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The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED: 05-24-2013

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: ZANNARAPOLIS TUNGSTEN

ALTERNATE NAMES:
ZANNAROPOLIS #33

YAVAPAI COUNTY MILS NUMBER: 103

LOCATION: TOWNSHIP 13 N RANGE 10 W SECTION 12 QUARTER W2
LATITUDE: N 34DEG 28MIN 49SEC LONGITUDE: W 113DEG 15MIN 51SEC
TOPO MAP NAME: ARRASTRA MTN NE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
TUNGSTEN
ZINC
COPPER
GEMSTONE

BIBLIOGRAPHY:
ADMMR ZANNARAPOLIS TUNGSTEN FILE
DALE, V.B. TUNGSTEN DEPTS GILA, YAVAPAI &
MOHAVE CTYS USBM IC 8078 1961 P 58
BLM STATE OFFICE AQUARIUS PLAN DIST STEP 3
BLM AMC FILE 56752
ADMMR MAPS - UPSTAIR BOXES (PHOENIX OFFICE)
CLAIMS ALSO IN SEC. 12 AND SEC. 11 T13N-R10W
AND SEC. 35 & 36 T14N-R10W

03/14/88

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

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BLM STATE OFFICE AQUARIUS PLAN DIST STEP 3
BLM AZ MINING CLAIMS LEAD FILE 56752
ADMMR MAPS - UPSTAIR BOXES (PHOENIX OFFICE)
CLAIMS ALSO IN SEC. 12 AND SEC. 11 T13N-R10W
AND SEC. 35 & 36 T14N-R10W
AERIAL PHOTOS (IN FILE)
REPORT BY TAYLOR 11/73 (IN FOLDER IN FILE)

JOHN PHILIP ZANNARAS

JOHN P. ROBINSON JR.

ZANNARAPOLIS TUNGSTEN MINE

HILLSIDE, ARIZONA

Feb. 17- 1945

ZANNARAPOLIS No: 33

COPPER CLAIM-

Consisting of a long oxidized chacopyrite Vein at points of several feet wide. Secondary Sulphides having being developed at the foot wall of considerable midth - Cholcocite is dissiminated in the Vein also appearing in Zones and bunches. assaying up to 40% Cu. The Vein Strikes Easterly westerly and dips slightly northerly - being near the contact of diorite against schist and appears to be the continuation of other copper Veins occuring in this vicinity.

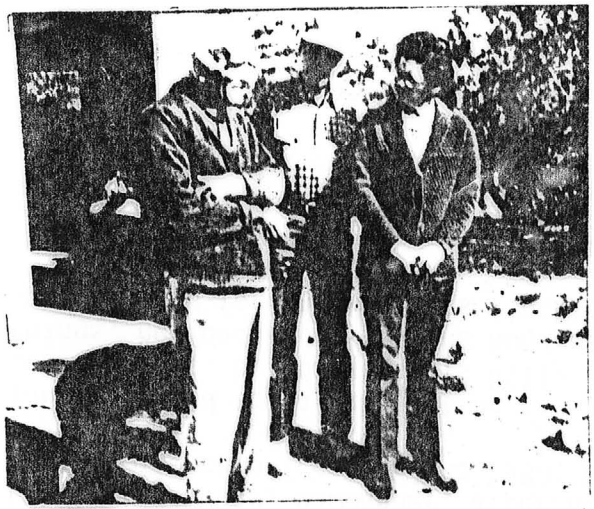
At the present the "Victory SAFT, is sunk near the center of the claim the ore being piled at the shaft for future Transportation to the ZANNARAS MILL ON BURRO CREEK for concentration by flootation.

3 men are working-

J. P. Zannaras

File as Mine owners Report

CHD 2/24/45



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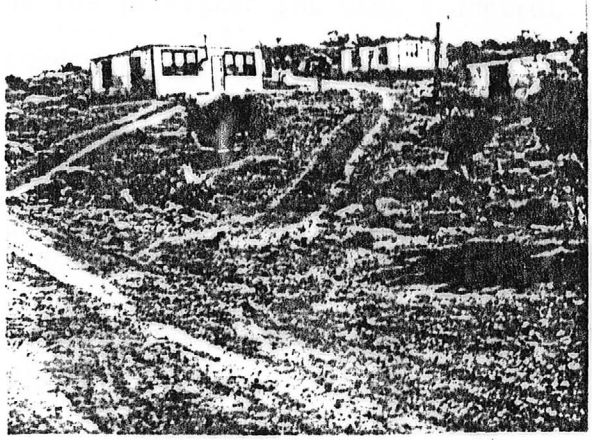

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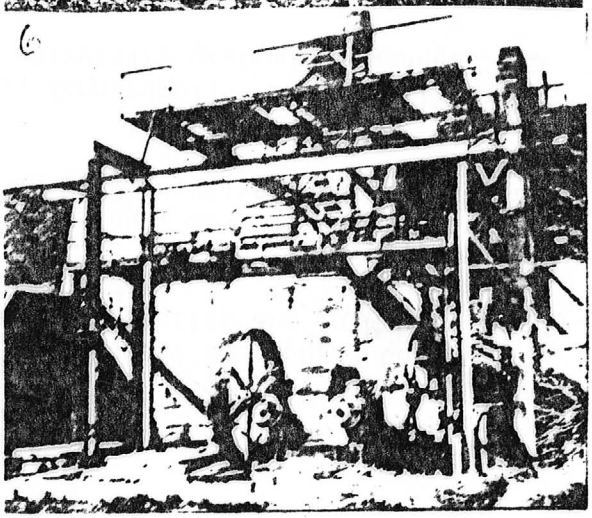
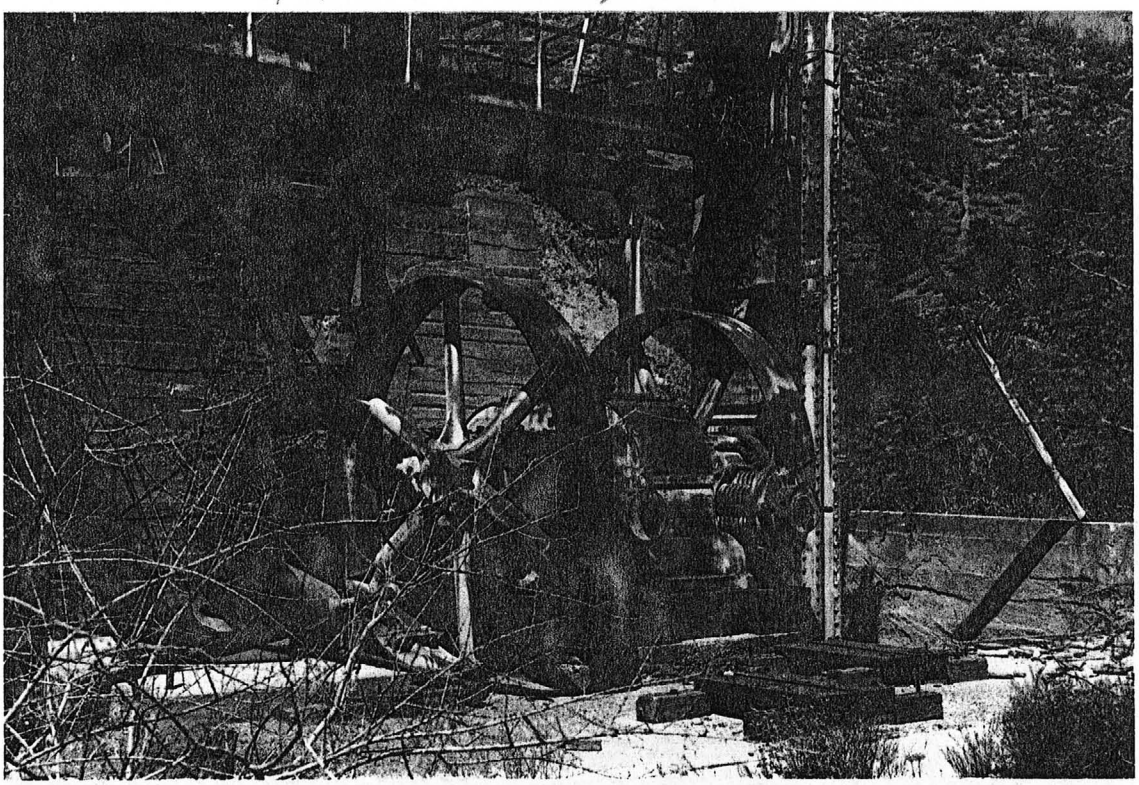


From Roman Malach Photograph Collection: (1) John P.Zannaras,85 years old,on left, talking with the Millers from Signal,(2) From left,Doreen Malach,John Zannaras, and the Millers,(3) At one time it was the mine camp office,where Zannaras talked with Malach surrounded by the mementoes of past days,(4) Some of the camp buildings, (5) More of the buildings for workers of this once active mining camp of the Zannarapolis Mine, and (6) This mill of the Zanarapolis Mine was in operation last time in 1956.

