Transportation @ .75 / mi. for 18 mi. | 13.50 |
| Dynamite, 4 boxes @ $11.40 per box | 44.80 |
| Caps, 4 boxes | 8.48 |
| | $657.78 |

(b) Labor, Supervision, Consultants

In accordance with proper drilling practice, a geologist or engineer should

supervise the program, log core, and prepare maps. The cost of this service is estimated as follows:

| | |
|---|---|
| Geologist salary @ $500 per mo. for 4 months | $2,000 |
| Geologist field expenses @ $400 per mo. for 4 months | $1,600 |
| Rent of Jeep for Geologist | $ 320 |
| Geologist helper (part time) | $ 280 |
| Total for 4 months | $4,200 |

Section (c) Operating Materials and Supplies

None.

Section (d) Operating Equipment

None.

Section (e) Rehabilitation and Repairs

None.

Section (f) New Buildings, Improvements and Installations

None.

Section (g) Miscellaneous

Provided copper mineralization is encountered, wet chemical assays will be required. It is estimated that approximately 1500 assays might be required.

1500 copper assays @ $1.00 each = $1500.

Section (h) Contingencies

None.

SUMMARY OF DRILLING COSTS:

| | |
|---|---|
| Diamond Core (AX) Drilling, 3000 ft. | $25,050.00 |
| Casing | 219 .00 |
| Cement & Cementing | 271 .00 |
| Reaming | 240.00 |
| Mobilization | 812.00 |
| Geologist, helper, jeep | 4,200.00 |

(cont)

(table cont.)

| | |
|---|---|
| Location work | $ 657.78 |
| Assays | 1,500.00 |
| TOTAL | $32,949.00 |

ARTICLE VII

Section (a) We are prepared to furnish our share of the cost of the proposed project in accordance with D.M.E.A. regulation Sec. 7, D.M.E.A. No. 1.

Section (b) Share of costs shall be furnished in money.

SAN JUAN COPPER PROPERTY

Graham County, Arizona

RECEIVED
JUN 18 1956

INTRODUCTION AND SUMMARY

The ten patented claims and 35 unpatented claims now comprising the San Juan Group were inspected on November 29, 30, and December 1, 1955, by the writer, in company with John Bibb, Jr., W.D. Roper, and J.J. Nikon.

The claims are easily accessible in the low foothills of the Gila Mountains, 9 miles north of Safford, Graham County, Arizona. The patented group consist of the Hole Brook, Outlaw, Esperanza, Beggarman, Richman, Poorman, Intermountain, Lucky Joe, Lawyer, and Bill Nye, all of which are under lease by John Bibb, Jr., W.D. Roper, (Safford, Arizona) and B.A. Gibbs (Tucson, Arizona) by right of location.

Copper ores have been mined selectively from a series of fissures in a monzonite porphyry plug which has penetrated earlier volcanics. The greatest concentration of copper bearing fissures and fractures is within the main mass of porphyry which is exposed over an area of approximately 1500 feet by 300 feet. The surrounding volcanics are fractured to a lesser extent and exhibit little copper mineralization except along the more extensive fissures which have produced minor amounts of copper-silver-gold ores.

Development and production with the exception of the small scattered prospects in the volcanics has been confined to the Poorman claim. Ore was mined from surface trenches following the vein croppings and from drift

and stoping operations at depth. The main shaft, reported to be 370 feet in depth, is filled with water to a point approximately 50 feet below the collar. The exposed walls appear to be holding well with little sluffing or caving. Maps of the early underground workings are not available.

Prior to World War I, the ore was treated or concentrated on the property. However, no production records are available. Judging from the size and depth of the badly eroded tailing pond, several thousand tons of select ore must have been milled.

The results of five groups of samples taken by five engineers over a period of several years, indicate an average grade of 2.5 % copper in the oxidized zone. Assay results from five churn drill holes indicate a zone of secondary enrichment averaging 3.7 per-cent copper. Details of this work may be noted in the reports of H. Grattan Lynch, and Frank L. Metler which are included as an appendix to this report.

The sampling and drilling accomplished to date have been so limited in scope that a reasonably accurant estimate of grade for the reserve tonnage cannot be calculated. The writer believes that with detailed mapping followed by a program of drilling, a measured and indicated reserve in excess of 3,000,000 tons containing 1% to 2% copper will be established.

LOCATION AND ACCESSIBILITY

The 46 claims are contiguous and are 9 road miles north of Safford, Arizona. They are in the Lone Star Mining District, Section 2, Township 6 South, Range 26 East, and Section 35, Township 5 South, Range 26 East, Gila and Salt River Meridian, Graham County, Arizona.

The property is accessible from Safford by 2 miles of blacktop road and 7 miles of easily maintained dirt and gravel road. There are no steep grades, but a gradual descent into Safford on the Gila River Valley.

Supplies and equipment may be obtained at Safford, Heavy mining equipment can be shipped by rail to Safford via the Southern Pacific Railroad. Housing and labor are available in and around Safford. The mine is within commuting distance of the town.

Electric power is not available on the property. Approximately 10 miles of line will be necessary to connect with existing sources of power.

TOPOGRAPHIC AND PHYSICAL FEATURES.

The claims are in the low foothills of the west slope of the Gila Mountains. Gravel beds, volcanics, and scattered monzonite plugs have been eroded into rolling hills and ridges separated by dry washes of low gradient. Most of the ground within the claims is covered by deposits of gravel, however, exposures of solid rock may be observed in most of the dry washes.

The climate is arid, resulting in sparse vegetation and no flowing water in the gulches. W.D. Roper indicated that water rights cannot be obtained to pump water from the Gila River. Nearby springs have dried up to the extent that sufficient water for milling purposes is not available from surface sources. The only alternative is to drill deep wells if a small mill is justified for the property. Water for drilling probably will have to be hauled from Safford, although, with proper equipment it can be pumped from the main shaft.

DESCRIPTION OF THE DEPOSIT

The greatest concentration of copper mineralization thus far discovered appears to be confined to the monzonite porphyry plug which is well defined on the Poorman claim. Surface workings have exposed two groups of major intersecting fractures which were filled with ore grade material ranging in thickness from several inches to eight feet. The rock between and around the major fractures is completely shattered and contains innumerable small veins and veinlets of copper oxides and sulphides. In places the copper mineralization appears to be disseminated throughout the porphyry.

The highly mineralized zone has been developed over an area of approximately 600 feet by 300 feet. Surface indications are such that fairly strong mineralization may extend for twice the above length. Since the deposit has been mined selectively, only pillars of the higher grade ore remain in the oxidized zone. The pillars show strong copper oxide mineralization enclosing stringers of copper sulphides.

The depth of the deposit is unknown. Surface sampling can be done to a maximum depth of 30 feet and drill hole sampling has been conducted to an average depth of 138 feet in 5 holes for which records are obtainable. Since the shafts, drifts, and stopes are inaccessible with one exception, no deep sampling has been possiblefor 30 or 40 years. Mining is reported to have been done from a 130 foot level and from a 230 foot level, consequently, it can be assumed that higher grade mineralization extended to those depths.

The recently located Blue Bird claims (September, 1955) surround the original San Juan patented group on all sides except for the length

of the Beggarman claim on the north. These claims include known and probably unknown veins and fractured zones within the volcanics. Most of the veins show weak copper mineralization and in some instance are reported to contain small amounts of gold and silver. The stronger fissures or veins strike northeast and with two exceptions dip to the southeast. They range in thickness from several inches to a maximum of 10 feet, and have been exposed by shallow cuts and shafts driven by early-day prospectors. Little or no production has come from these deposits.

Fissure veins were observed on the Blue Bird Nos. 3, 5, 8, 24, and 31. The remaining unpatented claims are either covered by gravel or show only minor indications of copper. The Blue Bird No. 8 claim contains the most favorable appearing vein in the group. It is 10 feet in width and was developed by a shallow shaft, now caved. The dump and vein cropping show strong copper mineralization, and a small amount of ore grade material is stockpiled on the dump. In the southern portion of the Blue Bird No. 8, a highly fractured zone in the volcanics contains considerable copper mineralization and may be worth investigating at depth.

The most favorable appearing spot for exploration outside the monzonite plug is a breccia plug near the northwest corner of the Beggarman claim. The exposed portion of the plug covers an area of approximately 100 by 200 feet and rises abruptly to a peak above the surrounding rocks. The breccia is extremely porous and contains considerable copper oxide and small amounts of copper sulphides in the vugs. Copper mineralization is more evident towards and at the center of the plug. The breccia will be worth testing at depth for secondary enrichment.

A wide, highly silicified band of monzonite porphyry extends southwest from the main monzonite plug on the Poorman claim and crosses the Espranza claim diagonally. Copper mineralization is fairly strong in the exposed protions of the band, particularly in the southwest portions of both the Poorman and Espranza claims. Testing of this zone at depth may be justified.

DEVELOPMENT AND PRODUCTION

Nearly all the development and production on the San Juan claims reportedly took place prior to World War I. Apparently there is one main shaft, reported by W.D. Roper, to be 370 feet in depth, and at least four additional shafts or holes of unknown depth. According to a report prepared in 1951 by H. Grattan Lynch, 1915 maps show a 130 foot level with 700 feet of drifts and crosscuts and a 230 foot level with 320 feet of drifts and crosscuts. There is a well preserved 140 foot crosscut entering the hill about 50 feet north of the mill site. It was driven on an easterly bearing to cut the ore body at depth, however, work was abandoned just as higher grade copper mineralization was encountered. A sample cut across the face of the crosscut by W.D. Roper contained 2% copper. Visual inspection indicates that this grade is maintained for a distance of five feet back from the face.

The surface development consists of a mass of interlocking trenches and pits in addition to open stopes that were worked to the surface from below. The rich surface croppings of the stronger veins were stripped to a depth ranging from 5 to 30 feet, and where major vein intersections occured the wall rock was mined, resulting in irregularly shaped pits. The underground workings probably developed two or three major veins and the surface workings probably developed at least a dozen smaller veins.

The type and capacity of the mill that operated on the property is unknown, however, the workings and the remaining portions of the tailing pond indicate a production and treatment of many thousands of tons of selectively mined ore over a period of several years.

At present there are no facilities or equipment on the property.

ORE RESERVES

In recent years at least five attempts have been made to sample the exposed portions of the oxidized zone, and one drilling project of 5 churn drill holes sampled the deposit to a maximum depth of 150 feet. As nearly as can be determined, the surface sampling was confined to the trenches, pits, and shallow shafts along the veins, and therefore, is not representative of the deposit as a whole if block caving or open pit mining is to be considered. Also, since the major and minor veins, as well as the countless veinlet are steeply dipping or are vertical, the five vertical drill holes unquestionably cut an exaggerated thickness of copper mineralization in each vein or stringer encountered. With these observations in mind it is difficult to accept the past sampling and the past estimates of the grade of ore reserves as basically sound, when applied to the entire deposit.

Frank L. Metler, Mining Engineer, in a report dated December 14, 1950, estimates for the oxidized zone a measured or proven ore reserve of 267,000 tons, containing 2.05% copper, and a proven reserve in the secondary zone of 864,000 tons containing 3.7% copper. The combined estimates total 1,131,000 tons, averaging 3.31% copper. He indicates that additional drilling probably will multiply the reserve several times.

H. Grattan Lynch, in a report dated May 11, 1951, estimates that 1,130,000 tons of low grade ore can be developed per 100 feet of depth

on the Poorman claim. He makes no estimate of grade for the tonnage and states that the grade of the material as a whole has not been determined definitely.

The writer concurs with Lynch in his statement concerning the grade of the ore reserve. With detailed mapping and angle core drilling, Metler's estimates of grade probably will be lowered and the tonnage estimates of both men probably will be multiplied at least three times.

It is doubtful that the Blue Bird claims will add materially to the ore reserves of the monzonite plug, however, small lots of selectively mined ore probably can be produced from the No. 8 claim.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that there is sufficient copper mineralization and indicated reserves on and in the immediate vicinity of the Poorman claim to justify additional exploration and development work on the property. A program of detailed mapping, followed by core drilling probably will indicate a reserve of several million tons of ore, averaging between 1% and 2% copper.

The following recommendations are submitted:

1. The area enclosed by the Outlaw, Espranza, Beggarman, Richman, Poorman, Intermountain, Lawyer, and Evelyn King be mapped geologically and topographically on a scale of 100 feet to the inch with a five-foot contour interval.
2. At the completion of the mapping, lay out a core drilling program best suited to cut across the steeply dipping trends of mineralization at depth rather than to drill vertically and risk obtaining

exaggerated mineral content in the core. At least 5 holes should be drilled to depths of no less than 200 feet to test the oxidized zone in the vicinity of the workings. At least 4 holes should be drilled to test the ground 100 feet or more below the workings as well as to determine the width and length of the copper bearing portion of the monzonite plug. This information can best be determined with angle holes starting either in the porphyry and drilling out towards the volcanics, or starting in the volcanics and drilling into the porphyry. To avoid old workings the safest method would be to start in the volcanics and drill as deeply as advisable into the porphyry.

3. Drill at least one hole 200-250 feet in length to test the breccia plug in the northwest corner of the Beggarman claim. This should be drilled at a minus 45°.

4. Pump out the workings, either prior to drilling, or while drilling is in progress to enable mapping and sampling to be completed as soon as possible.

5. If justified, plan a mining program based upon the combined results of the mapping, drilling and sampling.

Drilling costs will depend largely upon the skill of the driller, however, by starting with NX and reducing to BX, the over-all cost probably will be no less than $12.00 per foot. Starting with BX and reducing to AX, the cost probably could be held to $10.00 per foot. These costs are based upon personally supervised projects drilling in similar ground and maintaining sludge recovery at all times, either by utilizing casing or cement.

As for drilling the Blue Bird claims (unpatented group), it is doubtful that the results would justify the cost in money and time at present. The pending location work can be done quickly and easily with a bulldozer, by trenching or stripping the most favorable spots. These claims will be of value mainly to prevent crowding by other locators, should an operation commence on the patented group.

Respectfully submitted,

/s/ Russell R. McLellan

gl

REPORT BY H. GRATTAN LYNCH, MAY 11, 1951

SAN JUAN MINE, GRAHAM COUNTY, ARIZONA

SUMMARY

San Juan Mine is located in Graham County, Arizona, within 9 miles of the railroad with a short haul to several copper smelters. Water is scarce, but it is believed that it can be developed within 5 miles of the mine. Mining conditions are such taht a combination of underground and open pit mining can probably be used. It may also be possible to cave the surface ores after removing the sulphides, and then leach the mixed sulphides and carbonates in place.

A plug of quartz monzonite porphyry protrudes through flat lying volcanics and remnants of old sediments. The porphyry and surrounding rocks are mineralized by copper carbonates, oxides and sulphides which are in shears, veins, veinlets, and thinly disseminated through the rocks. There are two strong shear systems, one running Northeast and dipping from 55 degrees to vertically, and the other striking Northwest and dipping from 55 to 65 degrees Southwest.

On the surface the rocks assay from 1.5% to 2.5% copper. Drill results below the surface show an oxidized zone containing mixed oxides and sulphides about 50 feet deep and assaying 1.0% copper; and below the oxides a sulphide zone which assays 1.09% copper. The thickness of this latter zone has not been proved. Two holes were drilled to depths of 150 feet. The sulphide zone of one, Drill Hole 'D', was 75 feet thick and averages 1.5% copper; the bottom sample assayed 0.92% copper. The sulphide zone of Drill Hole 'C' was 75 feet thick and averaged 0.09%

copper. This hole, however, was low grade throughout the sul-phide zone. The two other holes, unfortunately, were stopped at a depth of 100 feet and in material which assayed 1.47% and 1.63% copper.. A fifth hole drilled into loose rock at a depth of 20 feet, probably an old stope, so nothing definite was gained from it.

The drilling to date indicates a low grade copper deposit with shoots or veins of higher grade. The high grade ore could be mined and shipped direct to one of the smelters.

Additional drilling should be done along the southeast contract between the porphyry and volcanics, and where the Southeast Northwest fractures intersect the northeast fracture which parallels the Southeast contact. About 5 holes would prove the Area.

INTRODUCTION

LOCATION

San Juan Mine is located at an elevation of 3800 feet, 9 miles northeasterly from Safford, Arizona, a shipping point on the Southern Pacific Railroad. Specifically the claims are situated in the Lone Star Mining District, Section 2, Township 6 South, Range 26 East, and Section 35, Township 5 South, Range 26 East, Gila and Salt River Meridian, Graham County, Arizona.

PROPERTY

The property consists of ten patented claims, Poorman, Richman, Lawyer, Intermountain, Beggarman, Hole Brook, Lucky Joe, Outlaw, Esperanza, and Bill Nye. The titles are in the name of Ralph H. Pfeffer.

TOPOGRAPHY

The mine lies in the foothills of the Gila Mountains which are north of the Gila River. The surface rises very gradually from the Gila River to the foot hills, about 1000 feet in 8 miles. The claims cover some small hills cut by dry arroyos. The main mountain range rises abruptly one mile north.

MINING FACILITIES

Water: Water for drilling is hauled from Safford by tank truck. There is a small spring about one mile north of the property, and it might be developed to supply water for mining purposes. Water for milling will be a problem, but there is some hot underground water within five miles of the property, which might be used.

Power: Graham County Power Company has 500 Horsepower available at the following rates: $6.00 per horsepower year standby charge, first 1000 KWH at 2¢ per KWH, second 1000 KWH at 1.5¢ per KWH, all over 2000 KWH at 1¢ per KWH. It would be necessary to build 12 miles of power line. If a small installation were made, it would be more economical to use diesel.

Climate: The climate at this elevation is mild with no great extremes of temperature.

Transportation: The road from Safford to the mine is paved for two miles. The balance is graded and easily maintained as it is mostly gravel. There is a down-grade to the railroad. The cost of trucking to Safford would be 50¢ per ton.

The following are rates from Safford to Miami and El Paso.

| $ Value: | 15-20 | 20-30 | 30-40 | 40-50 | 50-75 | 75-100 | 100-125 |
|---|---|---|---|---|---|---|---|
| To Miami | $1.76 | 2.12 | 2.48 | 2.84 | 3.56 | 4.28 | 5.00 |
| To El Paso | $2.40 | 2.70 | 3.00 | 3.30 | 3.90 | 4.50 | 5.10 |

For freight valuation copper is priced at 14¢ per pound.

Labor: Safford has a population of 2000; the mining centers of Globe, Douglas, Miami, and Morenci are within a radius of 125 miles. It should be possible to secure experienced miners from these places.

Housing: It would be advisable to house the workers at Safford and haul them to the property by bus.

GENERAL GEOLOGY

A plug of quartz monzonite porphyry has invaded flat lying volcanics, and possibly remnants of old sediments. In several places are areas of highly silicified rocks which have the appearance of old quartzites. The porphyry body has a long axis Northeast and Southwest of 1200 feet, but may extend in both directions under the debris which covers the surface. Its dimension in a Northwest Southeast direction is from 200 to 400 feet.

The porphyry and surrounding rocks have been shattered by two systems of fractures. One system strikes Northeasterly and dips from 55 degrees Southeast to vertical; the other strikes Northwesterly and dips from 55° to 65° Southwest. The fractures are from knife blades to 10 feet in width. Copper is found along the fractures.

On the surface the ore consists of chrysacolla and chalcocite in fractures and veins which have widths from a few inches to 10 feet. The larger veins are filled with gouge and breccia and partially cemented by the copper minerals. There is some copper mineralization disseminated thru the porphyry, however, any mineable ore will have to consist of mineralized shears or veins spaced close together.

The grade of the material has not been determined definitely. Many samples of dumps and open cuts have been made. These run from 1% to 2% copper. Samples taken from the ore in place on the surface assayed 2.48%

copper. Five churn holes were drilled during the spring of 1951, and gave average of 1.09% copper, but showed some higher grade zones as follows:

Hole A 15' - 4.94% Copper
Hole B 10' - 3.68% Copper
Hole D 20' - 5.29% Copper

The higher assays in A and B were found where the holes cut known veins as illustrated in sections accompanying. The higher grade in 'D' has not been found on the surface.

There are two highly mineralized surface areas which have not been drilled or tested. One area is along the Southeast contact where Northeast striking vein would intersect the Northwest shear system. Another is along the Southeast contact where it is crossed by the South side line of the Richman Claim. At this point a strong shearing comes in from the Southeast, possibly from the Lone Star Mine.

The claims lying to the West of the Poorman are in a low area between two arroyos and are covered by debris. Shafts sunk for location work and assessment work show some mineralization. This area warrants further prospecting and probably drilling.

THE MINE

The mine is flooded and inaccessible except for surface openings, cuts, etc. Maps made in 1915 show the mine to contain a vertical shaft with two levels, one at 130 feet and the other at 230 feet. The 130 level contains 700 feet of drifts and cross cuts while the 230 level contains 320 feet of drifts and cross cuts. In addition to these are some incline shafts and stopes along the Southeast contact.

RECOMMENDATIONS

The churn drilling that has been completed recently indicates that the San Juan Mine has ore deposits which can be shipped direct to the smelter, and that there is a possible large sized low grade body which might be caved, or mined by open pit methods. Addition drilling is necessary, and this should be accompanied or followed by underground exploration from the old workings.

The following work should be done:

1. Along the B-A line of holes, drill a hole 'F' at a point 150 feet S 73 E of drill hole 'A'.

2. At a point 50 feet S 73 E of 'F' drill hole 'G'.

3. At a point 100 feet N 17 E of 'F' drill hole 'H'.

4. At a point 100 feet S 73 E of 'H' drill hole 'I'.

5. At a point 100 feet N 73 E of 'H' drill hole 'J'.

Drill all holes to a depth of 200 feet.

6. If holes 'F', 'G', and 'H' show ore, rehabilitate the vertical shaft, unwater the 130 level and sample it.

7. From the 130 level cross cut N 60 W 150 feet to test the mineralized area which shows on the surface.

8. From 130 level cross cut S 70 E to the Southeast contact and follow at Northeast 300 feet.

9. The results obtained will decide whether the mine will be opened as an open pit or an underground mine. The program will cost about the following and will have the following time schedule:

| | | |
|---|---|---|
| Step One - Five Months | | |
| 1000 feet churn drilling | $10,000.00 | |
| Engineering | 1,000.00 | |
| Rehabilitate Shaft and unwater 130 level | 10,000.00 | |
| Equipment rental | 5,000.00 | |
| | | $26,000.00 |
| Step Two - Seven Months | | |
| Rehabilitate 130 level, pipe rails, etc. | $ 4,200.00 | |
| 150 feet Cross cut Northwest | 3,000.00 | |
| 200 feet Cross cut Southeast | 4,000.00 | |
| 300 feet drift Northeast along SE contact | 6,000.00 | |
| 2 raises to surface 130 feet each | 20,000.00 | |
| Purchase equipment | 15,000.00 | |
| | | $52,200.00 |
| | | $78,200.00 |

CONCLUSION

The San Juan Mine has impressive surface showing, samples from the surface averaged 2.48% copper; it has had some production from surface and underground workings; 5 drill holes bored from the surface in 1951 show a low grade copper deposit with areas, probably veins or vein intersections, or ore that assays from 3% to 8% copper.

It is possible to develop 1,130,000 tons of low grade ore per 100 feet of depth below the mineralized area outcropping on the poorman claim. Drilling and prospecting may extend the known mineralized area both to the east and west.

Without additional prospecting, it is impossible to estimate the amount of 3 to 8% copper present. Twenty six thousand dollars spent in additional drilling and rehabilitation of old workings will probably indicate enough ore to warrant putting the mine in production.

/s/ H. Grattan Lynch

C O P Y

INTERNATIONAL SMELTING & REFINING CO.
MIAMI PLANT

Assay Certificate - San Juan Mine - January 31, 1951

HOLE A

| Depth | | | Per Cent Copper |
|---|---|---|---|
| 0 | - | 5 | 0.15 |
| 5 | - | 10 | 0.24 |
| 10 | - | 15 | 0.25 |
| 15 | - | 20 | 0.37 |
| 20 | - | 25 | 0.49 |
| 25 | - | 30 | 0.38 |
| 30 | - | 35 | 0.39 |
| 35 | - | 40 | 0.37 |
| 40 | - | 45 | 0.33 |
| 45 | - | 50 | 0.49 |
| 50 | - | 55 | 1.29 |
| 55 | - | 60 | 0.88 |
| 60 | - | 65 | 0.76 |
| 65 | - | 70 | 1.27 |
| 70 | - | 75 | 0.69 |
| 75 | - | 80 | 1.14 |
| 80 | - | 85 70 | 4.46 |
| 85 | - | 90 | 4.45 |
| 90 | - | 95 | 5.92 |
| 95 | - | 100 | 1.47 |

Assay Certificate - San Juan Mine - March 2, 1951

HOLE B

| Depth | | | Per Cent Copper |
|---|---|---|---|
| 5 | - | 10 | 0.65 |
| 10 | - | 15 | 0.70 |
| 15 | - | 20 | 0.78 |
| 20 | - | 35 | 2.04 |
| 35 | - | 40 | 1.51 |
| 40 | - | 45 | 1.16 |
| 45 | - | 50 | 1.23 |
| 50 | - | 55 | 1.59 |
| 55 | - | 60 | 1.79 |
| 60 | - | 65 | 1.02 |
| 65 | - | 70 | 1.13 |
| 70 | - | 75 | 0.96 |
| 75 | - | 80 | 1.32 |
| 80 | - | 85 | 1.40 |
| 85 | - | 90 | 1.11 |
| 90 | - | 95 | 1.25 |
| 95 | - | 100 | 1.22 |
| 100 | - | 105 | 1.10 |
| 105 | - | 110 | 5.07 |
| 110 | - | 115 | 2.17 |
| 115 | - | 120 | 1.50 |

HOLE 5 (Cont.)

| Depth | Per Cent Copper |
|---|---|
| 120 - 125 | 1.18 |
| 125 - 130 | 0.96 |
| 130 - 135 | 0.87 |
| 135 - 140 | 0.86 |
| 140 - 145 | 1.11 |
| 145 - 150 | 0.92 |

Assay Certificate - San Juan Mine - February 14, 1951

HOLE 6

| Depth | Per Cent Copper |
|---|---|
| 0 - 5 | 2.84 |
| 5 - 10 | 1.58 |
| 10 - 15 | 2.16 |
| 15 - 20 | 2.25 |
| 20 - 25 | 2.00 |
| 25 - 30 | 1.33 |
| 30 - 35 | 0.51 |
| 35 - 40 | 3.26 |
| 40 - 45 | 0.89 |
| 45 - 50 | 0.46 |
| 50 - 55 | 1.45 |
| 55 - 60 | 1.09 |
| 60 - 65 | 0.44 |
| 65 - 70 | 0.31 |
| 70 - 75 | 0.23 |
| 75 - 80 | 0.14 |
| 80 - 85 | 0.11 |
| 85 - 90 | 0.07 |
| 90 - 95 | 0.09 |
| 95 - 100 | 0.10 |
| 100 - 105 | 0.13 |
| 105 - 110 | 0.10 |
| 110 - 115 | 0.10 |
| 115 - 120 | 0.13 |
| 120 - 125 | 0.08 |
| 125 - 130 | 0.08 |
| 130 - 135 | 0.07 |
| 135 - 140 | 0.06 |
| 140 - 145 | 0.06 |

Assay Certificate - San Juan Mine - February 7, 1951

HOLE D

| Depth | Per Cent Copper |
|---|---|
| 0 - 5 | 0.98 |
| 5 - 10 | 0.81 |
| 10 - 15 | 0.56 |
| 15 - 20 | 0.42 |
| 20 - 25 | 0.33 |
| 25 - 30 | 0.22 |
| 30 - 35 | 0.17 |
| 35 - 40 | 0.22 |
| 40 - 45 | 0.22 |
| 45 - 50 | 0.33 |
| 50 - 55 | 0.46 |
| 55 - 60 | 0.36 |
| 60 - 65 | 0.20 |
| 65 - 70 | 0.20 |
| 70 - 75 | 0.44 |
| 75 - 80 | 3.51 |
| 80 - 85 | 2.46 |
| 85 - 90 | 6.78 |
| 90 - 95 | 8.43 |
| 95 - 100 | 1.63 |

Assay Certificate - San Juan Mine - March 17, 1951

HOLE E

| Depth | Per cent Copper |
|---|---|
| 0 - 15 | 1.65 |
| 20 - 30 | 1.36 |
| 30 - 35 | 2.11 |
| 35 - 40 | 2.31 |
| 40 - 45 | 1.57 |
| 45 - 50 | 0.33 |
| 50 - 55 | 0.80 |
| 55 - 60 | 0.84 |
| 60 - 65 | 0.49 |
| 65 - 70 | 0.48 |
| 70 - 75 | 0.46 |
| 75 - 80 | 0.47 |
| 80 - 85 | 0.44 |
| 85 - 90 | 0.78 |

(REPORT BY FRANK L. METLER, MINING ENGINEER, TO R.H. PFEFFER)
December 14, 1950

## SAN JUAN MINE

This report is based on a personal examination of the mine covering the 10-day period from September 22nd through October 1, 1950. This examination included:

1. A thorough reconnaisance of the surface exposures, shallow shafts, and open cuts.

2. A check sampling of an estimated 20,000 tons of oxided ore removed by shallow crosscut exploration work.

3. A study of the drill records, the 1925 report of C.W. Botsford and C.L. Beckwith, and the 1946 report of H. Grattan Lynch.

4. A review of the preliminary metallurgical work made on the ore by the U.S. Bureau of Mines.

## CONCLUSION

In comparison with the major open pit copper mines which have produced or developed from 50 million to more than 500 million tons of ore, the San Juan Mine is a relatively small deposit.

Ore developed amounts to around 1,000,000 tons, with the possibility of increasing the tonnage to several times that amount. The ore can be mined by open pit or block caving methods. It can be concentrated by proven methods now in common use. The mine is well located with regard to transportation, power, water and climate.

By installing a Leach-precititation-Flotation plant of not less than 250 ton daily capacity, the ore now developed at the current price of 24.5¢ per pound of copper has a potential profit of $6,626,340.00.

The concentrating plant will cost, installed, approximately $1,000.00 per ton capacity. Present tonnage should supply a mill of 250 ton daily capacity for a period of 13 years, and annually earn $113,400.00 for 3 years from the oxidized zone, and $655,200.00 for 10 years from the chalcocite zone.

However, further development by drilling may increase the tonnage possibilities to such an extent as to warrant a much larger concentrating plant. Further drilling will also determine the possibilities of select mining areas for shipment direct to the smelter. Production on this basis could be inaugurated for approximately $50,000.00.

The following program is, therefore, recommended:

1. Complete drilling of the property, which cost is estimated at $25,000.
2. Rehabilitate the shaft and equip the property for mining and shipping ore direct to the smelter.
3. Design concentrating plant on data obtained from complete results of metallurgical tests on both the oxidized and chalcocite ore.

On completion of this program, it is probable that the required capital for a concentrating plant can be arranged from the Defense Minerals Administration, who are also now considering subsidizing newly increased production of copper with a bonus equal to 25 per cent of the market price. The premium paid would bring the price to 30.5 cents per pound or 27.5 cents paid by the smelter.

This would make it possible to mine and ship ore of a grade as low as 2.5 per cent copper, with a resultant profit of $1.69 per ton. The net profit on 3.0 per cent ore would be $4.44 per ton. It would increase the new profit of shipping ore of 3.5 per cent grade to $7.19 per ton.

Frank L. Metler

# SAN JUAN MINE

## PROPERTY

The property consists of ten patented claims, and six claims held by right of location. All claims are contiguous and cover an area of some 300 acres.

## TITLE

The claims are owned by Mr. Raoph H. Pffeffer. Title to the patented claims was perfected August 22, 1956.

## LOCATION

The mine is nine miles northeast of Safford, Arizona, and 18 miles southwest of Morenci, Arizona, where is located the second largest open pit copper mine in the United States.

## TRANSPORTATION

Safford is the County seat of Graham County, and is on the Southern Pacific Railroad. The frieght rates per ton on various grades of concentrates from Safford to the smelter of the International Smelting and Refining Company at Miami, Arizona, and to the smelter of the American Smelting and Refining Company at El Paso, Texas are as follows:

| $ Value: | 15/20 | 20/30 | 30/40 | 40/50 | 50/75 | 75/100 |
|---|---|---|---|---|---|---|
| To Miami, Arizona | $1.76 | $2.12 | $2.48 | $2.84 | $3.56 | $4.28 |
| To El Paso, Texas | $2.40 | $2.70 | $3.00 | $3.30 | $3.90 | $4.50 |

Plus 3% tax.

The road from Safford to the mine is paved for 2 miles, then graded on a very light grade and partly gravelled the last 7 miles. Safford is at the junction of Highways # 70 and # 666. The former goes from El Paso to Phoenix and the latter connects with Highway # 86 to Tucson. Mileage

by surfaced Highway from Safford is as follows: To Miami, 95 miles; to Phoenix, 180 miles; to El Paso, 250 miles; to Tucson, 135 miles.

POWER

From the Graham County Power Company there is now available from 500 to 600 HP. This company's present power plant has a capaicity of 2900 KW. This will be increased to 3600 KW by January 1, 1951. By June 1, 1951, there will be added an additional 5000 KW through the Bureau of Reclamation hook-up with Davis Dam. Rates on this power are as follows:

$6.00 per HP yearly stnadby.
First 1000 KWH per HP @ 2¢ per KWH
Second 1000 KWH per HP @ 1¼ per KWH
All over 2000 KWH per HP @ 1¼¢ per KWH

The power hookup can be made at Solomonville, a distance of 12 miles from the mine, at a cost of from $1600.00 to $1800.00 per mile.