ADMMR PHOTS

A-250-2



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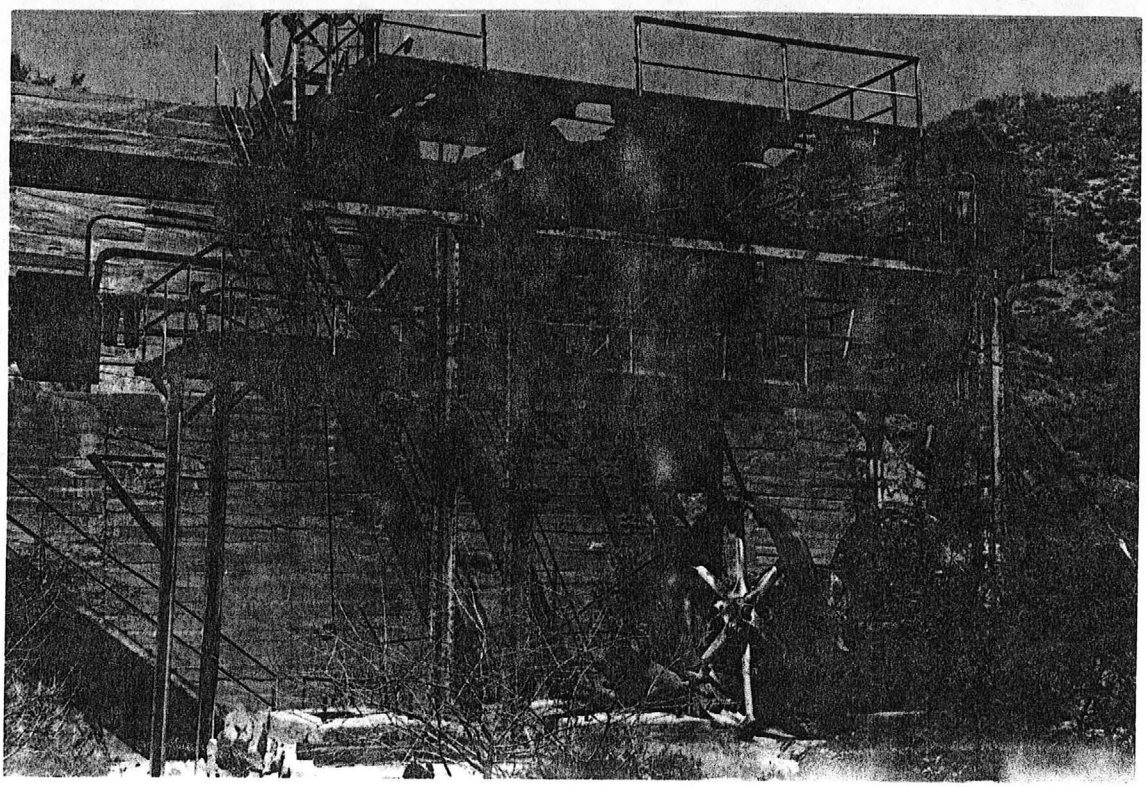
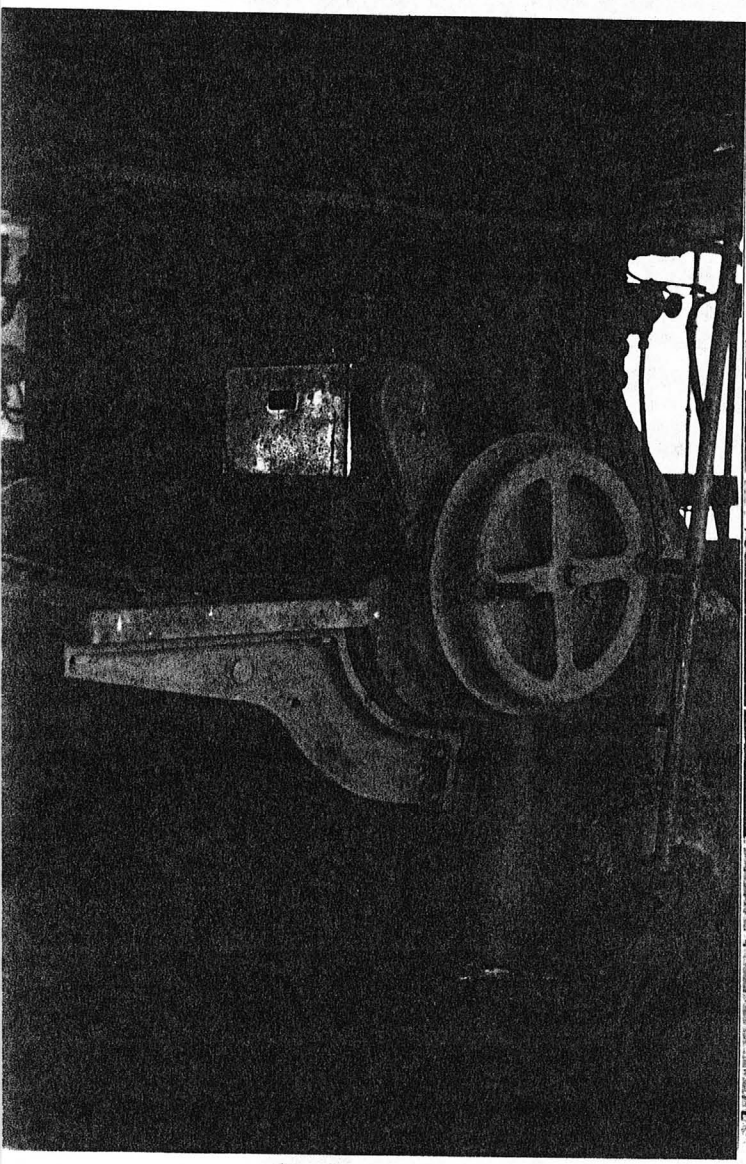
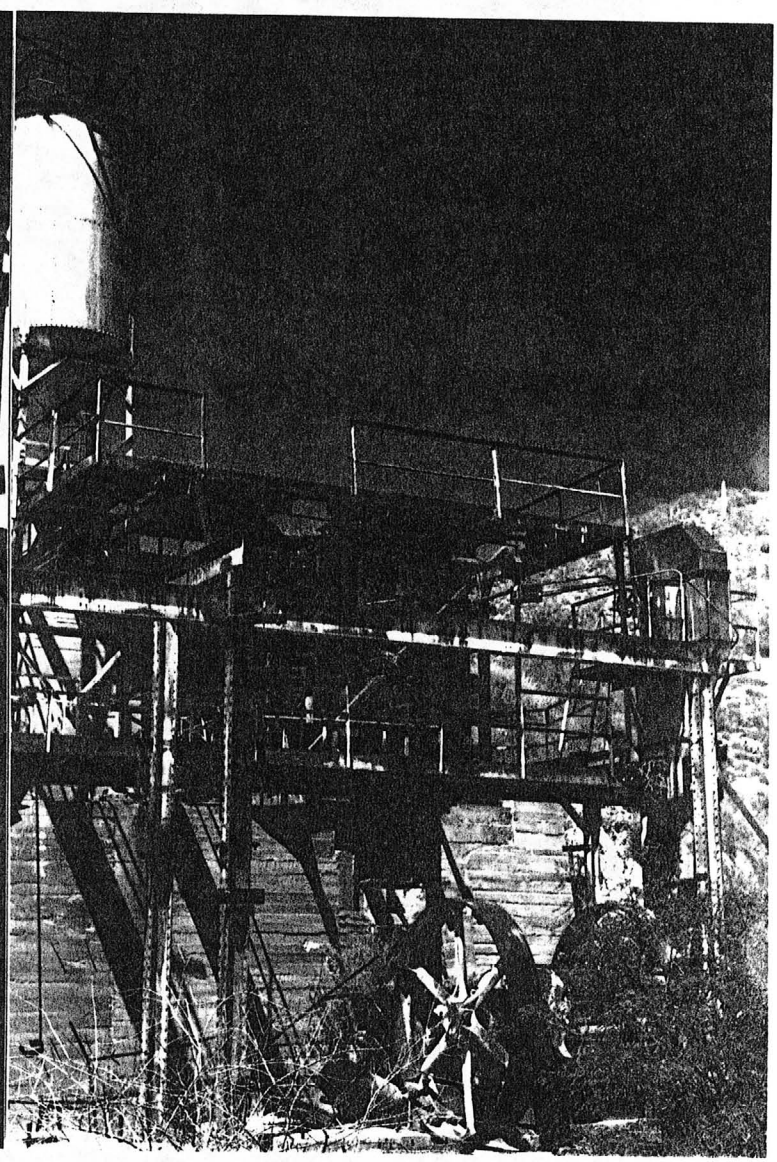




A-250-1



A-250-3

NAME OF MINE: ZANNARAPOLIS
OWNERS: Zannaras, & J.P.Robinson, Jr., Hillside

COUNTY: Yavapai
DISTRICT: Eureka
METALS: W

OPERATOR AND ADDRESS: DATE:		MINE STATUS DATE:	
5/1/44	J.P. Zannaras, Hillside	5/1/44	Shipping & milling
	3 men working	4/46	Developing

ZANNARAPOLIS TUNGSTEN

W

Yavapai 13 - S 1, 11, 12, T 13 N, R 10 W

J. P. Zannaras, Hillside '45

John P. Robinson, Jr.,
Zannaras Pollo Tungsten Mine
Hillside, Arizona

See Zannarapolis Tungsten
Re - rights on mining claims located subsequent to development of water well by grazing lessees.

Re application for B loan -- See ZANNARAPOLIS TUNGSTEN

See ZANNAROPOLIS TUNGSTEN - Re field eng. report 9-19-43
See ZANNARAPOLIS #33 - brief report by owner 2-19-45

ROBINSON, John P., Jr. et al
Hillside, Ariz. 9-19-43

See ZANNAROPOLIS TUNGSTEN - Re Field Eng. Report.

See ZANNAROPOLIS TUNGSTEN - Re deferment 10-25-43
" " " " 3-12-45
" " " Re discharge 11-19-45

Mining Journal
9/15/42

[redacted]

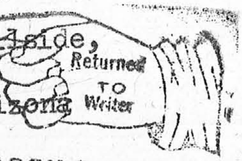
PHOENIX
AUG 15
7-PM
1958
ARIZ.

Box 580
Congress, Ariz

Mr. John Philip Zannaras

~~Hillside,~~

Arizona



REASON CHECKED
Unclaimed...... Refused....
Unknown ✓...............
For better address...........
Moved, Left no address......
No such office in state.......

ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

August 15, 1958

To the Owner or Operator of the Arizona Mining Property named below:

ZAnnarapolis No. 33 (Yavapai Co.) copper
(Property) (ore)
and Zannarapolis Tungsten

We have an old listing of the above property which we would like to have brought up to date.

Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

ZANNARAPOLIS #33

Cu

Yavapai 13 - 4

J. P. Zannaras, Hillside '45

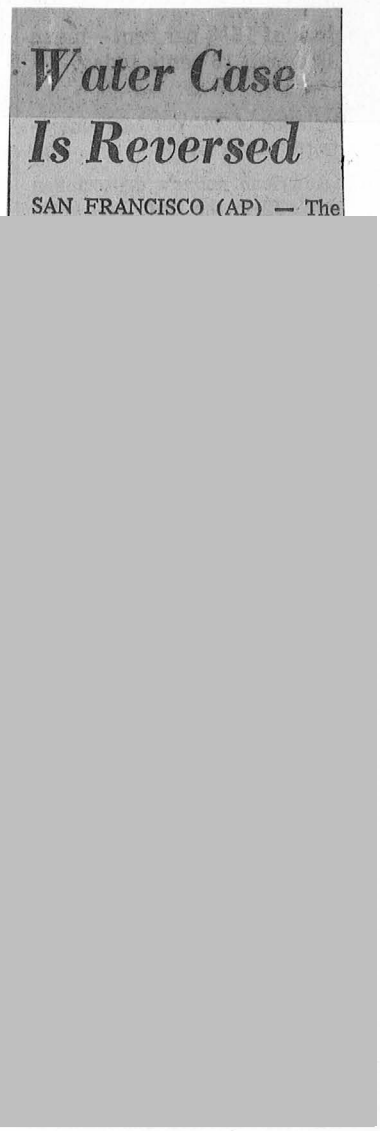
April 4, 1952
(Gemmill news item)

The Zanaras property, 5 Mi. South of Bagdad, owned by U. S. Tungsten Corporation has 12 men employed building mill of about 200 tons daily capacity - diesel electric.

Development work in mine and building mill. Have just completed housing accommodations for 15-20 men and expect to build more. Have well for camp water and are drilling deeper to try to get enough water for mill.

Mr. Zannaras stated that they have sufficient finance for all work planned and that he hoped to get into production within the next two months.

See USBM I.C. 8078 - p.58



Water Case Is Reversed

SAN FRANCISCO (AP) — The

Zannarapolis

March 12, 1945

Selective Service Board
Prescott, Arizona

Gentlemen:

Mr. Zannaras of Hillside was in and talked to us about the indispensability of his partner, Mr. John P. Robinson of Prescott and Hillside as affecting their copper operation and production at their copper mine near Zannarapolis.

We know that Mr. Robinson is the key partner in this project, particularly so as he represents both financial and technical phases of the operation.

Without Mr. Robinson's active attention there could be no such operation but there might be a corresponding loss in production of critical copper.

This department recommends that Mr. Robinson be deferred so that he may continue in the active production of copper.

Yours very truly,

Chas. H. Dunning
Director

CHD:LP

CC: Mr. Zannaras

Zannaras #83

February 19, 1945

Mr. J. P. Zannaras
Hillside, Arizona

Dear Mr. Zannaras:

We have received your description of your copper property and will take pleasure in adding it to our files.

We would suggest that you get Mr. Nebeker to look this over and get his report too on file.

With personal regards.

Yours sincerely,

Chas. H. Dunning
Director

CHD:LP

JOHN PHILIP ZANNARAS JOHN P. ROBINSON JR.

ZANNARAPOLIS TUNGSTEN MINE

HILLSIDE, ARIZONA

Feb. 17th. 1945

Mr.
C. H. Dunning
Director of the Department of
Mineral Resources - (Arizona)
Phoenix. Ariz.

Dear Sir.

Some time ago reports of our properties containing Tungsten were made by the Engineers of Your department. - No reports were made of our copper. and The properties I am enclosing a brief discription of one of our copper claims. which I wish to be filed with the other information you have -

With my best personal regards

Yours truly

J. P. Zannaras

Washington Park Apts. F-12
491 Bethlehem Pike
Fort Washington, Pennsylvania 19034
April 27, 1981
Tel.: (215) 646-3471

Mr. J. E. DuHamel
Acting District Supervisor
Phelps Dodge Corporation
Western Exploration Office
Drawer 1217
Douglas, Arizona 85607

Re: U.S. Tungsten Corp. (defunct)
P.O. Box 500, Congress, Arizona 85332
Mr. Charles P. Lower, deceased, treasurer
Mr. John Zannaras, president

Dear Mr. DuHamel:

Thank you for your letter of April 22 requesting the specific location of our worthless mine about which I cannot accurately answer since Mr. Zannaras never gave us a map. The assay office was in Congress, not Wickenburg, as I recollect and that is why our company used that mail address. We were never shown any assay report.

From the 1950's Mr. Zannaras felt that the Bagdad Copper Co. was the cause of his lack of success, claiming they took 3,000,000 gallons of water out of the Burro Creek needed for him to operate his flotation tables. If you contact their company, for which you are familiar as you process their ore at your smelter in Hidalgo County, New Mexico, at Mr. David Lincoln's residence P.O. Box 245, 55 E. Thomas Road (602) 263-9407, they would surely be able to answer your question. The map shows Thomas Road is in Phoenix. All of our family except myself were there to inspect the worthless property and we could see no scheelite or wolframite that would constitute an orebody to delineate.

I do not know of any schools in the East that give a degree in the specific area of mining engineering, only in the field of chemistry, metallurgy, geology, foundry technology, and so forth which result in CE, ME or EE, as appropriate.

The Corson's Lime Quarry nearby here on Joshua Road, a large open pit, was started in 1822.

All of McGuire Air Force Base in Wrightstown, New Jersey was constructed of concrete masonry produced by us during the period of the activity in U.S. Tungsten Corp.

The Imperial limestone quarry in Nazareth, Northampton County, Pennsylvania supplies both Lone Star and Penn-Dixie Cement Company which manufactured the cement for our concrete products plant in Bethayres, Montgomery County, Pennsylvania.

Perhaps later this summer I could stop by to speak to Mr. Richard Moolick at your New York office.

Sincerely yours,

Richard J. Lower

phelps dodge Corporation Western Exploration Office, Drawer 1217, Douglas, AZ 85607 • (602) 364-7521

Ken
Feb discuss

April 22, 1981

Mr. Richard J. Lower
Washington Park Apts. F-12
491 Bethlehem Pike
Fort Washington, Pennsylvania 19034

RE: U.S. Tungsten Corporation

Dear Mr. Lower:

I am in receipt of your letter of April 11 concerning U.S. Tungsten Corp. Mine in Arizona. If, by your letter you intend to submit the property to us for consideration, we need the following information before we can proceed.

1) Location by township, range, and section.
2) Claim map.
3) Any geological, assay, or engineering reports available.

Upon receipt of this information we will consider the property. I look forward to your reply. Thank you for contacting Phelps Dodge Corporation.

Very truly yours,

J. E. DuHamel

J. E. DuHamel
Acting District Supervisor

JED:cc

To Note: RWL/AMH/CFA

Washington Park Apts. F-12
491 Bethlehem Pike
Fort Washington, Pennsylvania 19034
April 11, 1981
Tel.: (215) 646-3471

Mr. R. W. Ludden, Jr., manager
Phelps Dodge Corporation
Western Exploration Office
Drawer 1217
Douglas, Arizona 85607

Re: U.S. Tungsten Corp. (defunct)
P.O. Box 500, Congress, Arizona 85332
Mr. John Zannaras, president
Mr. Charles P. Lower, deceased, treasure
Mr. John P. Robinson, secretary

Dear Mr. Ludden:

Our worthless property is located on the Burro Creek tributary of the Hassayampa River in Yavapai County, Arizona. I had several dozen color slides taken by my mother, Mrs. Charles P. Lower, when my parents lived at the Flying E Dude Ranch in Wickenburg, during construction in 1951 of the large concrete retaining wall, installation of ball mill crushers, flotation tables, and vertical mine shaft, which was arbitrarily located at a likely point that would yield ore. The machinery would then be ready for production.

Our concrete products business which we sold in 1963 was founded in 1924 and is located in Bethayres, Montgomery County, Pennsylvania, a suburb of Philadelphia.

Falconbridge reports the R.H.A. Tungsten Mine in Zimbabwe suspended. From the description of Zimbabwe in Friday's "Wall Street Journal", conditions are primitive and railroads reserved for transport of mine minerals. Falconbridge did not pay dividends from 1977 to 1979; their irregular pattern makes poor investment for outsiders to the Superior Oil Company and the Canadian Imperial Bank of Commerce, apparently, whose loan is for $75,900,000.

The April 20, 1962 issue of "Paydirt" magazine reported the government stockpile contained 80,732 tons of tungsten, which Mr. Zannaras claimed "ruined the price of tungsten for many years..." I did not know the government had a stockpile.

The ore concentrate produced by United States Tungsten Corp., if any, previously called Zannarapolis Tungsten Mine, was to be processed by Kennametals, but when Mr. Charles Lower inquired about output, Mr. Zannaras always replied he needed more venture risk capital to make the venture succeed.

St. Joe Minerals Corporation operates the Fostung tungsten project 50-50 with Union Carbide near Espanola, Ontario, Canada, which is misspelled Espinola in the St. Joe 1980 annual report. It is near the Sudbury Basin from which comes the Falconbridge Canadian nickel.

Sincerely yours,

Richard J. Lower

phelps dodge Corporation Western Exploration Office, Drawer 1217, Douglas, AZ 85607 • (602) 364-7521

April 8, 1981

Mr. Richard J. Lower
Washington Park Apts. F-12
491 Bethlehem Pike
Ft. Washington, Pennsylvania 19034

Dear Mr. Lower,

I have been informed that you may be interested in having Phelps Dodge investigate your mining property in Yavapai County, Arizona near Wickenburg. Before proceeding we need to know the exact location of the property by township, range and section. This will allow us to review our files and other available information that might relate to the area. If you have maps and reports on the property these would also be helpful.

We appreciate your interest in Phelps Dodge Corporation and will be looking forward to your reply.

Very truly yours,

R. W. Ludden

R. W. Ludden, Jr., Manager
Western Exploration Operations

RWL/acp

cc: JED w/encls

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

OWNERS MINE REPORT

Date

1. Mine Zannarapolis Tungsten — A. C. Nebeker
2. Mining District & County Hard Grub (Eureka) — 4. Location Prescott, Ariz.
3. Former name None
5. Owner J. P. Zannaras & J. P. Roberinson Jr. — 6. Address (Owner) Prescott, Ariz.
7. Operator Owners — 8. Address (Operator)
9. President not incorporated — 10. Gen. Mgr.
11. Mine Supt. — 12. Mill Supt.
13. Principal Metals Tungsten (scheelite) — 14. Men Employed 3
15. Production Rate developing only — 16. Mill: Type & Cap. gravity, 25 tons
17. Power: Amt. & Type Gasoline, Case Engine at mill. Ingersoll Portable Compressor at mine.
18. Operations: Present Prospecting and developing by pits and trenches.

19. Operations Planned The owners are going to open several more places on the surface where ore outcrops and then mine to the capacity of the mill and go into production as fast as possible.

20. Number Claims, Title, etc. 31 mining locations, 600'X 1500', title by location and doing assessment work. The claims are located so they form a solid block.

21. Description: Topography & Geography Country very rugged and cut by many gullies the bottom of which is filled with boulders and sand.

*

22. Mine Workings: Amt. & Condition The mine workings now consists of four open pits and several trenches, all of which are in good condition and show mineral. The deepest of these is 7 feet.

(over)

23. Geology & Mineralization

The formation is coarse grain granite, and schists cut by pegmatite dikes. The scheelite occurs in the schists afew feet away from the contact. The scheelite appears inplaces grouped and will make up about 20% of the rock, while in other places it poobable will not be more than ½ of one per cent of the rock, showing the mineralization to be spotted.

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

I went over the property with a mineral-lite about IO O'clock at night. The scheelite showed up like stars in a blue sky.

In one pit the scheelite went across for IO feet, 3 feet inwhich it was well concentrated, and the other 7 feet very spotted, about I00 ft away was a cut with 2 feet ore which show a stronger concentration of scheelite crystals which the owners claim will carry I0% tungsten. All holes show ore and the owners claim all ores will average .5% tungsten and by hand sorting a better grade can be made. I followed the vein with the Lite, over the surface between the pits and found places where it was 25 feet across.

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

I saw no chemical analysis of the ore, but the Mineral-lite show or indicate high grade ore in spots. I also was on the property in day light, and it appears that many thousands of tons can be developed quickly and at small cost.

25. Mine, Mill Equipment & Flow Sheet

At the mine is a I10 cu. ft Ingersoll Portable compressor, Jackhammer and drills. At the mill, a ore bin, a 6xI0 Jaw crusher, ore feeder, 3½ x 7½ ball mill, hydralic classifier, regular size wilfley shaking table, 2- 7000 gals concrete tanks for main water supply, one 800 gals tank, one 7000 gals thickener tank, powered by a 40 H.P. Gasecractor type engine. Power concrete mixer, and room made for flotation cells. All machinery set on concrete base, well constructed. and in good repair and in running order.

26. Road Conditions, Route

Water at present is hauled to the mine, but at the mill a F. B. M. pump powered by a 48H.P. Willis engine is placed in Burro creek with a I500 feet 2" pipe line and water is pumped to the Head Tanks at the mill.

ROADS: The road for 25 miles out from Hillside, along the Bagdad road is good, and 20 miles along Kingman road fair, but 5 miles down the wash to the mill sandy, and in rainy weather could be bad.

27. Water Supply

Mr Zannara went into this district I8 months ago to prospect for gold, but the formation indicated to him that Tungsten should exist he got a Mineral Lite and soon found the scheelite, so, since that time has spent their money and time developing their tungsten claims.

Mr Zannaras is a Graduate in mining fro m Leigh University, Penn. and understands his problems.

28. Brief History

They have made a small test run at the mill and find they now make about a 60% recovery, so are planning to first do more developement at the mine and add flotation cells at the mill. Inorder to raise the value of the mill feed a picking belt under a Mineral-lite is planned, so rock carrying no scheelite can be taken out.

29. Special Problems, Reports Filed

These boys are getting short on money, but can carry on by taking longer time, so did not know if they should ask for a R. F. C. loan, or if they could get one if they applied.

I suggested that they open up another two pits on the ore, and get some assays on a measured section, make an assay map, get all data together and apply for a developement loan, for the mine, and use their personal funds to finish their plans on the mill and thereby get into production sooner.