WATER

Water can be pumped from the Gila River, a distance of 8 miles. The difference in elevation between the river and the mine is aroung 900 feet. There is a source of warm water within 4 miles of the mine that could probably be developed, and which would reduce the pumping head and length of pipe line by as much as fifty per cent.

GENERAL

Climate is mild with no extremes in temperature, the elevation at the mine being 3800 feet.

Labor can be recruited from Safford, which has a population of around 2000, and from the mining centers of Morenci, Globe, Miami, and Douglas, all within a radius of 125 miles.

Housing at the mine can be eliminated by running a bus from Safford.

## THE ORE BODY

The monzonite porphyry ore body is exposed on the surface over a length of 1400 feet, and over a width of 200 feet at the east end, and 400 feet at the west end. While there are many indications that the tonnage may be substantially increased, the area that can be considered proven by numerous shafts, pits, open cuts, and by churn drill holes, is 600 feet in length by 200 feet in width, which is used in calculating tonnage. Ore in place is taken at 13.5 cu. ft. per ton. In the oxidized zone to a depth of 30 feet, these figures give 26700 tons. The average assay value in copper of the oxidized ore is obtained from the samples taken of the ore removed from shafts, pits and open cuts; samples weighed around 50 pounds each.

Sampling by H. Grattan Lynch, February, 1946

| | |
|---|---|
| Per cent in copper | 1.91 |
| | 2.85 |
| | 1.13 |
| | 1.41 |
| | 2.25 |
| Average | 1.91 |

Sampling by D.A. Gillis, April, 1946

| | |
|---|---|
| Per cent in copper | 2.20 |
| | 1.68 |
| | 1.26 |
| | 1.88 |
| | 2.18 |
| | 2.02 |
| | 1.05 |
| | 1.02 |
| | 1.50 |
| | 1.50 |
| Average | 1.629 |

Sampling by Frank L. Metler, September, 1950

| | |
|---|---|
| Per cent in copper | 1.73 |
| | 1.24 |
| | 1.32 |
| | 1.63 |
| Average | 1.605 |

The ore from which all of the above samples were obtained had been sorted and all high grade removed. The average, therefore, of 1.715 per cent cu. is below the actual value of the ore in place, which is substantiated by the following results of assays taken from the many exposed faces.

Sampling by R.A. Gibbs, April, 1948

| | |
|---|---|
| Per cent in copper | 2.04 |
| | 1.90 |
| | 2.26 |
| | 2.82 |
| | 1.84 |
| | 1.84 |
| Average | 2.11 |

Sampling by J.W. Reinhart, September, 1950

| | |
|---|---|
| Per cent in copper | 2.15 |
| | 2.70 |
| | 3.65 |
| | 2.40 |
| | 4.20 |
| Average | 3.03 |

Average of all the sampling done in the oxidized zone is 2.05 per cent copper.

Below the oxidized zone a zone of secondary enrichment common to this type of deposit has been developed by churn drilling. The degree of enrichment of the secondary zone is like that of other deposits in arid regions where there is a low water level, and where oxidization proceeded faster than erosion.

For instance, at the Bagdad Mine in Arizona the oxidized ore averages 0.50 per cent cu. and the secondary ore 1.40 per cent cu. At the Ray Mine

in Arizona the oxidized ore averages 0.25 per cent copper and the secondary 1.70 per cent copper. Thus the secondary ore at Bagdad is enriched 2.8 times the per cent of copper in the oxidized zone. The enrichment at Ray is 6.8 times.

Therefore, before considering the results of churn drilling obtained at the San Juan Mine, with a proven oxidized zone averaging no less than 1.75 per cent copper, it would be only reasonable to expect an enrichment of 2 times the copper in the secondary zone. This would amount to 3.5 per cent copper. Actual drilling results show an average of 3.7 per cent cu. Ore of this grade indicated by drilling amounts to 864,000 tons.

This tonnage, however, does not take into consideration all the mineralized surface exposures. In the immediate area on the Poorman claim further development might double this tonnage. Also there are several mineralized exposures to the West, notably some 1700 feet westerly from the Poorman end line, where a grab sample from a shallow shaft at this point assayed 0.93 percent cu., indicating a continuance of the ore in this direction. The ore zone has by no means been delineated by drilling. Further study of the geology and development by drilling may prove that the ore zone, as it now appears in the shape of a wedge with the narrow edge at the east end and increasing in thickness as it proceeds westerly, had, at one time, a more or less uniform thickness. The present shallow depth of the ore zone at the easterly end can then be accounted for as the remnant of extreme erosion, whereas, in sloping westerly, that part of the ore zone was not subjected to as much erosion and may still be intact. Development in this direction might add several million tons to that already proven.

## METALLURGY

Preliminary metallurgical work by the U.S. Bureau of Mines has obtained the following results:

### Leach-Precipitation-Flotation

Portions of the sample were wet-ground to minus 65, 100, and 200 mesh and treated by the Inspiration leach-precipitation-flotation procedure as described in Tucson Research and Development Report No. 1. Briefly, this procedure comprises agitation of the ground ore in a gallon bottle or Abbe mill with sufficient Sulfuric acid to maintain a ph of about 1.5 during the leaching period of 1½ hours. Hydrated lime is then added to the pulp to establish a stable pH of 2.3, and the dissolved copper is then precipitated as cement by agitating the pulp with iron nails. After removal of the nails the resulting pulp is neutralized with additional lime to a pH of about 5.0 and the cement copper and undissolved sulfide copper minerals are floated together with Minerec A and pine oil. The rougher concentrate is cleaned one or more times to give a final product of the desired grade. The results of a typical test employing 75 pounds of acid on a portion of the sample ground to minus 100 mesh are as follows:

| Product | Weight % | Assay, % cu | % Copper |
|---|---|---|---|
| Cleaner Concentrate | 2.4 | 44.43 | 77.0 |
| Cleaner tailing | 4.9 | 1.58 | 5.6 |
| Rougher concentrate | 7.3 | 15.69 | 82.6 |
| Rougher tailing | 92.7 | 0.25 | 17.4 |
| Calculated head | 100.0 | 1.39 | 100.0 |

The head sample from which this test was made assayed 1.56 per cent cu. The recovery was 82.6 per cent making a concentrate assaying 15.69 per cent copper. More complete metallurgical tests could materially increase the recovery and resultant profits particularly on the chalcocite ore.

ECONOMICS

In calculating results to be expected from production of San Juan ore the grade of ore in the oxidized zone is reduced from the overall average of 2.05 per cent to 1.75 per cent, and the grade of the ore in the secondary zone from 3.7 per cent to 3.5 per cent. A recovery of 80.0 per cent which is below that obtained on the oxidized ore is used in making calculations on both the oxidized and chalcocite zones.

Freight rates were obtained from the agent of the Southern Pacific Railroad, at Safford, Arizona, the smelting treatment charges from the Smelter Superintendent of the International Smelting and Refining Company at Miami, Arizona. Power rates were obtained from the Manager of the Graham County Power Company at Pima, Arizona.

All other costs are based on those being obtained at comparative operations and under similar conditions, and upon the experience of the writer as manager of an open pit mine.

Frank L. Metler

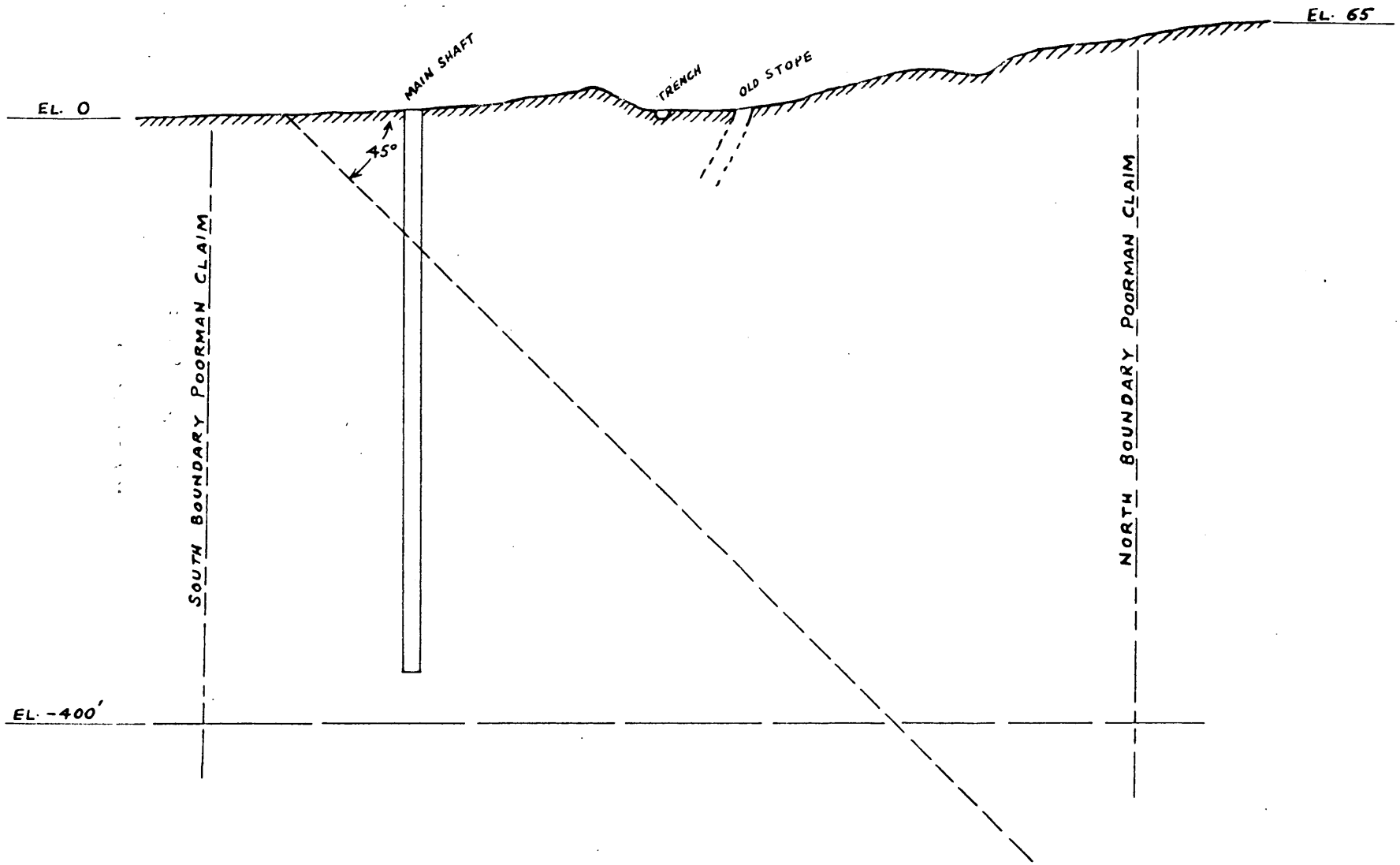
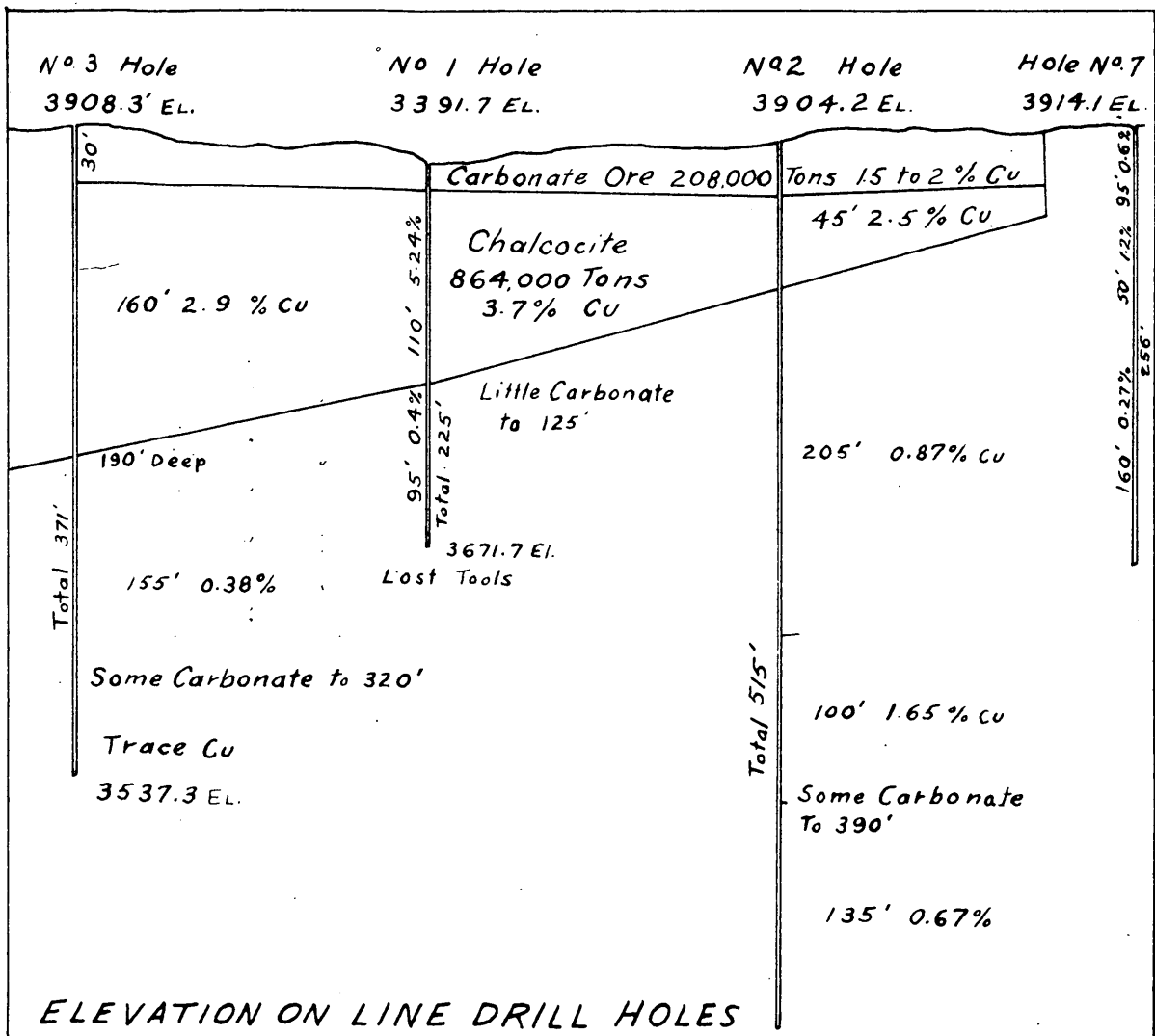



FIG. 4 NORTH-SOUTH SECTION THROUGH MAIN SHAFT
LOOKING WEST
SCALE: 1"=100'

PROPOSED DRILL HOLES---

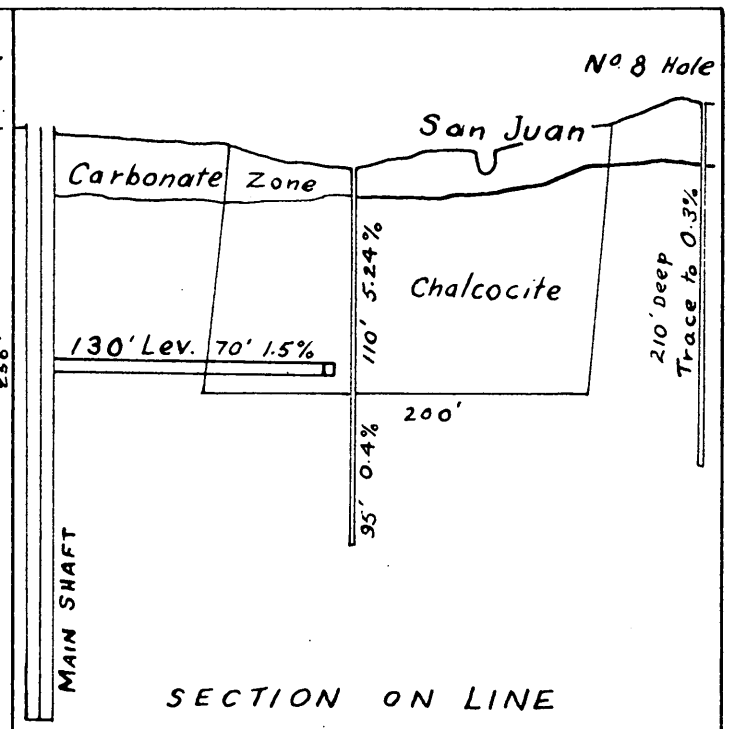
DRAWN BY: T.J. BARRETT APRIL 1956




ELEVATION ON LINE DRILL HOLES
Nos. 3, 1, 2 AND 7
Scale: 1" = 100'

TRACED BY T.J.B. APRIL 1956

FIG. 2




SECTION ON LINE
MAIN SHAFT, DRILL HOLES
Nos. 1 AND 8
Scale: 1" = 100'

NOTE:

Hole no. 4-Poorman Claim, 535' Deep
Trace to 0.55 Cu, Ave: 0.12%

Hole no. 5-Poorman Claim, 351' Deep
0.05 to 0.95 Cu., Ave: 0.25%

Hole no. 6-Beggerman Claim, 80' Deep
only a trace

Hole No. 8-Poorman Claim 210' Deep
Trace to 0.3% Cu, Ave: 0.05%

Traced By T.J.B. April 1956

RECEIVED
JUN 18 1956

TUAB MINERAL CORPORATION

201 N. Stone Ave.

Tucson, Arizona

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 10/30 | [illegible] | 500 |
| 10/30 | gb | 220 |
| [illegible] | [illegible] | 215 |
| | | 225 |
| | | |
| | | |
| | | |
| | | |
| | | |

October 30, 1957

Memorandum

To: Director, Division of Operations Control and Statistics

From: Director, Division of Base Metals

Subject: Withdrawal of Application, Docket No. DMEA-4343, Tuab Mineral Corporation, San Juan Mine, Graham County, Arizona, Copper.

Will you please withdraw the cited application. An undated letter, received October 11, 1957, from Mr. J. W. Bibb, President of the Tuab Mineral Corporation, states that they will not execute the proposed DMEA Contract and that the unsigned contracts will be returned as soon as they are able to secure them from Mr. Goldberg's estate.

Mr. E. N. Harshman, Acting Executive Officer, DMEA Field Team, Region III, in his memorandum, dated October 24, 1957, enclosed the Operator's Copy of the proposed contract which is attached to this memorandum.

When the unexecuted copies of this proposed contract are received from the Applicant, will you please place them in the docket.

W. R. Griswold

W. R. Griswold

JWAlt/er
Copy to: Docket
Admr R File
Chron.

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
224 New Customhouse
Denver 2, Colorado

October 24, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 28 1957

| DATE | INITIALS | CODE |
|---|---|---|
| 10/28 | gb | 220 |
| 10/28 | fwa | 500 |
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| | | |
| | | |
| | | |

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-4343 (Copper) Tuab Mineral Corporation (San Juan mine) Graham County, Arizona - Proposed Exploration Project Contract Idm-E1059

In reference to the Administrator's letter to Mr. J. W. Bibb, dated October 18, 1957, enclosed is the "Operator's copy" of the proposed contract, which we have been holding in our files.

It is assumed that you will consider the application as withdrawn; therefore, we will close our records on that basis.

E. N. Harshman

E. N. Harshman

Operator's copy

RECEIVED OCT 28 1957 D.M.E.A.

MF-200
(Revised June 1954)

Docket No. DMEA -4343

Commodity Copper

Contract No. Idm-E1059

# UNITED STATES OF AMERICA
# DEPARTMENT OF THE INTERIOR
## DEFENSE MINERALS EXPLORATION ADMINISTRATION

## EXPLORATION PROJECT CONTRACT[1]

It is agreed this 31 JAN 1957 day of ....., 195..., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] TUAB MINERAL CORPORATION, an Arizona corporation,

whose mailing address is 2517 East Glenn
Tucson, Arizona,

hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200), the attached Exhibit "A," Annex I, and 2 maps.

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Arizona, County of Graham, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] Owner of [5] See Annex I in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] See Annex I, [7] recorded in Book ....., page ....., official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: None

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

of the land (lessor, seller, optionor, etc.), are attached, as follows: .....

.....

.....

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 8, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 8(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of Copper. ..... The work to be performed is described in Exhibit "A." The Operator on or before ..... shall commence the work, and on or before July 1, 1957 ..... (unless the Operator's obligation to prosecute the work is terminated—see Article 10) shall either have completed the work or shall have incurred allowable costs (see Article 6) in a sum not less than the estimated total allowable cost set forth in Exhibit "A."

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Independent contracts.*—To the extent that the allowable costs are estimated in Exhibit "A" with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed; but if the reference in Exhibit "A" to any such independent contract requires the Government's approval thereof, payments under such contract will not be allowable costs unless the Government gives its written approval of the contract. Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract and regardless of the Government's approval thereof, the Government will participate in payments to the independent contractor only on account of work performed in accordance with the provisions of this exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—The estimated total allowable cost of the project, set forth in Exhibit "A," is the sum of $20,972.00 .....
The Government shall contribute 50 percent of the allowable costs as they are incurred in a total sum not in excess of $10,486.00 .....: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last

voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work or not in excess of the amount of the Government's contribution to the cost of property which is or may become subject to disposal as provided in Article 9(c), whichever is greater. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 7(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. "Costs incurred" mean costs that have been paid or have become due and payable, or that in the opinion of the Government have become an obligation. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Estimated costs.*—(a) *Categories of costs.*—The allowable costs of the work to which the Government shall contribute are limited to those that are direct, reasonable, necessary, and that are estimated in Exhibit "A" by categories as specified in this article. If any category or subcategory is omitted from the estimate of costs, or if the word "none" is annexed to the listing thereof, costs under such category or subcategory are not allowable. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost, and any excess over the estimated total allowable cost of the work, shall not be allowable. Any excess over the estimate of any category, subcategory, or item, either as to requirement or related cost, not indicated as a maximum shall be allowable within the limit of the estimated total allowable cost of the work. To the extent that excesses over maximums other than the estimated total allowable cost of the work may be necessary for the performance of the work, the Operator shall incur such excesses for his own account without contribution by the Government; but except for any such necessary excesses in categories, subcategories, or items thereunder the Operator is not obligated to incur more than his agreed percentage of the estimated, total allowable cost of the work.

To the extent specified in this article or in Exhibit "A" the following categories, subcategories, and elements thereof are maximums; but if not so specified either here or in Exhibit "A" they are not maximums, and may be exceeded within the limit of the estimated total allowable cost of the work:

CATEGORY (1)—INDEPENDENT CONTRACTS.—Work to be performed under independent contracts (see Article 4(b)). The estimated total amount of this category and the estimated cost of each unit of work for performance under an independent contract are maximums.

CATEGORY (2)—PERSONAL SERVICES.

*Subcategory (a)—Supervision.*—All elements of this subcategory (number of supervisors, periods of employment, rates of pay, and total) are maximums.

*Subcategory (b)—Technical services.*—All elements of this subcategory (number of technicians, periods of employment, rates of pay, and total) are maximums.

*Subcategory (c)—Labor.*

CATEGORY (3)—OPERATING MATERIALS AND SUPPLIES.—Includes such items as drill bits and steel, explosives, fuel, pipe, power, small tools costing less than $50 each, timber, track.

CATEGORY (4)—OPERATING EQUIPMENT.

*Subcategory (a)—Rental.*—The number of each object to be rented [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

*Subcategory (b)—Purchases.*—The estimated total of this subcategory is a maximum.

*Subcategory (c)—Depreciation.*—All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)—INITIAL REHABILITATION AND REPAIRS.—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

*Subcategory (a)—Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).*—The estimated total of this subcategory is a maximum.

*Subcategory (b)—Initial rehabilitation and repairs of operating equipment.*—The estimated total of this subcategory is a maximum.

CATEGORY (6)—NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

CATEGORY (7)—MISCELLANEOUS.—Repairs and maintenance (other than initial) of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, communications, and any other items of requirement or cost that do not fall within any of the first 6 categories.

THE ESTIMATED TOTAL ALLOWABLE COST of the work is a maximum.

(b) *Nonallowable costs.*—The following costs are not allowable for contribution by the Government:

(1) *Costs of the land,* such as rental, depreciation, depletion, or other cost of acquiring, owning, or holding possession;

(2) *Indirect costs,* such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) *Previous work* performed or costs incurred before the date of this contract; and

(4) *Deferred payments.*—Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods; unless the purchase agreement is approved by the Government in writing.

(c) *Reductions in costs.*—The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original estimated total cost. This provision does not apply to receipts from production which are subject to the Government's percentage royalty under the provisions of Article 9[redacted] 8 . **See Annex I.**

ARTICLE 7. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. If the Government elects to audit said records and accounts relating to the exploration work by certified public accountant, it may do so as a cost of the work to which the Operator shall contribute. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine any pertinent books, documents, papers, and records of the Operator. All of the Operator's vouchers and records and accounts relating thereto and the Government's payments thereof remain subject to adjustment until final audit by the Government. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved by the Government.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing detailed costs incurred during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and costs incurred for each type of work; and (3) a Narrative Report of the work performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and related costs incurred.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 8. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after a sufficient final report and final account (see Article 7) has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

(b) *Royalty on production.*—The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land, as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, within a period of ten years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the crude ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

(d) *Unsold production.*—If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value therof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½)

percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

(For instance: the royalty on an amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on an amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this article.

(g) *Lien for payment.*—To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(h) *Notice to purchasers.*—The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

ARTICLE 9. *Interests in purchased property.*—(a) *Title and ownership.*—All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions, although title thereto shall be taken in the name of the Operator.

(b) *Preservation of property.*—Until the final disposal of any property in which the Government has an interest the Operator shall preserve and protect same for the best interest of the Government, any reasonable and necessary costs thereof to be treated as an allowable cost of the project. After the completion of the work or termination of the Government's obligation to contribute, or when such property is not in use for or needed for the work, the Operator shall neither use it without the written consent of the Government nor without paying a reasonable rental to be fixed by the Government for its interest.

(c) *Disposal of property.*—Upon the completion of the work or termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator or the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government the Operator shall not sell at any price any item of property the cost of which was more than $500, and shall not sell at less than 25 percent of the purchase price any item of property which cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or himself cares to give. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, or explosives, or pipe, or rails), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the project.

(d) *Default of the Operator re disposal.*—If within 90 days after the completion of the work or termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, or after such further time as the Government may in writing allow, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may pursue one of the following two courses: (1) the Government, by written notice to the Operator, may place upon such property what in its opinion is a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the

date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; or (2) the Government may enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 10. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon: (1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon: (1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 10 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 11. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 12. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 13. *Changes and added provisions.*—

**In Article 6(c), the words "Article 9" are changed to "Article 8."**

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C. O. Mittendorf

**Administrator, Defense Minerals Exploration Administration**

**TUAB MINERAL CORPORATION**

(Operator)

By .....

**Title** .....

---

I, ....., certify that I am the ..... secretary of the corporation named as Operator herein; that ..... who signed this contract on behalf of the Operator, was then ..... of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

.....

[ CORPORATE SEAL ]

U. S. GOVERNMENT PRINTING OFFICE 16—70617-1

EXPLORATION PROJECT CONTRACT
TUAB MINERAL CORPORATION
DOCKET NO. DMEA-4343

ANNEX I

The land referred to in Article 2 of the contract is owned by the Operator and consists of 10 patented and 36 unpatented lode mining claims situated in secs. 35 and 36, T. 5 S., R. 26 E., and in secs. 1 and 2, T. 6 S., R. 26 E., G. & S. R. M., in the Lone Star mining district, Graham County, Arizona, and is described as follows:

The patented claims are: Lawyer, Beggerman, Richman, Poorman, Intermountain, Outlaw, Espranza, Hole Brook, Bill Nye, and Lucky Joe. The Operator acquired these ten patented claims by deed dated March 2, 1956, and recorded on March 20, 1956, in the office of the Recorder of Graham County, Arizona, in Docket 37, page 447.

The unpatented claims are Blue Bird Claims 1 through 36, both inclusive. The Operator acquired these claims by deed dated March 1, 1956, and recorded in the Office of the Recorder of Graham County, Arizona, in Docket 37, page 261.

The property is shown on the map entitled: "Fig. - 2. Claim Map, Tuab Mineral Corp., San Juan Mine, Graham County, Arizona," attached hereto and made a part hereof.

EXPLORATION PROJECT CONTRACT
TUAB MINERAL CORPORATION
DOCKET NO. DMEA-4343

EXHIBIT "A"

Description of the Work

The purpose of the project is to explore, by diamond drilling, from the surface, to determine the continuation of copper ores that existed in the upper levels of the Main shaft on the Poorman claim.

The work shall consist of drilling 4 diamond drill holes from the surface. The total amount of drilling shall not exceed 2,400 feet. The holes shall be drilled at or near the indicated sites, and on the indicated bearings, as shown on the map entitled "Fig.-4 - Proposed Exploration, Tuab Mineral Corp., San Juan Mine, Graham County, Arizona," attached hereto and made a part hereof. The holes shall be inclined at about minus 45 degrees.

All core shall be kept in core boxes for Government inspection. Sample intervals shall not exceed 5 feet in those sections which are mineralized. The mineralized sections of the core shall be split, one half to be assayed for copper and the other half to be furnished to the Government upon request. Sludge samples shall be taken from intervals where core recovery is less than 80 per cent, and shall be assayed for copper. Half of each sludge sample shall be retained and made available to the Government. Certified copies of all assay certificates and complete log records of all holes shall be submitted with the Operator's monthly reports. The number of samples taken shall not exceed 800.

The project shall be supervised by a competent engineer-geologist who shall devote full time to the project work.

Only the costs of completed drill holes are allowable costs of the project. Holes entering the primary ore zone should be bottomed after a minimum penetration, but shall not exceed 600 feet in depth per hole.

The locations, directions, inclinations, and extent of all holes shall have prior approval of the Government.