30. Remarks

The mine is in Yavapai County and the mill is in Mohave County I4 miles down the wash where they can get plenty of water.

Yavapai County was starting Monday to make them a road which willcut off about 5 miles distance from the mine to mill.

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

They have not thought anything about selling, but I think they would consider an operating deal or may be a sell out.

32. Signed.....A.C.Nobeker.....

33. Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNAROPOLIS TUNGSTEN Date September 19, 1943

District Eureka Mining District of Yavapai County, Arizona. Engineer B. W. Brown

Subject: Examination of Zannaropolis Tungsten Mine

The Zannaropolis Tungsten Mine is located in the Eureka Mining District of Yavapai County, Arizona in sections 1, 11, and 12 of T 13 N, R 10 W, G & SRB & M. The Zannaras Tungsten Mill is located approximately 10 miles distant in the Greenwood Mining District of Mojave County, Arizona. The Zannaropolis holdings are owned jointly by J. P. Zannaras and John P. Robinson Jr. (address: Hillside, Ariz.), major and minor interested parties, respectively. The holdings consist of 31 unpatented claims and one mill-site claim. The mill-site claim is located on Burro creek in Mojave county a distance of some ten miles from the mine. The group is listed as follows: Zannaropolis numbers 1 to 30, Starlight number 1, and Mill-site number 1.

The Zannaras Mill-site is reached from the Zannaropolis holdings by a very serviceable haul-road which for the most part lies in a sandy wash. The grade from the mine to the mill is in no instance considerable and affords for the major distance a slightly down-graded load-haul to the mill. The trip was easily made with a dual-tired heavy duty truck in forty minutes.

The mill is situated about 150 feet above Burro creek at an approximate elevation of 1,850 feet. The creek at this point has a perennial flow of sweet water suitable for camp purposes and in ample quantities for the milling proposed. A thirty gallon reciprocating pump, powered with a four-cylinder Willy's engine, and grouted to a concrete foundation about 18 feet above the stream bed is used to lift live water to two 7,000 gallon concrete tanks situated above the mill. The water falls from these tanks to a 1,000 gallon constant-head tank feeding to the mill. The mill is set on a concrete foundation with ample floor space for expansion of operations; about $\frac{1}{2}$ of the present floor space is being used. The mill is powered by a 40 HP Gage-tractor engine and the power is transmitted through an overhead system of pulleys. The flow, which is with gravity, may be outlined as follows:

1) Ore is shoveled from the truck to a 3/4 inch inclined grizzly set above a 50 ton steel lined ore-bin.

2) The oversize from the grizzly feeds by gravity to a primary jaw crusher set to the bin.

3) From the bin the sized ore travels by belt feed to a 35 ton ball mill.

4) The ball-pulp feeds through a 12 mesh trommel to two 12" by 18" Denver Disphragm Jigs. Oversize from the trommel was returned by hand to the ball-feed.

* 5) The overflow from the two jigs went collectively over two staged Diester Tables.

6) Tailings were to be handled thru a 7,000 gallon thickener tank which was at the time of examination prepared for but lacking the appropriate thickening equipment.

There is ample room for tailings disposal for a milling operation of this scope. The mill was not operating at the time of this examination as it was proposed to suspend all milling operations for the duration of the war. The mill-site is reported to be within two miles of Parker-dam power and it was proposed to eventually extend electrical facilities to the mill.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNAROPOLIS TUNGSTEN (CONTINUED) Date

District Engineer

Subject:

The mill was designed to handle the ores coming from the Zannaropolis #19 workings. A fine concentration of this ore was reported to have been taken off of the tables. No samples were taken by this engineer and all assays and estimates of grade were furnished by the owners.

The main workings of the Zannaropolis holdings may be considered to lie on three claims; the Zannaropolis #19, the Starlight #1, and the Zannaropolis #28. The workings on these three claims were carefully studied by this engineer under daylight conditions and again at night under the ultra-violet radiations of the Mineralight.

The principal mineralization involved in the Zannaras workings is of Scheelite occurring in dikes striking to the northeast at a point of granitic contact contact with a schist belt lying against the Grey-Back uplift. The associated minerals are Epidote and Feldspar. Along the strike and paralleling are dikes of amphibolite and diabase together with chimneys and inclusions of orthoclase and quartz. In the same belt are outcroppings of a massive pegmatite bearing large phenocrysts of albite and beryl.

Taking under first consideration the workings on the number 19 claim which, like all of the other 30 claims, has had considerable surface investigation in the form of shallow pits and trenched, the main workings consist of a Y-shaped trench-cut that exposes to an average depth of about 8 feet a fifteen foot wide epidotic dike carrying values in scheelite which fluoresce under ultra-violet light with a yellow and yellow-white color. The owners reported that a general sample taken from this dike averaged 0.5% in Tungsten. It was from these workings that the mill heads were taken.

Next under consideration is the Starlight claim. The Starlight workings are very shallow and barely expose the Scheelite bearing dike which is believed to be a continuation on a smaller scale of the #19 outcrop. Insufficient exposure had been made to accurately determine the width of the vein.

A still different picture was presented by the showing on the #28 claim where the orebody had evidently consolidated in a dike of epidotic quartz at a point where a feeding fissure vein has broken into the main lead. This orebody, where exposed in a shallow pit, shows a mineralization width of at least 4½ feet. Estimating from the weight of the ore and from the percentage of the volume which fluoresced, it was believed to contain good tungsten values. The owners claim an assay value of better than 3% from these workings and are sacking the ore for shipment. Unlike the ore from the lower workings, the #19 rock fluoresces a clear blue to blue-white color.

An excellent graded road connects the #28 workings with the Zannaropolis camp for a distance of about .2 of a mile. The camp in turn connects with the county maintained road to Kingman by about 3 miles of private graded road to a point about twelve miles from the juncture of the Kingman road with the Bagdad road. This three mile link of road connects also with the Starlight and #19 workings.

No water has been developed at the Zannaropolis camp and the camp water and mine

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNARAPOLIS MINE (CONTINUED) Date

District Engineer

Subject:

water is now being hauled from Burro creek a distanc e of 10 miles. It is hoped that water can be developed at an abandoned well-site at Placerita, a point below the Zannaras camp on one of the group of claims.

In conclusion it should be stated that indications on the #28 claim will justify a thorough investigation of the tungsten possibilities there. It is also recommended that careful sampling for Beryl be made on the acid pegmatites cropping to the northwest of the #28 claim.

B.W. Brown-FIELD

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNAROPOLIS TUNGSTEN Date September 19, 1943

District Eureka Mining District of Yavapai County, Arizona. Engineer B. W. Brown

Subject:
Examination of Zannaropolis Tungsten Mine

The Zanaropolis Tungsten Mine is located in the Eureka Mining District of Yavapai County, Arizona in sections 1, 11, and 12 of T 13 N, R 10 W, G & SRB & M. The Zannaras Tungsten Mill is located approximately 10 miles distant in the Greenwood Mining District of Mojave County, Arizona. The Zannaropolis holdings are owned jointly by J. P. Zannaras and John P. Robinson Jr. (address: Hillside, Ariz.), major and minor interested parties, respectively. The holdings consist of 31 unpatented claims and one mill-site claim. The mill-site claim is located on Burro creek in Mojave county a distance of some ten miles from the mine. The group is listed as follows: Zannaropolis numbers 1 to 30, Starlight number 1, and Mill-site number 1.

The Zannaras Mill-site is reached from the Zannaropolis holdings by a very serviceable haul-road which for the most part lies in a sandy wash. The grade from the mine to the mill is in no instance considerable and affords for the major distance a slightly down-graded load-haul to the mill. The trip was easily made with a dual-tired, heavy duty truck in forty minutes.

The mill is situated about 150 feet above Burro creek at an approximate elevation of 1,850 feet. The creek at this point has a perennial flow of sweet water suitable for camp purposes and in ample quantities for the milling proposed. A thirty gallon reciprocating pump, powered with a four-cylinder Willy's engine, and grouted to a concrete foundation about 18 feet above the streambed is used to lift live water to two 7,000 gallon concrete tanks situated above the mill. The water falls from these tanks to a 1,000 gallon constant-head tank feeding to the mill. The mill is set on a concrete foundation with ample floor space for expansion of operations; about ½ of the present floor space is being used. The mill is powered by a 40 HP Gage-tractor engine and the power is transmitted through an overhead system of pulleys. The flow, which is with gravity, may be outlined as follows:

1.) Ore is shoveled from the truck to a ¾ inch inclined grizzly set above a 50 ton steel lined ore-bin
2). The oversize from the grizzly feeds by gravity to a primary jaw crusher set to the bin.
3). From the bin the sized ore travels by belt feed to a 35 ton ball mill
4). The ball-pulp feeds through a 12 mesh trommel to two 12"X18" Denver Diaphragm Jigs. Oversize from the trommel was returned by hand to the ball-feed.
5). The overflow from the two jigs went collectively over two staged Diester Tables.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Zannaropolis Tungsten Date

District Engineer

Subject: Continued

6). Tailings were to be handled thru a 7,000 gallon thickener tank which was at the time of examination prepared for but lacking the appropriate thickening equipment.

There is ample room for tailings disposal for a milling operation of this scope. The mill was not operating at the time of this examination as it was proposed to suspend all milling operations for the duration of the war. The mill-site is reported to be within two miles of Parker-dam power and it was proposed to eventually extend electrical facilities to the mill.

The mill was designed to handle the ores coming from the Zannaropolis #19 workings. A fine concentration of this ore was reported to have been taken off of the tables. No samples were taken by this engineer and all assays and estimates of grade were furnished by the owners.

The main workings of the Zannaropolis holdings may be considered to lie on three claims; the Zannaropolis #19, the Starlight #1, and the Zannaropolis #28. The workings on these three claims were carefully studied by this engineer under daylight conditions and again at night under the ultra-violet radiations of the Mineralight.

The principal mineralization involved in the Zannaras workings is of Scheelite occurring in dikes striking to the northeast at a point of granitic contact with a schist belt lying against the Grey-Back uplift. The associated minerals are Epidote and Feldspar. Along the strike and paralleling are dikes of amphibolite and diabase together with chimneys and inclusions of orthoclase and quartz. In the same belt are outcroppings of a massive pegmatite bearing large phenocrysts of albite and beryl.

Taking under first consideration the workings on the number 19 claim which, like all of the other 30 claims, has had considerable surface investigation in the form of shallow pits and trenches, the main workings consist of a Y shaped trench-cut that exposes to an * average depth of about 8 feet a fifteen foot wide epidotic dike carrying values in scheelite which fluoresce under ultra-violet light with a yellow to yellow-white color. The owners reported that a general sample taken from this dike averaged 0.5% in Tungsten. It was from these workings that the mill heads were taken.

Next under consideration is the Starlight claim. The Starlight workings are very shallow and barely expose the Scheelite bearing dike which is believed to be a continuation on a smaller scale of the #19 outcrop. Insufficient exposure had been made to accurately determine the width of the vein.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Zannaropolis Tungsten Date

District Engineer

Subject: Continued

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An excellent graded road connects the #28 workings with the Zannaropolis camp for a distance of about .2 of a mile. The camp in turn connects with the county maintained road to Kingman by about 3 miles of private graded road to a point about twelve miles from the juncture of the Kingman road with the Bagdad road. This three mile link of road connects also with the Starlight and #19 workings.

No water has been developed at the Zannaropolis camp and the camp water and mine water is now being hauled from Burro creek a distance of 10 miles. It is hoped that water can be developed at an abandoned well-site at Placerita, a point below the Zannaras camp on one of the group of claims.

In conclusion it should be stated that indications on the #28 claim will justify a thorough investigation of the tungsten possibilities there. It is also recommended that careful sampling for Beryl be made on the acid pegmatites cropping to the northwest of the #28 claim.

B. W. Brown-FIELD

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DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNAROPOLIS TUNGSTEN Date September 19, 1943

District Eureka Mining District of Yavapai County, Arizona. Engineer B. W. Brown

Subject: Examination of Zannaropolis Tungsten Mine

The Zannaropolis Tungsten Mine is located in the Eureka Mining District of Yavapai County, Arizona in sections 1, 11, and 12 of T 13 N, R 10 W, G & SRB & M. The Zannaras Tungsten Mill is located approximately 10 miles distant in the Greenwood Mining District of Mojave County, Arizona. The Zannaropolis holdings are owned jointly by J. P. Zannaras and John P. Robinson Jr. (address: Hillside, Ariz.), major and minor interested parties, respectively. The holdings consist of 31 unpatented claims and one mill-site claim. The mill-site claim is located on Burro creek in Mojave county a distance of some ten miles from the mine. The group is listed as follows: Zannaropolis numbers 1 to 30, Starlight number 1, and Mill-site number 1.

The Zannaras Mill-site is reached from the Zannaropolis holdings by a very serviceable haul-road which for the most part lies in a sandy wash. The grade from the mine to the mill is in no instance considerable and affords for the major distance a slightly down-graded load-haul to the mill. The trip was easily made with a dual-tired heavy duty truck in forty minutes.

The mill is situated about 150 feet above Burro creek at an approximate elevation of 1,850 feet. The creek at this point has a perennial flow of sweet water suitable for camp purposes and in ample quantities for the milling proposed. A thirty gallon reciprocating pump, powered with a four-cylinder Willy's engine, and grouted to a concrete foundation about 18 feet above the stream bed is used to lift live water to two 7,000 gallon concrete tanks situated above the mill. The water falls from these tanks to a 1,000 gallon constant-head tank feeding to the mill. The mill is set on a concrete foundation with ample floor space for expansion of operations; about ½ of the present floor space is being used. The mill is powered by a 40 HP Gage-tractor engine and the power is transmitted through an overhead system of pulleys. The flow, which is with gravity, may be outlined as follows:

1) Ore is shoveled from the truck to a 3/4 inch inclined grizzly set above a 50 ton steel lined ore-bin.

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3) From the bin the sized ore travels by belt feed to a 35 ton ball mill.

4) The ball-pulp feeds through a 12 mesh trommel to two 12" by 18" Denver Disphragm Jigs. Oversize from the trommel was returned by hand to the ball-feed.

5) The overflow from the two jigs went collectively over two staged Diester Tables.

6) Tailings were to be handled thru a 7,000 gallon thickener tank which was at the time of examination prepared for but lacking the appropriate thickening equipment.

There is ample room for tailings disposal for a milling operation of this scope. The mill was not operating at the time of this examination as it was proposed to suspend all milling operations for the duration of the war. The mill-site is reported to be within two miles of Parker-dam power and it was proposed to eventually extend electrical facilities to the mill.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNAROPOLIS TUNGSTEN (CONTINUED) Date

District Engineer

Subject:

The mill was designed to handle the ores coming from the Zannaropolis #19 workings. A fine concentration of this ore was reported to have been taken off of the tables. No samples were taken by this engineer and all assays and estimates of grade were furnished by the owners.

The main workings of the Zannaropolis holdings may be considered to lie on three claims; the Zannaropolis #19, the Starlight #1, and the Zannaropolis #28. The workings on these three claims were carefully studied by this engineer under daylight conditions and again at night under the ultra-violet radiations of the Mineralight.

The principal mineralization involved in the Zannaras workings is of Scheelite occurring in dikes striking to the northeast at a point of granitic contact contact with a schist belt lying against the Grey-Back uplift. The associated minerals are Epidote and Feldspar. Along the strike and paralleling are dikes of amphibolite and diabase together with chimneys and inclusions of orthoclase and quartz. In the same belt are outcroppings of a massive pegmatite bearing large phenocrysts of albite and beryl.

Taking under first consideration the workings on the number 19 claim which, like all o f the other 30 claims, has had considerable surface investigation in the form of shallow pits and trenched, the main workings consist of a Y-shaped trench-cut that exposes to an average depth of about 8 feet a fifteen foot wide epidotic dike carrying values in scheelite which fluoresce under ultra-violet light with a yellow and yellow-white color. The owners reported that a general sample taken from this dike averaged 0.5% in Tungsten. It was from these workings that the mill heads were taken.

Next under consideration is the Starlight claim. The Starlight workings are very shallow and barely expose the Scheelite bearing dike which is believed to be a continuation on a smaller scale of the #19 outcrop. Insufficient exposure had been made to accurately determine the width of the vein.

A still different picture was presented by the showing on the #28 claim where the orebody had evidently consolidated in a dike of epidotic quartz at a point where a feeding fissure vein has broken into the main lead. This orebody, where exposed in a shallow pit, shows a mineralization width of at least 4½ feet. Estimating from the weight of the ore and from the percentage of the volume which fluoresced, it was believed to contain good tungsten values. The owners claim an assay value of better than 3% from these workings and are sacking the ore for shipment. Unlike the ore from the lower workings, the #19 rock fluoresces a clear blue to blue-white color.

An excellent graded road connects the #28 workings with the Zannaropolis camp for a distance of about .2 of a mile. The camp in turn connects with the county maintained road to Kingman by about 3 miles of private graded road to a point about twelve miles from the juncture of the Kingman road with the Bagdad road. This three mile link of road connects also with the Starlight and #19 workings.

No water has been developed at the Zannaropolis camp and the camp water and mine

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNARAPOLIS MINE (CONTINUED) Date

District Engineer

Subject:

water is now being hauled from Burro creek a distanc e of 10 miles. It is hoped that water can be developed at an abandoned well-site at Placerita, a point below the Zannaras camp on one of the group of claims.

In conclusion it should be stated that indications on the #28 claim will justify a thorough investigation of the tungsten possibilities there. It is also recommended that careful sampling for Beryl be made on the acid pegmatites cropping to the northwest of the #28 claim.

B.W. Brown-FIELD

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine: ZANNAROPOLIS TUNGSTEN Date: September 19, 1943

District: Eureka Mining District of Yavapai County, Arizona. Engineer: B. W. Brown

Subject: Examination of Zannaropolis Tungsten Mine

The Zannaropolis Tungsten Mine is located in the Eureka Mining District of Yavapai County, Arizona in sections 1, 11, and 12 of T 13 N, R 10 W, G & SRB & M. The Zannaras Tungsten Mill is located approximately 10 miles distant in the Greenwood Mining District of Mojave County, Arizona. The Zannaropolis holdings are owned jointly by J. P. Zannaras and John P. Robinson Jr. (address: Hillside, Ariz.), major and minor interested parties, respectively. The holdings consist of 31 unpatented claims and one mill-site claim. The mill-site claim is located on Burro creek in Mojave county a distance of some ten miles from the mine. The group is listed as follows: Zannaropolis numbers 1 to 30, Starlight number 1, and Mill-site number 1.

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DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNAROPOLIS TUNGSTEN (CONTINUED) Date

District Engineer

Subject:

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DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNARAPOLIS MINE (CONTINUED) Date

District Engineer

Subject:

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B.W. Brown-FIELD

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date

Mine Zannarapolis Tungsten — Engineer A. C. Nebeker

District Burro Creek (Eureka) — Location Prescott, Arizona

Former name None

Owner J. P. Zannaras & J. P. Roberinson, Jr. — Address Hillside, Arizona

Operator Owners — Address

President Not incorporated — Gen. Mgr.

Mine Supt. — Mill Supt.

Principal Metals Tungsten (scheelite) — Men Employed 3

Production Rate developing only — Mill: Type & Cap. Gravity, 25 tons

Power: Amt. & Type Gasoline, Case Engine at mill. Ingersoll Portable Compressor at mine.

Operations: Present Prospecting and developing by pits and trenches.

Operations Planned The owners are going to open several more places on the surface where ore outcrops and then mine to the capacity of the mill and go into production as fast as possible.

Number Claims, Title, etc. 31 mining locations, 600' x 1500', title by location and doing assessment work. The claims are located so they form a solid block.

Description: Topog. & Geog. Country very rugged and cut by many gullies the bottom of which is filled with boulders and sand.

Mine Workings: Amt. & Condition The mine workings now consists of four open pits and several trenches, all of which are in good condition and show mineral. The deepest of these is 7 feet.

(over)

Geology & Mineralization The formation is coarse grain granite, and schists cut by pegmatite dikes. The scheelite occurs in the schists afew feet away from the contact. The scheelite appears in places grouped and will make up about 20% of the rock, while in other places it probably will not be more than ½ of one per cent of the rock, showing the mineralization to be spotted.

Ore: Positive & Probable, Ore Dumps, Tailings I went over the property with a mineral-lite about 10 o'clock at night. The scheelite showed up like stars in a blue sky. In one pit the shceelite went across for 10 feet, 3 feet in which it was well concentrated, and the other 7 seven feet very spotted, about 100 feet away was a cut with 2 feet ore which show a stronger concentration of scheelite crystals which the owners claim will carry 10% tungsten. All holes show ore and the owners claim all ores will average 0.5% tungsten and by hand sorting a better grade can be made. I followed the vein with the light, over the surface between the pits and found places where it was 25 feet across.

Mine, Mill Equipment & Flow Sheet

I say no chemical analysis of the ore, but the Mineral-Lite show or indicate high grade ore in spots. I also was on the property in day light, and it appears that many thousands of tons can be developed quickly and at small cost.

Road Conditions, Route At the mine there is all0 cul ft. Ingersoll Portable compressor, Jack-hammer and drills. At the mill, a ore bin, a 6 x 10 Jaw crusher, ore feeder, 3½ x 7½ ball mill, hydralic classifier, regular size wilfley shaking table, 2- 7000 gals. concrete tanks for main water supply, one 800 gals, tank, one 7000 gals, thickener tank, powered by a 40 H.P. Casecractor type engine. Power concrete mixer, and room made for flotation cells. Al machinery set on concrete base, well constructed, all machinery in good repair and in running order.

Water Supply

WATER SUPPLY: Water at present is hauled to the mine, but at the mill a F. B. M. pump powered by a 48 H.P. Willis engine is placed in Burro creek with a 1500 ft. 2" pipe line and water is pumped to the Head Tanks at the mill.

ROADS: The road for 25 miles out from Hillside, along the Bagdad road is good, and 20 miles along Kingman road fair,5 miles to the mill sandy, and in rainy weather might be bad.

Brief History Mr. Zannara went into this district 18 months ago to prospect for gold, but the formation indicated to him that tungsten should exist he got a Mineral-Lite and soon found the tungsten, so, since that time has spent their money and time developing their tungsten claims. Mr. Zannaras is a Graduate in mining from Leigh Univ, Penn. and understands his problems.

Lehigh

Special Problems, Reports Filed They have made a small test run at the mill and find they now make about a 60% recovery, so are planning to first do more development at the mine and add flotation cells at the mill. In order to raise the value of the mill feed a picking belt under a Mileral-Lite is planned, so rock carrying no scheelite can be taken out.