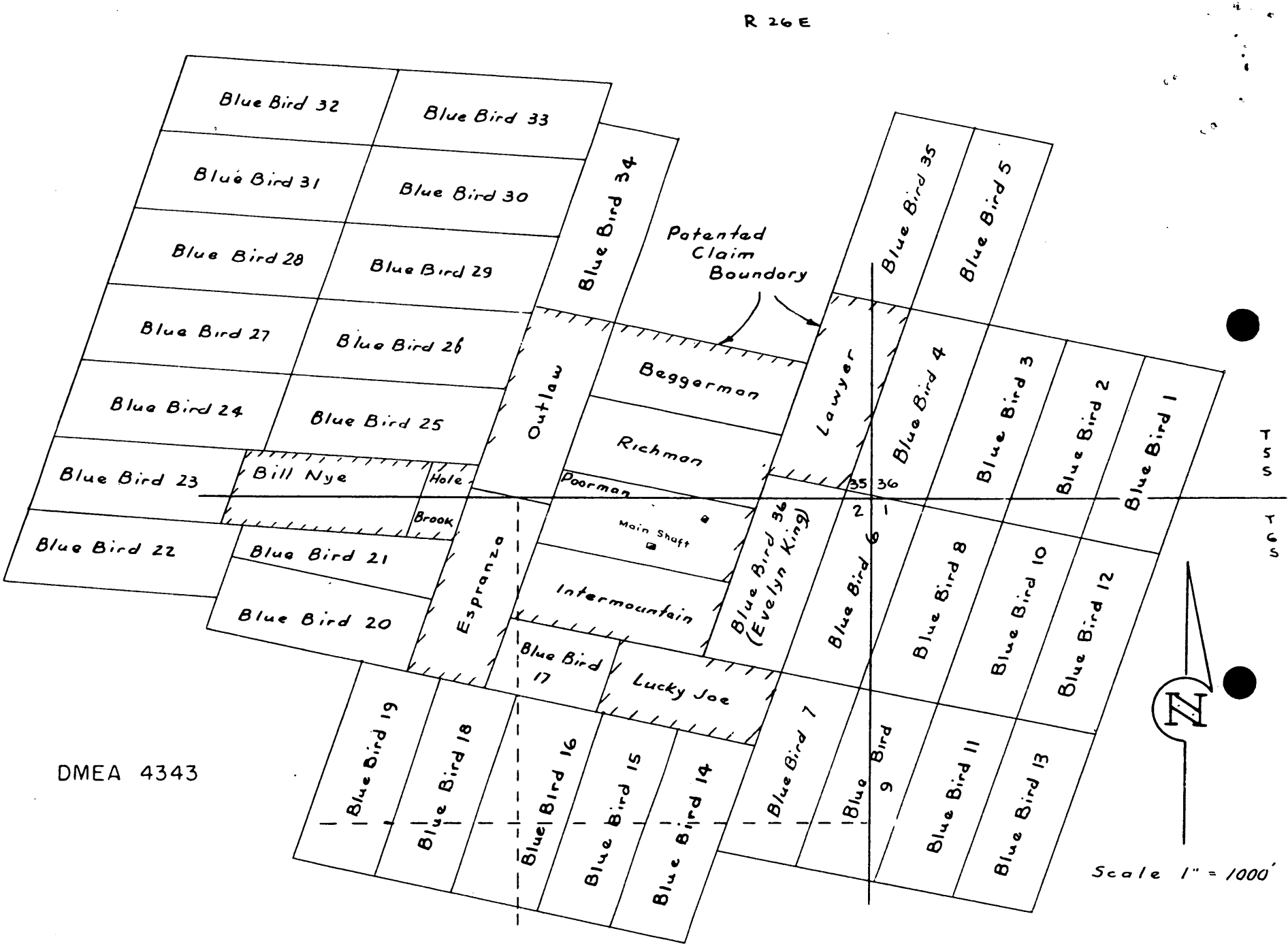
Estimated Costs of the Project
(*Indicates an allowable maximum)

Category (1) Independent Contracts

| | |
|---|---|
| Collar pipe, from surface to 20-foot depth, 80 feet @ $7.40/ft. | $ 592.00 |

| | | |
|---|---|---|
| BX coring, from 20-foot depth to 150-foot depth, 520 feet @ $6.40/ft. | $ 3,328.00 | |
| AX coring, from 150-foot depth to 250-foot depth, 400 feet @ $5.40/ft. | 2,160.00 | |
| AX coring, from 250-foot depth to 500-foot depth, 1,000 feet @ $5.90/ft. | 5,900.00 | |
| AX coring, from 500-foot depth to 600-foot depth, 400 feet @ $6.50/ft. | 2,600.00 | |
| Cementing and redrilling, 20 feet per hole, 80 feet @ $3.00/ft. | 240.00 | |
| Reaming and casing, 20 feet per hole, 80 feet @ $2.75/ft. | 220.00 | |
| Mobilization and demobilization | 700.00* | |
| Cost of hauling water, 3.2 months @ $250.00/mo. | 800.00* | |
| 3,200 miles @ $0.15/mi. for use of truck | 480.00* | |
| Purchase price of 80,000 gallons of water @ $0.40/1,000 gals. | 32.00* | $17,052.00 |
| Category (2) Personal Services | | |
| Subcategories (a) and (b) Supervision and Technical Services | | |
| Engineer-geologist, 4 months @ $500.00/mo. | 2,000.00 | |
| Subcategory (c) Labor None | | 2,000.00 |
| Category (3) Operating Materials and Supplies | | |
| Fuel and grease for jeep | 150.00 | |
| 100 core boxes @ $3.50/box | 350.00 | 500.00 |
| Category (4) Operating Equipment | | |
| Subcategory (a) Rental | | |
| Rental of jeep @ $80.00/mo. | 320.00 | |

| | | | |
|---|---|---|---|
| Subcategories (b) and (c) Purchases and Depreciation | None | | $ 320.00 |
| Category (5) Initial Rehabilitation and Repairs | None | | |
| Category (6) New Buildings, Fixtures, and Installations | None | | |
| Category (7) Miscellaneous - None except: | | | |
| Payroll taxes and liability insurance 10% of $2,000.00 | | $ 200.00 | |
| Repairs for jeep | | 100.00 | |
| 800 samples assayed for copper @ $1.00/sample | | 800.00 | 1,100.00 |
| Estimated Total Cost of the Project | | | $20,972.00 |
| Government Participation @ 50% | | | $10,486.00 |




DMEA 4343

FIG.-2-CLAIM MAP, TUAB MINERAL CORP. SAN JUAN MINE GRAHAM COUNTY, ARIZONA

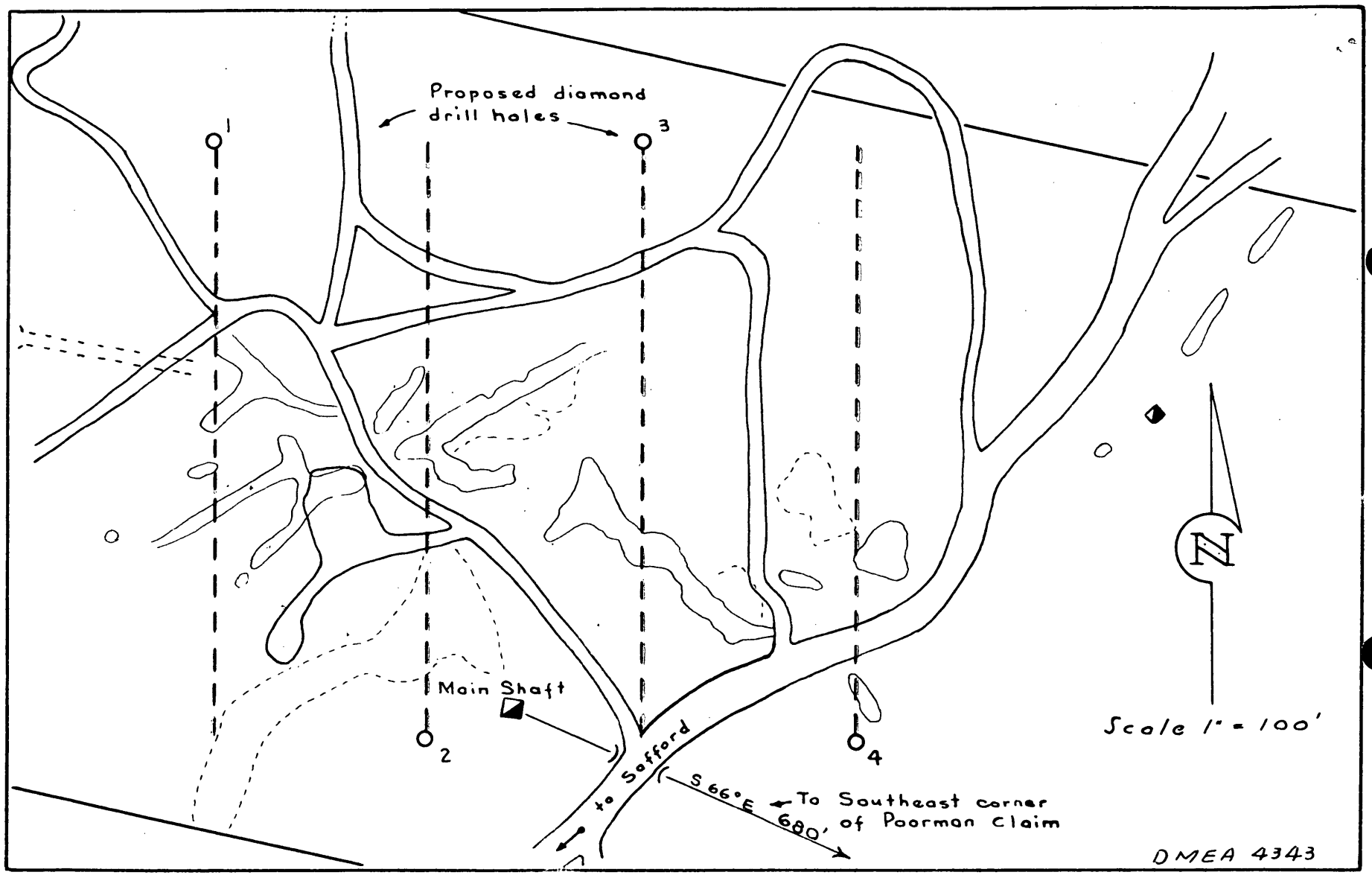



FIG -4- PROPOSED EXPLORATION, TUAB MINERAL CORP. SAN JUAN MINE
GRAHAM COUNTY, ARIZONA

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

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OCT 23 1957

JWALT/er Rm 4444, Ext. 2690

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DMEA, Division of Base Metals

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14X4401(01) Revolving Fund,
Defense Production Act, Interior,
(Transfer of Office of Secy.)

TELETYPE

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Date:

To: Mr. E. N. Harshman, Acting Executive Officer, DMEA
Field Team, Region III, Denver, Colorado

Reurtt October 22, 1957, Docket DMEA-4343, Tuab Mineral Corp. See copy of our letter to Mr. Bibb, President, Tuab Mineral Corporation, dated October 18, 1957.

George C. Selfridge

Chairman, Operating Committee (GS)

JWAlt/er 10/23/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Chron.

8623

Mr. George Selfridge

OFFICIAL FILE COPY
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SPECIAL

DN 235 BUR MINES 10-22-57 8-22

CHAIRMAN OPERATNG COMMITTEE, DMEA

RE DCXXX DOCKET DMEA-4343, TUAB MINERAL CORP., ACTING ADMINITXXXXXX ADMINISTRATOR S LETTER OF SEPTEMBER 19, 1957 TO JAMES M. MURPHY. PLEASE TELETYPE ADVICE AS TO STATUS OF DOCKET.

E N HARSHMAN ACTG. EXED. OFFICER

Denver Colo.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

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OCT 18 1957

Mr. J. W. Bibb, President
Tuab Mineral Corporation
1218 Sixth Avenue
Safford, Arizona

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Bibb:

This is to acknowledge your undated letter regarding the cited project in which you stated that you do not propose to execute the Defense Minerals Exploration Contract.

We will appreciate your returning the unsigned contracts to this office immediately so that we can close our files on this case.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

UWAlt/er 10/17/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

8623

TELEPHONE MA 4-4501

# TUAB MINERAL CORP.

~~201 NORTH STONE AVENUE~~
~~TUCSON, ARIZONA~~

JOHN W. BIBB, JR., PRESIDENT

1218 Sixth Avenue
Safford, Arizona

| OFFICIAL FILE COPY DMEA RECEIVED OCT 11 1957 | | |
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10/16

Mr. Frank E. Johnson
United States Dept. of the Interior
Defense Minerals Exploration Administration
Washington 25, D.C.

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Johnson:

We do not propose to execute the DMEA Contract.

We will return the unsigned contracts soon as we are able to secure them from Mr. Goldberg's estate.

Yours very truly,

J.W. Bibb, President

JWB/cy

DMEA Form 7
(12-56)

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SEP 19 1957

Mr. James M. Murphy
Valley National Building
Tucson, Arizona

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Murphy:

We have received a letter, dated August 21, 1957, from Mr. William Gordon, Attorney at Law, 73 West Council Street, Tucson, Arizona, in which he advises us to correspond with you regarding the proposed contract for the cited project, which was mailed to the Tuab Mineral Corporation on February 5, 1957. We would appreciate it if you would give this matter your immediate attention, and notify us as to your intent regarding this contract at your very earliest convenience. We cannot carry this proposed contract on our records for an indefinite period.

If you have decided to accept this contract, please have the authorized corporation official sign all copies and send them to Mr. W. H. King, Executive Officer, DMEA Field Team, Region III, 224 New Customhouse Building, Denver 2, Colorado, with a statement advising him as to the date the project work will be started.

If you have decided not to accept the contract, please return all copies of the contract, unsigned, to this office without further delay.

Because of the length of time elapsed since the contract was sent to the Tuab Mineral Corporation, we will be compelled to withdraw it unless the Corporation acts before October 18, 1957.

Sincerely yours,

Frank E. Johnson
ACTING Administrator

JWAlt/bjm/(9/19/57)
Copy to: Docket
Admr. R. File
Op. Committee
Mr. McMahon
Mr. Kiilsgaard
Region III (2)
Chron.

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
224 New Customhouse
Denver 2, Colorado

September 13, 1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 4343 (Copper), Tuab Minerals Corporation (San Juan mine), Graham County, Arizona

On February 5, 1957, proposed Exploration Project Contract No. Idm-E1059 was forwarded to the Tuab Minerals Corporation for their approval and signature. Repeated attempts have been made since that date to ascertain the Corporation's intention regarding consummation of the contract.

We have received no answer to the latest request, that made by the Administrator in his letter of August 9, 1957, and it appears that the Corporation has lost interest in the proposed program of exploration.

As the contract has been in the hands of the Corporation for more than seven months without indication on their part that they have any intention to proceed with the work, it is recommended that your office notify the Tuab Minerals Corporation that if the signed contract is not received within thirty days it will be withdrawn and the docket closed.

H. M. Conners
for E. N. Harshman

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WILLIAM GORDON
ATTORNEY AT LAW
73 WEST COUNCIL STREET
TUCSON, ARIZONA
MAIN 3-8123

August 21, 1957

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 26 1957

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United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D.C.

Attention: Mr. C. O. Mittendorf, Administrator

Gentlemen:

Please refer to your letter to me dated August 9, 1957. I suggest that you communicate directly with James M. Murphy, Esquire, Valley National Building, Tucson, who is attorney for others interested in the Tuab Mineral Corporation. After he receives advice from you, he will undoubtedly communicate with me, and it is likely that something definitive will be said to you.

You will note that my address is not 201 North Stone Avenue; that was the address of the late Mr. Goldberg.

Yours very truly,

William Gordon

William Gordon

WG:b
cc to:
Mrs. Hymen D. Goldberg
James M. Murphy

WILLIAM GORDON
73 WEST COUNCIL STREET
TUCSON, ARIZONA

TUCSON
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AIR MAIL
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VIA AIR MAIL

United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D.C.

Attention: Mr. C.O.Mittendorf, Administrator

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(12-56)

OFFICIAL FILE COPY

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AUG - 9 1957

Mr. William Gordon
Tuab Mineral Corporation
201 North Stone Avenue
Tucson, Arizona

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Gordon:

On May 9, 1957, we wrote to you that we would hold the proposed contract for the cited project in abeyance until further word is received from you. As it is now three months since we wrote you, we are anxious to know if you have made a decision regarding your intent pertaining to this proposed contract.

If you have made a decision regarding this proposed contract, please advise Mr. W. H. King, Executive Officer, DMEA Field Team, Region III, at your earliest convenience.

As the proposed contract was sent to your company by the Field Team on February 5, 1957, we would appreciate it if you would give this matter your immediate consideration.

Sincerely yours,

C. O. Mittendorf

Administrator

JWAlt/bjh (8/8/57)

Copy to: Docket
Admr. R. File
Op. Committee
Mr. McMahon (USBM)
Mr. Kiilsgaard (USGS)
Region III (2)
Chron.

8623

DMEA Form 7
(12-56)

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MAY - 9 1957

Mr. E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse Bldg.
Denver 2, Colorado

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Harshman:

We are enclosing ~~a copy~~ copies of a letter, dated May 1, 1957 from Mr. William Gordon, regarding the proposed contract for the cited project. This is in reply to our letter, dated April 26, to Mr. Hyman D. Goldberg. Under these circumstances, please hold the proposed contract in abeyance until further word is received from this Corporation.

Also, enclosed are copies of a letter from the Administrator to Mr. William Gordon.

Sincerely yours,

George C. Selfridge (By cs)
Chairman, Operating Committee

Enclosures

JWAlt/er 5/7/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

Frank D. Lamb (By cs)
Member, Bureau of Mines

Thor H. Kiilsgaard (By cs)
Member, Geological Survey

8623

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(12-56)

OFFICIAL FILE COPY

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Lamb
Kilgaard

MAY - 9 1957

Mr. William Gordon
Tuab Mineral Corporation
201 North Stone Avenue
Tucson, Arizona

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Gordon:

This is to acknowledge your letter, dated May 1, 1957, regarding the proposed contract for the cited project.

We are sorry to hear that Mr. Goldberg has passed away and, under these circumstances, we will hold the proposed contract in abeyance until further word is received from you.

When you have made a decision regarding your intent pertaining to this proposed contract, please advise Mr. E. N. Harshman, Acting Executive Officer, DMEA Field Team, Region III, at your earliest convenience.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

JWAlt/er 5/7/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

8623

HYMEN D. GOLDBERG
COUNSELLOR AT LAW
201 NORTH STONE AVENUE
TUCSON, ARIZONA

TELEPHONES {MAIN 4-4501
MAIN 4-4111

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 3 1957

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May 1st, 1957

Mr. Frank E. Johnson
Acting Administrator
United States Dept. of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine, Graham County, Arizona.

Dear Sir:

I am sorry that I must report to you that Mr. Goldberg has passed away.

The files are under study by other counsel and communication will be made to you as soon as possible under the circumstances.

Very truly yours,

William Gordon Jr.

William Gordon

WG:r

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
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| 4/24 | Triayne | 100 |
| 4/25 | Selfridge | 90 |
| " | Johnson | 110 |
| | | ~~100~~ |
| 4/27 | C | 225 |
| | | 500 |

APR 26 1957

Mr. Hymen D. Goldberg, Secretary
Tuab Mineral Corporation
201 North Stone Avenue
Tucson, Arizona

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Goldberg:

This is with reference to the cited application. On February 5, 1957, Mr. W. M. Traver, Executive Officer, DMEA Field Team, Region III, sent you copies of proposed Exploration Project Contract No. Idm-E1059 for your approval and signature. On February 15, you acknowledged receipt of Mr. Traver's letter and the enclosures, and stated that you are studying the contract and would write to him again shortly.

Having received no further word from you, Mr. E. N. Harshman, Acting Executive Officer, wrote to you on March 4, saying that he would appreciate advice by return mail as to your plans relative to execution and return of all copies of the proposed contract.

We believe that you have had sufficient time to study this proposed contract. If it is acceptable please sign the contract and return to Mr. Harshman. In the event that you wish to have the contract modified, return all unsigned copies with your suggestions for changes.

Will you please advise Mr. Harshman of your intent regarding this proposed contract in the near future.

Sincerely yours,

Frank E. Johnson

ACTING Administrator

JWAlt/er 4/24/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
224 New Customhouse
Denver 2, Colorado

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AIR MAIL

April 4, 1957

4/17

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-4343 (Copper) Tuab Mineral Corporation (San Juan mine) Graham County, Arizona - Proposed Exploration Project Contract Idm-E1059

Please refer to letters from this office to the Applicant, dated February 5, and March 4, 1957.

We have not been favored with a reply as requested in the last paragraph of our letter of March 4. Therefore, it is recommended that the Applicant be contacted by your office in an effort to obtain a commitment as to his plans for performing work under the contract.

E. N. Harshman

E. N. Harshman

224 New Customhouse
Denver 2, Colorado

March 4, 1957

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Mr. Hyman D. Goldberg, Secretary
Tuab Mineral Corp.
201 North Stone Avenue
Tucson, Arizona

Re: Docket No. DMRA 4343 (Copper)
Tuab Mineral Corp.
(San Juan mine)
Graham County, Arizona;
Proposed Exploration Project
Contract No. Idm-E1059

Dear Mr. Goldberg:

Reference is made to proposed Exploration Project Contract No. Idm-E1059, five copies of which were forwarded to you by our letter of February 5, 1957; receipt of which was acknowledged by your letter of February 15, 1957.

We will appreciate advice by return mail as to your plans relative to execution and return of all copies of the proposed Contract.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMRA Field Team, Region III

JWT:prl

cc: Chairman, Op. Comm. (2) ) w/copy of
Harshman ) Operator's
Storms ) letter of Feb. 15
Emerick ) (Note change of address)

Townsend
Corres. file
Chron.

TELEPHONE MA 4-4501

# TUAB MINERAL CORP.

201 NORTH STONE AVENUE
TUCSON, ARIZONA

JOHN M. STOB, JR., PRESIDENT

DMEA
DEPARTMENT OF THE INTERIOR
FEB 18 1957
REGION II
DENVER, COLORADO

February 15, 1957

United States Department of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Re: Docket No. DMEA 434 (Copper)
Tuab Mineral Corporation
(San Juan mine)
Graham County, Arizona;
Proposed Exploration Project
Contract No. Idm-E1059

Attention:
Mr. W.M. Traver

Dear Sir:

We have just received your letter of February 5th, together with enclosures. We are in the process of studying your form of contract and will write you again shortly.

Please note on your records that all mail addressed to the Tuab Mineral Corporation should be sent in care of it's Secretary, Hymen D. Goldberg, 201 North Stone Avenue, Tucson, Arizona.

Very truly yours,

Hymen D. Goldberg
Secretary

HDG:ep

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

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224 New Customhouse
Denver 2, Colorado

February 5, 1957

Docket

Mr. Russell R. McLellan
Utex Exploration Company, Inc.
Box 387
Moab, Utah

Re: Docket DMEA 4343 (Copper)
Tumb Mineral Corporation
(San Juan claims)
Graham County, Arizona

Dear Mr. McLellan:

This is with further reference to your letter of July 31, 1956 and ours of September 24, 1956 concerning the captioned application.

For your information we are, today, forwarding to the Tucson, Arizona address of the applicant corporation, six copies of an Exploration Project Contract No. Idm-E1059 for signature of the officer of the corporation authorized to sign such documents.

Very truly yours,

Original signed by
W. M. TRAVER

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

WMT:jy
cc: Chm. Op. Comm. (2)
Harshman
Storms
Emerick
Docket 4343
Townsend
Chron.

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1020

3. Royalty is due the Government on all production from the land described in the Contract, beginning on the date of the Contract.

If the Contract is satisfactory, and upon return of all copies properly signed, the "Operator's Copy" of the Contract will be forwarded to you, together with blank report forms and instructions relative to reporting on work performed under the Contract. Also, instructions will be given as to the procedure to be followed in corresponding with this office in matters concerning operations under the Contract.

When the signed copies of the Contract are returned, please advise the date on or before which work will be commenced, for our insertion in Article 3 of the Contract form.

Very truly yours,

Original signed by
W. M. TRAVER

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

Enclosures

JWT:prl

cc: Chairman, Op. Comm. (2)
Harshman
Storms
Emerick
Townsend
Docket
Chron.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

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| | Firnwald | 500 |
| 1-25 | Chamberlin | 800 |
| 1/31 | Selfridge | 130 |
| 1-31 | [illegible] | 220 |
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1/30 Johnson 110
3/ Butterworth 100
1-31-R.S.G. 225.
500.

JAN 31 1957

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

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Traver:

Enclosed are the original and five copies of a proposed long-form contract signed by the Administrator for the Government. It consists of the form, Annex I (1 page), Exhibit "A" (3 pages), and two maps. Also enclosed are two extra copies of Annex I, Exhibit "A", and two maps for Field Team use.

It will be necessary to insert in the contract, in the space provided under Article 3, the date when the Operator shall commence work on the contract.

If the proposed contract meets with your approval, kindly present it to the Applicant for approval and signature and, when completed, distribute the copies in the usual manner. In the event that the proposed contract is not satisfactory, and cannot be amended within your delegated authority, return all copies with your recommendation concerning any modification.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

JWAlt/er 1/25/57
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

Frank D. Lamb (FDL)
Member, Bureau of Mines

Noted by N. E. Nelson (NEN)
Member, Geological Survey

R.S.G.

8623

Docket Copy

MF-200
(Revised June 1954)

Docket No. DMEA 4343

Commodity Copper

Contract No. Idm-E

# UNITED STATES OF AMERICA
# DEPARTMENT OF THE INTERIOR
## DEFENSE MINERALS EXPLORATION ADMINISTRATION

## EXPLORATION PROJECT CONTRACT[1]

It is agreed this ..... day of ....., 195...., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] Tuab Mineral Corporation, an Arizona corporation, whose mailing address is 2517 East Glenn Tucson, Arizona, hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200), the attached Exhibit "A," Annex I, and 2 maps.

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Arizona, County of Graham, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] Owner of [5] See Annex I in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] See Annex I., [7] recorded in Book ....., page ....., official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: None

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

of the land (lessor, seller, optionor, etc.), are attached, as follows: .....

.....

.....

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 8, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 8(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of ....Copper.... The work to be performed is described in Exhibit "A." The Operator on or before ..... shall commence the work, and on or before ....July 1, 1957.... (unless the Operator's obligation to prosecute the work is terminated—see Article 10) shall either have completed the work or shall have incurred allowable costs (see Article 6) in a sum not less than the estimated total allowable cost set forth in Exhibit "A."

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Independent contracts.*—To the extent that the allowable costs are estimated in Exhibit "A" with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed; but if the reference in Exhibit "A" to any such independent contract requires the Government's approval thereof, payments under such contract will not be allowable costs unless the Government gives its written approval of the contract. Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract and regardless of the Government's approval thereof, the Government will participate in payments to the independent contractor only on account of work performed in accordance with the provisions of this exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—The estimated total allowable cost of the project, set forth in Exhibit "A," is the sum of $....20,622.00.... The Government shall contribute ....50.... percent of the allowable costs as they are incurred in a total sum not in excess of $....10,311.00....: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last

Tadi, Fr
Dunyon
Appd. Sol. Off.
Alt
Jurisdl
Chambers

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By .....
**Administrator, Defense Minerals Exploration Administration**

**TUAB MINERAL CORPORATION**
(Operator)

By .....

**Title** .....

---

I, ....., certify that I am the ..... secretary of the corporation named as Operator herein; that ..... who signed this contract on behalf of the Operator, was then ..... of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

.....

[ CORPORATE SEAL ]

U. S. GOVERNMENT PRINTING OFFICE 16—70617-1

date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; or (2) the Government may enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 10. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon: (1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon: (1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 10 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 11. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 12. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 13. *Changes and added provisions.*—
**In Article 6(c), the words "Article 9" are changed to "Article 8."**

EXPLORATION PROJECT CONTRACT
TUAB MINERAL CORPORATION
DOCKET NO. DMEA-4343

EXHIBIT "A"

Description of the Work

The purpose of the project is to explore, by diamond drilling, from the surface, to determine the continuation of copper ores that existed in the upper levels of the Main shaft on the Poorman claim.

The work shall consist of drilling 4 diamond drill holes from the surface. The total amount of drilling shall not exceed 2,400 feet. The holes shall be drilled at or near the indicated sites, and on the indicated bearings, as shown on the map entitled "Fig.--4 - Proposed Exploration, Tuab Mineral Corp., San Juan Mine, Graham County, Arizona," attached hereto and made a part hereof. The holes shall be inclined at about minus 45 degrees.

~~Core samples shall be taken in significant mineralized zones, utilizing drilling intervals of not more than 5 feet.~~ Sludge samples shall be taken from intervals where core recovery is less than 80 percent. All samples shall be assayed for ~~total~~ copper. Certified copies of all assay certificates and complete log records of all holes shall be submitted with the Operator's monthly reports. Half of each sample shall be retained and made available ~~for such disposition as may be directed by the Government~~. The number of samples taken shall not exceed 800.

The project shall be supervised by a competent engineer-geologist who shall devote full time to the project work.

Only the costs of completed drill holes are allowable costs of the project. Holes entering the primary ore zone should be bottomed after a minimum penetration, but shall not exceed 600 feet in depth per hole.

The locations, directions, inclinations, and extent of all holes shall have prior approval of the Government.

Estimated Costs of the Project
(* Indicates an allowable maximum)

Category (1) Independent Contracts

| | |
|---|---|
| Collar pipe, from surface to 20 feet depth, 80 feet @ $7.40 | $ 592.00 |

| | | |
|---|---|---|
| BX coring, from 20 foot depth to 150 foot depth, 520 feet @ $6.40/ft. | $ 3,328.00 | |
| AX coring, from 150 foot depth to 250 foot depth, 400 feet @ $5.40/ft. | 2,160.00 | |
| AX coring, from 250 foot depth to 500 foot depth, 1,000 feet @ $5.90/ft. | 5,900.00 | |
| AX coring, from 500 foot depth to 600 foot depth, 400 feet @ $6.50/ft. | 2,600.00 | |
| Cementing and redrilling, 20 feet per hole, 80 feet @ $3.00/ft. | 240.00 | |
| Reaming and casing, 20 feet per hole, 80 feet @ $2.75/ft. | 220.00 | |
| Mobilization and demobilization | 700.00* | |
| Cost of hauling water, 3.2 months @ $250.00/mo. | 800.00* | |
| 3,200 miles @ $0.15/mi. for use of truck | 480.00* | |
| Purchase price of 80,000 gallons of water @ $0.40/1,000 gals. | 32.00* | $17,052.00 |

Category (2) Personal Services

Subcategories (a) Supervision & Technical Services (b)

Engineer-geologist, 4 months @ $500.00/mo. 2,000.00

Subcategories (c) - Labor ~~(b) and (c) Technical Services and Labor~~ None

Category (3) Operating Materials and Supplies ~~None~~

Fuel and grease for Jeep 150.00
100 Core boxes @ $3.50/box 350.00 500.00

Category (4) Operating Equipment

Subcategory (a) Rental

Rental of Jeep @ $80.00/mo. 320.00

Subcategories (b) and (c) Purchases and Depreciation None

Category (5) Initial Rehabilitation and Repairs None

Category (6) New Buildings, Fixtures, and Installations None

Category (7) Miscellaneous - None except:

Payroll taxes and liability insurance 10% of $2,000.00 200.00

| | | |
|---|---|---|
| ~~Fuel, grease,~~ ~~and~~ repairs for Jeep | $ ~~250.00~~ $100.00 | $1100.00 |
| 800 samples, assayed for copper @ $1.00/sample | 800.00 | $ ~~1,250.00~~ 20,972.00 |
| Estimated Total Cost of the Project | | ~~$20,622.00~~ 10,486.00 |
| Government Participation @ 50% | | ~~$10,311.00~~ |

DMEA Form 7
(12-56)

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January 18, 1957

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Chief, Base Metals Division

Subject: Preparation of Contract for Docket No. DMEA-4343, Tuab Mineral Corporation, San Juan Mine (Copper), Graham County, Arizona

Will you please prepare a contract for the cited project. A draft of the contract, Annex I, Exhibit "A", and 9 copies of two maps are attached to this memorandum.

W. R. Griswold

W. R. Griswold

JWAlt/er 1/18/57

Copy to: Docket
Base Metals
Chron.

8623

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

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| January 9, 1957 | | |
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Memorandum

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

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Field Team Report, Docket No. DMEA 4343, (copper), Tuab Mineral Corporation, San Juan Mine, Graham County, Ariz.

The field examiners believe that conditions are favorable for indicating the presence of a significant reserve of low-grade copper-bearing rock of a possible mining grade and exploration work can be completed at a relatively low cost. Accordingly, they propose an exploration project consisting of four diamond drill holes totaling a maximum of 2,400 feet at a cost of $23,260.20.

The target of the proposed project is to explore below the 130-foot level that offers the possibility of increasing present estimates of ore reserves. Reports of previous work indicating that the bottom limit of the ore zone is approximately 120 feet are considered unreliable and the deeper exploration appears to be warranted.

Except for the provision, under supervision and labor, for two full time samplers, I concur with the recommendations of the examiners and the Field Team.

A. D. McMahon

A. D. McMahon

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
F. D. Lamb
F i l e s

IN REPLY REFER TO:

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

January 4, 1957
Re: DMEA 4343
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona
Applicant's Estimate $35,067.03
Recommended Estimate $23,260.20 - Copper

Memorandum

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

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

Subject: Review of Field Team Report.

The applicant requested assistance in drilling 5 angle diamond drill holes across a mineralized zone characterized by a steeply dipping set of multidirectional veins and veinlets.

Previous drilling and mining of which the records are not complete, indicate the zone is 600 to 630 feet long and 200 to 300 feet wide. The depth is less certain, but apparently variable. However it seems to be commonly taken as about 120 feet. So taken, the inferred ore in the blocks, as estimated by the examiners, is:-

| Block | Oxide Ore Tons | Mixed Oxide and Sulfide Tons | Total Tons |
|---|---|---|---|
| 200 x 600 @30' | 267,000 @ 90' | 800,000 | 1,067,000 |
| 300 x 630 @30' | 420,000 @ 90' | 1,260,000* | 1,680,000* |

*Corrected using 90-foot depth.

The grade can only be guessed but is taken as 1% copper.

The examiners recommend drilling 4 holes instead of 5 across the block as proposed by the applicant, and would drill 2 600-foot holes from north to south and 2 600-foot holes from south to north in order to obtain more nearly equal depths on the 2 sides of the east-west trending block. The change is advisable.

If, as said, the average depth of the zone of mineralization is believed to be about 120 feet, the bottoms of the 600-foot holes @-45° will be far below that assumed depth. I would recommend say, 8 or 12

holes @ 30°-45° and if they remain in ore continue them as indicated. A better sampling would be obtained.

Except for a change in the drilling pattern, I concur with the recommendation of the examiners and the Field Team.

N. E. Nelson

N. E. Nelson

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

JAN 2

224 New Customhouse
Denver 2, Colorado

December 31, 1956

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Joint Report of Examination Docket DMEA 4343 (Copper) Tusb Mineral Corporation (San Juan Mine) Graham County, Arizona.

Enclosed are the original and three copies of a joint engineering and geologic Report of Examination on the subject property.

The field examiners recommend an exploration project to consist of four diamond drill holes at an estimated total cost of $23,260.20. We concur in this recommendation.

Your attention is invited to certain revisions in the Report of Examination, which are discussed in a supplemental memorandum from W. L. Emerick and T. M. Romslow to the Executive Officer, DMEA Field Team, Region III, dated December 19, 1956, copy of which accompanies the Report of Examination.

Nine extra copies of Figure 2 and Figure 4 are enclosed for possible use in the contract.

DMEA Field Team, Region III

Original signed by
W. M. TRAVER

By W. M. Traver
Executive Officer

Enclosures
HMC:ytl
cc
Sec. Op. Comm. (4)
Docket 4343
Harshman
Mining Division
Storms
Emerick
Chron.

w/cc of Joint Report of Examination.

1/4/57

DMEA
DEPARTMENT OF THE INTERIOR
DEC 26 1956
REGION III
DENVER, COLORADO

Box 4126 University Station
Tucson, Arizona

December 19, 1956

TRANSMITTED DEC 31 1956

MEMORANDUM

To: Executive Officer, DMEA Field Team, Region III

From: W. L. Emerick
T. M. Romslo

Through: E. N. Harshman DHB for ENH
W. R. Storms WRS

Subject: Docket DMEA 4343 (Copper) Tuab Mineral Corporation, San Juan Mine, Graham County, Arizona

Reference is made to our field examination report on the above docket submitted under letter of transmittal dated December 12, 1956. After a telephone discussion with E. N. Harshman on December 18, 1956, the examining team requests that certain revisions enumerated below supersede these parts of the report effected.

The second paragraph, page 12, under "Proposed Exploratory Project" should be revised to read:

> "The examining team believes the property's potential can be adequately explored by drilling 4 similarly inclined holes from the surface sites of Figure 4. Drilling of 2 northerly and 2 southerly trending holes, as indicated, eliminates the unfavorable features of the applicant's program. The examining team believes a depth of 600 feet and an inclination of 45° on the drill holes, rather than a lesser inclination, will more thoroughly explore the ground below the 130-foot level specified in unverified and probably unreliable older reports as the bottom limits of the ore zone. A depth of 600 feet will also more adequately explore the deeper zones in which earlier churn drill data is uncertain and possibly unreliable, and also offers the possibility of significantly increasing the over-all reserves below the depth of present estimates."