Remarks These boys are getting short on money, but can carry on by taking longer time, so did not know if they should ask for a RFC loan, or if they could get one if they applied.

I suggested that they open up another two pits on the ore, and get some assays on a measured section, make an assay map, get all data together and apply for a development loan for the mine, and use their personal funds to finish their plans on the mill and thereby get into production sooner.

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

The mine is in Yavapai County and the mill is in Mohave County 14 miles down the wash where they can get plenty of water.

Yavapai County was starting Monday to make them a road which will cut off about 5 miles distance from the mine to the mill.

They have not thought anything about selling, but I think they would consider an operating deal or maybe a sell out.

Signed A. C. Nebeker

Use additional sheets if necessary. Separate sheets on each problem.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date Aug 13/1942

Mine Zannarapolis Tungsten — Engineer A. C. Nebeker

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Former name None

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Ore: Positive & Probable, Ore Dumps, Tailings In one pit the scheelite went across for IO feet, 3 feet inwhich it was well concentrated, and the other 7 feet very spotted, about I00 ft away was a cut with 2 feet ore which show a stronger concentration of scheelite crystals which the owners claim will carry I0% tungsten. All holes show ore and the owners claim all ores will average .5% tungsten and by hand sorting a better grade can be made. I followed the vein with the Lite, over the surface between the pits and found places where it was 25 feet across.

Mine, Mill Equipment & Flow Sheet I saw no chemical analysis of the ore, but the Mineral-lite show or indicate high grade ore in spots. I also was on the property in day light, and it appears that many thousands of tons can be developed quickly and at small cost.

At the mine there is a II0 cu. ft Ingersoll Portable compressor, Jackhammer and drills. At the mill, a ore bin, a 6xI0 Jaw crusher, ore feeder, Road Conditions, Route $3\frac{1}{2}$ x $7\frac{1}{2}$ ball mill, hydralic classifier, regular size wilfley shaking table, 2- 7000 gals concrete tanks for main water supply, one 800 gals tank, one 7000 gals thickener tank, powered by a 40 H.P. Caseractor type engine. Power concrete mixer, and room made for flotation cells. All machinery set on concrete base, well constructed. all machinery in good repair and in running order.

Water Supply Water at present is hauled to the mine, but at the mill a F. B. M. pump powered by a 48H.P. Willis engine is placed in Burro creek with a I500 feet 2" pipe line and water is pumped to the Head Tanks at the mill.

ROADS: The road for 25 miles out from Hillside, along the Bagdad road is good, and 20 miles along Kingman road fair, but 5 miles down the wash to the mill sandy, and in rainy weather could be bad.

Brief History Mr Zannara went into this district I8 months ago to prospect for gold, but the formation indicated to him that Tungsten should exsist he got a Mineral Lite and soon found the scheelite, so, since that time has spent their money and time developing their tungsten claims.

Mr Zannaras is a Graduate in mining fro m Leigh University, Penn. and understands his problems. Lehigh

Special Problems, Reports Filed They have made a small test run at the mill and find they now make about a 60% recovery, so are planning to first do more developement at the mine and add flotation cells at the mill. Inorder to raise the value of the mill feed a picking belt under a Mineral-lite is planned, so rock carrying no scheelite can be taken out.

Remarks These boys are getting short on money, but can carry on by taking longer time, so did not know if they should ask for a R. F. C. loan, or if they could get one if they applied.

I suggested that they open up another two pits on the ore, and get some assays on a measured section, make an assay map, get all data together and apply for a developement loan, for the mine, and use their personal funds to finish their

If property for sale: Price, terms and address to negotiate. plans on the mill and thereby get into production sooner.

The mine is in Yavapai County and the mill is in Mohave County I4 miles down the wash where they can get plenty of water.

Yavapai County was starting Monday to make them a road which willcut off about 5 miles distance from the mine to mill.

They have not thought anything about selling, but I think they would consider an operating deal or may be a sell out.

Signed A.C.Nebeker

Use additional sheets if necessary. Separate sheets on each problem.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date

Mine Minneapolis Tungsten — Engineer A. G. Hobbins

District Burro Creek (Eureka) — Location Prescott, Arizona

Former name None

Owner J. P. Tennant & J. P. Robertson, Jr. — Address Hillside, Arizona

Operator Owners — Address

President Not incorporated — Gen. Mgr.

Mine Supt. — Mill Supt.

Principal Metals Tungsten (scheelite) — Men Employed 5

Production Rate Developing only — Mill: Type & Cap. Gravity, 25 tons

Power: Amt. & Type Gasoline, Case Engine at mill. Ingersoll Rorbable Compressor at mine.

Operations: Present Prospecting and developing by pits and trenches.

Operations Planned The owners are going to open several more places on the surface where ore outcrops and then mine to the capacity of the mill and go into production as fast as possible.

Number Claims, Title, etc. 21 claim location, 600' x 1500', title by location and doing assessment work. The claims are located so they form a solid block.

Description: Topog. & Geog. Country very rugged and cut by many gullies the bottom of which is filled with boulders and sand.

Mine Workings: Amt. & Condition The mine workings now consists of four open pits and several trenches, all of which are in good condition and show mineral. The deepest of these is 7 feet.

(over)

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

FIELD ENGINEERS REPORT

Date

Mine Minneapolis Tungsten — Engineer A. C. Webster

District Burro Creek (Eureka) — Location Prescott, Arizona

Former name None

Owner J. P. Cameron & J. P. Robertson, Jr. — Address Hillside, Arizona

Operator Owners — Address

President Not incorporated — Gen. Mgr.

Mine Supt. — Mill Supt.

Principal Metals Tungsten (scheelite) — Men Employed 5

Production Rate developing only — Mill: Type & Cap. Gravity, 25 tons

Power: Amt. & Type Gasoline, Case Engine at mill. Ingersoll Portable Compressor at mine.

Operations: Present Prospecting and developing by pits and trenches.

Operations Planned The owners are going to open several more places on the surface where ore outcrops and then mine to the capacity of the mill and go into production as fast as possible.

Number Claims, Title, etc. 31 mining locations, 600' x 1500', title by location and doing assessment work. The claims are located so they form a solid block.

Description: Topog. & Geog. Country very rugged and cut by many gullies the bottom of which is filled with boulders and sand.

Mine Workings: Amt. & Condition The mine workings now consists of four open pits and several trenches, all of which are in good condition and show mineral. The deepest of these is 7 feet.

Signed .....

(over)

Geology & Mineralization The formation is coarse grain granite, and schists cut by pegmatite dikes. The scheelite occurs in the schists a few feet away from the contact. The scheelite appears in places grouped and will make up about 20% of the rock, while in other places it probably will not be more than ½ of one per cent of the rock, showing the mineralization to be spotted.

I went over the property with a mineral-lite about 10 o'clock at night. The scheelite

Ore: Positive & Probable, Ore Dumps, Tailings showed up like stars in a blue sky. In one pit the scheelite went across for 10 feet, 3 feet in which it was well concentrated, and the other 7 seven feet very spotted, about 100 feet away was a cut with 2 feet ore which show a stronger concentration of scheelite crystals which the owners claim will carry 10% tungsten. All holes show ore and the owners claim all ores will average 0.5%

Mine, Mill Equipment & Flow Sheet a better grade can be made. I followed the vein with the light, over the surface between the pits and found places where it was 20 feet across.

I say no chemical analysis of the ore, but the Mineral-Lite show or indicate high grade ore in spots. I also was on the property in day light, and it appears that many thousands of tons can be developed quickly and at small cost.

Road Conditions, Route At the mine there is a 110 cu. ft. Ingersoll Portable compressor, Jack-hammer and drills. At the mill, a ore bin, a 6 x 10 Jaw crusher, ore feeder, 3½ x 4½ ball mill, hydraulic classifier, regular size wilfley shaking table, 2- 7000 gals. concrete tanks for main water supply, one 500 gals. tank, one 7000 gals. thickener tank, powered by a 40 H.P. [illegible] type engine. Power concrete mixer, and room made for flotation cells. All machinery set on concrete base, well constructed, all machinery in good repair

Water Supply and in running order.

WATER SUPPLY: Water at present is hauled to the mine, but at the mill a F. B. M. pump powered by a 48 H.P. Willis engine is placed in Burro creek with a 1800 ft. 2" pipe line and water is pumped to the Head Tanks at the mill.

ROADS: The road for 20 miles out from Hillside, along the Bagdad road is good, and 20 miles along Kingman road fair, 5 miles to the mill sandy, and in rainy weather might be bad.

Brief History Mr. Zannara went into this district 10 months ago to prospect for gold, but the formation indicated to him that tungsten should exist he got a Mineral-Lite and soon found the tungsten, so, since that time has spent their money and time developing their tungsten claims. Mr. Zannaras is a Graduate in mining from Leigh Univ, Penn. and understands his problems.

Special Problems, Reports Filed They have made a small test run at the mill and find they now make about a 60% recovery, so are planning to first do more development at the mine and add flotation cells at the mill. In order to raise the value of the mill feed a picking belt under a Mineral-Lite is planned, so rock carrying no scheelite can be taken out.

Remarks These boys are getting short on money, but can carry on by taking longer time, so did not know if they should ask for a RFC loan, or if they could get one if they applied.

I suggested that they open up another two pits on the ore, and get some assays on a measured section, make an assay map, get all data together and apply for a development loan for the mine, and use their personal funds to finish their plans on the mill and

If property for sale: Price, terms and address to negotiate. thereby get into production sooner.

The mine is in Yavapai County and the mill is in Mohave County 14 miles down the wash where they can get plenty of water.

Yavapai County was starting Monday to make them a road which will cut off about 8 miles distance from the mine to the mill.

They have not thought anything about selling, but I think they would consider an operating deal or maybe a sell out.

Signed A. C. Rubel

Use additional sheets if necessary. Separate sheets on each problem.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNAROPOLIS TUNGSTEN Date September 19, 1943

District Eureka Mining District of Yavapai County, Arizona. Engineer B. W. Brown

Subject: Examination of Zannaropolis Tungsten Mine

The Zannaropolis Tungsten Mine is located in the Eureka Mining District of Yavapai County, Arizona in sections 1, 11, and 12 of T 13 N, R 10 W, G & SRB & M. The Zannaras Tungsten Mill is located approximately 10 miles distant in the Greenwood Mining District of Mojave County, Arizona. The Zannaropolis holdings are owned jointly by J. P. Zannaras and John P. Robinson Jr. (address: Hillside, Ariz.), major and minor interested parties, respectively. The holdings consist of 31 unpatented claims and one mill-site claim. The mill-site claim is located on Burro creek in Mojave county a distance of some ten miles from the mine. The group is listed as follows: Zannaropolis numbers 1 to 30, Starlight number 1, and Mill-site number 1.

The Zannaras Mill-site is reached from the Zannaropolis holdings by a very serviceable haul-road which for the most part lies in a sandy wash. The grade from the mine to the mill is in no instance considerable and affords for the major distance a slightly down-graded load-haul to the mill. The trip was easily made with a dual-tired heavy duty truck in forty minutes.

The mill is situated about 150 feet above Burro creek at an approximate elevation of 1,850 feet. The creek at this point has a perennial flow of sweet water suitable for camp purposes and in ample quantities for the milling proposed. A thirty gallon reciprocating pump, powered with a four-cylinder Willy's engine, and grouted to a concrete foundation about 18 feet above the stream bed is used to lift live water to two 7,000 gallon concrete tanks situated above the mill. The water falls from these tanks to a 1,000 gallon constant-head tank feeding to the mill. The mill is set on a concrete foundation with ample floor space for expansion of operations; about ½ of the present floor space is being used. The mill is powered by a 40 HP Gage-tractor engine and the power is transmitted through an overhead system of pulleys. The flow, which is with gravity, may be outlined as follows:

1) Ore is shoveled from the truck to a 3/4 inch inclined grizzly set above a 50 ton steel lined ore-bin.

2) The oversize from the grizzly feeds by gravity to a primary jaw crusher set to the bin.

3) From the bin the sized ore travels by belt feed to a 35 ton ball mill.

4) The ball-pulp feeds through a 12 mesh trommel to two 12" by 18" Denver Disphragm Jigs. Oversize from the trommel was returned by hand to the ball-feed.

5) The overflow from the two jigs went collectively over two staged Diester Tables.

6) Tailings were to be handled thru a 7,000 gallon thickener tank which was at the time of examination prepared for but lacking the appropriate thickening equipment.

There is ample room for tailings disposal for a milling operation of this scope. The mill was not operating at the time of this examination as it was proposed to suspend all milling operations for the duration of the war. The mill-site is reported to be within two miles of Parker-dam power and it was proposed to eventually extend electrical facilities to the mill.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNAROPOLIS TUNGSTEN (CONTINUED) Date

District Engineer

Subject:

The mill was designed to handle the ores coming from the Zannaropolis #19 workings. A fine concentration of this ore was reported to have been taken off of the tables. No samples were taken by this engineer and all assays and estimates of grade were furnished by the owners.

The main workings of the Zannaropolis holdings may be considered to lie on three claims; the Zannaropolis #19, the Starlight #1, and the Zannaropolis #28. The workings on these three claims were carefully studied by this engineer under daylight conditions and again at night under the ultra-violet radiations of the Mineralight.

The principal mineralization involved in the Zannaras workings is of Scheelite occurring in dikes striking to the northeast at a point of granitic contact contact with a schist belt lying against the Grey-Back uplift. The associated minerals are Epidote and Feldspar. Along the strike and paralleling are dikes of amphibolite and diabase together with chimneys and inclusions of orthoclase and quartz. In the same belt are outcroppings of a massive pegmatite bearing large phenocrysts of albite and beryl.

Taking under first consideration the workings on the number 19 claim which, like all o f the other 30 claims, has had considerable surface investigation in the form of shallow pits and trenched, the main workings consist of a Y-shaped trench-cut that exposes to an average depth of about 8 feet a fifteen foot wide epidotic dike carrying values in scheelite which fluoresce under ultra-violet light with a yellow and yellow-white color. The owners reported that a general sample taken from this dike averaged 0.5% in Tungsten. It was from these workings that the mill heads were taken.

Next under consideration is the Starlight claim. The Starlight workings are very shallow and barely expose the Scheelite bearing dike which is believed to be a continuation on a smaller scale of the #19 outcrop. Insufficient exposure had been made to accurately determine the width of the vein.

A still different picture was presented by the showing on the #28 claim where the orebody had evidently consolidated in a dike of epidotic quartz at a point where a feeding fissure vein has broken into the main lead. This orebody, where exposed in a shallow pit, shows a mineralization width of at least 4½ feet. Estimating from the weight of the ore and from the percentage of the volume which fluoresced, it was believed to contain good tungsten values. The owners claim an assay value of better than 3% from these workings and are sacking the ore for shipment. Unlike the ore from the lower workings, the #19 rock fluoresces a clear blue to blue-white color.

An excellent graded road connects the #28 workings with the Zannaropolis camp for a distance of about .2 of a mile. The camp in turn connects with the county maintained road to Kingman by about 3 miles of private graded road to a point about twelve miles from the juncture of the Kingman road with the Bagdad road. This three mile link of road connects also with the Starlight and #19 workings.

No water has been developed at the Zannaropolis camp and the camp water and mine

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ZANNARAPOLIS MINE (CONTINUED) Date

District Engineer

Subject:

water is now being hauled from Burro creek a distanc e of 10 miles. It is hoped that water can be developed at an abandoned well-site at Placerita, a point below the Zannaras camp on one of the group of claims.

In conclusion it should be stated that indications on the #28 claim will justify a thorough investigation of the tungsten possibilities there. It is also recommended that careful sampling for Beryl be made on the acid pegmatites cropping to the northwest of the #28 claim.

B.W. Brown-FIELD

1997 TAX NOTICE

JAN. 1, 1997 TO DEC. 31, 1997 — COUNTY OF YAVAPAI — ARIZONA

ADDRESS: 1015 FAIR STREET
PRESCOTT AZ 86

LEGAL DESCRIPTION: SECTION TWN RNG ACRES 42.78 USE 6800
EUREKA DIST MINERAL RIGHTS ONLYMINERAL DYKE S2 20.661AC; MINERAL DYKE #3 20.661AC; MINERAL DYKE #4 20.661AC; MINERAL DYKE #20 20.661AC; MINERAL DYKE A 20.661AC; MINERAL DYKE L 18.818AC; MINERAL DYKE M 20.661AC; IN PT OF SECS 19 25 30 T14 R9W

TAX ROLL NUMBER
47824
PARCEL IDENTIFICAT
300-15-500
TAX AREA CODE
2001

IMPORTANT - SEE REVE... FOR COMPLETE EXPLANATI(YOUR 1997 TAX NOTICE A PAYMENT INSTRUCTIONS.

300-15-500 9 47824

ZANNARAS J P &
ROBINSON JOHN PIERCE JR
3168 E BERRIDGE LN
PHOENIX AZ 85016-2328

1997 TAX SUMMARY (3)	
PRIMARY AD VALOREM TAX	
LESS STATE AID TO EDUCATION	
NET PRIMARY AD VALOREM TAX	
SECONDARY AD VALOREM TAX	
SPECIAL DISTRICT TAX	

PAY TOTAL OR HALF T

TOTAL TAX DUE ➡	
HALF TAX ➡	

DELINQUENT DATES
1st HALF NOV. 1, 199
2nd HALF MAY 1, 199

THIS IS THE ONLY NOTICE YOU WILL REC
NO RECEIPT WILL BE SENT UNLESS REQUE

PRIMARY PROPERTY TAX CALCULATION (1)

ITEM	LIMITED VALUE	ASSMT.%	ASSESSED VALUE	EXEMPTION	TAX RATE	AD VALOREM TAX
LAND,BLDGS,ETC.	903	160	144	0	77702	1118
PERSONAL PROPERTY	0	0	0	0	0	00
TOTALS ➡	903		144	0		1118

SECONDARY PROPERTY TAX CALCULATION (2)

ITEM	LIMITED VALUE	ASSMT.%	ASSESSED VALUE	EXEMPTION	TAX RATE	AD VALOREM TAX
LAND	903	160	144	0	19719	284
BLDGS,ETC.	0	0	0	0	0	00
PERSONAL PROPERTY	0	0	0	0	0	00
TOTALS ➡	903		144	0		284

1996-1997 TAX COMPARISON (4)

TAX CODE	TAX JURISDICTION	1997 PRIMARY	1997 SECONDARY	1997 TOTAL	1996 TOTAL	DIFFERENCE
01999	YAV CO PAYMENT AHCCCS AND ALTCS	91	00	91	96	
02000	YAVAPAI COUNTY	169	00	169	178	
02001	SCHOOL EQUALIZATION	76	00	76	76	
02002	TAX COURT JUDGMENT-B	00	00	00	263	
07020	BAGDAD UNIFIED SD #20	572	210	782	663	
08150	YAVAPAI COMMUNITY COLLEGE	210	15	225	227	
11900	FIRE DISTRICT ASSISTANCE FUND	00	14	14	14	
14900	YAVAPAI COUNTY LIBRARY DIST	00	15	15	16	
15001	YAVAPAI FLOOD CONTROL DISTRICT	00	30	30	29	
	TOTALS ➡	1118	284	1402	1562	

TEAR OFF ALONG DOTTED LINES

TEAR OFF ALONG DOTTED LINES

PLEASE RETURN THIS PORTION WITH PAYMENT TO:

ROSS JACOBS
COUNTY TREASURER
1015 FAIR STREET
PRESCOTT AZ 86301

ZANNARAS J P &
3168 E BERRIDGE LN

TAX ROLL NUMBER
47824
PARCEL IDENTIFICATION
300-15-500 9
TAX AREA CODE
2000

RECEIPT REQUESTED ( )

PLEASE RETURN THIS PORTION WITH PAYMENT TO:

ROSS JACOBS
COUNTY TREASURER
1015 FAIR STREET
PRESCOTT AZ 86301

ZANNARAS J P &
3168 E BERRIDGE LN

TAX ROLL NUMBER
47824
PARCEL IDENTIFICATIO
300-15-500
TAX AREA CODE
2000

RECEIPT REQUESTED

13300150090011997000000022222

13300150090011997000000000000

NOTE: 1st HALF TAXES DELINQUENT AFTER NOV 1, 1997

TE: 2nd HALF TAXES DELINQUENT AFTER MAY 1, 1998

97 TAX NOTICE

JAN. 1, 19[illegible] TO DEC. 31, 1997 — COUNTY OF YAVAPAI — ARIZONA

ADDRESS: 1015 FAIR STREET
PRESCOTT AZ 86301

DESCRIPTION: SECTION 0030 TWN 14N RNG 09W ACRES 11.33 USE 0014
EKA MINING DIST DYKE #21 SEC30 14 9W PAT 379/354

TAX ROLL NUMBER
47790
PARCEL IDENTIFICATION
300-15-009 1
TAX AREA CODE
2000

IMPORTANT - SEE REVERSE SIDE FOR COMPLETE EXPLANATION OF YOUR 1997 TAX NOTICE AND PAYMENT INSTRUCTIONS.