Item 6, page 13, 3rd paragraph, under "Proposed Exploratory Project", should be revised to read:

1/4/57

"6. Only the costs of completed drill holes are allowable costs of the project. Holes entering the primary ore zone should be bottomed after a minimum penetration, but shall not exceed 600 feet in depth per hole."

W L Emerick

W. L. Emerick, U. S. Geological Survey

Original signed by
T. M. Romslo

T. M. Romslo, U. S. Bureau of Mines

WLE:ms

Traver (8)
E. N. Harshman
W. R. Storms
W. L. Emerick

DMEA
IN REPLY REFER TO:
DEPARTMENT OF THE INTERIOR

DEC 19 1956
REGION III
DENVER, COLORADO

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

TRANSMITTED DEC 31 1956

December 18, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 4343 (Copper), Tuab Mineral Corporation (San Juan mine), Graham County, Arizona

Enclosed are the original and eight copies of a joint examination report by T. M. Romslo, U. S. Bureau of Mines, and W. L. Emerick, U. S. Geological Survey, in which Government exploration assistance is recommended.

The examiners conclude that exploration may result in the delineation of a significant amount of low-grade (1 percent ±) copper ore on the Poorman claim.

Eight churn drill holes have already been drilled in the small block proposed for exploration by the examining team. The proposed DMEA exploration consists of four angle diamond drill holes. The examiners reason that the four diamond drill holes, cutting the ore-bearing structures at an angle, will give conclusive data on the size and average grade of the ore body in contrast to the churn drill holes, paralleling the ore-bearing structures, which gave rather inconclusive data.

The depth to which each hole proposed by the examiners is to be drilled and the reasons for drilling far below the depth of possible commercial ore (given in the report as about 120 feet) are not given in the report. I discussed these omissions with Emerick today and requested a supplemental memorandum covering these two points.

Although exploration at the subject property appears warranted, final Field Team action on a specific program should await receipt of the supplemental information.

E. N. Harshman

E. N. Harshman
Member, Field Team

Reviewed by
DMEA OFFICE OF ENGINEERING
1/4/57
(2280).

Enclosures (9)

ENHarshman:arh

MINERAL DEPOSITS
DMEA
RECEIVED
DEC 17 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

DMEA
DEPARTMENT OF THE INTERIOR
DEC 19 1956
REGION III
DENVER, COLORADO

Box 4126 University Station
Tucson, Arizona

December 12, 1956

TRANSMITTED
DEC 31 1956

MEMORANDUM

To: Executive Officer, DMEA Field Team, Region III

From: T. M. Romslo
W. L. Emerick

Through: W. R. Thorne
E. H. Harshman

Subject: Docket DMEA 4383 (Copper), Tuab Mineral Corporation, San Juan Mine, Graham County, Arizona

Enclosed are the original and 3 copies of a joint field report on the above property, recommending approval of the application.

Original signed by
T. M. Romslo

T. M. Romslo
U. S. Bureau of Mines

W L Emerick

W. L. Emerick
U. S. Geological Survey

WLE:mm

cc: W. M. Traver (5)
E. H. Harshman
W. R. Thorne

1/4/57

FOR UNITED STATES GOVERNMENT USE ONLY

TRANSMITTED

DEC 31 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-4343 (Copper), Tuab Mineral Corporation

San Juan Mine

Graham County, Arizona


T. M. Romslo, Mining Engineer
U. S. Bureau of Mines

W. L. Emerick, Geologist
U. S. Geological Survey


December 12, 1956


Developed by
DMEA Central Files
1/4/57



ONE-SIDE Report

## SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Defense Minerals Exploration Administration examined the San Juan mining claims in Graham County, Arizona in connection with an application by the Tuab Minerals Corporation for aid in proposed explorations for copper. The application, docket DMEA-4343, proposed that a small area at the San Juan mine be tested from the surface by diamond drilling 3000 feet in 5 holes. Cost of the proposed exploratory project was estimated at $35,067.03.

The San Juan mine was active during times of high copper prices from about 1900 to the end of World War I. Probably the most active period was from 1915 to 1918, when the San Juan Mining Company sunk several shafts and churn drill holes, drove a short adit, erected a mill, and mined and shipped some ore from open cuts and possibly from underground workings. Since then, activity probably has been confined to the drilling of 5 churn drill holes in 1951. Total production from the mine includes several thousand tons of selectively mined copper ore and possibly a small amount of copper concentrates.

In the San Juan mine area, monzonite porphyry lies exposed in a ridge-like hill surrounded and intruded by diabase. No limonite capping, chloritization, or sericitization appears to be present in the porphyry in the highly mineralized area of the San Juan mine. The monzonite porphyry was shattered and fractured probably by post-intrusive adjustments and shrinkage, or by mineralization.

Two fracture systems are exposed in the area. One trends N. 40° to 60° E. and dips 70° S.E. to vertical; a second one trends about N. 45° W. and dips vertically or at steep angles. Both systems carry veins, ranging in thickness from 1 to 4 feet, that contain oxides and sulphides of copper. Rock between the two fracture systems is shattered and crackled and the fracture planes carry oxides or sulphides of copper as thin scale or varnish.

The more highly mineralized area, roughly 600 feet by 200 feet, is on the Poorman claim. Mineralization gets leaner to the north, northwest, and northeast on the Poorman and Richman claims.

Mineralization was fracture controlled and consists of veins and veinlets of copper silicates, carbonates, and sulphides in the monzonite porphyry. Mineralization occurs on both sides of the diabase-porphyry contact but appears to be important on only the porphyry side.

Evidence of a zone of primary chalcopyrite and pyrite is weakly present, or lacking, in the rock on dumps. The zone of oxidation is shallow and underlain by a chalcocite zone of variable thickness.

Old churn drill holes indicate no extension of the ore body to the northwest or probably to the north and northeast. No information is available on the ground to the south of the main shaft and the ground to the west does not appear favorable.

Estimated on an area 600 feet long by 200 feet wide, reserves would include 267,000 tons of inferred oxide ore, and 800,000 tons of inferred mixed oxide and sulphide ore, or a total of 1,067,000 tons averaging about 1 percent copper. Estimated on an area slightly larger of 630 feet long by 300 feet wide, reserves would include about 420,000 tons of inferred oxide ore and 840,000 tons of inferred mixed oxide and sulphide ore, or a total of 1,260,000 tons averaging about 1 percent copper.

It is concluded that the deposit probably is of shallow depth, limited horizontal extent, and essentially of vein type with characteristic low-grade porphyry copper features lacking or weakly present. Although the deposit probably is not extensive, it could contain significant reserves of low-grade copper-bearing rock, minable by open pit methods and potentially amenable to concentration. The potential worth of the partially explored deposit could be adequately determined by drilling 4 diamond drill holes at an estimated total cost of $23,260.20.

Approval is recommended for Governmental participation in explorations because (1) conditions indicate the presence of a significant reserve of low grade copper-bearing rock of a possible mining grade, and (2) the explorations can be completed at a relatively low cost.

DMEA-4343 (COPPER), TUAB MINERAL CORPORATION

SAN JUAN MINE

GRAHAM COUNTY, ARIZONA

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## INTRODUCTION

The Tuab Mineral Corp., an Arizona corporation, applied for Defense Minerals Exploration Administration aid to explore for copper on their San Juan mining claims in Graham County, Arizona. The application, docketed as DMEA-4343, contained a proposed exploratory project with estimated costs.

The proposed project, confined to a small area at the San Juan mine, involves the diamond drilling from the surface of 3,000 feet in 5 holes. The holes are designed to crosscut a highly fractured zone in monzonite porphyry that has been explored by churn drill holes, presently inaccessible shafts and drifts, and numerous shallow pits and trenches. The estimated total cost of the proposed project is $35,067.03.

Field investigations were initiated August 7, 1956, when W. L. Emerick, Geologist, U. S. Geological Survey, made a preliminary examination of the property in the presence of R. McClellan, the applicant's geologist. On October 12, 1956, Mr. Emerick and Lincoln Stewart, mining engineer, U. S. Bureau of Mines, completed the field investigations. The examining team was accompanied by John W. Bibb Jr., President of the corporation. Mr. Bibb also accompanied T. M. Romslo, mining engineer, U. S. Bureau of Mines, during his visit to the property November 20, 1956, for the purpose of obtaining supplementary data for cost estimates.

## LOCATION AND ACCESSIBILITY

The San Juan property is about 8 air-miles northeast of Safford, Arizona, in secs. 35 and 36, T. 5 S., R. 26 E., and sec. 2, T. 6 S., R. 26 E., Lone Star mining district, Graham County, Arizona (fig. 1). It is reached from Safford by traveling about 4 miles northeasterly on a paved county road and thence 5 miles to the north on a dirt road that skirts the principal workings of the San Juan mine.

Safford is the county seat of Graham County. It is located on a main line of the Southern Pacific Railroad and on U. S. Highway 70. Within a radius of 125 miles from Safford are the copper mining centers of Globe, Miami, Bisbee and Morenci.

## TOPOGRAPHY, PHYSICAL FEATURES AND CLIMATE

The San Juan property is situated at an average altitude of about 3,800 feet in the southern foothills of the northwesterly trending Gila Mountains. The principal mine workings are in an area of rolling hills of gentle to moderately steep slopes.

Vegetation consists mainly of forage grasses and a light growth of desert type shrubs.

Drainage is southerly to the Gila River that is dry except during periods of abnormally heavy precipitation.

The climate is suitable for year around mining operations. Summers are hot and winters are mild. Precipitation is largely confined to a few heavy summer rain storms and light rain and snowfalls during the winters.

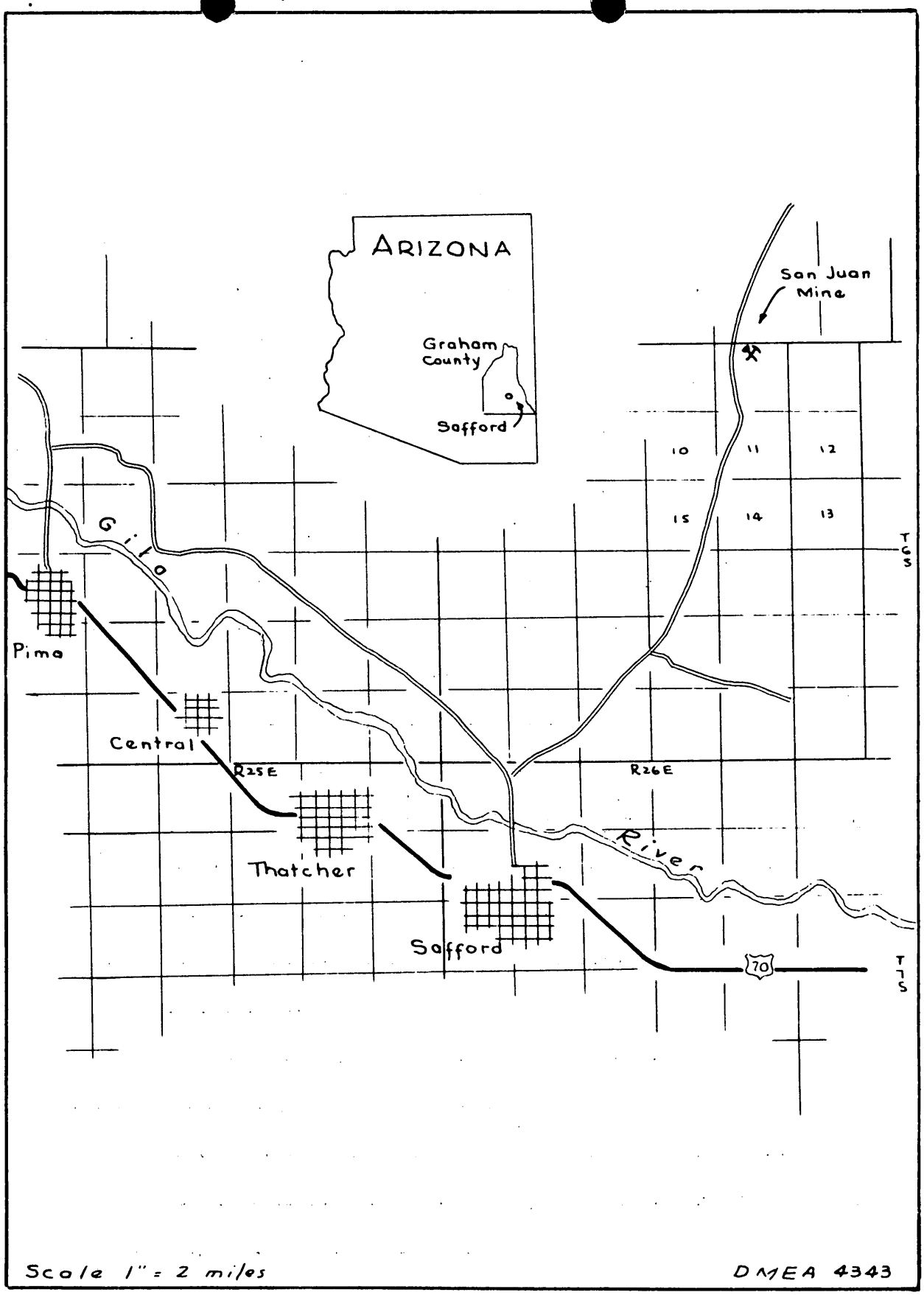


FIG.-1- LOCATION MAP, TUAB MINERAL CORP. SAN JUAN MINE
GRAHAM COUNTY, ARIZ.

## HISTORY AND PRODUCTION

The San Juan property was first located during the 1890's. To 1915 when the mine was optioned to the San Juan Copper Mining Company, some ore was mined from shallow surface workings during times of high copper prices. The company then sunk several shafts and 8 churn drill holes, drove an adit, erected a mill, and mined and shipped some ore from surface cuts and possibly from underground workings. Operations ceased shortly after the termination of World War I. Since then activity probably has been confined to the drilling of 5 churn drill holes during 1951.

During 1946, the U. S. Bureau of Mines examined the property[1/] and conducted metallurgical tests[2/] on ore from trenches and pits.

Arizona Metal Production, Arizona Bureau of Mines Bulletin No. 140, credits the San Juan Mine with a production of $25,000 of copper in 1907. Other recorded production is confined to $50,000 of copper in 1916 as reported by W. H. Weed in the Mines Handbook of 1918. The total of $75,000 of copper, representing selectively mined ores and possibly some concentrates, probably covers the major portion of total production.

---

1/ Haury, P. S., Summary Report of War Minerals Examination, No. Haury 5, May 7, 1946.

2/ Leaching and Leach-Precipitation-Flotation of San Juan Oxidized Copper Ore, T.M.R. 22, August 22, 1946.

## EXTENT AND OWNERSHIP OF THE PROPERTY

Tuab Mineral Corporation, the applicant, reportedly is the owner of 2 groups of lode mining claims in the Lone Star mining district, Graham County, Arizona. The group of claims of the proposed exploratory project comprises 10 patented claims and 36 unpatented claims (fig. 2). The other group comprising 16 unpatented claims reportedly is situated a few miles to the north of the proposed project area.

Officers of the Tuab Mineral Corporation, an Arizona Corporation, are:

John W. Bibb, Jr., President,
2517 E. Glenn, Tucson, Arizona.

Charles Steen, Vice President,
Moab, Utah.

Bert A. Gibbs, Vice President,
4117 E. Waverly, Tucson, Arizona.

Hymen D. Goldberg, Secretary-Treasurer,
201 N. Stone, Tucson, Arizona.

Mitchell Melich, Asst. Secretary-Treasurer,
Moab, Utah.

## PRESENT STATUS

There are no buildings or mining and milling equipment on the inactive property.

The principal mining workings comprise 2 vertical shafts, an 85-foot adit, 11 churn drill holes, and several shallow pits and trenches (fig. 3). Of the underground workings only the adit is accessible.

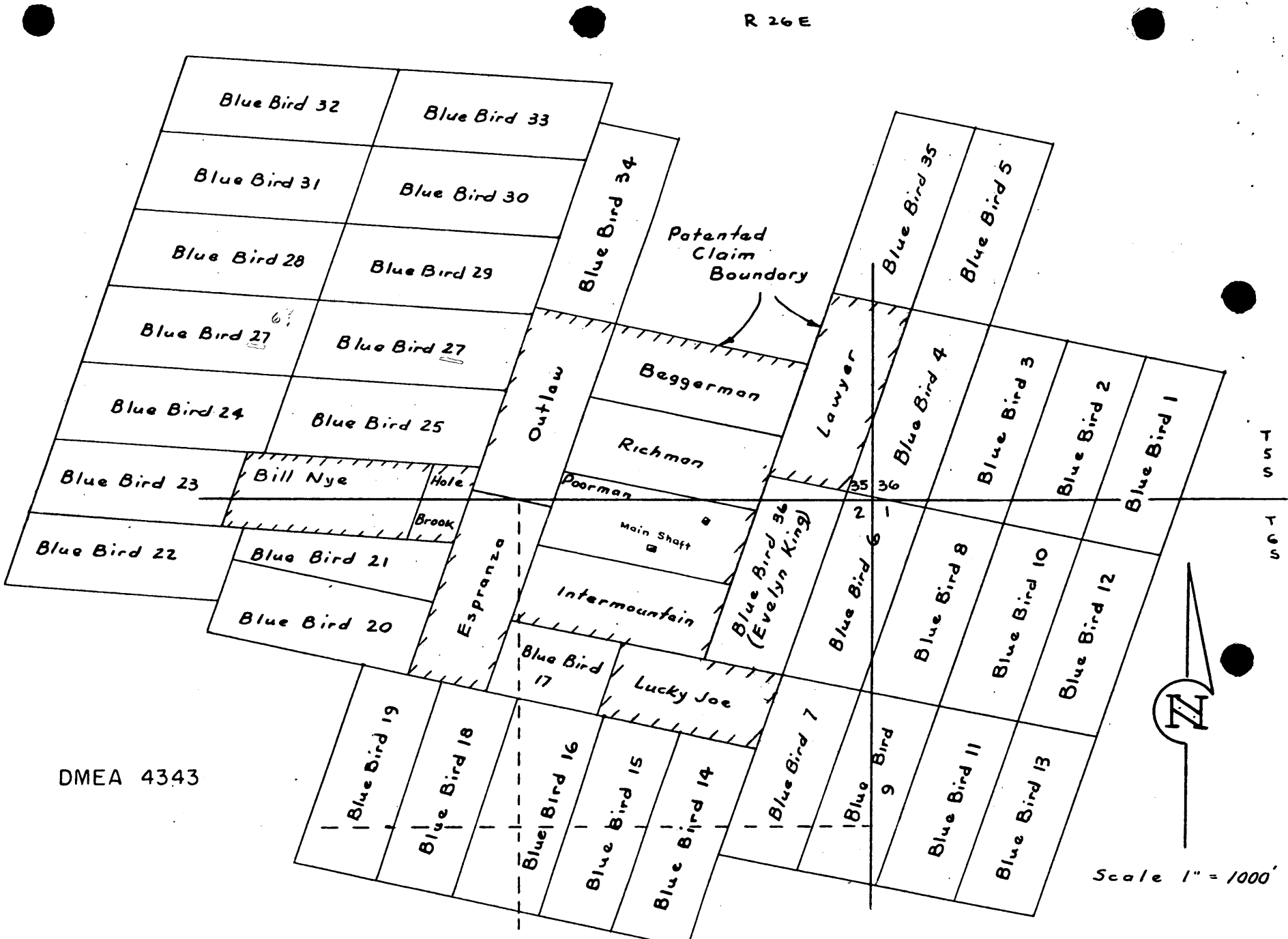


FIG.-2-CLAIM MAP, TUAB MINERAL CORP. SAN JUAN MINE GRAHAM COUNTY, ARIZONA

The main shaft reportedly is 370 feet deep and has 2 levels, the 130 and 230, containing a total of 1,020 feet of drifts and crosscuts.

The water level in the main shaft is reportedly at about 100 feet from the surface.

## GEOLOGY

The San Juan Mine lies in the foothills on the extreme lower southwest flank of Lone Star Mountain, which forms the southeast end of the Gila Range. Rocks of the Gila Range consist of undifferentiated metamorphic and volcanic rocks ranging from Precambrian to Quaternary. Variable thicknesses of Quaternary to Recent gravels cover most of the metamorphic and igneous rocks in the foothills around the San Juan mine area.

In the San Juan mine area, monzonite porphyry, surrounded and intruded by diabase, lies exposed in a ridge-like hill by erosion. The monzonite porphyry in the highly mineralized area on the Poorman claim (Fig. 3) appears fresh, unaltered, and fairly siliceous. To the north and northeast on the Richman claim the porphyry seems to become coarser, slightly weathered, and less mineralized. Contact exposures of the monzonite porphyry and diabase are sharp in places and blended in others. No limonite capping, chloritization, or seritization appears to be present in the porphyry in the highly mineralized area of the San Juan mine. Except for scattered outcrops of monzonite porphyry or diabase, most of the rest of the area outside of the Poorman and Richman claims is covered by gravels.

After its intrusion the monzonite porphyry was shattered and fractured, probably as a result of later adjustments and shrinkage during cooling, or during mineralization. These adjustments formed two major fracture systems that are now exposed in the surface workings. Both systems of fractures carry veins containing the oxides and sulphides of copper. One system, trending N. 40° E. to N. 60° E., is dominant; the other system trends about N. 45° W. Dips on the N.E. trending fractures, in general, range from about 70° S.E. to vertical; the N.W. trending fractures are vertical or dip at steep angles either to the N.E. or S.W. Thickness of the N.E. fracture zones ranges from one foot to more than 4 feet; thickness of the N.W. fracture zones ranges from 1 to 2 feet. Rock between these major fracture systems is shattered and crackled in all directions and the fracture planes contain oxides and sulphides of copper that range in thickness from thin scales or varnish to fractions of an inch.

The principal ore deposits, roughly about 600 feet long by 200 or 300 feet wide, cover a more highly mineralized area on the Poorman claim (Fig. 3). Mineralization extends northeastward along the most easternmost fracture on the Poorman claim onto the Richman claim, but it is probable that mining was confined only to the vein along the fracture. The veins and veinlets, in general, appear to become fewer and leaner in mineralized material to the north, northwest, and northeast on the Poorman and Richman claims, and there was little prospecting in these areas.

Mineralization was fracture controlled and consists of veins and veinlets of copper silicates, carbonates, and sulphides along the fractures in the monzonite porphyry. Some thin veins and seams of copper carbonate or silicate were noted in the diabase, particularly near the contact of the diabase and porphyry, and some mining of a prospecting nature in the main diabase body north of the Richman claim is being done from veins and veinlets in small fractures. Sulphides apparently are absent in the diabase veins. Mineralization occurs on both sides of the diabase-porphyry contact but appears to be important on only the porphyry side. Ore minerals were emplaced after the monzonite porphyry and diabase intrusions.

It is possible that the primary minerals were chalcopyrite and pyrite and, if so, most of the chalcopyrite and pyrite have been altered to chalcocite and the silicate and carbonates of copper. Evidence of a zone of primary chalcopyrite and pyrite is weakly present, or lacking, in the rock on shaft dumps, which might suggest that the veins, in general, are shallow and lacking in significant mineralization even of a primary nature. One earlier examination[3/] stated that an "old map shows about 1,100 feet of drifting on the 130-foot level (Main shaft, fig. 3) which was done several years ago and is below a large portion of the commercial ore". Another early report[4/] stated that "dumps of deeper shafts are almost barren, indicating that primary mineralization is extremely low grade".

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3/ Botsford, C. W., and Beckwith, C. L., Atlas Copper Co., Property on San Juan Group, Lone Star Mining District, Graham County, Arizona.

4/ Haury, P. S., Summary report of War Minerals Examinations No. 5 Haury, June 7, 1946.

As N. E. Nelson pointed out in his review of the application (June 26, 1956), the variable results obtained in some of the churn drill holes suggests other than an oxidized zone underlain by an enriched sulphide zone. Differentials in oxidation, vein structure, and primary vein minerals, rather than supergene enrichment, are probably responsible for the variable results obtained in the churn drill holes. Applicant's Figure 2 shows a shallow oxidized zone underlain by a chalcocite zone of variable thickness. Churn drill holes 1, 2, and 3 (Applicant's Figure 2) indicate some carbonates below the enriched chalcocite zone. The presence of chalcocite with chrysocolla and malachite in veins at the surface, in little altered or weathered porphyry, might suggest that the chalcocite is hypogene rather than supergene and that chalcopyrite and pyrite were minor primary minerals. It is believed that erosion has not removed any considerable thickness of the monzonite porphyry.

Churn drill holes Nos. 4 and 8 to the northwest of the highly mineralized area on the Poorman claim (Fig. 3) do not indicate a favorable extension of the ore body in that direction; churn drill hole No. 5 (Fig. 3) to the northeast of the highly mineralized area is also in unfavorable ground. The adit directly west of the highly mineralized area was barren up to about the last 5 feet from the face. No information is available on the ground to the south of the mineralized area and the main shaft.

Applicant's Figure 2 is a copy of a section made by Botsford and Beckwith for their 1925 report on the Atlas Copper Co. property on the San Juan group[5/]. Apparently these two examiners had access to logs on the 8 numbered churn drill holes (Fig. 3) drilled prior to 1925, and their descriptions of the holes follow:

> "The log of drill hole No. 1 shows chalcocite ore at between 15 and 20 feet of depth, with the following 110 feet chalcocite and some carbonate of copper down to 125 feet depth and averaging 5.24% copper, with some assays running as high as 13.75%. From 125 feet down to 220 feet, the bottom of hole less than 1% with an average of 0.4%."

> "The log of drill hole No. 2 shows 30 feet of carbonate from 30' to 75' depth mixed carbonate and chalcocite average 2.5% copper. From 75' to 280' average 0.87% copper. 280' to 380' depth average 1.65% copper. 380' to 515' depth and bottom 0.67% copper. Primary ore begins at 390' depth."

> "Drill Hole No. 3: Carbonate of copper down to 30 feet of depth. From 30' to 190' of depth chalcocite and carbonate average 2.985% copper. 190' to 345' depth average 0.38% copper. Some carbonates down to 320 feet depth. Last 26 feet to 371' depth and bottom of hole, trace of copper."

> "Drill Hole No. 7: 0' to 45' depth carbonate of copper and chalcocite average 0.65% copper. 45' to 95' 1.20% copper. 95' to 255' average 0.27% copper. The above drill holes are on a line bearing N. 75 Deg. 41' W. 200 feet distance between holes."

> "Drill Holes Nos. 4, 5,and 8 are parallel and on a line 200 feet distant to the north of 1, 2, 3, and 7. The three holes returned assays of less than 1% copper."

> "No. 6 hole, 80 feet deep, is on the Beggerman claim, 1,200 feet to the north and entirely out of the mineralized belt."

---

5/ Botsford, C. W., and Beckwith, C. L.,op. cit., 1925.

Assay certificates on 5 lettered churn drill holes (A, B, C, D, and E) drilled in 1951 are available. Approximate locations of Holes Nos. A, B, C, and D are shown on Fig.3. Location of Hole No. E is unknown. A summation of weighted averages calculated from the assay certificates is given below for these 5 holes.

| | | | |
|---|---|---|---|
| Hole A - | 0'- 50' | av. | 0.35 percent Cu. |
| | 50'-100' | " | 2.23 percent Cu. |

Total depth of hole - 100 feet

| | | | |
|---|---|---|---|
| Hole B - | 5'-150' | av. | 1.40 percent Cu. |

Total depth of hole - 150 feet

| | | | |
|---|---|---|---|
| Hole C - | 0'- 60' | av. | 1.66 percent Cu. |
| | 60'-150' | " | 0.14 percent Cu. |

Total depth of hole - 150 feet

| | | | |
|---|---|---|---|
| Hole D - | 0'- 10' | av. | 0.89 percent Cu. |
| | 10'- 75' | " | 0.31 percent Cu. |
| | 75'-100' | " | 4.56 percent Cu. |

Total depth of hole - 100 feet

| | | | |
|---|---|---|---|
| Hole E - | 0'- 60' | av. | 1.15 percent Cu. |
| | 60'- 90' | " | 0.52 percent Cu. |

Total depth of hole - 90 feet.

## ORE RESERVES

Several estimates of reserves have been made in previous years on the applicant's property by various individuals. These estimates range from no measurable ore reserves to reserves of over a million tons. All of the earlier estimates, as well as the applicant's, appear to be concerned with the highly mineralized area on the Poorman claim in which most of the surface workings occur. This is an area

roughly 600 feet long and from 200 to 300 feet wide in which 8 churn drill holes were put down prior to 1925 and 5 more in 1951 (Fig. 3).

Depths of drill holes ranged from 90 feet to 535 feet. All of the veins and veinlets of mineral material are steeply dipping, and it is possible that the grade results obtained from vertical drill holes could be unreliable, that is, either high or low, if exaggerated thicknesses of copper mineralization were cut in the veins. However, churn drilling has been an accepted method of exploration in low-grade copper deposits under similar rock conditions. An oxidized zone of about 30 feet in thickness and a mixed silicate-carbonate and sulphide zone averaging about 90 feet in thickness was derived from results of the churn drilling. An average depth of possible commercial grade material would probably be somewhere between 115 and 120 feet for most of the mineralized area. Old records[6/] state that the 130-foot level was below a large portion of the commercial ore. A considerable tonnage of rock weakly mineralized or barren of primary minerals lies on the dumps.

Using an area 600 feet long by 200 feet wide and a tonnage factor of 13.5 cu. ft./ton on which earlier estimates were based (Fig. 3), about 267,000 tons of inferred oxide ore and 800,000 tons of inferred mixed oxide and sulphide ore, or a total of 1,067,000 tons, is obtained. Lacking a reliable average grade, an average grade of 1.0 percent Cu was assumed, which would give a total of 21,340,000 pounds of copper.

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6/ Botsford, C. W. and Beckwith, C. L., op. cit. 1925.

Using a larger area of 630 feet long by 300 feet wide (Fig. 3) and the same tonnage factor, about 420,000 tons of inferred oxide ore and 840,000 tons of inferred mixed oxide and sulphide ore, or a total of 1,260,000 tons is obtained. Assuming an average grade of 1.0 percent Cu, a total of 25,200,000 pounds of Cu would be present.

Actually, the average grade may be much higher than the one assumed in this estimate of reserves. Applicant estimates an average grade of between 1 percent and 2 percent.

## PROPOSED EXPLORATORY PROJECT

The applicant's proposal involves the diamond drilling of a total of 3,000 feet in 5 holes from surface site shown on figure 3. Each hole would be inclined at minus 45 degrees. Drilling of all holes northward, as proposed, would result in leaving untested the depth extension of the indicated southern portion of the deposit.

The examining team believes the property's potential can be adequately explored by drilling 4 similarly inclined holes from the surface sites of figure 4. Drilling of 2 northerly and 2 southerly trending holes, as indicated, eliminates the unfavorable feature of the applicant's program.

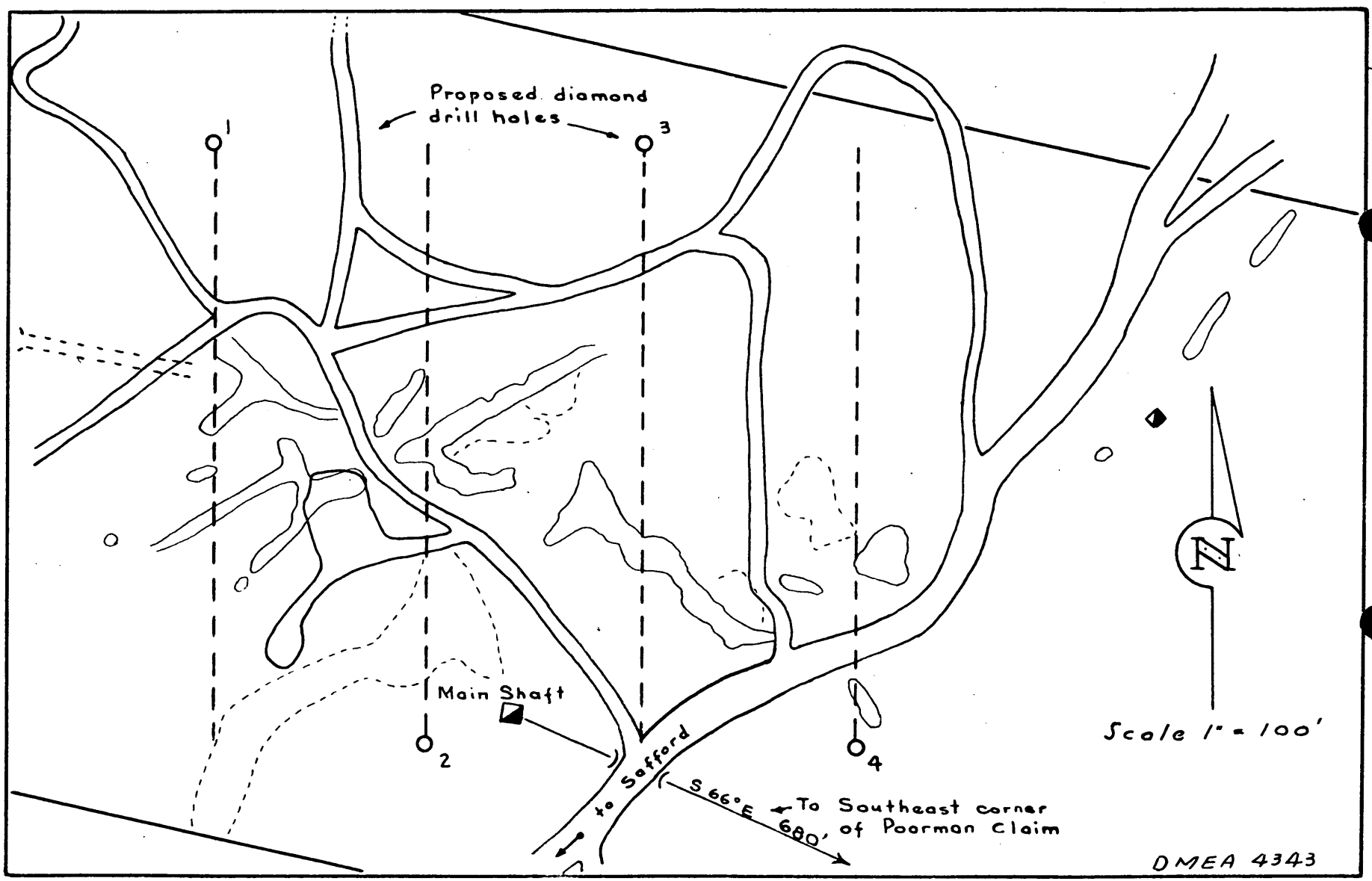


FIG -4- PROPOSED EXPLORATION, TUAB MINERAL CORP. SAN JUAN MINE
GRAHAM COUNTY, ARIZONA

Proposed specifications for the examining team's drilling program follows:

1. Holes to be drilled from at or near the indicated sites.

2. Holes to be drilled approximately on the indicated bearings and to be inclined at about minus 45 degrees.

3. Drilling to a core size smaller than AX is not to be done unless found necessary for completion of a hole.

4. Representative core and sludge samples shall be taken in mineralized zones, utilizing hole intervals of not more than 10 feet. All core samples, and sludge samples from intervals where core recovery is less than 80 percent, shall be chemically analysed for total copper. Certified copies of all assay certificates and complete log records of all holes shall be submitted with the Operator's monthly reports. A duplicate of each sample shall be retained and made available for disposition of the Government.

5. The project shall be supervised by a competent engineer-geologist who shall devote full time to the project work.

6. Only the costs of completed drill holes are allowable costs of the project. The depth of the holes are expected to range from 450 to 750 feet and average about 600 feet.

## ESTIMATED COST OF THE PROJECT

### Applicant's Estimate

Independent Contract

(1) Diamond Core Drilling

The per foot cost of AX size holes alone was estimated as follows:

| | |
|---|---|
| 0 - 250 ft. $7.00 | 500 - 750 ft. $8.80 |
| 250 - 500 ft. $7.80 | 750 -1000 ft. $9.80 |

Drilling costs on the above basis would be:

| | | |
|---|---|---|
| Hole #1 - 700 ft. | $5,970.00 | |
| Hole #2 - 600 ft. | 5,010.00 | |
| Hole #3 - 500 ft. | 4,050.00 | |
| Hole #4 - 700 ft. | 5,970.00 | |
| Hole #5 - 500 ft. | 4,050.00 | |
| 3,000 ft. | | $25,050.00 |

Casing

20 ft. of 3" collar casing per hole

| | | |
|---|---|---|
| 100 ft. @ $2.19 per ft. | | 219.00 |

Cementing

| | | |
|---|---|---|
| 20 hours @ $9.50 per hour | $ 190.00 | |
| 25 bags cement @ $3.25 ea. | 81.25 | 271.25 |

Reaming

20 ft. per hole

| | | |
|---|---|---|
| 100 ft. @ $2.40 per ft. | | 240.00 |
| Mobilization and demobilization | | 812.00 |

Other Costs

Building roads and preparing drill sites.

| | | |
|---|---|---|
| Tractor and operator, 32 hrs. @ $12.00/hr. | $ 384.00 | |
| Compressor and Operator, 32 hrs.@ $7.00/hr. | 224.00 | |
| Tractor and compressor transportation 18 miles @ $0.75/mile | 13.50 | |
| Dynamite, 4 boxes @ $11.20/box | 44.80 | |
| Caps, 4 boxes @ $2.12/box | 8.48 | |
| Total | | 674.78 |

Supervision and Labor

Only a 4 months breakdown was provided for in the application, but applicant's representative requests that costs under this section be estimated for 6 months as shown below.

| | | |
|---|---|---|
| Geologist @ $500.00/mo. | $3,000.00 | |
| Geologist field expenses @ $400.00/mo. | 2,400.00 | |
| Rent of Jeep for Geologist @ $80.00/mo. | 480.00 | |
| Geologist helper (part time) $70.00/mo. | 420.00 | 6,300.00 |
| Assaying - 1,500 copper assays @ $1.00 each | | 1,500.00 |
| Estimated total cost | | $35,067.03 |

Summary of Applicant's Estimated Costs

| | |
|---|---|
| Diamond drilling | $26,592.25 |
| Roads and preparation of drill sites | 674.78 |
| Supervision and labor | 6,300.00 |
| Assaying | 1,500.00 |
| Estimated total cost of project | $35,067.03 |
| Estimated total cost per foot | $11.69 |

## DMEA Estimate

Independent Contract

Diamond drilling - data contained in the R. S. McClintock Company's bid, one of the 3 bids appended to this report, is used in the following estimates for drilling 4 600-foot holes.

| | |
|---|---|
| Collar pipe, 20 ft. per hole | |
| 80 ft. @ $7.40/ft. ---------- | $ 590.20 |
| BX coring 20 to 150 ft. per hole | |
| 520 ft. @ $6.40/ft. ---------- | 3,328.00 |
| AX coring 150 to 250 ft. per hole | |
| 400 ft. @ $5.40/ft. ---------- | 2,160.00 |
| AX coring 250 to 500 ft. per hole | |
| 1000 ft. @ $5.90 ft. ---------- | 5,900.00 |
| AX coring 500 to 600 ft. per hole | |
| 400 ft. @ $6.50/ft. ---------- | 2,600.00 |
| Drilling cement - 20 ft. per hole | |
| 80 ft. @ $3.00 per foot ---------- | 240.00 |
| Ream casing - 20 ft. per hole | |
| 80 ft. @ $2.75 per foot ---------- | 220.00 |
| Mobilization and demobilization ---------- | 700.00 |
| * Water - 3.2 months @ $250.00/mo. ---------- | 800.00 |
| 3,200 miles @ $0.15/mi. ---------- | 480.00 |
| Purchase price 80,000 gals. @ 40 cents/M ---- | 32.00 |
| Total estimated drilling costs ---------- | $17,050.20 |

*80 days or 3.2 month will be required to complete the 2,400 feet of drilling at the estimated rate of 30 feet of advance in 2 shifts per day and 6 days per week. Water to be purchased at Willcox and consumed at rate of 1,000 gallons per day.

Other Costs

Building roads and preparing drill sites.

Field investigations indicated that the costs of a minor amount of this work that may be necessary will not be significant. Mr. Bibb agreed with the above finding and requested withdrawal of application's estimated costs of the work.

Supervision and labor

Allowance of 4 months provides for preparatory work, drilling period and winding up the project.

Geologist @ $500.00 per month-------$2,000.00 disallowed not needed

2 Samplers - 200 days @ $12.00/day-- 2,400.00 $4,400.00

Equipment

Rental of Jeep @ $80.00/mo.---------- 320.00

Materials and supplies

Fuel, grease and repairs for Jeep ---------- 250.00

Miscellaneous

Payroll taxes and liability insurance

10% of $4,400.00 ---------- 440.00

Assaying -- 800 samples for copper

at $1.00 per sample---------- 800.00

Summary of DMEA Estimated Costs

| | |
|---|---|
| Diamond drilling | $17,050.20 |
| Supervision and Labor | 4,400.00 |
| Equipment | 320.00 |
| Materials and supplies | 250.00 |
| Payroll taxes and liability insurance | 440.00 |
| Assaying | 800.00 |
| Estimated total cost of project | $23,260.20 |
| Estimated total cost per foot | $9.69 |

## CONCLUSIONS

Based on surface examination of the mineralized area on the Poorman claim, and a study of earlier available examination reports and churn drill data, it appears that the deposit is of shallow depth, limited horizontal extent, and essentially vein type. Characteristic features of low grade porphyry copper deposits, such as rock alteration, sulphide dissemination, primary yellow sulphides at depth, and secondary enrichment, are lacking or weakly present in this deposit. In spite of the adverse points, the San Juan mine may be considered as a small, easily accessible and potential copper ore body. Amenability of the ore to treatment probably would not be a problem under modern methods and the deposit could be easily mined by open-pit methods. A practical method of determining the potential worth of the partially explored deposit would be by diamond-drilling an

estimated 2400 feet in 4 holes at an estimated total cost of $23,260.20. The applicant can be expected to properly supervise the explorations and to share the costs of the project with the Government on a 50-50 basis.

## RECOMMENDATION

Approval is recommended for Governmental participation in explorations at the San Juan mine because (1) conditions are favorable for indicating the presence of a significant reserve of low grade copper-bearing rock of a possible mining grade, and (2) the explorations can be completed at a relatively low cost.

H. R. REHDERS

OIL & MINING OPERATOR

BOX 696

ST. JOHNS, ARIZONA

June 22, 1956

Mr. John Bibbs
Tu-ab Mining Co.
Tucson, Arizona

Dear Sir:

In answer to your request for a bid covering a minimum of 3,000 foot of core-drilling on your San Juan Copper properties of Graham County, Arizona, located approximately ten miles north of Safford, Arizona; I hereby, submit the following footage bids:

Five locations of approximately 600' each.

For each location:

| | | |
|---|---|---|
| First, 100' | @ $12.00 | per foot |
| Second, 100' | @ $13.00 | per foot |
| Third, 100' | @ $14.00 | per foot |
| Fourth, 100' | @ $16.00 | per foot |
| Fifth, 100' | @ $18.00 | per foot |
| Sixth, 100' | @ $20.00 | per foot |
| Seventh, 100' | @ $20.00 | per foot |

The above estimates will include a maximum possible core recovery, one foot cutting samples, water and drilling muds and any necessary materials required to complete the required total depth of each location.

In the case of possible loss circulation, due to cavities, crevices or caverns encountered; which, forces the abandonment of a location, then, the contractor will; if desired by the operator, drill another hole offsetting the abandoned hole, with the operator and the contractor equally sharing of the cost of said hole, at the above footage prices.

The location of the above mentioned five drill holes will be staked by the operators geologists, prior to the drilling of each consecetive location. The holes will be drilled on an incline of 30 to 50 degrees below a vertical angle from the horizon.

This estimate is based on a spudding date on/or/before August 1, 1956. The contractor will, if possible, drill on a 24 hour schedule, so-as to complete the drilling as soon as possible

Thanking you, I remain,

Very truly yours,

/s/ H. R. REHDERS

C O P Y

Diamond core drilling
Mining
Quarries
Shaft sinking
Tunnel Driving

BOYLES BROS.
DRILLING COMPANY
Contractors - Engineers
1321 South Main Street Phone 84-4401
Salt Lake City 15, Utah

May 14/56

Reply to:
1016 East Minnezona
Phoenix, Arizona

Tuab Mineral Corporation
201 North Stone Ave.
Tucson, Arizona

Attention- H.D. Goldberg

After examining your property on the Poorman claim of the San Juan group, approximately nine miles north of Safford, Arizona I submit the following proposal.

Mobilization & demobilization ---------- $ 400.00

| | | AX | BX | NX | NC |
|---|---|---|---|---|---|
| Drilling | 0 to 250 ft. | 6.30 | 7.10 | 7.60 | 7.90 |
| " | 250 to 500 " | 7.10 | 7.60 | | |
| " | 500 to 750 " | 7.60 | | | |
| " | 750 to 1000 | 8.10 | | | |

Reaming if necessary ---------- 2.40 per foot

Cementing if necessary will be charged for at 9.50 per hour plus cost of cement or cement substitutes.

Lost casing will be charged for at list price F.O.B. job

Water will be charged for at actual cost to you which will be $ 449.50 per month for driver and 225.00 per month for truck plus 10 cents a mile.

Core boxes can be supplied by us at a dollar a box ✓

If proposal is accepted we can be on the property within on week of notification to proceed

A letter of acceptance will be all that is necessary in lieu of a formal contract

Thanking you for calling on us, I remain

Yours very truly

/s/ J. E. Roberts

J. E. Roberts
Dist. Mgr. - Arizona Division

C O P Y

11-21-56

Tuab Mineral Corp.
Mr. John Bibb
201-209 N. Stone Ave.
Tucson, Ariz.

Dear Mr. Bibb:

We understand you wish to diamond drill a minimum of 5 holes from 500' to 700' in depth in the Lone Star Mining District on the Poor Man Claim of the San Juan group. We further understand that the holes will be located in an accessible or practical spot for the drill setups, most of which can be reached by truck.

We propose to furnish the drill rig, rods, casing, circulating pump, drill labor, diamond bits, core bbls. and drilling accessories for the following prices per foot:

| | | |
|---|---|---|
| Collar pipe | 0 to 25' | @ 7.40 |
| NX | 0 to 100' | @ 6.90 |
| BX | 0 to 150' | @ 6.40 |
| AX- EX | 0 to 250' | @ 5.40 |
| AX- EX | 250 to 500' | @ 5.90 |
| AX- EX | 500 to 750' | @ 6.50 |

In the event loose or caving ground or water courses are encountered which requires the use of cement or casing, a charge will be made for furnishing, placing and redrilling the cemented portion of the hole or for reaming and seating casing as follows:

| | | |
|---|---|---|
| Drill cement | 0 - 400' | @ 3.00 ft. |
| | 400 - 750' | @ 3.50 ft. |
| Ream casing | 0 - 400' | @ 2.75 ft. |
| | 400 - 750' | @ 3.25 ft. |

We will expect to receive $700.00 for ... mobilization and demobilization, of which 1/2 will be receivable on our first statement, and 1/2 receivable upon completion of the job. In case of delay time for the convenience of your company, and not through fault of contractor or breakdown of contractor's equipment, we will expect to receive $7.00 per hr. for the time the drill crew are on shift.

We agree to haul water for the diamond drilling for $250.00 per month plus $0.15 per mile and the initial cost of the water at the source, based on 1 shift per day and a 6 day week.

Our employees will be covered by Ariz. State Industrial Insurance, and the contract will be covered by liability ins. in the amt. of $100,000/300,000. and property damage in the amt. of $100,000.00.

Thanking you for the privilege of submitting our proposal, we are.

Very truly yours,

R. S. McClintock Company

By: M. B. Weaver

C O P Y

Denver, Colorado

TELETYPE

DMEA, Bureau of Mines

[redacted]

Docket

alt
Betty

W. R. Storms, USBM
Tucson, Arizona

December 4, 1956

Please advise when we may expect to receive reports of examination on Dockets DMEA 4277, Cordillera Mining Company and DMEA 4343, Tuab Minerals Corporation.

Original signed by
W. M. TRAVER
W. M. Traver

CONFIRMATION
WMT:jy
cc: Barnhman (2)
Emerick (2)
Sec. Op. Comm. (4)
Docket 4343
Docket 4277
Chron

RECEIVED
DEC 4 1956

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

all Betty

RECEIVED
SEP 27 1956

224 New Customhouse
Denver 2, Colorado

September 24, 1956

Docket

Memorandum

To: Messrs. Storms and Emerick

From: DMEA Field Team, Region III

Subject: Docket DMEA 4343 (Copper) TUAB Mineral Corporation (San Juan Claims) Graham County, Arizona

Reference is made to the memoranda on the subject Docket, dated September 13 and September 18, 1956, from W. L. Emerick to the Executive Officer DMEA Field Team, Region III.

Attached is a copy of our letter to Mr. Russell R. McLellan on the subject Docket, which is self-explanatory.

We see no reason why further action should be withheld on this application and again request that a field examination and suitable report be made on this property.

Returned herewith is Bureau of Mines' copy of the DMEA Region III Control Sheet. We are retaining the Engineer copy of the brochure in this office, since the field examiners may use the Survey copy.

W. M. Traver

HMC:ytl

By W. M. Traver
Executive Officer

cc; Sec. Op. Comm. (2)
Harshman
Docket 4343
Chron.

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

RECEIVED
SEP 27 1956

224 New Customhouse
Denver 2, Colorado

September 24, 1956

Mr. Russell R. McLellan
UTEX Exploration Company, Inc.
Box 387
Moab, Utah

RE: Docket DMEA 4343 (Copper) TUAB
Mineral Corp. (San Juan Claims)
Graham County, Arizona

Dear Mr. McLellan:

Reference is made to your letter of July 31, 1956, wherein you requested that due to the change of officials within the company, future correspondence concerning the application be directed to Charles A. Steen, Box 487, Moab, Utah.

The application for DMEA aid on this property was signed by John W. Bibb, Jr., President of the corporation, and appears to be a valid application. We have received no official notice of a change in presidents and we cannot be a party to any factional disputes within the corporation.

We have no other recourse, at present, than to direct future correspondence concerning this application to TUAB Mineral Corporation, John W. Bibb, Jr., President. Should there be a change in the President of the corporation and we receive official notice thereof, we would direct future correspondence concerning this application to the new President of TUAB Mineral Corporation.

Very truly yours,

W. M. Traver

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

HMC:ytl
cc: Sec. Op. Com. (2)
Harshman
Storms
Emerick
Docket 4343
Chron.

(2)

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

DMEA
DEPARTMENT OF THE INTERIOR
SEP 21 1956
REGION III
DENVER, COLORADO

MINERALS REFER TO:
DMEA
RECEIVED
SEP 20 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

MEMORANDUM

September 18, 1956

To: Executive Officer, DMEA Field Team, Region III

From: W. L. Emerick

Through: W. R. Storms TMB for
E. N. Harshman ENH

Subject: Docket DMEA 4343 (Copper) Tuab Mineral Corporation (San Juan Mine), Graham County, Arizona

In reference to your teletype of September 18, 1956 requesting clarification of official conflict within the Tuab Mineral Corporation, the answer probably goes back to exaggerated information on the San Juan mine given newspapers late in June 1956 by John W. Bibb, Jr., president. Immediately following the release of the exaggerated information, Charles A. Steen, under the signature of Russell R. McClellan, geologist, directed a letter to W. M. Traver, Jr., dated July 31, 1956, stating John W. Bibb, Jr. had been asked to resign his position, and requesting that future DMEA correspondence be sent to him (Steen).

In a letter to W. M. Traver, dated September 1, 1956, John W. Bibb, Jr. requests information on approximate DMEA examination date of the San Juan property.

In discussions with Russell R. McClellan in Safford, Arizona, on September 12, 1956, the writer was informed that John W. Bibb, Jr. had refused the request of Charles A. Steen to resign his post as president of the company. As of September 12, 1956 that appeared to be the divided official status of the company officers, with the Bibb faction, including J. W. Bibb, Jr., president, Bert A. Gibbs, vice-president, and Hymen D. Goldberg, Secretary-Treasurer; and the Steen faction composed of Charles A. Steen, vice-president, and Mitchell Melich, Assistant Secretary-Treasurer. Steen and Melich are also officials of the Utex Exploration Company, Inc., on whose stationery McClellan wrote his request to W. M. Traver, on July 31, 1956. Utex Exploration Company, Inc. as a corporation has no interests in Tuab Mineral Corporation or its DMEA loan, as far as is known.

The Tucson examining team at present is uncertain with whom to confer on matters of field examination or any additional information they might need on the property.

WLE:cm
cc. W. R. Storms
E. N. Harshman

W L Emerick
W. L. Emerick

DMEA

SEP 18 1956

DENVER, COLORADO

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

IN REPLY REFER TO:
MINERAL DEPOSITS
DMEA
RECEIVED
SEP 17 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

September 13, 1956

MEMORANDUM

TO: Executive Officer, DMEA Field Team, Region III

FROM: W. L. Emerick

Through: W. R. Storms
E. N. Harshman

SUBJECT: Docket DMEA 4343 (Copper) Tuab Mineral Corporation (San Juan Mine), Graham County, Arizona

In view of the possibility of a favorable field report on the above subject docket, and to eliminate any possibility of embarrassment to the field team, it is recommended that the Tuab Mineral Corporation be advised that further action on their application must be suspended, until their official conflicts are satisfactorily settled.

Reference is made to letter of July 31, 1956 to W. M. Traver, under signature of Russell R. McClellan, geologist, Utex Exploration Company, Inc., Moab, Utah; and to letter of September 1, 1956 to W. M. Traver, under signature of John W. Bibb, Jr., president, Tuab Mineral Corporation, Tucson, Arizona.

Verification of official conflicts and possibility of legal entanglements over the internal situation were obtained from Russell R. McClellan during a field examination of the San Juan mine on September 12, 1956, by the Survey member of the DMEA examining team.

Pending instructions, the Tucson DMEA field team will withhold further action on the application.

W L Emerick
W. L. Emerick

WLE:ms

cc: W. R. Storms
E. N. Harshman

September 4, 1956

224 New Customhouse
Denver 2, Colorado

Mr. J. W. Bibb, Jr., President
Tuab Mineral Corporation
201 North Stone Avenue
Tucson, Arizona

Re: Docket DMEA 4343 (Copper)
(San Juan claims) Graham
County, Arizona

Dear Mr. Bibb:

This will acknowledge receipt of your letter dated September 1, 1956 requesting a date for the field examination on the captioned property.

Your application has been released for a field examination which will be scheduled as soon as possible. When the date of the field examination is scheduled, you will be advised so that you or your representative may be present to accompany the field examiners.

Very truly yours,

J. W. Townsend
Acting Executive Officer, DMEA
Field Team, Region III

HMC:ab

cc: Harshman
Storms
Emerick
Docket 4343
Chron.

TIAB MINERAL CORP.
201 NORTH STONE AVENUE
TUCSON, ARIZONA

DEPARTMENT OF THE INTERIOR
SEP 4 1956
REGION III
DENVER, COLORADO

JOHN W. GIBB, JR., PRESIDENT
BERT A. GIBBS, VICE PRESIDENT
CHARLES A. STEEN, VICE PRESIDENT
HYMEN D. GOLDBERG, SECY. - TREAS.
MITCHEL MELICK, ASST. SECY. - TREAS.

September I, I956
8II I2th Street
Safford, Arizona

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

Dear Sir;

In regard to our DMEA Docket No. 4343 (copper), Graham County, Arizona.

We are wondering if you had set a date for your teams inspection of this property and if so could you conveniently let us know. If no date has been set prehaps an approximate time might be on your schedule at this time.

Thank you very kindly for any information you might be able to pass on to us.

Yours very truly,

J. W. Bibb Jr.
President

JWB/ng

Utex Exploration Company Inc.
MINERALS EXPLORATION & DEVELOPMENT
BOX 387
MOAB, UTAH

CHARLES A. STEEN
PRESIDENT
CHIEF GEOLOGIST

. T. HUDSON
VICE PRESIDENT

OSELIE SHUMAKER
TREASURER

MITCHELL MELICH
SECRETARY

MAXINE STEEN BOYD
ASST. SEC.-TREAS.

Date Rec'd.
AUG 3 1956
BUREAU OF MINES
Denver, Colorado

July 31, 1956

Re: DMEA-4343

Mr. W.M. Traver, Jr.
U.S. Bureau of Mines
224 New Customhouse
Denver 2, Colorado

Dear Mr. Traver,

John W. Bibb, Jr., president of Tuab Mineral Corporation, has been asked to resign his position as a result of his release of highly exaggerated information concerning the San Juan Copper prospect in Graham County, Arizona for which a D.M.E.A. application has been prepared. We have been informed that the application has been referred to your office.

Due to the change of officials within the company, would you direct future correspondence concerning the application to Charles A. Steen, Box 487, Moab, Utah.

Very truly yours,

Russell R. McLellan

Russell R. McLellan
Geologist

RRM:glc

Sec. Op. Com (2)

July 25, 1956

Memorandum

To: W. R. Storms

From: Super ntendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4343 (Copper) Tumb Mineral Corporation (San Juan Mine) Graham County, Arizona

The application for Tumb Mineral Corporation, DMEA 4343 in the amount of $32,949.00 is enclosed.

A field examination and suitable report are required. The completed report should be forwarded directly to the Executive Officer with a copy of the memorandum of transmittal to this office.

JOHN F. SHAW

John F. Shaw

Enclosure

cc: W. M. Traver (3)
E. N. Harshman
W. L. Emerick
Sec. Op. Com. (2)

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

RECEIVED
JUL 27 1956

July 24, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw (2) (With brochure)
W. L. Emerick

From: Field Team, Region III

Subject: Docket DMEA 4343 (Copper) Tomb Mineral Corporation (San Juan Mine) Graham County, Arizona

Enclosed is the subject application in the amount of $32,949.00. A field examination and suitable report are requested.

A copy of a letter from J. W. Bibb, Jr., President, dated July 10 and a property map mentioned in the Chairman's letter, copy of which is attached, are enclosed with the brochure. Also attached for your information are copies of memoranda of review of the application by J. W. Pennington and H. E. Nelson.

Copies of a telegram from the Applicant dated July 24, 1956 stating that if additional information is required regarding this application, it may be obtained from J. W. Bibb, 811 18th Street, Safford, Arizona.

Please return the brochure with the Report of Examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures
EMC:ab
cc: Sec. Op. Comm. (2)
Docket 4343
Marshman
Chron.

File Copy
Surname

J. All
Linamed
Selfridge
H. Johnson

500

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

JUL 18 1956

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

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Traver:

The cited application for exploration assistance is being referred to your office for consideration, a field examination if warranted, and recommendation.

Enclosed is a copy of a letter from J. W. Bibb, Jr., President, dated July 10, in reply to our letter of June 28. Also enclosed is a copy of a property map.

The Applicant's estimated costs for the proposed work appear to be excessively high and should be carefully studied by the Field Team.

Copies of memoranda, dated June 20 and June 26, 1956, by J. W. Pennington, Bureau of Mines, and N. E. Nelson, Geological Survey, respectively, relating to the project, are enclosed for your information.

Sincerely yours,

Chairman, Operating Committee (JWB)

Enclosures

JWAlt/er 7/17/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
~~MKXRXsMXXXXXXXM~~
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

Member, Bureau of Mines (JWB)

Member, Geological Survey (JWB)

File Copy
Surname
J. All.
Trimmed
Yoggs
Kilsgaard
Selfridge
Johnson

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

JUL 18 1956

Mr. John W. Bibb, Jr., President
Tuab Mineral Corporation
2517 E. Glenn
Tucson, Arizona

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Bibb:

This is to acknowledge receipt of your letter, dated July 10, 1956, and four copies of a property map, regarding the cited application.

Your application for Government assistance to explore the cited property has been referred by the Base Metals Division of the Defense Minerals Exploration Administration to:

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

If additional information is required, the Field Team will contact you at an early date.

Sincerely yours,

JWAlt/er 7/17/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

E. O. Mittendorf

Administrator

P.C.L.

EPHONE 4-4501

# TUAB MINERAL CORP.

201 NORTH STONE AVENUE
TUCSON, ARIZONA

JOHN W. BIBB, JR., PRESIDENT
BERT A. GIBBS, VICE PRESIDENT
CHARLES A. STEEN, VICE PRESIDENT
HYMEN D. GOLDBERG, SEC'Y. - TREAS.
MITCHEL MELICH, ASS'T. SEC'Y. - TREAS.

RECEIVED
JUL 16 1956

July 10, 1956

United States Dept. of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Attention Mr. W. R. Griswold, Chief
Base Metals Division

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corp., San Juan Mine
Graham County, Arizona

Dear Sir:

This will acknowledge receipt of your letter dated June 28th in the above matter.

Enclosed herewith is a map showing the 52 unpatented Blue Bird claims and the 10 patented claims. The map also shows the location of the proposed drill holes, which will be in the Poorman and Intermountain claims, which are two of the patented ones.

All of the claims, both patented and unpatented, are owned by Tuab Mineral Corp. The patented claims were acquired by deed dated March 2, 1956, and recorded on March 20, 1956, in the office of the Recorder of Graham County, Arizona, at Docket 37, page 447.

The unpatented claims are Blue Bird Nos. 1 through 52. The deed for claims 1 through 36 to the Tuab Mineral Corp. is dated March 1, 1956, and is recorded in the office of the Graham County Recorder, Arizona, in Docket 37 at page 261. The deed for claims 37 through 52 is dated April 5, 1956, and is recorded in the above office in Docket 38 at page 281.

The Evelyn King claim is an unpatented claim, and was relocated as Blue Bird No. 36 in the above group. Under its original name as Evelyn King, the claim was recorded in the above mentioned office in Book 22 at page 16, and was conveyed by quit claim deed to Tuab Mineral Corp. on March 2, 1956, which deed is recorded in Book 37 at page 449. It was relocated as Blue Bird No. 36 on December 1, 1955, and the location notice was recorded in Docket 36 at page 151. As such relocated claim, it was conveyed to Tuab Mineral Corp. by deed recorded March 2, 1956 in Docket 37 at page 261.

The above covers all of the questions set out in your letter of June 28. This letter and the enclosed map are submitted in quadruplicate in accordance with your request.

Very truly yours,

TUAB MINERAL CORP.

By

President

jb
j

File Copy
Surname
J. W.

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

500

JUN 28 1956

Mr. John W. Bibb, Jr., President
Tuab Mineral Corporation
2517 E. Glenn
Tucson, Arizona

Re: Docket No. DMEA-4343 (Copper)
Tuab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Bibb:

Your application, dated April 1956, for Government exploration assistance for the cited property has been received and reviewed by the Base Metals Division of the Defense Minerals Exploration Administration.

In order to expedite the processing of your application, we would appreciate receiving the following information:

A map showing the 52 unpatented Blue Bird claims and the 10 patented claims. The map submitted with the application shows 35 unpatented and 10 patented claims. Please show on this map the location of your proposed diamond drill holes.

The application states, the Corporation's interest in the 52 unpatented claims, but fails to mention its interest in the 10 patented claims. Also, your application does not mention the Evelyn King claim which is shown on the map immediately adjacent to the Intermountain, Poorman and Richman claims. The Corporation's interest in these claims should be stated and if it is not the owner, a copy of the instrument showing its right of possession to these claims should be submitted. It will also be necessary to give the survey numbers or other record data of these claims.

Please submit the requested information in quadruplicate at your earliest convenience.

Sincerely yours,

for J. W. Ad

W. R. Griswold, Chief
Base Metals Division

JWAlt/er 6/28/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

IN REPLY REFER TO:

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

June 26, 1956

RECEIVED
JUN 26 1956

Re: DMEA 4343,
Tuab Mineral Corp.,
San Juan Mine,
Graham Co., Ariz.,
$32,949.00 - Copper

Memorandum

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

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

Subject: Review of application.

The applicant requests assistance in exploring at depth by core drilling an area in quartz monzonite from which a large tonnage of "oxide" copper ore has been mined. Five vertical drill holes, probably drilled in 1951, whose locations are not shown, cut much low grade ore and some high grade at varying depths up to 150 feet, thus:

| Hole | Low Grade | Medium Grade | High Grade |
|---|---|---|---|
| A | 0-50' (0.15-0.49%) | 50-80' (0.76-1.29%) | 80-95' (4.45-5.92%) |
| B | 0-20' (0.65-0.78%) | 20-105'(0.96-2.04%) | 105-110' (5.07%) |
| | 125-150'(0.86-1.18% | 110-125' (1.18-1.50%) | |
| C | 40-145' (0.06-1.45%) | 0-40' (0.51-3.26%) | |
| D | 0-75' (0.17-0.98%) | 95-100' (1.63%) | 75-95' (2.46-8.43%) |
| E | 45-90' (0.44-0.84%) | 0-45' (1.36-2.31%) | |

Such variable results suggest other than an oxidized capping underlain by an enriched sulfide zone as shown on the sections in Fig. 2.

Sections in Fig. 2, drawn in April 1956, show graphically the results obtained in 5 numbered churn drill holes 1, 2, 3, 7 and 8, whose locations are shown on Fig. 1. Lynch (conclusion) mentions 5 churn drill holes drilled in 1951, but does not mention the "letter" holes and the footages (depths) of the holes 1, 2, 3, do not indicate a change from lettering to numbering of holes A, B, and C. Except for the sections, Fig. 2, no information is given concerning the numbered holes, whereas assays for 5-foot sections are given for the lettered holes, supposedly drilled the same year. The results as given are confusing if not misleading. A map like Fig. 3 with <u>all</u> drill hole locations on it would be informative.

However the over-all results indicate an examination is warranted. Referral of the application to the Field Team for appropriate action is recommended.

N. E. Nelson

N. E. Nelson

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

RECEIVED JUN 21 1956

June 20, 1956

Memorandum

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

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4343 (copper), Tuab Mineral Corporation, San Juan and Blue Bird Claims, Lone Star Mining District, Graham County, Arizona, $32,949

To determine the size and grade of this copper deposit, the applicant proposes 5 holes totaling 3,000 feet of exploratory diamond drilling at an estimated total cost of $32,949.

Information submitted with the application indicates that the deposit may contain from 1,000,000 to 3,000,000 tons of ore assaying from 1 to 2 percent copper.

The program appears sound and warranted. However, it is recommended that the application be referred to the Field Team for appropriate action.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
R. W. Geehan
F i l e s

June 25, 1956

Tuab Mineral Corporation
c/o Mr. John W. Bibb, Jr.
2517 E. Glenn,
Tucson, Arizona

Subject: DMEA 4343
Re: Exploration Assistance
San Juan Mine

Dear Mr. Bibb

The receipt of your application dated April, 1956 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA 4343 and referred to the Base 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

June 18, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region III.

DMEA -4343 Tuab Mineral Corporation

Robert E. Adams
Chief, Operation's Control
and Statistics Division

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

June 15, 1956

224 New Customhouse
Denver 2, Colorado

RECEIVED
JUN 18 1956

Mr. Robert K. Wyant
Tumb Mineral Corp.
201 North Stone Avenue
Tucson, Arizona

Re: Application for DMEA Aid (Copper) San Juan Mine, Graham, County, Arizona

Dear Mr. Wyant:

This will acknowledge receipt of your application for DMEA assistance on the captioned property. The application has been forwarded to the Washington Office, DMEA, for further processing.

Very truly yours,

W. M. TRAVER,

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

HMC:ab

cc: Sec. Op. Comm. (2)
Docket
Harshman
Shaw (2)
Storms
Chron.

224 New Customhouse
Denver 2, Colorado

March 4, 1957

RECEIVED
1957
CODE

Mr. Hyman D. Goldberg, Secretary
Tuab Mineral Corp.
201 North Stone Avenue
Tucson, Arizona

Re: Docket No. DMEA 4343 (Copper)
Tuab Mineral Corp.
(San Juan mine)
Graham County, Arizona;
Proposed Exploration Project
Contract No. Idm-E1059

Dear Mr. Goldberg:

Reference is made to proposed Exploration Project Contract No. Idm-E1059, five copies of which were forwarded to you by our letter of February 5, 1957; receipt of which was acknowledged by your letter of February 15, 1957.

We will appreciate advice by return mail as to your plans relative to execution and return of all copies of the proposed Contract.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

JWT:prl

cc: Chairman, Op. Comm. (2) ) w/copy of
Harshman ) Operator's
Storms ) letter of Feb. 15
Emerick ) (Note change of address)

Townsend
Corres. file
Chron.

TELEPHONE MA 4-4501

# TUAB MINERAL CORP.

201 NORTH STONE AVENUE
TUCSON, ARIZONA

JOHN M. STOS, JR., PRESIDENT

DMEA
DEPARTMENT OF THE INTERIOR
FEB 18 1957
REGION III
DENVER, COLORADO

February 15, 1957

United States Department of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Re: Docket No. DMEA 434 (Copper)
Tuab Mineral Corporation
(San Juan mine)
Graham County, Arizona;
Proposed Exploration Project
Contract No. Idm-E1059

Attention:
Mr. W.M. Traver

Dear Sir:

We have just received your letter of February 5th, together with enclosures. We are in the process of studying your form of contract and will write you again shortly.

Please note on your records that all mail addressed to the Tuab Mineral Corporation should be sent in care of it's Secretary, Hymen D. Goldberg, 201 North Stone Avenue, Tucson, Arizona.

Very truly yours,

Hymen D. Goldberg
Secretary

HDG:ep

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

204 New Customhouse
Denver 2, Colorado

February 5, 1957

CENTRA COPY
DMEA
RECEIVED FEB 7 1957

| DATE | INITIALS | CODE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

Pending

Mr. Russell R. McMillan
Wenx Exploration Company, Inc.
Box 387
Moab, Utah

Re: Docket DMEA 4343 (Copper)
Tomb Mineral Corporation
(San Juan claims)
Graham County, Arizona

Dear Mr. McMillan:

This is with further reference to your letter of July 31, 1956 and ours of September 24, 1956 concerning the captioned application.

For your information we are, today, forwarding to the Tucson, Arizona address of the applicant corporation, six copies of an Exploration Project Contract No. IAn-21059 for signature of the officer of the corporation authorized to sign such documents.

Very truly yours,

Original signed by
W. M. TRAVER

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

WMT:jy
cc: Chm. Op. Comm. (2)
Harshman
Storms
Emerick
Docket 4343
Townsend
Chron.

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

224 New Customhouse
Denver 2, Colorado

CERTIFIED MAIL

February 5, 1957

Pending

EXTRA COPY
D M E A
RECEIVED FEB 7 1957

| DATE | INITIALS | CODE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

Tuab Mineral Corporation
2517 East Glenn
Tucson, Arizona

Re: Docket No. DMEA 4343 (Copper)
Tuab Mineral Corporation
(San Juan mine)
Graham County, Arizona;
Proposed Exploration Project
Contract No. Idm-E1059

Gentlemen:

Enclosed are the Government's, Division, Docket, Finance Office, and Field Team copies of proposed Exploration Project Contract No. Idm-E1059, which has been prepared pursuant to your Application for Government assistance in exploration work under the Defense Minerals Exploration Administration program.

If the Contract is satisfactory, all copies are to be signed by an official of the corporation authorized to sign such an instrument, the signer's title inserted, the signature attested to by the Secretary of the corporation, the corporate seal affixed, and all copies promptly returned to this office.

In the event the Contract is not satisfactory, all copies are to be returned promptly to this office, together with your comments on or objections to the Contract.

Your attention is especially directed to three provisions in the Contract:

1. The Government will not contribute to the costs of any work which is provided for in the Contract that is performed prior to the date of the Contract.

2. The Contract requires completion of the exploration work by the date fixed therefor. Approval must be obtained from this office for any suspension of work which may result in failure to complete the work by the date specified.

3. Royalty is due the Government on all production from the land described in the Contract, beginning on the date of the Contract.

If the Contract is satisfactory, and upon return of all copies properly signed, the "Operator's Copy" of the Contract will be forwarded to you, together with blank report forms and instructions relative to reporting on work performed under the Contract. Also, instructions will be given as to the procedure to be followed in corresponding with this office in matters concerning operations under the Contract.

When the signed copies of the Contract are returned, please advise the date on or before which work will be commenced, for our insertion in Article 3 of the Contract form.

Very truly yours,

Original signed by
W. M. TRAVER

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

Enclosures

JWT:prl

cc: Chairman, Op. Comm. (2)
Harshman
Storms
Emerick
Townsend
Docket
Chron.

JAN 31 1957

Mr. W. H. Traver
Executive Officer
DMA Field Team, Region III
224 New Customhouse Bldg.
Denver 2, Colorado

Re: Docket No. DMA-4343 (Copper)
Teab Mineral Corporation
San Juan Mine
Graham County, Arizona

Dear Mr. Traver:

Enclosed are the original and five copies of a proposed long-form contract signed by the Administrator for the Government. It consists of the form, Annex I ( 1 page), Exhibit "A" (3 pages), and two maps. Also enclosed are two extra copies of Annex I, Exhibit "A", and two maps for Field Team use.

It will be necessary to insert in the contract, in the space provided under Article 3, the date when the Operator shall commence work on the contract.

If the proposed contract meets with your approval, kindly present it to the Applicant for approval and signature and, when completed, distribute the copies in the usual manner. In the event that the proposed contract is not satisfactory, and cannot be amended within your delegated authority, return all copies with your recommendation concerning any modification.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee
JWAlt/er 1/25/57
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Killsgaard, USGS
Chron.

Enclosures

APPROVED:

Frank D. Lamb
Member, Bureau of Mines

"Noted" by N. E. Nelson
Member, Geological Survey

Division Copy

MF-200
(Revised June 1954)

Docket No. DMEA 4343

Commodity Copper

Contract No. Idm-E

# UNITED STATES OF AMERICA
# DEPARTMENT OF THE INTERIOR
## DEFENSE MINERALS EXPLORATION ADMINISTRATION

## EXPLORATION PROJECT CONTRACT[1]

It is agreed this ..... day of ....., 195..., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] Tuab Mineral Corporation, an Arizona corporation, whose mailing address is 2517 East Glenn Tucson, Arizona, hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200), the attached Exhibit "A," Annex I, and 2 maps

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Arizona, County of Graham, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] Owner of [5] See Annex I in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] See Annex I., [7] recorded in Book ....., page ....., official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: None

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

of the land (lessor, seller, optionor, etc.), are attached, as follows: .....

.....

.....

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 8, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 8(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of .....Copper..... The work to be performed is described in Exhibit "A." The Operator on or before ..... shall commence the work, and on or before ....July 1, 1957..... (unless the Operator's obligation to prosecute the work is terminated—see Article 10) shall either have completed the work or shall have incurred allowable costs (see Article 6) in a sum not less than the estimated total allowable cost set forth in Exhibit "A."

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Independent contracts.*—To the extent that the allowable costs are estimated in Exhibit "A" with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed; but if the reference in Exhibit "A" to any such independent contract requires the Government's approval thereof, payments under such contract will not be allowable costs unless the Government gives its written approval of the contract. Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract and regardless of the Government's approval thereof, the Government will participate in payments to the independent contractor only on account of work performed in accordance with the provisions of this exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—The estimated total allowable cost of the project, set forth in Exhibit "A," is the sum of $..20,622.00..... The Government shall contribute ..50.. percent of the allowable costs as they are incurred in a total sum not in excess of $..10,311.00.....: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last

date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; or (2) the Government may enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 10. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon: (1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon: (1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 10 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 11. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 12. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 13. *Changes and added provisions.*—
In Article 6(c), the words "Article 9" are changed to "Article 8."

Todrite
Sawyer
"Appd. Sol. Off."
All.
Linwood
Chambers

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By .....
**Administrator, Defense Minerals Exploration Administration**

**TUAB MINERAL CORPORATION**
(Operator)

By .....

**Title** .....

---

I, ....., certify that I am the ..... secretary of the corporation named as Operator herein; that ..... who signed this contract on behalf of the Operator, was then ..... of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

.....

[ CORPORATE SEAL ]

U. S. GOVERNMENT PRINTING OFFICE 16—70617-1

EXPLORATION PROJECT CONTRACT
TUAB MINERAL CORPORATION
DOCKET NO. DMSA-4343

EXHIBIT "A"

Description of the Work

The purpose of the project is to explore, by diamond drilling, from the surface, to determine the continuation of copper ores that existed in the upper levels of the Main shaft on the Poorman claim.

The work shall consist of drilling 4 diamond drill holes from the surface. The total amount of drilling shall not exceed 2,400 feet. The holes shall be drilled at or near the indicated sites, and on the indicated bearings, as shown on the map entitled "Fig.--4 - Proposed Exploration, Tuab Mineral Corp., San Juan Mine, Graham County, Arizona," attached hereto and made a part hereof. The holes shall be inclined at about minus 45 degrees.

Core samples shall be taken in significant mineralized zones, utilizing drilling intervals of not more than 5 feet. Sludge samples shall be taken from intervals where core recovery is less than 80 percent. All samples shall be assayed for total copper. Certified copies of all assay certificates and complete log records of all holes shall be submitted with the Operator's monthly reports. Half of each sample shall be retained and made available for such disposition as may be directed by the Government. The number of samples taken shall not exceed 800.

The project shall be supervised by a competent engineer-geologist who shall devote full time to the project work.

Only the costs of completed drill holes are allowable costs of the project. Holes entering the primary ore zone should be bottomed after a minimum penetration, but shall not exceed 600 feet in depth per hole.

The locations, directions, inclinations, and extent of all holes shall have prior approval of the Government.

Estimated Costs of the Project
(* Indicates an allowable maximum)

Category (1) Independent Contracts

| | |
|---|---|
| Collar pipe, from surface to 20 foot depth, 80 feet @ $7.40 | $ 592.00 |

| | | |
|---|---|---|
| BX coring, from 20 feet depth to 150 feet depth, 520 feet @ $6.40/ft. | $ 3,328.00 | |
| AX coring, from 150 foot depth to 250 foot depth, 400 feet @ $5.40/ft. | 2,160.00 | |
| AX coring, from 250 foot depth to 500 foot depth, 1,000 feet @ $5.90/ft. | 5,900.00 | |
| AX coring, from 500 foot depth to 600 foot depth, 400 feet @ $6.50/ft. | 2,600.00 | |
| Cementing and redrilling, 20 feet per hole, 80 feet @ $3.00/ft. | 240.00 | |
| Reaming and casing, 20 feet per hole, 80 feet @ $2.75/ft. | 220.00 | |
| Mobilization and demobilization | 700.00* | |
| Cost of hauling water, 3.2 months @ $250.00/mo. | 800.00* | |
| 3,200 miles @ $0.15/mi. for use of truck | 480.00* | |
| Purchase price of 80,000 gallons of water @ $0.40/1,000 gals. | 32.00* | $17,052.00 |

Category (2) Personal Services

Subcategory (a) Supervision

| | | |
|---|---|---|
| Engineer-geologist, 4 months @ $500.00/mo. | | 2,000.00 |

Subcategories (b) and (c) Technical Services and Labor — None

Category (3) Operating Materials and Supplies — None

Category (4) Operating Equipment

Subcategory (a) Rental

| | | |
|---|---|---|
| Rental of Jeep @ $80.00/mo. | | 320.00 |

Subcategories (b) and (c) Purchases and Depreciation — None

Category (5) Initial Rehabilitation and Repairs — None

Category (6) New Buildings, Fixtures, and Installations — None

Category (7) Miscellaneous - None except:

| | | |
|---|---|---|
| Payroll taxes and liability insurance 10% of $2,000.00 | | 200.00 |

| | | |
|---|---|---|
| Fuel, grease, and repairs for Jeep | $ 250.00 | |
| 800 samples, assayed for copper @ $1.00/sample | 800.00 | $ 1,250.00 |
| Estimated Total Cost of the Project | | $20,622.00 |
| Government Participation @ 50% | | $10,311.00 |

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

RECEIVED
JUN 18 1956

June 15, 1956

22d New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Copper) Tuab Mineral, Corp. (San Juan Mine), Graham County, Arizona

Enclosed are three copies of the subject application in the amount of $32,949.00. One copy of the application is being retained in our file.

The Applicant submitted no copies of deeds conveying the 52 Blue Bird claims to Tuab Mineral Corp. The E. Grattan Lynch Report, which accompanies the application, states: "The titles to the ten patented claims are in the name of Ralph N. Pfeffer".

No drilling bids were furnished by the Applicant to support his estimate of drilling costs.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

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

RECEIVED
JUN 18 1956

June 15, 1956

224 New Customhouse
Denver 2, Colorado

Mr. Robert K. Wyant
Tuab Mineral Corp.
201 North Stone Avenue
Tucson, Arizona

Re: Application for DMEA Aid (Copper) San Juan Mine, Graham, County, Arizona

Dear Mr. Wyant:

This will acknowledge receipt of your application for DMEA assistance on the captioned property. The application has been forwarded to the Washington Office, DMEA, for further processing.

Very truly yours,

W. M. TRAVER,

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

HMC:ab

cc: Sec. Op. Comm. (2)
Docket
Harshman
Shaw (2)
Storms
Chron.

IN REPLY REFER TO:

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

June 26, 1956

RECEIVED
JUN 26 1956

Ref: DMA 4343,
Quab Mineral Corp.,
San Juan Mine,
Graham Co., Ariz.,
832,949.00 - Copper

Memorandum

To: [illegible] Griswold, Defense Minerals Exploration Administration

From: [illegible] Nelson, U. S. Geological Survey

Subject: Review of application.

The applicant requests assistance in exploring at depth by core drilling an area in quartz monzonite from which a large tonnage of "oxide" copper ore has been mined. Five vertical drill holes, probably drilled in 1951, whose locations are not shown, cut much low grade ore and some high grade at varying depths up to 150 feet, thus:

| Hole | Low Grade | Medium Grade | High Grade |
|---|---|---|---|
| A | 0-50' (0.15-0.49%) | 50-80' (0.76-1.29%) | 80-95' (4.19-5.92%) |
| B | 0-20' (0.65-0.72%) | 20-105' (0.96-2.04%) | 105-110' (5.07%) |
| | 125-150' (0.86-1.18%) | 110-125' (1.18-1.50%) | |
| C | 40-145' (0.06-1.45%) | 0-40' (0.51-3.76%) | |
| D | 0-75' (0.17-0.98%) | 95-100' (1.63%) | 75-95' (2.46-8.43%) |
| E | 45-90' (0.14-0.81%) | 0-45' (1.36-2.31%) | |

Such variable results suggest other than an oxidized capping underlain by an enriched sulfide zone as shown on the sections in Fig. 2.

Sections in Fig. 2, drawn in April 1956, show graphically the results obtained in 5 numbered churn drill holes 1, 2, 3, 7 and 9, whose locations are shown on Fig. 1. Lynch (conclusion) mentions 5 churn drill holes drilled in 1951, but does not mention the "letter" holes and the footages (depths) of the holes 1, 2, 3, do not indicate a change from lettering to numbering of holes A, B, and C. Except for the sections, Fig. 2, no information is given concerning the numbered holes, whereas assays for 5-foot sections are given for the lettered holes, supposedly drilled the same year. The results as given are confusing if not misleading. A map like Fig. 3 with <u>all</u> drill hole locations on it would be informative.

However the over-all results indicate an examination is warranted. Referral of the application to the Field Team for appropriate action is recommended.

N. E. Nelson

N. E. Nelson

N Nelson:btr
G 6/26/56

cc: J. W. Pennington, 3623
Director's reading file (4212)
Branch reading file (4212)
DMBA(3)
Chron. file
Docket file

RECEIVED
JUN 21 1956

June 20, 1956

Memorandum

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

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4343 (copper), Tomb Mineral Corporation, San Juan and Blue Bird Claims, Lone Star Mining District, Graham County, Arizona, $32,949

To determine the size and grade of this copper deposit, the applicant proposes 5 holes totaling 3,000 feet of exploratory diamond drilling at an estimated total cost of $32,949.

Information submitted with the application indicates that the deposit may contain from 1,000,000 to 3,000,000 tons of ore assaying from 1 to 2 percent copper.

The program appears sound and warranted. However, it is recommended that the application be referred to the Field Team for appropriate action.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
R. W. Geehan
F i l e s

Pending

January 18, 1957

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Chief, Base Metals Division

Subject: Preparation of Contract for Docket No. DHA-4343, Tuab Mineral Corporation, San Juan Mine (Copper), Graham County, Arizona

Will you please prepare a contract for the cited project. A draft of the contract, Annex I, Exhibit "A", and 9 copies of two maps are attached to this memorandum.

W. R. Griswold

W. R. Griswold

JWAlt/er 1/18/57

Copy to Docket
Base Metals
Chron.

January 9, 1957

Memorandum

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

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Field Team Report, Docket No. DMEA 4343, (copper), Tuab Mineral Corporation, San Juan Mine, Graham County, Ariz.

The field examiners believe that conditions are favorable for indicating the presence of a significant reserve of low-grade copper-bearing rock of a possible mining grade and exploration work can be completed at a relatively low cost. Accordingly, they propose an exploration project consisting of four diamond drill holes totaling a maximum of 2,400 feet at a cost of $23,260.20.

The target of the proposed project is to explore below the 130-foot level that offers the possibility of increasing present estimates of ore reserves. Reports of previous work indicating that the bottom limit of the ore zone is approximately 120 feet are considered unreliable and the deeper exploration appears to be warranted.

Except for the provision, under supervision and labor, for two full time samplers, I concur with the recommendations of the examiners and the Field Team.

Signed

A. D. McMahon

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
F. D. Lamb
F i l e s

January 4, 1957
Re: DMEA 4343
Quab Mineral Corporation
San Juan Mine
Graham County, Arizona
Applicant's Estimate $35,067.03
Recommended Estimate $23,260.20 - Copper

Memorandum

To: [illegible] Griswold, Defense Minerals Exploration Administration

From: M. [illegible] Balson, U. S. Geological Survey

Subject: Review of Field Team Report.

The applicant requested assistance in drilling 5 angle diamond drill holes across a mineralized zone characterized by a steeply dipping set of multidirectional veins and veinlets.

Previous drilling and mining of which the records are not complete, indicate the zone is 600 to 630 feet long and 200 to 300 feet wide. The depth is less certain, but apparently variable. However it seems to be commonly taken as about 120 feet. So taken, the inferred ore in the blocks, as estimated by the examiners, is:-

| Block | Oxide Ore Tons | Mixed Oxide and Sulfide Tons | Total Tons |
|---|---|---|---|
| 200 x 600 x 30' | 267,000 x 90' | 800,000 | 1,067,000 |
| 300 x 630 x 30' | 420,000 x 90' | 1,260,000* | 1,680,000* |

*Corrected using 90-foot depth.

The grade can only be guessed but is taken as 1% copper.

The examiners recommend drilling 4 holes instead of 5 across the block as proposed by the applicant, and would drill 2 600-foot holes from north to south and 2 600-foot holes from south to north in order to obtain more nearly equal depths on the 2 sides of the east-west trending block. The change is advisable.

If, as said, the average depth of the zone of mineralization is believed to be about 120 feet, the bottoms of the 600-foot holes -450 will be far below that assumed depth. I would recommend say, 8 or 12

holes @ 30°-45° and if they remain in ore continue them as indicated. A better sampling would be obtained.

Except for a change in the drilling pattern, I concur with the recommendation of the examiners and the Field Team.

N. E. Nelson

N. E. Nelson

cc: Director's reading, 4212
Branch reading, 4212
DMSA (3)
Docket file
Chron. file
J. W. Pennington, 3623
NENelson:pbb
G: 1/4/57

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

224 New Customhouse
Denver 2, Colorado

December 31, 1956

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Joint Report of Examination Docket DMEA 4343 (Copper) Tuab Mineral Corporation (San Juan Mine) Graham County, Arizona.

Enclosed are the original and three copies of a joint engineering and geologic Report of Examination on the subject property.

The field examiners recommend an exploration project to consist of four diamond drill holes at an estimated total cost of $23,260.20. We concur in this recommendation.

Your attention is invited to certain revisions in the Report of Examination, which are discussed in a supplemental memorandum from W. L. Emerick and T. M. Romslow to the Executive Officer, DMEA Field Team, Region III, dated December 19, 1956, copy of which accompanies the Report of Examination.

Nine extra copies of Figure 2 and Figure 4 are enclosed for possible use in the contract.

DMEA Field Team, Region III

Original signed by
W. M. TRAVER

By W. M. Traver
Executive Officer

Enclosures
RMC:ytl
cc
Sec. Op. Comm. (4) )
Docket 4343 ) w/cc of
Harshman ) Joint Report
Mining Division ) of Examination.
Storms )
Emerick )
Chron.

Reviewed by
DMEA OPERATING COMMITTEE

DMEA
DEPARTMENT OF THE INTERIOR
DEC 26 1956
REGION III
DENVER, COLORADO

Box 4126 University Station
Tucson, Arizona

TRANSMITTED
DEC 31 1956

December 19, 1956

MEMORANDUM

To: Executive Officer, DMEA Field Team, Region III

From: W. L. Emerick
T. M. Romola

Through: E. N. Harshman DWR for ENH
W. R. Storms WRS

Subject: Docket DMEA 4343 (Copper) Tush Mineral Corporation, San Juan Mine, Graham County, Arizona

Reference is made to our field examination report on the above docket submitted under letter of transmittal dated December 12, 1956. After a telephone discussion with E. N. Harshman on December 18, 1956, the examining team requests that certain revisions enumerated below supersede those parts of the report effected.

The second paragraph, page 12, under "Proposed Exploratory Project" should be revised to read:

> "The examining team believes the property's potential can be adequately explored by drilling 4 similarly inclined holes from the surface sites of Figure 4. Drilling of 2 northerly and 2 southerly trending holes, as indicated, eliminates the unfavorable features of the applicant's program. The examining team believes a depth of 600 feet and an inclination of 45° on the drill holes, rather than a lesser inclination, will more thoroughly explore the ground below the 130-foot level specified in unverified and probably unreliable older reports as the bottom limits of the ore zone. A depth of 600 feet will also more adequately explore the deeper zones in which earlier churn drill data is uncertain and possibly unreliable, and also offers the possibility of significantly increasing the over-all reserves below the depth of present estimates."

Item 6, page 13, 3rd paragraph, under "Proposed Exploratory Project", should be revised to read:

"6. Only the costs of completed drill holes are allowable costs of the project. Holes entering the primary ore zone should be bottomed after a minimum penetration, but shall not exceed 600 feet in depth per hole."

W L Emerick

W. L. Emerick, U. S. Geological Survey

Original signed by
T. M. Romslo

T. M. Romslo, U. S. Bureau of Mines

WLE:ms

Traver (8)
D. N. Harshman
W. R. Storms
W. L. Emerick

Reviewed by
DNM OPERATING CONTRACTS

IN REPLY REFER TO:
DMEA
DEPARTMENT OF THE INTERIOR

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

DEC 19 1956
REGION III
DENVER, COLORADO

December 18, 1956

TRANSMITTED
DEC 31 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 4343 (Copper), Tuab Mineral Corporation (San Juan mine), Graham County, Arizona

Enclosed are the original and eight copies of a joint examination report by T. M. Romslo, U. S. Bureau of Mines, and W. L. Emerick, U. S. Geological Survey, in which Government exploration assistance is recommended.

The examiners conclude that exploration may result in the delineation of a significant amount of low-grade (1 percent ±) copper ore on the Poorman claim.

Eight churn drill holes have already been drilled in the small block proposed for exploration by the examining team. The proposed DMEA exploration consists of four angle diamond drill holes. The examiners reason that the four diamond drill holes, cutting the ore-bearing structures at an angle, will give conclusive data on the size and average grade of the ore body in contrast to the churn drill holes, paralleling the ore-bearing structures, which gave rather inconclusive data.

The depth to which each hole proposed by the examiners is to be drilled and the reasons for drilling far below the depth of possible commercial ore (given in the report as about 120 feet) are not given in the report. I discussed these omissions with Emerick today and requested a supplemental memorandum covering these two points.

Although exploration at the subject property appears warranted, final Field Team action on a specific program should await receipt of the supplemental information.

E. N. Harshman
E. N. Harshman
Member, Field Team

Reviewed by
DMEA OPERATING COMMITTEE

Enclosures (9)

ENHarshman:arh

MINERAL DEPOSITS
DMEA
RECEIVED
DEC 17 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

DMEA
DEPARTMENT OF THE INTERIOR
DEC 19 1956
REGION III
DENVER, COLORADO

Box 4126 University Station
Tucson, Arizona

December 12, 1956

TRANSMITTED
DEC 31 1956

MEMORANDUM

To: Executive Officer, DMEA Field Team, Region III

From: T. M. Romslo
W. L. Emerick

Through: W. R. Storms
E. E. Burnham

WRS
EE Burnham

Subject: Docket DMEA 4343 (Copper), Tech Mineral Corporation, San Juan Mine, Graham County, Arizona

Enclosed are the original and 8 copies of a joint field report on the above property, recommending approval of the application.

Original signed by
T. M. Romslo

T. M. Romslo
U. S. Bureau of Mines

W L Emerick

W. L. Emerick
U. S. Geological Survey

WLEmm

cc. W. H. Traver (3)
E. E. Burnham
W. R. Storms

FOR UNITED STATES GOVERNMENT USE ONLY

TRANSMITTED

DEC 31 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-243 (Copper), Tyab Mineral Corporation

San Juan Mine

Graham County, Arizona


W. M. Bunnle, Mining Engineer
U. S. Bureau of Mines

W. L. Emerick, Geologist
U. S. Geological Survey



Received by
DMEA OPERATING CO. [illegible]


December 12, 1955

## SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Defense Minerals Exploration Administration examined the San Juan mining claims in Graham County, Arizona in connection with an application by the Tank Minerals Corporation for aid in proposed explorations for copper. The application, docket DMEA-4343, proposed that a small area at the San Juan mine be tested from the surface by diamond drilling 3300 feet in 5 holes. Cost of the proposed exploratory project was estimated at $35,867.03.

The San Juan mine was active during times of high copper prices from about 1900 to the end of World War I. Probably the most active period was from 1913 to 1918, when the San Juan Mining Company sunk several shafts and churn drill holes, drove a short adit, erected a mill, and mined and shipped some ore from open cuts and possibly from underground workings. Since then, activity probably has been confined to the drilling of 5 churn drill holes in 1951. Total production from the mine includes several thousand tons of selectively mined copper ore and possibly a small amount of copper concentrates.

In the San Juan mine area, monzonite porphyry lies exposed in a ridge-like hill surrounded and intruded by diabase. No limonite capping, chloritization, or sericitization appears to be present in the porphyry in the highly mineralized area of the San Juan mine. The monzonite porphyry was sheared and fractured probably by post-intrusive adjustments and shrinkage, or by mineralization.

Two fracture systems are exposed in the area. One trends N. 45° to 65° E. and dips 70° S.E. to vertical; a second one trends about N. 45° W. and dips vertically or at steep angles. Both systems carry veins, ranging in thickness from 1 to 4 feet, that contain oxides and sulphides of copper. Rock between the two fracture systems is shattered and crushed and the fracture planes carry oxides or sulphides of copper as thin coats or varnish.

The more highly mineralized area, roughly 600 feet by 300 feet, is on the Freeman claim. Mineralization gets leaner to the north, northwest, and northeast on the Freeman and Richman claims.

Mineralization was fracture controlled and consists of veins and veinlets of copper silicates, carbonates, and sulphides in the monzonite porphyry. Mineralization occurs on both sides of the diabase-porphyry contact but appears to be important on only the porphyry side.

Evidence of a zone of primary chalcopyrite and pyrite is weakly present, or lacking, in the work on dumps. The zone of oxidation is shallow and underlain by a chalcocite zone of variable thickness.

Old shaft drill holes indicate no extension of the ore body to the northwest or probably to the north and northeast. No information is available on the ground to the south of the main shaft and the ground to the west does not appear favorable.

Estimated on an area 600 feet long by 250 feet wide, reserves would include 267,000 tons of inferred oxide ore, and 500,000 tons of inferred mixed oxide and sulphide ore, or a total of 1,067,000 tons averaging about 1 percent copper. Estimated on an area slightly larger of 630 feet long by 300 feet wide, reserves would include about 480,000 tons of inferred oxide ore and 840,000 tons of inferred mixed oxide and sulphide ore, or a total of 1,320,000 tons averaging about 1 percent copper.

It is concluded that the deposit probably is of shallow depth, limited horizontal extent, and essentially of vein type with characteristic low-grade porphyry copper features lacking or weakly present. Although the deposit probably is not extensive, it could contain significant reserves of low-grade copper-bearing rock, minable by open pit methods and potentially amenable to concentration. The potential worth of the partially explored deposit could be adequately determined by drilling 4 diamond drill holes at an estimated total cost of $23,250.00.

Approval is recommended for Governmental participation in explorations because (1) conditions indicate the presence of a significant reserve of low grade copper-bearing rock of a possible mining grade, and (2) the explorations can be completed at a relatively low cost.

DMEA-4343 (COPPER), TUAS MINERAL CORPORATION

SAN JUAN MINE

GRAHAM COUNTY, ARIZONA

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| CONCLUSIONS | 18 |
| RECOMMENDATIONS | 19 |

APPENDIX, LOGS OF 3 DIAMOND-DRILL CORE HOLES


ILLUSTRATIONS


| Fig. No. | | | |
|---|---|---|---|
| 1 | LOCATION MAP | Following page | 2 |
| 2 | CLAIM MAP | " " | 4 |
| 3 | GEOLOGY OF THE SAN JUAN MINE AREA | Folder on back cover | |
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## INTRODUCTION

The Tomb Mineral Corp., an Arizona corporation, applied for Defense Minerals Exploration Administration aid to explore for copper on their San Juan mining claims in Graham County, Arizona. The application, docketed as DMEA-4343, contained a proposed exploratory project with estimated costs.

The proposed project, confined to a small area on the San Juan mine, involves the diamond drilling from the surface of 3,000 feet in 5 holes. The holes are designed to intersect a highly fractured zone in monzonite porphyry that has been explored by shallow drill holes, presently inaccessible shafts and drifts, and numerous shallow pits and trenches. The estimated total cost of the proposed project is $35,067.03.

Field investigations were initiated August 7, 1956, when W. L. Emerick, Geologist, U. S. Geological Survey, made a preliminary examination of the property in the presence of R. McClellan, the applicant's geologist. On October 12, 1956, Mr. Emerick and Lincoln Stewart, mining engineer, U. S. Bureau of Mines, completed the field investigations. The examining team was accompanied by John W. Bibb Jr., President of the corporation. Mr. Bibb also accompanied W. M. Ramale, mining engineer, U. S. Bureau of Mines, during his visit to the property November 20, 1956, for the purpose of obtaining supplementary data for cost estimates.

## LOCATION AND ACCESSIBILITY

The San Juan property is about 5 airmiles northeast of Safford, Arizona, in secs. 33 and 34, T. 5 S., R. 26 E., and sec. 2, T. 6 S., R. 26 E., Lone Star mining district, Graham County, Arizona (fig. 1). It is reached from Safford by traveling about 4 miles northeasterly on a paved county road and thence 5 miles to the north on a dirt road that skirts the principal workings of the San Juan mine.

Safford is the county seat of Graham County. It is located on a main line of the Southern Pacific Railroad and on U. S. Highway 70. Within a radius of 125 miles from Safford are the copper mining centers of Globe, Miami, Ray and Morenci.

## TOPOGRAPHY, PHYSICAL FEATURES AND CLIMATE

The San Juan property is situated at an average altitude of about 3,300 feet in the southern foothills of the northwesterly trending Gila Mountains. The principal mine workings are in an area of rolling hills of gentle to moderately steep slopes.

Vegetation consists mainly of forage grasses and a light growth of desert type shrubs.

Drainage is southerly to the Gila River that is dry except during periods of abnormally heavy precipitation.

The climate is suitable for year around mining operations. Summers are hot and winters are mild. Precipitation is largely confined to a few heavy summer rain storms and light rain and snowfalls during the winters.

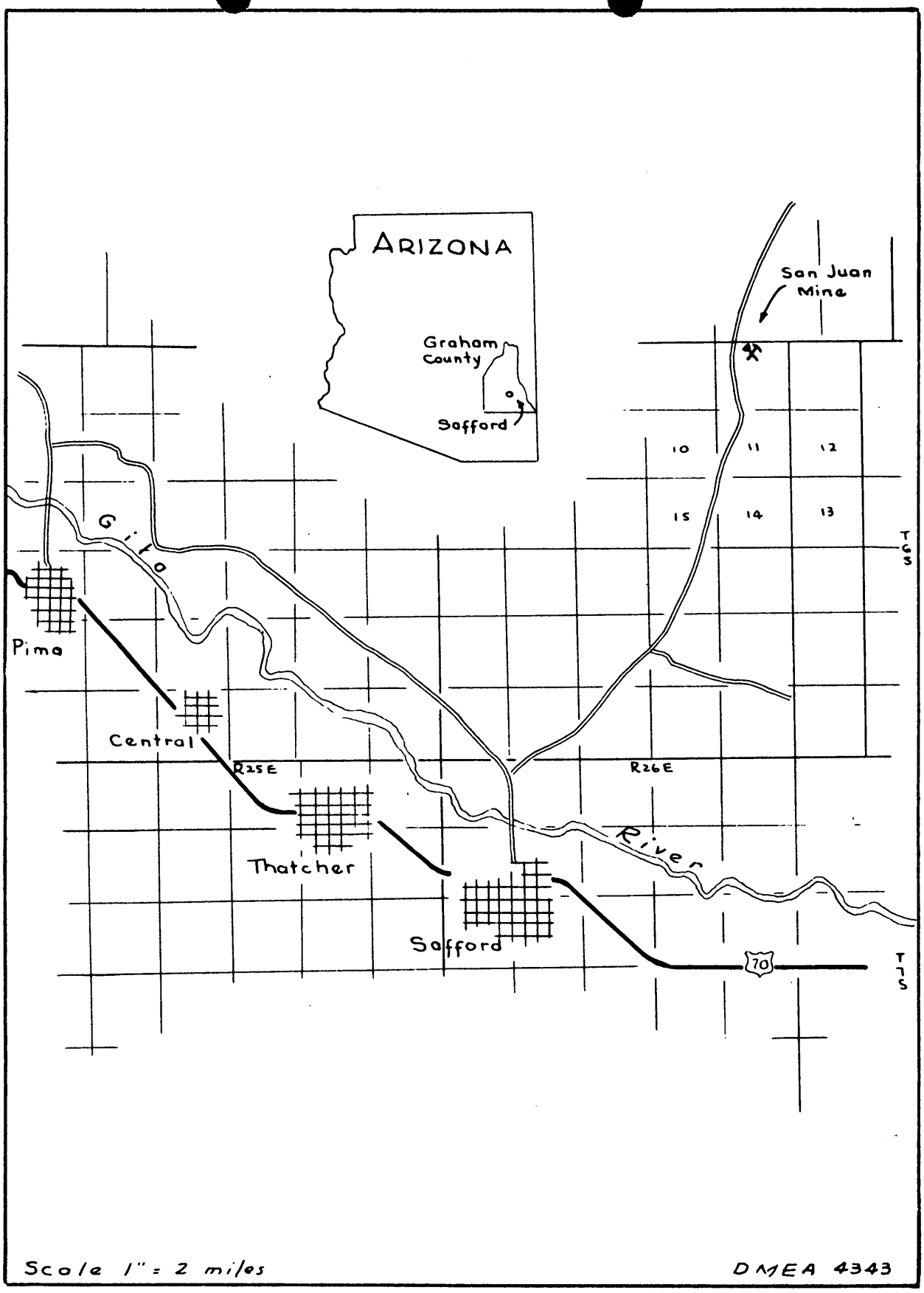



FIG.-1- LOCATION MAP, TUAB MINERAL CORP. SAN JUAN MINE
GRAHAM COUNTY, ARIZ.

## HISTORY AND PRODUCTION

The San Juan property was first located during the 1890's. To 1915 when the mine was optioned to the San Juan Copper Mining Company, some ore was mined from shallow surface workings during times of high copper prices. The company then sunk several shafts and 8 churn drill holes, drove an adit, erected a mill, and mined and shipped some ore from surface cuts and possibly from underground workings. Operations ceased shortly after the termination of World War I. Since then activity probably has been confined to the drilling of 5 churn drill holes during 1951.

During 1946, the U. S. Bureau of Mines examined the property[1] and conducted metallurgical tests[2] on ore from trenches and pits.

Arizona Metal Production, Arizona Bureau of Mines Bulletin No. 140, credits the San Juan Mine with a production of $85,000 of copper in 1907. Other recorded production is confined to $30,000 of copper in 1916 as reported by W. H. Weed in the Mines Handbook of 1918. The total of $75,000 of copper, representing selectively mined ores and possibly some concentrates, probably covers the major portion of total production.

---

1/ Ramey, P. S., Summary Report of War Minerals Examination, No. Henry 5, May 7, 1946.

2/ Leaching and Leach-Precipitation-Flotation of San Juan Oxidized Copper Ore, T.M.R. 28, August 28, 1946.

## EXTENT AND OWNERSHIP OF THE PROPERTY

Tomb Mineral Corporation, the applicant, reportedly is the owner of 2 groups of lode mining claims in the Lone Star mining district, Graham County, Arizona. The group of claims of the proposed exploratory project comprises 10 patented claims and 36 unpatented claims (fig. 2). The other group comprising 16 unpatented claims reportedly is situated a few miles to the north of the proposed project area.

Officers of the Tomb Mineral Corporation, an Arizona Corporation, are:

John W. Bibb, Jr., President,
2317 E. Glenn, Tucson, Arizona.

Charles Steen, Vice President,
Moab, Utah.

Bert A. Gibbs, Vice President,
4117 E. Waverly, Tucson, Arizona.

Hyman D. Goldberg, Secretary-Treasurer,
231 N. Stone, Tucson, Arizona.

Mitchell Malich, Asst. Secretary-Treasurer,
Moab, Utah.

## PRESENT STATUS

There are no buildings or mining and milling equipment on the inactive property.

The principal mining workings comprise 2 vertical shafts, an 85-foot adit, 11 shown drill holes, and several shallow pits and trenches (fig. 3). Of the underground workings only the adit is accessible.

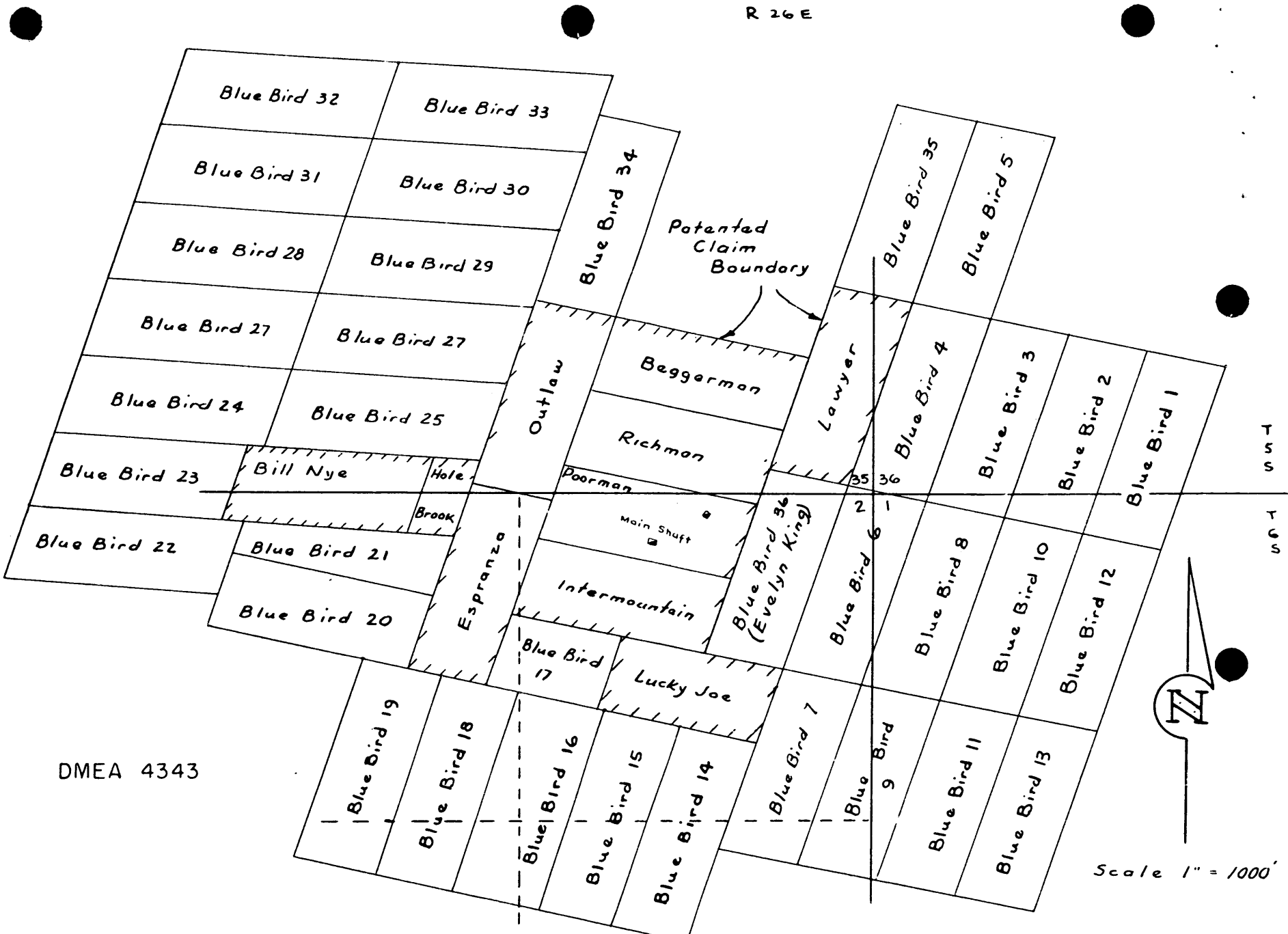



FIG.-2-CLAIM MAP, TUAB MINERAL CORP. SAN JUAN MINE GRAHAM COUNTY, ARIZONA

The main shaft reportedly is 370 feet deep and has 2 levels, the 130 and 230, containing a total of 1,000 feet of drifts and crosscuts.

The water level in the main shaft is reportedly at about 100 feet from the surface.

## GEOLOGY

The San Juan Mine lies in the foothills on the extreme lower southwest flank of Lone Star Mountain, which forms the southeast end of the Gila Range. Rocks of the Gila Range consist of undifferentiated metamorphic and volcanic rocks ranging from Precambrian to Quaternary. Variable thicknesses of Quaternary to Recent gravels cover most of the metamorphic and igneous rocks in the foothills around the San Juan mine area.

In the San Juan mine area, monzonite porphyry, surrounded and intruded by diabase, lies exposed in a ridge-like hill by erosion. The monzonite porphyry in the highly mineralized area on the Foorman claim (Fig. 3) appears fresh, unaltered, and fairly siliceous. To the north and northeast on the Richman claim the porphyry seems to become coarser, slightly weathered, and less mineralized. Contact exposures of the monzonite porphyry and diabase are sharp in places and blended in others. No limonite capping, chloritization, or sericitization appears to be present in the porphyry in the highly mineralized area of the San Juan mine. Except for scattered outcrops of monzonite porphyry or diabase, most of the rest of the area outside of the Foorman and Richman claims is covered by gravels.

After its intrusion the monzonite porphyry was shattered and fractured, probably as a result of later adjustments and shrinkage during cooling, or during mineralization. These adjustments formed two major fracture systems that are now exposed in the surface workings. Both systems of fractures carry veins containing the oxides and sulphides of copper. One system, trending N. 40° E. to N. 60° E., is dominant; the other system trends about N. 45° W. Dips on the N.E. trending fractures, in general, range from about 70° S.E. to vertical; the N.W. trending fractures are vertical or dip at steep angles either to the N.E. or S.W. Thickness of the N.E. fracture zones ranges from one foot to more than 4 feet; thickness of the N.W. fracture zones ranges from 1 to 2 feet. Rock between these major fracture systems is shattered and crushed in all directions and the fracture planes contain oxides and sulphides of copper that range in thickness from thin scales or veinlets to fractions of an inch.

The principal ore deposits, roughly about 600 feet long by 200 or 300 feet wide, cover a more highly mineralized area on the Freeman claim (Fig. 3). Mineralization extends northeastward along the most conspicuous fracture on the Freeman claim onto the Richman claim, but it is probable that mining was confined only to the vein along the fracture. The veins and veinlets, in general, appear to become fewer and leaner in mineralized material to the north, northeast, and northwest on the Freeman and Richman claims, and there was little prospecting in these areas.

Mineralization was fracture controlled and consists of veins and veinlets of copper silicates, carbonates, and sulphides along the fractures in the monzonite porphyry. Some thin veins and seams of copper carbonate or silicate were noted in the diabase, particularly near the contact of the diabase and porphyry, and some mining of a prospecting nature in the main diabase body north of the Richman claim is being done from veins and veinlets in small fractures. Sulphides apparently are absent in the diabase veins. Mineralization occurs on both sides of the diabase-porphyry contact but appears to be important on only the porphyry side. Ore minerals were emplaced after the monzonite porphyry and diabase intrusions.

It is possible that the primary minerals were chalcopyrite and pyrite and, if so, most of the chalcopyrite and pyrite have been altered to chalcocite and the silicate and carbonates of copper. Evidence of a zone of primary chalcopyrite and pyrite is weakly present, or lacking, in the rock on shaft dumps, which might suggest that the veins, in general, are shallow and lacking in significant mineralization even of a primary nature. One earlier examination[3] stated that an "old map shows about 1,100 feet of drifting on the 130-foot level (main shaft, fig. 3) which was done several years ago and is below a large portion of the commercial ore". Another early report[4] stated that "dumps of deeper shafts are almost barren, indicating that primary mineralization is extremely low grade".

---

3/ Botsford, C. W., and Beckwith, C. L., Atlas Copper Co., Property on San Juan Group, Lone Star Mining District, Graham County, Arizona.

4/ Henry, F. S., Summary report of War Minerals Examinations No. 5 Henry, June 7, 1946.

As N. E. Nelson pointed out in his review of the application (June 25, 1956), the variable results obtained in some of the churn drill holes suggests other than an oxidized zone underlain by an enriched sulphide zone. Differentials in oxidation, vein structure, and primary vein minerals, rather than supergene enrichment, are probably responsible for the variable results obtained in the churn drill holes. Applicant's Figure 2 shows a shallow oxidized zone underlain by a chalcocite zone of variable thickness. Churn drill holes 1, 2, and 3 (Applicant's Figure 2) indicate some carbonates below the enriched chalcocite zone. The presence of chalcocite with chrysocolla and malachite in veins at the surface, in little altered or weathered porphyry, might suggest that the chalcocite is hypogene rather than supergene and that chalcopyrite and pyrite were minor primary minerals. It is believed that erosion has not removed any considerable thickness of the monzonite porphyry.

Churn drill holes Nos. 4 and 5 to the northeast of the highly mineralized area on the Poorman claim (Fig. 3) do not indicate a favorable extension of the ore body in that direction; churn drill hole No. 5 (Fig. 3) to the northeast of the highly mineralized area is also in unfavorable ground. The adit directly west of the highly mineralized area was barren up to about the last 5 feet from the face. No information is available on the ground to the south of the mineralized area and the main shaft.

Applicant's Figure 2 is a copy of a section made by Botsford and Beckwith for their 1925 report on the Atlas Copper Co. property on the San Juan group[5/]. Apparently these two examiners had access to logs on the 8 numbered shown drill holes (Fig. 3) drilled prior to 1925, and their descriptions of the holes follow:

"The log of drill hole No. 1 shows chalcocite ore at between 15 and 20 feet of depth, with the following 110 feet chalcocite and some carbonate of copper down to 125 feet depth and averaging 5.24% copper, with some assays running as high as 13.75%. From 125 feet down to 220 feet, the bottom of hole less than 1% with an average of 0.4%."

"The log of drill hole No. 2 shows 30 feet of carbonate from 30' to 75' depth mixed carbonate and chalcocite average 2.3% copper. From 75' to 200' average 0.27% copper. 200' to 330' depth average 1.65% copper. 330' to 515' depth and bottom 0.67% copper. Primary ore begins at 390' depth."

"Drill Hole No. 3: Carbonate of copper down to 30 feet of depth. From 30' to 190' of depth chalcocite and carbonate average 2.985% copper. 190' to 345' depth average 0.38% copper. Some carbonates down to 320 feet depth. Last 26 feet to 371' depth and bottom of hole, trace of copper."

"Drill Hole No. 7: 0' to 45' depth carbonate of copper and chalcocite average 0.65% copper. 45' to 95' 1.20% copper. 95' to 255' average 0.27% copper. The above drill holes are on a line bearing N. 75 Deg. 41' W. 200 feet distance between holes."

"Drill Holes Nos. 4, 5, and 8 are parallel and on a line 200 feet distant to the north of 1, 2, 3, and 7. The three holes returned assays of less than 1% copper."

"No. 6 hole, 20 feet deep, is on the Bangarman claim, 1,200 feet to the north and entirely out of the mineralized belt."

---

5/ Botsford, C. W., and Beckwith, C. I., op. cit., 1925.

Assay certificates on 5 lettered churn drill holes (A, B, C, D, and E) drilled in 1951 are available. Approximate locations of Holes Nos. A, B, C, and D are shown on Fig.3. Location of Hole No. E is unknown. A summation of weighted averages calculated from the assay certificates is given below for these 5 holes.

| | | | |
|---|---|---|---|
| Hole A - | 0'- 50' | av. | 0.35 percent Cu. |
| | 50'-100' | " | 2.23 percent Cu. |

Total depth of hole - 100 feet

| | | | |
|---|---|---|---|
| Hole B - | 5'-150' | av. | 1.40 percent Cu. |

Total depth of hole - 150 feet

| | | | |
|---|---|---|---|
| Hole C - | 0'- 60' | av. | 1.56 percent Cu. |
| | 60'-150' | " | 0.14 percent Cu. |

Total depth of hole - 150 feet

| | | | |
|---|---|---|---|
| Hole D - | 0'- 10' | av. | 0.39 percent Cu. |
| | 10'- 75' | " | 0.31 percent Cu. |
| | 75'-100' | " | 4.36 percent Cu. |

Total depth of hole - 100 feet

| | | | |
|---|---|---|---|
| Hole E - | 0'- 60' | av. | 1.15 percent Cu. |
| | 60'- 90' | " | 0.52 percent Cu. |

Total depth of hole - 90 feet.

## ORE RESERVES

Several estimates of reserves have been made in previous years on the applicant's property by various individuals. These estimates range from no measurable ore reserves to reserves of over a million tons. All of the earlier estimates, as well as the applicant's, appear to be concerned with the highly mineralized area on the Peterson claim in which most of the surface workings occur. This is an area

roughly 600 feet long and from 200 to 300 feet wide in which 8 churn drill holes were put down prior to 1925 and 5 more in 1951 (Fig. 3).

Depths of drill holes ranged from 90 feet to 535 feet. All of the veins and veinlets of mineral material are steeply dipping, and it is possible that the grade results obtained from vertical drill holes could be unreliable, that is, either high or low, if exaggerated thicknesses of copper mineralization were cut in the veins. However, churn drilling has been an accepted method of exploration in low-grade copper deposits under similar rock conditions. An oxidized zone of about 30 feet in thickness and a mixed silicate-carbonate and sulphide zone averaging about 50 feet in thickness was derived from results of the churn drilling. An average depth of possible commercial grade material would probably be somewhere between 115 and 180 feet for most of the mineralized area. Old records[6] state that the 130-foot level was below a large portion of the commercial ore. A considerable tonnage of rock weakly mineralized or barren of primary minerals lies on the dumps.

Using an area 600 feet long by 200 feet wide and a tonnage factor of 13.5 cu. ft./ton on which earlier estimates were based (Fig. 3), about 267,000 tons of inferred oxide ore and 800,000 tons of inferred mixed oxide and sulphide ore, or a total of 1,067,000 tons, is obtained. Lacking a reliable average grade, an average grade of 1.0 percent Cu was assumed, which would give a total of 21,340,000 pounds of copper.

---

6/ Botsford, C. W. and Beckwith, C. L., op. cit. 1925.

Using a larger area of 630 feet long by 300 feet wide (Fig. 3) and the same tonnage factor, about 420,000 tons of inferred oxide ore and 840,000 tons of inferred mixed oxide and sulphide ore, or a total of 1,260,000 tons is obtained. Assuming an average grade of 1.0 percent Cu, a total of 25,200,000 pounds of Cu would be present.

Actually, the average grade may be much higher than the one assumed in this estimate of reserves. Applicant estimates an average grade of between 1 percent and 2 percent.

## PROPOSED EXPLORATORY PROJECT

The applicant's proposal involves the diamond drilling of a total of 3,000 feet in 5 holes from surface site shown on figure 3. Each hole would be inclined at minus 45 degrees. Drilling of all holes northward, as proposed, would result in leaving untested the depth extension of the indicated southern portion of the deposit.

The examining team believes the property's potential can be adequately explored by drilling 4 similarly inclined holes from the surface sites of figure 4. Drilling of 2 northerly and 2 southerly trending holes, as indicated, eliminates the unfavorable feature of the applicant's program.

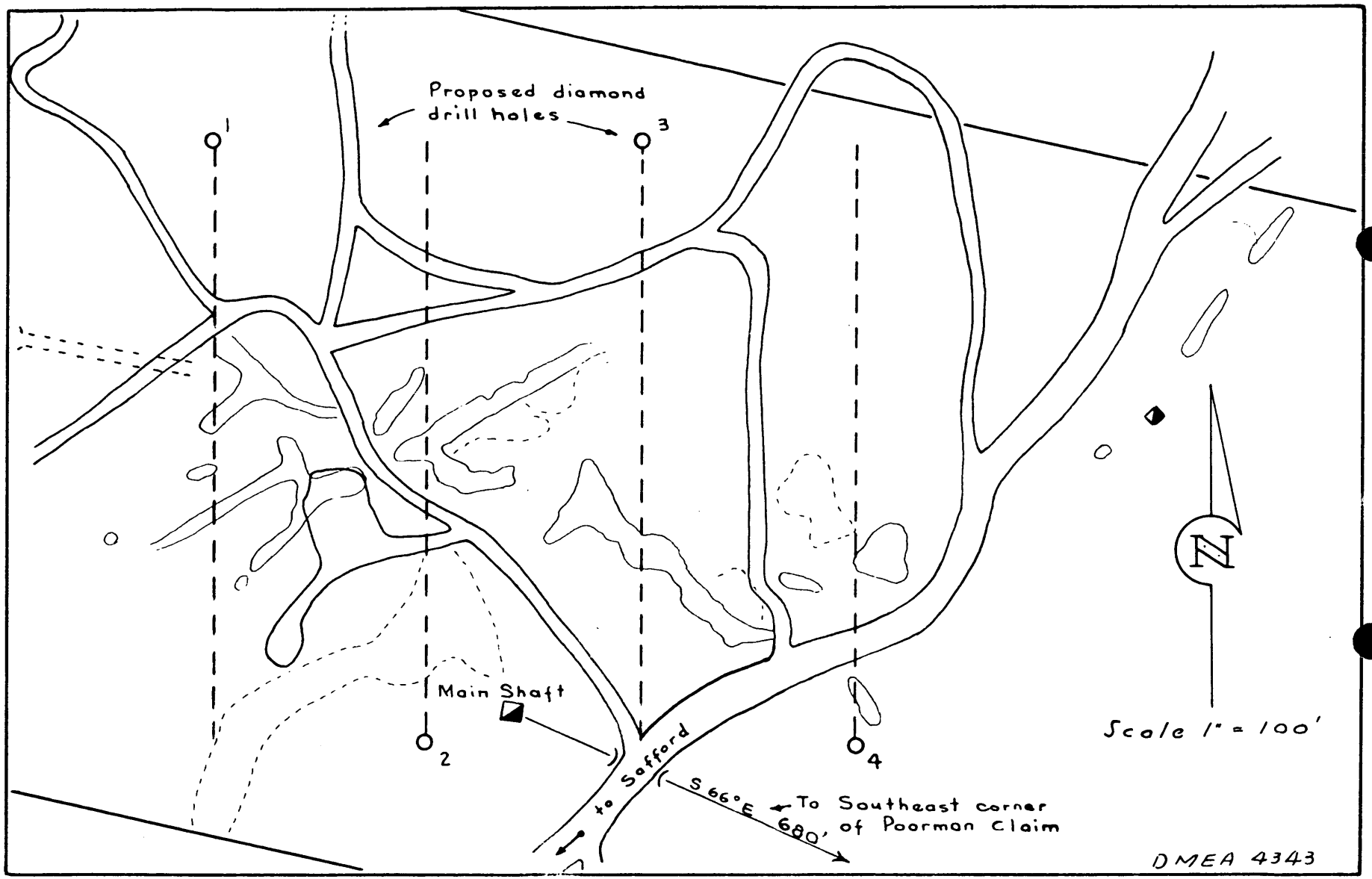



FIG -4- PROPOSED EXPLORATION, TUAB MINERAL CORP SAN JUAN MINE
GRAHAM COUNTY, ARIZONA

Proposed specifications for the examining team's drilling program follows:

1. Holes to be drilled from at or near the indicated sites.

2. Holes to be drilled approximately on the indicated bearings and to be inclined at about minus 45 degrees.

3. Drilling to a core size smaller than AX is not to be done unless found necessary for completion of a hole.

4. Representative core and sludge samples shall be taken in mineralized zones, utilizing hole intervals of not more than 10 feet. All core samples, and sludge samples from intervals where core recovery is less than 50 percent, shall be chemically analyzed for total copper. Certified copies of all assay certificates and complete log records of all holes shall be submitted with the Operator's monthly reports. A duplicate of each sample shall be retained and made available for disposition of the Government.

5. The project shall be supervised by a competent engineer-geologist who shall devote full time to the project work.

6. Only the costs of completed drill holes are allowable costs of the project. The depth of the holes are expected to range from 450 to 750 feet and average about 600 feet.

## ESTIMATED COST OF THE PROJECT

### Applicant's Estimate

Independent Contract

(1) Diamond Core Drilling

The per foot cost of AX size holes alone was estimated as follows:

| | |
|---|---|
| 0 - 250 ft. $7.00 | 500 - 750 ft. $8.50 |
| 250 - 500 ft. $7.50 | 750 -1000 ft. $9.50 |

Drilling costs on the above basis would be:

| | | |
|---|---|---|
| Hole #1 - 700 ft. | $5,970.00 | |
| Hole #2 - 600 ft. | 5,010.00 | |
| Hole #3 - 500 ft. | 4,050.00 | |
| Hole #4 - 700 ft. | 5,970.00 | |
| Hole #5 - 500 ft. | 4,050.00 | |
| 3,000 ft. | | $25,050.00 |

Casing

20 ft. of 3" caliber casing per hole

100 ft. @ $2.19 per ft. ---------- 219.00

Cementing

| | | |
|---|---|---|
| 20 hours @ $9.50 per hour | $ 190.00 | |
| 25 bags cement @ $3.25 ea. | 81.25 | 271.25 |

Reaming

20 ft. per hole

100 ft. @ $2.40 per ft. ---------- 240.00

Mobilization and demobilization ---------- 812.00

Other Costs

Building roads and preparing drill sites.

| | | |
|---|---|---|
| Tractor and operator, 32 hrs. @ $12.00/hr. | $ 384.00 | |
| Compressor and Operator, 32 hrs. @ $7.00/hr. | 224.00 | |
| Tractor and compressor transportation 18 miles @ $0.75/mile | 13.50 | |
| Dynamite, 4 boxes @ $11.20/box | 44.80 | |
| Caps, 4 boxes @ $2.12/box | 8.48 | |
| Total | | 674.78 |

Supervision and Labor

Only a 4 months breakdown was provided for in the application, but applicant's representative requests that costs under this section be estimated for 6 months as shown below.

| | | |
|---|---|---|
| Geologist @ $500.00/mo. | $3,000.00 | |
| Geologist field expenses @ $400.00/mo. | 2,400.00 | |
| Rent of Jeep for Geologist @ $80.00/mo. | 480.00 | |
| Geologist helper (part time) $70.00/mo. | 420.00 | 6,300.00 |
| Assaying - 1,500 copper assays @ $1.00 each | | 1,500.00 |
| Estimated total cost | | $35,067.03 |

Summary of Applicant's Estimated Costs

| | |
|---|---|
| Diamond drilling | $26,392.85 |
| Roads and preparation of drill sites | 674.75 |
| Supervision and labor | 6,300.00 |
| Assaying | 1,500.00 |
| Estimated total cost of project | $35,067.03 |
| Estimated total cost per foot | $11.69 |

## BMA Estimate

Independent Contract

Diamond drilling - data contained in the R. S. McClintock Company's bid, one of the 3 bids appended to this report, is used in the following estimates for drilling 4 600-foot holes.

| | |
|---|---|
| Collar pipe, 20 ft. per hole | |
| 80 ft. @ $7.40/ft. | $ 590.20 |
| BX coring 20 to 150 ft. per hole | |
| 580 ft. @ $6.40/ft. | 3,395.00 |
| AX coring 150 to 250 ft. per hole | |
| 400 ft. @ $5.40/ft. | 2,160.00 |
| AX coring 250 to 500 ft. per hole | |
| 1000 ft. @ $5.90 ft. | 5,900.00 |
| AX coring 500 to 600 ft. per hole | |
| 400 ft. @ $6.50/ft. | 2,600.00 |
| Drilling cement - 20 ft. per hole | |
| 80 ft. @ $3.00 per foot | 240.00 |
| Casing casing - 20 ft. per hole | |
| 80 ft. @ $2.75 per foot | 220.00 |
| Mobilization and demobilization | 700.00 |
| * Water - 3.2 months @ $250.00/mo. | 800.00 |
| 3,200 miles @ $0.15/mi. | 480.00 |
| Purchase price 60,000 gals. @ 40 cents/M | 38.00 |
| Total estimated drilling costs | $17,050.20 |

*90 days or 3.2 month will be required to complete the 2,400 feet of drilling at the estimated rate of 30 feet of advance in 2 shifts per day and 6 days per week. Water to be purchased at Willcox and consumed at rate of 1,000 gallons per day.

Other Costs

Building roads and preparing drill sites.

Field investigations indicated that the costs of a minor amount of this work that may be necessary will not be significant. Mr. Bibb agreed with the above finding and requested withdrawal of application's estimated costs of the work.

Supervision and labor

Allowance of 4 months provides for preparatory work, drilling period and winding up the project.

Geologist @ $500.00 per month———$2,000.00

2 Samplers - 200 days @ $12.00/day— 2,400.00 $4,400.00

Equipment

Rental of Jeep @ $[illegible]0.00/mo.——————— 380.00

Materials and supplies

Fuel, grease and repairs for Jeep ——————— 250.00

Miscellaneous

Payroll taxes and liability insurance

10% of $4,400.00 ——————————— 440.00

Assaying — 600 samples for copper

at $1.00 per sample——————————— 600.00

Summary of DMA Estimated Costs

| | |
|---|---|
| Diamond drilling | $17,050.20 |
| Supervision and labor | 4,400.00 |
| Equipment | 320.00 |
| Materials and supplies | 290.00 |
| Payroll taxes and liability insurance | 440.00 |
| Assaying | 800.00 |
| Estimated total cost of project | $23,260.20 |
| Estimated total cost per foot | $9.69 |

CONCLUSIONS

Based on surface examination of the mineralized area on the Peterson claim, and a study of earlier available examination reports and churn drill data, it appears that the deposit is of shallow depth, limited horizontal extent, and essentially vein type. Characteristic features of low grade porphyry copper deposits, such as rock alteration, sulphide dissemination, primary yellow sulphides at depth, and secondary enrichment, are lacking or weakly present in this deposit. In spite of the adverse points, the San Juan mine may be considered as a small, easily accessible and potential copper ore body. Amenability of the ore to treatment probably would not be a problem under modern methods and the deposit could be easily mined by open-pit methods. A practical method of determining the potential worth of the partially explored deposit would be by diamond-drilling an

estimated 2400 feet in 4 holes at an estimated total cost of $23,260.20. The applicant can be expected to properly supervise the explorations and to share the costs of the project with the Government on a 50-50 basis.

RECOMMENDATION

Approval is recommended for Governmental participation in explorations at the San Juan mine because (1) conditions are favorable for indicating the presence of a significant reserve of low grade copper-bearing rock of a possible mining grade, and (2) the explorations can be completed at a relatively low cost.

[illegible]

[illegible] & DRILLING [illegible]

[illegible] 096

[illegible], [illegible]

June 22, 1956

Mr. John Mines
Turak Mining Co.
Tucson, Arizona

Dear Sir:

In answer to your request for a bid covering a minimum of 3,000 feet of core-drilling on your San Juan Copper properties of Graham County, Arizona, located approximately ten miles north of Safford, Arizona; I hereby, submit the following footage bids:

Five locations of approximately 600' each.

For each location:

| | | |
|---|---|---|
| First, 100' | @ $12.00 | per foot |
| Second, 100' | @ $13.00 | per foot |
| Third, 100' | @ $14.00 | per foot |
| Fourth, 100' | @ $16.00 | per foot |
| Fifth, 100' | @ $18.00 | per foot |
| Sixth, 100' | @ $20.00 | per foot |
| Seventh, 100' | @ $20.00 | per foot |

The above estimates will include a maximum possible core recovery, one foot cutting samples, water and drilling muds and any necessary materials required to complete the required total depth of each location.

In the case of possible loss circulation, due to cavities, crevices or caverns encountered; which, forces the abandonment of a location, then, the contractor will; if desired by the operator, drill another hole offsetting the abandoned hole, with the operator and the contractor equally sharing of the cost of said hole, at the above footage prices.

The location of the above mentioned five drill holes will be staked by the operators geologists, prior to the drilling of each consecutive location. The holes will be drilled on an incline of 30 to 50 degrees below a vertical angle from the horizon.

This estimate is based on a spudding date on/or/before August 1, 1956. The contractor will, if possible, drill on a 24 hour schedule, press to complete the drilling as soon as possible.

Thanking you, I remain,

Very truly yours,

/s/ [illegible]

[illegible]

Diamond core drilling
Mining
Quarries
Shaft sinking
Tunnel Driving

BOYLES BROS.
DRILLING COMPANY
Contractors - Engineers
1321 South Main Street Phone 84-4401
Salt Lake City 15, Utah

May 14/56

Reply to:
1016 East Minnesona
Phoenix, Arizona

Tuab Mineral Corporation
201 North Stone Ave.
Tucson, Arizona

Attention- H.B. Goldberg

After examining your property on the Poorman claim of the San Juan group, approximately nine miles north of Safford, Arizona I submit the following proposal.

Mobilisation & demobilisation ---------- $ 400.00

| | | AX | BX | NX | NC |
|---|---|---|---|---|---|
| Drilling | 0 to 250 ft. | 6.30 | 7.10 | 7.60 | 7.90 |
| " | 250 to 500 " | 7.10 | 7.60 | | |
| " | 500 to 750 " | 7.60 | | | |
| " | 750 to 1000 | 8.10 | | | |

Reaming if necessary ---------- 2.40 per foot

Cementing if necessary will be charged for at 9.50 per hour plus cost of cement or cement substitutes.

Lost casing will be charged for at list price F.O.B. job

Water will be charged for at actual cost to you which will be $ 449.50 per month for driver and 225.00 per month for truck plus 10 cents a mile

Core boxes can be supplied by us at a dollar a box

If proposal is accepted we can be on the property within on week of notification to proceed

A letter of acceptance will be all that is necessary in lieu of a formal contract

Thanking you for calling on us, I remain

Yours very truly

/s/ J. E. Roberts

J. E. Roberts
Dist. Mgr. - Arizona Division

C O P Y

11-21-56

Tuso Mineral Corp.
Mr. John Gibb
201-209 N. Stone Ave.
Tucson, Ariz.

Dear Mr. Gibb:

We understand you wish to diamond drill a minimum of 5 holes from 500' to 700' in depth in the Lone Star Mining District on the Poor Man Claim of the San Juan group. We further understand that the holes will be located in an accessible or practical spot for the drill setups, most of which can be reached by truck.

We propose to furnish the drill rig, rods, casing, circulating pump, drill labor, diamond bits, core bbls. and drilling accessories for the following prices per foot:

| | | |
|---|---|---|
| Collar pipe | 0 to 25' | @ 7.40 |
| NX | 0 to 100' | @ 6.90 |
| BX | 0 to 150' | @ 6.40 |
| AX- BX | 0 to 250' | @ 5.40 |
| AX- BX | 250 to 500' | @ 5.90 |
| AX- BX | 500 to 750' | @ 6.50 |

In the event loose or caving ground or water courses are encountered which requires the use of cement or casing, a charge will be made for furnishing, placing and redrilling the cemented portion of the hole or for reaming and seating casing as follows:

| | | |
|---|---|---|
| Drill cement | 0 - 400' | @ 3.00 ft. |
| | 400 - 750' | @ 3.50 ft. |
| Seat casing | 0 - 400' | @ 2.75 ft. |
| | 400 - 750' | @ 3.25 ft. |

We will expect to receive $700.00 for ... mobilization and demobilization, of which 1/2 will be receivable on our first statement, and 1/2 receivable upon completion of the job. In case of delay time for the convenience of your company, and not through fault of contractor or breakdown of contractor's equipment, we will expect to receive $7.00 per hr. for the time the drill crew are on shift.

We agree to haul water for the diamond drilling for $250.00 per month plus $0.15 per mile and the initial cost of the water at the source, based on 1 shift per day and a 6 day week.

Our employees will be covered by Ariz. State Industrial Insurance, and the contract will be covered by liability ins. in the amt. of $100,000/300,000. and property damage in the amt. of $100,000.00.

Thanking you for the privilege of submitting our proposal, we are.

Very truly yours,

R. S. McClintock Company

By: M. B. Weaver

COPY

JAN 30 1957

Mr. Grant Godfrey, Partner
Arrowhead Mining Company
Post Office Box 494
Safford, Arizona

Re: Docket No. DMA-4604 (Copper)
Arrowhead Mining Company
Lucky Strike Claims
Graham County, Arizona

Dear Mr. Godfrey:

Your application for Government assistance to explore the cited property has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration and has been referred to:

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

If the Field Team requires additional information concerning your application, they will contact you at an early date.

Sincerely yours,

C. O. Mitchell

Administrator

WPKlugescheid/er 1/30/57
Copy to: Docket
Admr & File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Milligaard, USGS
Region III (2)
Chron.

JAN 30 1957

Mr. A. R. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Bldg.
Denver 2, Colorado

Re: Docket No. DMEA-4604 (Copper)
Arrowhead Mining Company
Lucky Strike Claims
Graham County, Arizona

Dear Mr. Traver:

The cited application for exploration assistance is being referred to your office for consideration, a field examination of the property if warranted, and recommendations.

If the project is favorably considered by the Field Team, and merit is found in the project as now constituted, a number of factors will have to be taken into consideration.

(1) Consent to Lien and Subordination Agreement will have to be obtained on the standard form.

(2) Probably the Applicant does not have a clear idea as to the geology of this deposit. An effort has been made to supply a map of the veins but the accuracy thereof is open to question. It has not supplied any samples taken from any of the open cuts and it was not stated whether the sorted ore was oxide or sulphide.

(3) The shaft sinking is excessive for a deposit of which nothing much is known.

(4) The proposed 400-foot raise for ventilation purposes is completely out of the question. The Applicant most certainly has no idea as to the difficulties involved in driving a raise of this length.

(5) The sinking costs are high and the advance per shift is only a small fraction over one foot.

(6) The Applicant states that it will supply its share of the cost with labor and equipment. Depreciation of its equipment has not been figured in as a part of the cost of the project.

(7) The property map is incomplete, as only two claims are given and even these two are not named.

(8) A slusher and ramp for mucking in the drift and crosscut seems a bit outmoded. A mucking machine would be much more satisfactory.

(9) No allowance is made for sampling and assaying.

A drilling program to determine the possible value of the deposit might be the best method of beginning the exploration and then, if the results are favorable, other work might be considered.

We are referring this project to your office as the men who compose the company are apparently practical miners and do not know how to plan a project. They will need a lot of help in getting things straightened out and, unless the project is favorably considered by your office, much time would be needlessly lost.

Copies of memoranda dated January 16 and 24, 1957, by N. E. Nelson, Geological Survey, and A. D. McMahon, Bureau of Mines, respectively, relating to the project, are enclosed for your information. Also, we are enclosing two copies of the application for the use of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee
WPKlugescheid/er 1/30/57
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. McMahon, USBM
Mr. Killsgaard, USGS
Chron.

Enclosures

APPROVED:

Frank D. Lamb

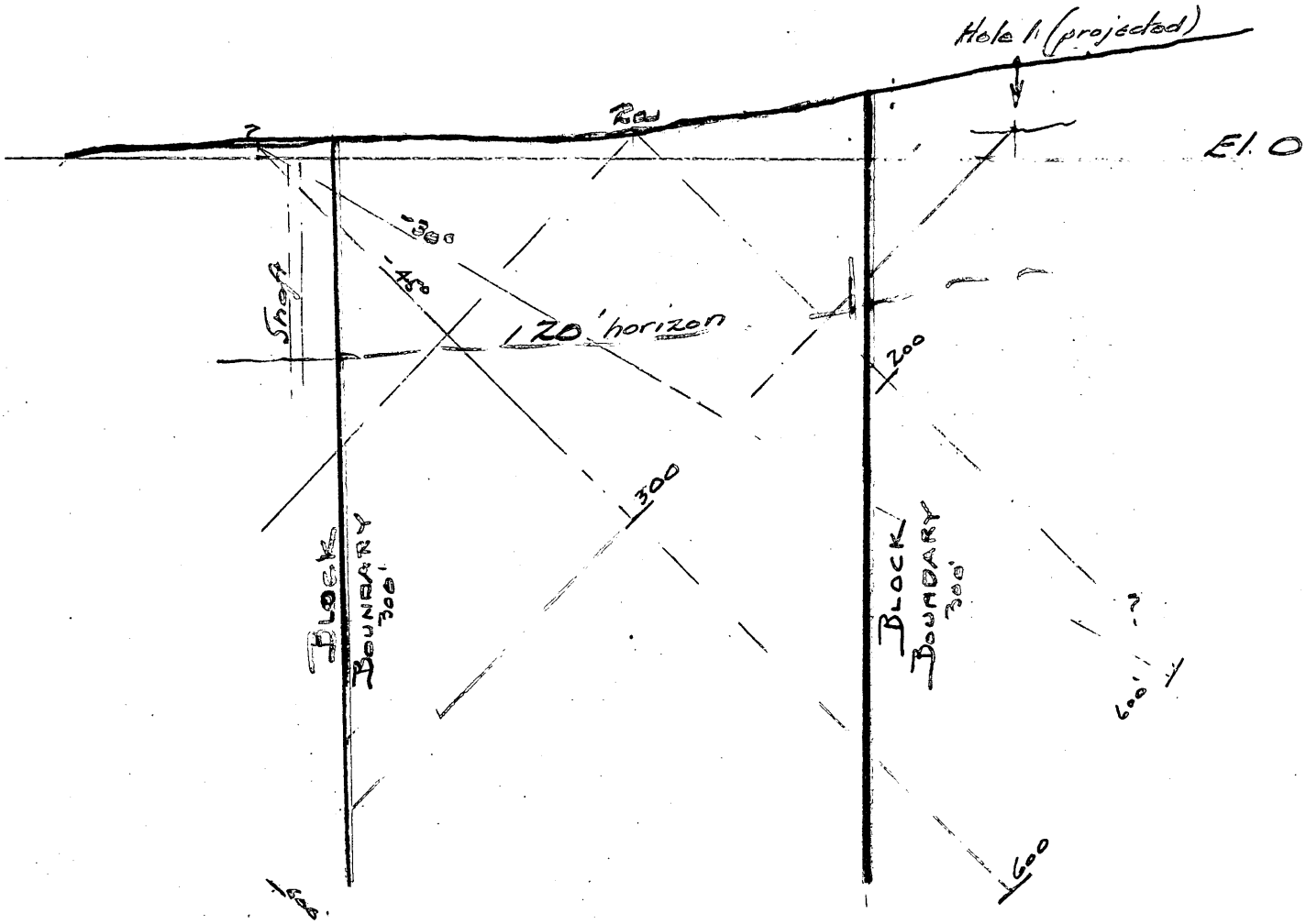
Member, Bureau of Mines

N. E. Nelson

Member, Geological Survey

# SECTION A-A'

On Hole 2 (Examiners)




1" = 100'

RECEIVED JAN 7 1957 D.M.E.A.

# Government Messenger Envelope

rm No. 65 (Rev. 1/46)

1. U blocks consecutively, one at a time.
2. Void previous block.
3. Write clearly.

| E OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM | | NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM | |
|---|---|---|---|
| [illegible] 1944 [illegible] | RUN<br>STOP | | RUN<br>STOP |
| | RUN<br>STOP | | RUN<br>STOP |
| | RUN<br>STOP | | RUN<br>STOP |
| | RUN<br>STOP | | RUN<br>STOP |
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| | RUN<br>STOP | | RUN<br>STOP |
| | RUN<br>STOP | | RUN<br>STOP |
| | RUN<br>STOP | | RUN<br>STOP |

*s envelopes to*
*n for reissue.*

Use other side

**Use RUN and STOP only when messenger service between Government buildings in Washington is required.**
**Your mail room has RUN and STOP information.**

# U. S. Government Messenger Envelope

Standard Form No. 65 (Rev. 1/46)

1. Use blocks consecutively, one at a time.
2. Void previous block.
3. Write clearly.

| NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM | | NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM | |
|---|---|---|---|
| ~~Lemmon~~ ~~5216~~ | RUN / STOP | | RUN / STOP |
| Parker 5240 | RUN / STOP | | RUN / STOP |
| | RUN / STOP | | RUN / STOP |
| | RUN / STOP | | RUN / STOP |
| | RUN / STOP | | RUN / STOP |
| | RUN / STOP | | RUN / STOP |
| | RUN / STOP | | RUN / STOP |
| | RUN / STOP | | RUN / STOP |
| | RUN / STOP | | RUN / STOP |
| | RUN / STOP | | RUN / STOP |

*Send surplus envelopes to supply room for reissue.*

Use other side

16—38949a-2

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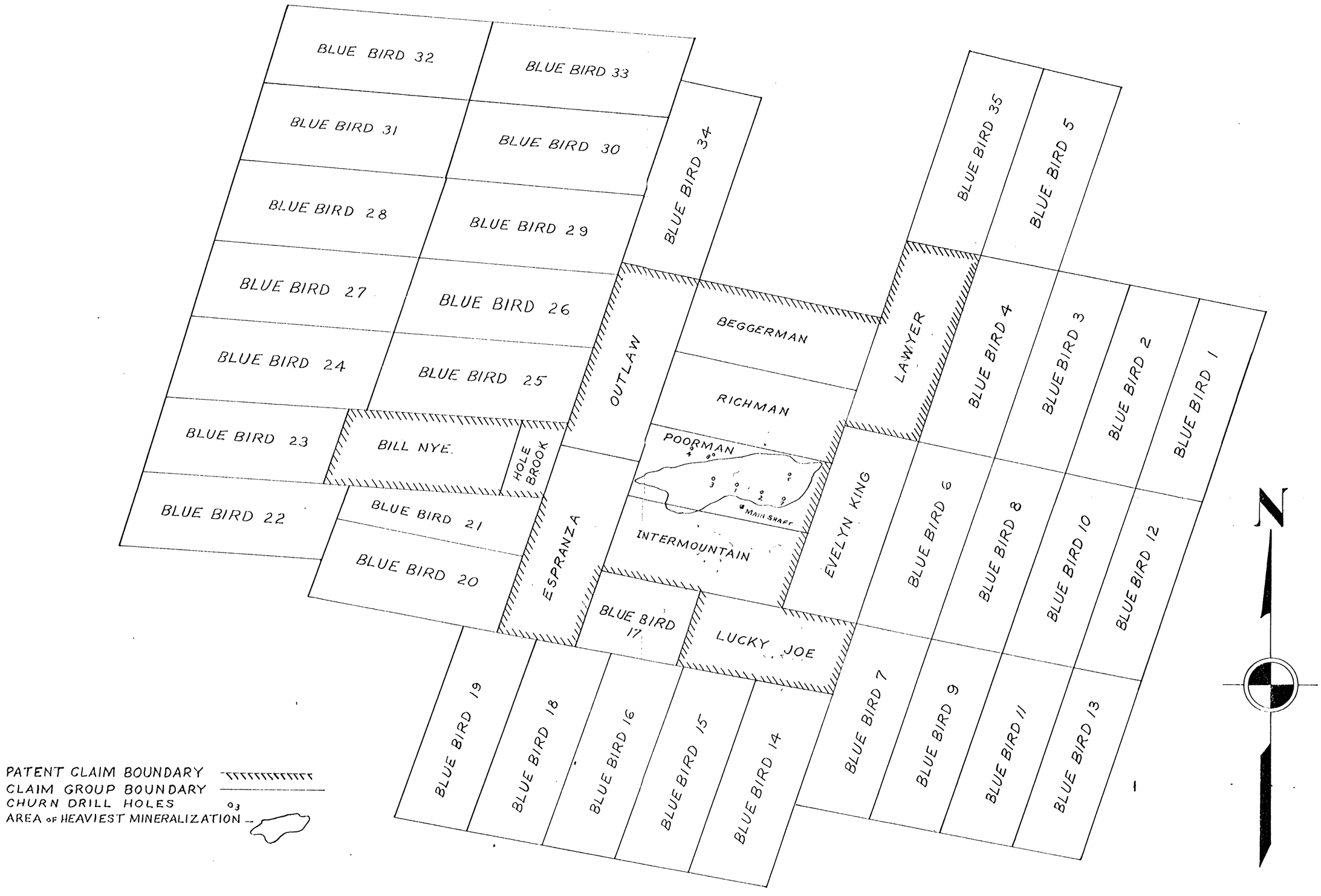
Your mail room has RUN and STOP information.




PLAN

SAN JUAN CLAIM GROUP

LONE STAR MINING DISTRICT GRAHAM COUNTY, ARIZ.

| | | |
|---|---|---|
| SCALE: 1" = 500' | APPROVED BY | DRAWN BY TJB |
| DATE: 4-2-56 | | REVISED |

TuAb Mineral Corp., 201 N. Stone, Tucson, Ariz.

| | |
|---|---|
| FIG. 1. | DRAWING NUMBER 1 |

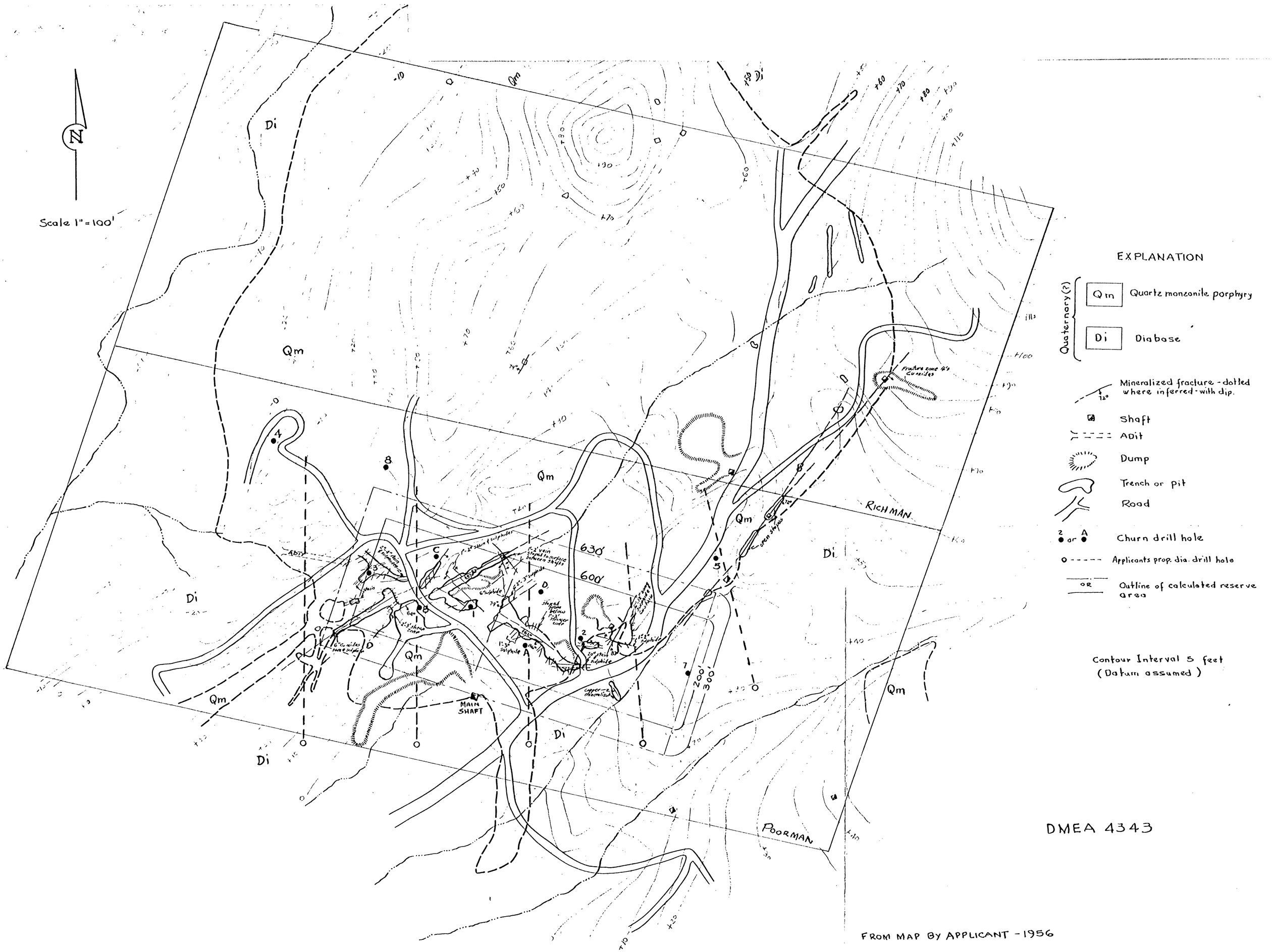
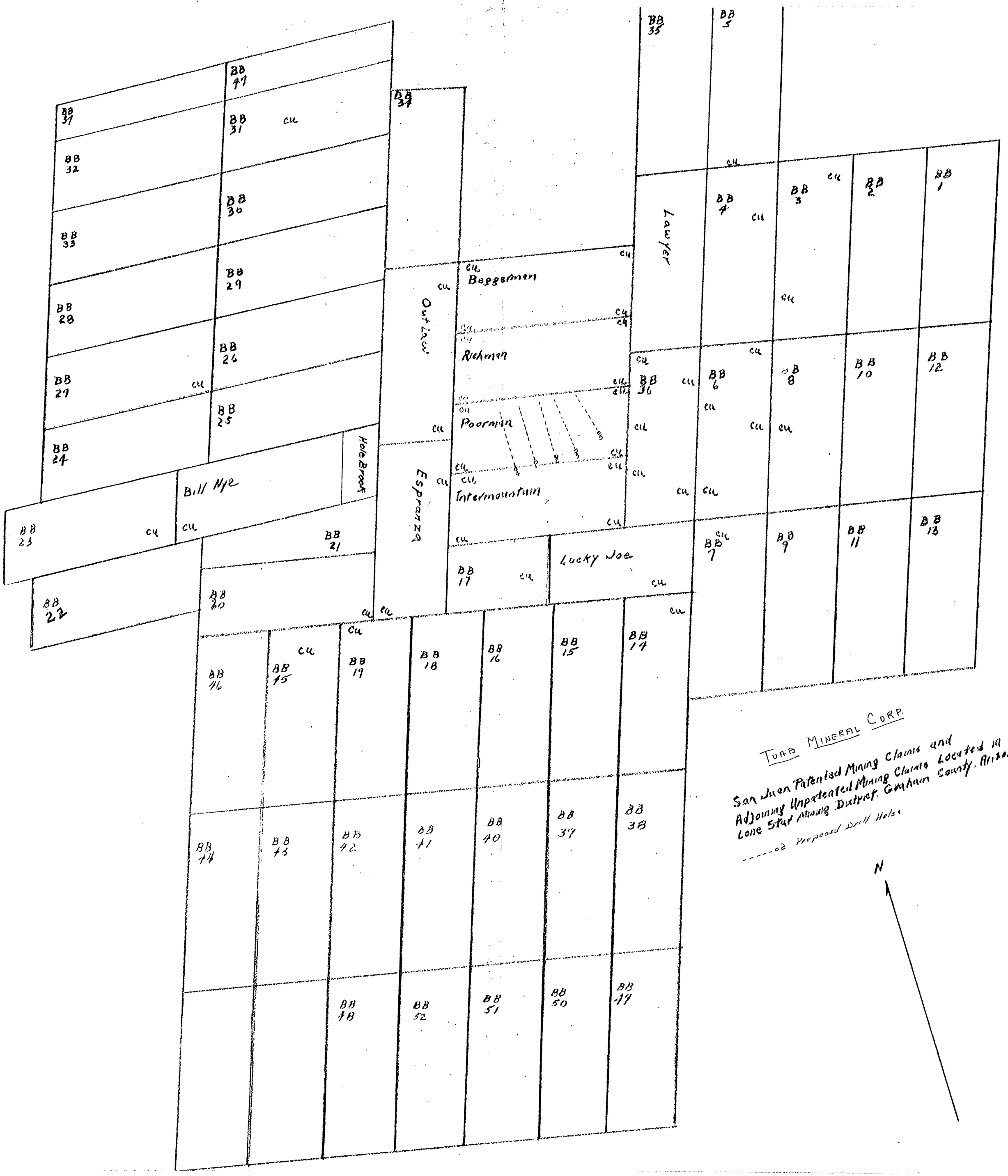



FIGURE 3.- GEOLOGY OF THE SAN JUAN MINE AREA, TUAB MINERAL CORPORATION, GRAHAM COUNTY, ARIZONA




TUAB MINERAL CORP.

San Juan Patented Mining Claims and Adjoining Unpatented Mining Claims Located in Lone Star Mining District, Graham County, Arizona

------ Proposed Drill Holes

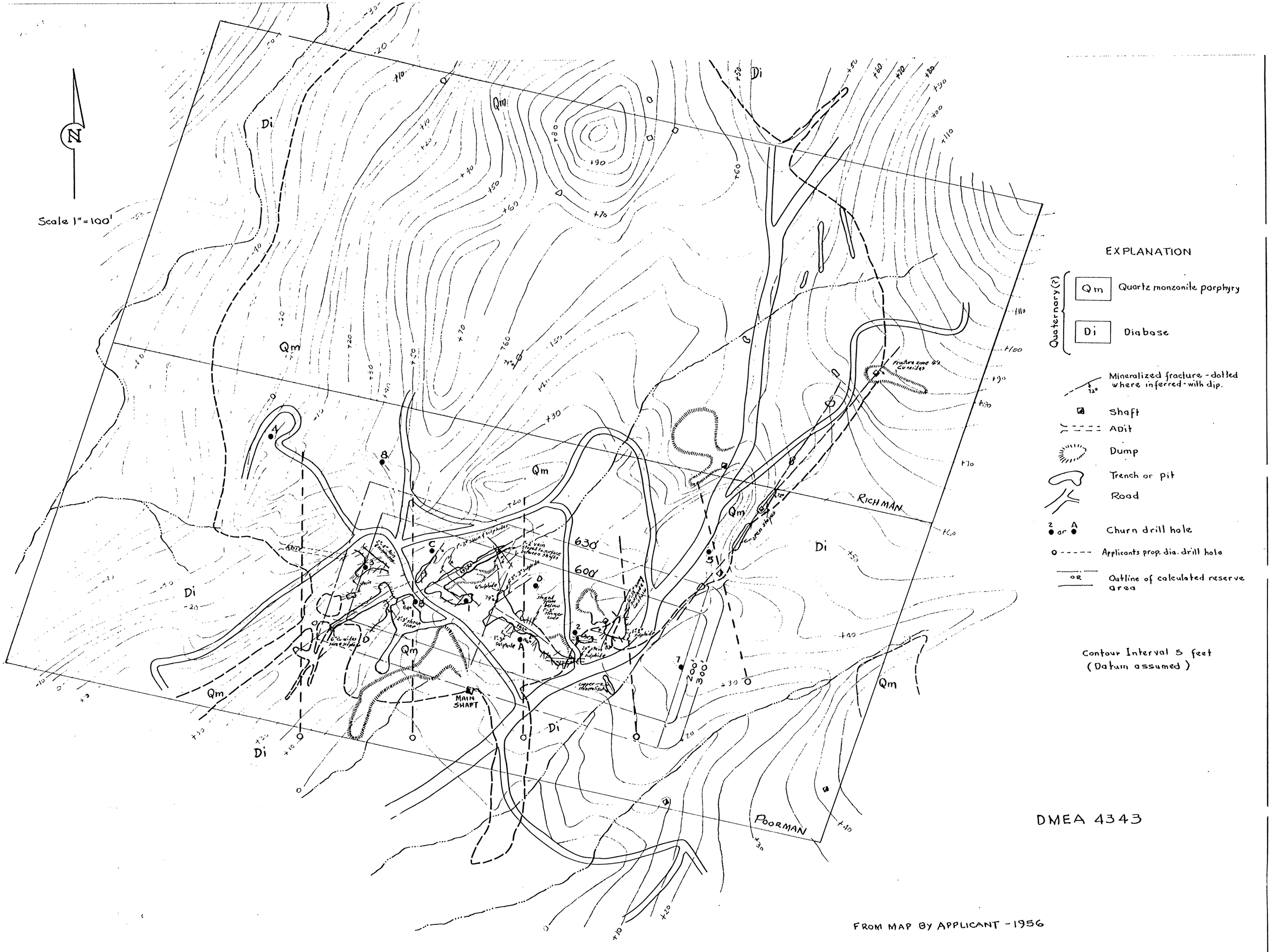
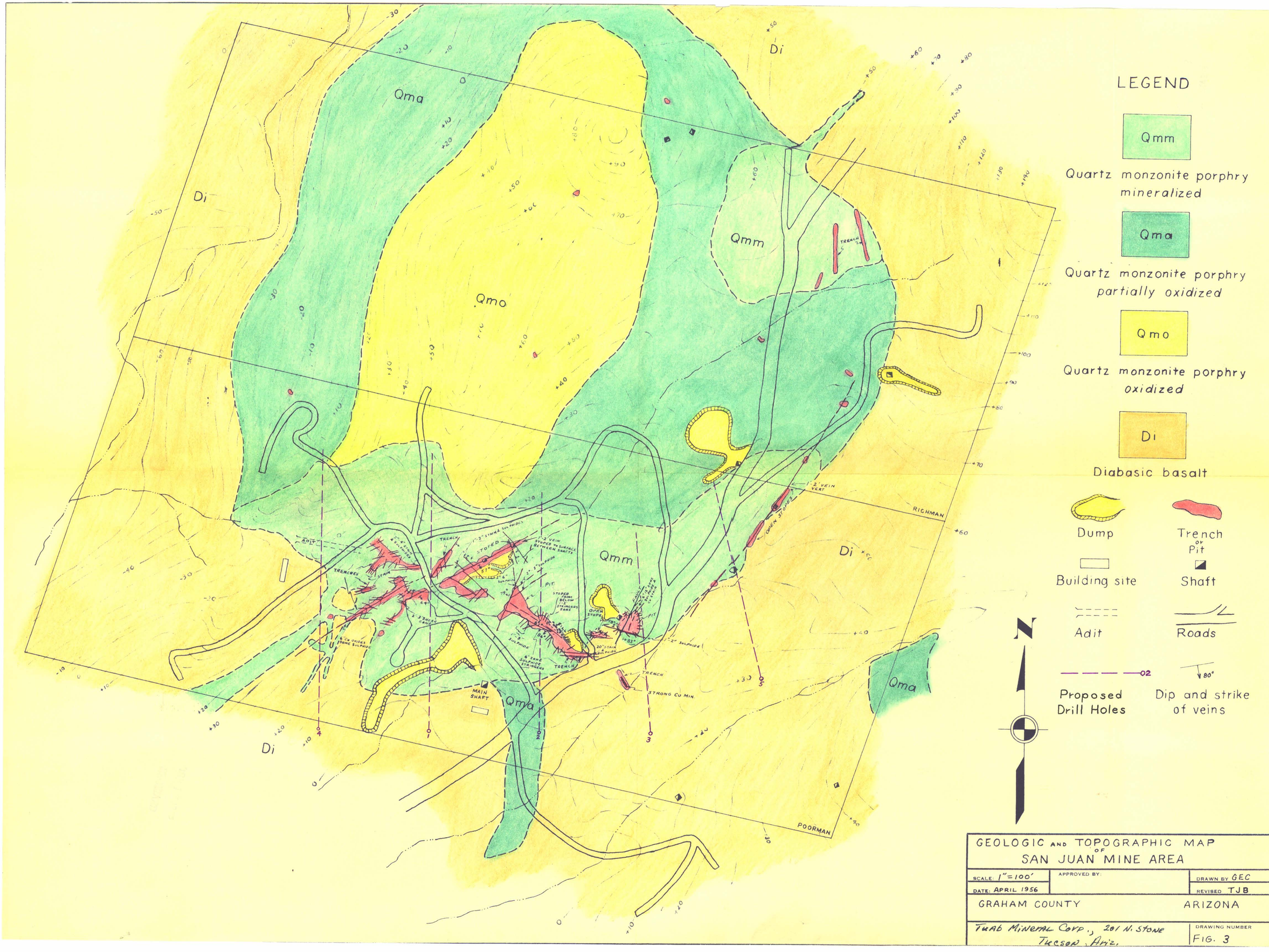



FIGURE 3.- GEOLOGY OF THE SAN JUAN MINE AREA, TUAB MINERAL CORPORATION, GRAHAM COUNTY, ARIZONA


LEGEND
Qmm
Quartz monzonite porphry mineralized
Qma
Quartz monzonite porphry partially oxidized
Qmo
Quartz monzonite porphry oxidized
Di
Diabasic basalt
Dump
Trench or Pit
Building site
Shaft
Adit
Roads
Proposed Drill Holes
Dip and strike of veins
N
Qmm
Qma
Qmo
Di
RICHMAN
POORMAN
TRENCH
ADIT
TRENCHES
STAIN
STOPED
PIT
OPEN STOPES
MAIN SHAFT
STRONG CO MIN.
GEOLOGIC AND TOPOGRAPHIC MAP OF SAN JUAN MINE AREA
SCALE: 1"=100'
APPROVED BY:
DRAWN BY GEC
DATE: APRIL 1956
REVISED TJB
GRAHAM COUNTY
ARIZONA
TUAB MINERAL CORP., 201 N. STONE TUCSON, ARIZ.
DRAWING NUMBER
FIG. 3