300-15-009 1 47790

ZANNARAS JOHN P &
ROBINSON JR JOHN P
3168 E BERRIDGE LN
PHOENIX AZ 85016-2328

1997 TAX SUMMARY (3)	
PRIMARY AD VALOREM TAX	1772
LESS STATE AID TO EDUCATION	00
NET PRIMARY AD VALOREM TAX	1772
SECONDARY AD VALOREM TAX	450
SPECIAL DISTRICT TAX	00

PAY TOTAL OR HALF TAX

TOTAL TAX DUE ➡	2222
HALF TAX ➡	

DELINQUENT DATES
1st HALF NOV. 1, 1997
2nd HALF MAY 1, 1998

THIS IS THE ONLY NOTICE YOU WILL RECEIVE
NO RECEIPT WILL BE SENT UNLESS REQUESTED

PRIMARY PROPERTY TAX CALCULATION (1)

	LIMITED VALUE	ASSMT.%	ASSESSED VALUE	EXEMPTION	TAX RATE	AD VALOREM TAX
D,BLDGS,ETC.	1425	160	228	0	77702	1772
SONAL PROPERTY	0	0	0	0	0	00
TALS ➡	1425		228	0		1772

SECONDARY PROPERTY TAX CALCULATION (2)

	LIMITED VALUE	ASSMT.%	ASSESSED VALUE	EXEMPTION	TAX RATE	AD VALOREM TAX
D	1425	160	228	0	19719	450
GS,ETC.	0	0	0	0	0	00
SONAL PROPERTY	0	0	0	0	0	00
TALS ➡	1425		228	0		450

1996-1997 TAX COMPARISON (4)

E	TAX JURISDICTION	1997 PRIMARY	1997 SECONDARY	1997 TOTAL	1996 TOTAL	DIFFERENCE
	YAV CO PAYMENT AHCCCS AND ALTCS	144	00	144	152	-08
00	YAVAPAI COUNTY	268	00	268	281	-13
01	SCHOOL EQUALIZATION	121	00	121	121	00
02	TAX COURT JUDGMENT-B	00	00	00	417	-417
20	BAGDAD UNIFIED SD #20	906	332	1238	1049	189
50	YAVAPAI COMMUNITY COLLEGE	333	24	357	360	-03
00	FIRE DISTRICT ASSISTANCE FUND	00	23	23	23	00
00	YAVAPAI COUNTY LIBRARY DIST	00	24	24	26	-02
01	YAVAPAI FLOOD CONTROL DISTRICT	00	47	47	47	00
	TOTALS ➡	1772	450	2222	2476	-254

TEAR OFF ALONG DOTTED LINES

TEAR OFF ALONG DOTTED LINES

E RETURN THIS PORTION WITH PAYMENT TO:

SS JACOBS
UNTY TREASURER
15 FAIR STREET
ESCOTT AZ 86301

NNARAS JOHN P &
68 E BERRIDGE LN
OENIX AZ85016

TAX ROLL NUMBER
47790
PARCEL IDENTIFICATION
300-15-009 1
TAX AREA CODE
2000

RECEIPT REQUESTED ( )

TAL TAX DUE IS $25.00 OR LESS FULL AMOUNT IS DUE NOW.
AYMENT INSTRUCTIONS ON REVERSE SIDE OF NOTICE.
ADDRESS CORRECTION ON THE BACK OF THIS COUPON.

1997 2ND HALF COUPON

Y 2ND HALF	PAY ➡	********

HALF TAXES DELINQUENT AFTER MAY 1, 1998

13300150090011997000000000

PLEASE RETURN THIS PORTION WITH PAYMENT TO:

ROSS JACOBS
COUNTY TREASURER
1015 FAIR STREET
PRESCOTT AZ 86301

ZANNARAS JOHN P &
3168 E BERRIDGE LN
PHOENIX AZ85016

TAX ROLL NUMBER
47790
PARCEL IDENTIFICATION
300-15-009 1
TAX AREA CODE
2000

RECEIPT REQUESTED ( )

PLEASE RETURN BOTH COUPONS WHEN PAYING FULL YEAR TAX

*IF TOTAL TAX DUE IS $25.00 OR LESS FULL AMOUNT IS DUE NOW.
SEE PAYMENT INSTRUCTIONS ON REVERSE SIDE OF NOTICE.
ENTER ADDRESS CORRECTION ON THE BACK OF THIS COUPON

1997 1ST HALF COUPON

TO PAY 1ST HALF ONLY	PAY ➡	********
TO PAY FULL YEAR TAX	PAY ➡	22.22

NOTE: 1st HALF TAXES DELINQUENT AFTER NOV 1, 1997

13300150090011997000000002222

1997 TAX NOTICE

TO DEC. 31, 1997 — COUNTY OF YAVAPAI — ARIZONA — ADDRESS: 1015 FAIR STREET PRESCOTT AZ 86301

AL DESCRIPTION: SECTION 0025 TWN 014 RNG ACRES 123.96 USE 0014
REKA DIST MINERAL DYKE B 20.66AC; MINERAL DYKE #10 20.66AC;
INERAL DYKE #11 20.66AC; MINERAL DYKE #12 20.66AC; MINERAL
YKE #14 20.66AC; MINERAL DYKE #16 20.66AC; ABOVE CLAIMS SI
ED IN SW4; W2 W2 NW4 SE4 SEC 25 & E2 E2 SE4 SEC 26; ALL IN T1
W; TOT 123.96AC

TAX ROLL NUMBER	47834
PARCEL IDENTIFICATION	300-19-003 5
TAX AREA CODE	2000

IMPORTANT - SEE REVERSE SID FOR COMPLETE EXPLANATION O YOUR 1997 TAX NOTICE AND PAYMENT INSTRUCTIONS.

300-19-003 5 47834

ZANNARAS JOHN P &
ROBINSON JOHN P JR
3168 E BERRIDGE LN
PHOENIX AZ 85016-2328

1997 TAX SUMMARY (3)	
PRIMARY AD VALOREM TAX	1939
LESS STATE AID TO EDUCATION	0
NET PRIMARY AD VALOREM TAX	1939
SECONDARY AD VALOREM TAX	492
SPECIAL DISTRICT TAX	0

PAY TOTAL OR HALF TAX

TOTAL TAX DUE ➡	2431
HALF TAX ➡	1215

DELINQUENT DATES
1st HALF NOV. 1, 1997
2nd HALF MAY 1, 1998

THIS IS THE ONLY NOTICE YOU WILL RECEIVE
NO RECEIPT WILL BE SENT UNLESS REQUESTED

PRIMARY PROPERTY TAX CALCULATION (1)

EM	LIMITED VALUE	ASSMT.%	ASSESSED VALUE	EXEMPTION	TAX RATE	AD VALOREM TAX
ND,BLDGS,ETC.	15599	160	2496	0	77702	19394
RSONAL PROPERTY	0	0	0	0	0	00
OTALS ➡	15599		2496	0		19394

SECONDARY PROPERTY TAX CALCULATION (2)

EM	LIMITED VALUE	ASSMT.%	ASSESSED VALUE	EXEMPTION	TAX RATE	AD VALOREM TAX
ND	15599	160	2496	0	19719	4922
DGS,ETC.	0	0	0	0	0	00
RSONAL PROPERTY	0	0	0	0	0	00
OTALS ➡	15599		2496	0		4922

1996-1997 TAX COMPARISON (4)

DE	TAX JURISDICTION	1997 PRIMARY	1997 SECONDARY	1997 TOTAL	1996 TOTAL	DIFFERENCE
9	YAV CO PAYMENT AHCCCS AND ALTCS	1577	00	1577	1656	-7
000	YAVAPAI COUNTY	2931	00	2931	3078	-14
001	SCHOOL EQUALIZATION	1323	00	1323	1323	0
002	TAX COURT JUDGMENT-B	00	00	00	4569	-456
020	BAGDAD UNIFIED SD #20	9922	3636	13558	11492	206
150	YAVAPAI COMMUNITY COLLEGE	3641	263	3904	3933	-2
900	FIRE DISTRICT ASSISTANCE FUND	00	251	251	251	0
900	YAVAPAI COUNTY LIBRARY DIST	00	260	260	284	-2
001	YAVAPAI FLOOD CONTROL DISTRICT	00	512	512	510	0
	TOTALS ➡	19394	4922	24316	27096	-278

TEAR OFF ALONG DOTTED LINES

TEAR OFF ALONG DOTTED LINES

ASE RETURN THIS PORTION WITH PAYMENT TO:

OSS JACOBS
OUNTY TREASURER
015 FAIR STREET
RESCOTT AZ 86301

TAX ROLL NUMBER	47834
PARCEL IDENTIFICATION	300-19-003 5
TAX AREA CODE	2000

RECEIPT REQUESTED ( )

ANNARAS JOHN P &
168 E BERRIDGE LN
HOENIX AZ85016

TOTAL TAX DUE IS $25.00 OR LESS FULL AMOUNT IS DUE NOW.
PAYMENT INSTRUCTIONS ON REVERSE SIDE OF NOTICE.
ER ADDRESS CORRECTION ON THE BACK OF THIS COUPON.

1997 2ND HALF COUPON

PAY 2ND HALF PAY ➡ 121.58

nd HALF TAXES DELINQUENT AFTER MAY 1, 1998

13300190030051997000000012158

PLEASE RETURN THIS PORTION WITH PAYMENT TO:

ROSS JACOBS
COUNTY TREASURER
1015 FAIR STREET
PRESCOTT AZ 86301

TAX ROLL NUMBER	47834
PARCEL IDENTIFICATION	300-19-003 5
TAX AREA CODE	2000

RECEIPT REQUESTED ( )

ZANNARAS JOHN P &
3168 E BERRIDGE LN
PHOENIX AZ85016

PLEASE RETURN BOTH COUPONS WHEN PAYING FULL YEAR TAX

*IF TOTAL TAX DUE IS $25.00 OR LESS FULL AMOUNT IS DUE NOW.
SEE PAYMENT INSTRUCTIONS ON REVERSE SIDE OF NOTICE.
ENTER ADDRESS CORRECTION ON THE BACK OF THIS COUPON.

1997 1ST HALF COUPON

TO PAY 1ST HALF ONLY	PAY ➡	121.58
TO PAY FULL YEAR TAX	PAY ➡	243.16

NOTE: 1st HALF TAXES DELINQUENT AFTER NOV 1, 1997

13300190030051997000000012158

997 TAX NOTICE

JAN. 1, 997 TO DEC. 31, 1997

COUNTY OF YAVAPAI ARIZONA

ADDRESS: 1015 FAIR STREET
PRESCOTT AZ 86301

AL DESCRIPTION: SECTION 0001 TWN 013 RNG ACRES 167.95 USE 8794
REKA DIST ZANNARAPOLIS #1; ZANNARAPOLIS #6; ZANNARAP
IS #8; ZANNARAPOLIS #12; ZANNARAPOLIS #17; ZANNARAPOLIS #19
ZANNARAPOLIS #25; ZANNARAPOLIS #28; ZANNARAPOLIS #25 MS; SEC
12 11 T13 R10W TOT 167.959AC

TAX ROLL NUMBER
47622
PARCEL IDENTIFICATION
300-03-001 2
TAX AREA CODE
2000

IMPORTANT – SEE REVERSE SID FOR COMPLETE EXPLANATION O YOUR 1997 TAX NOTICE AND PAYMENT INSTRUCTIONS.

300-03-001 2 47622

U S TUNGSTEN CORP
ZANNARAS J *
3168 E BERRIDGE LN
PHOENIX AZ 85016-2328

1997 TAX SUMMARY (3)	
PRIMARY AD VALOREM TAX	2669
LESS STATE AID TO EDUCATION	0
NET PRIMARY AD VALOREM TAX	2669
SECONDARY AD VALOREM TAX	677
SPECIAL DISTRICT TAX	0

PAY TOTAL OR HALF TAX

TOTAL TAX DUE ➡	3346
HALF TAX ➡	1673

DELINQUENT DATES
1st HALF NOV. 1, 1997
2nd HALF MAY 1, 1998

THIS IS THE ONLY NOTICE YOU WILL RECEIVE
NO RECEIPT WILL BE SENT UNLESS REQUESTED

PRIMARY PROPERTY TAX CALCULATION (1)

EM	LIMITED VALUE	ASSMT.%	ASSESSED VALUE	EXEMPTION	TAX RATE	AD VALOREM TAX
ND,BLDGS,ETC.	21465	160	3435	0	77702	26692
RSONAL PROPERTY	0	0	0	0	0	00
TOTALS ➡	21465		3435	0		26692

SECONDARY PROPERTY TAX CALCULATION (2)

EM	LIMITED VALUE	ASSMT.%	ASSESSED VALUE	EXEMPTION	TAX RATE	AD VALOREM TAX
AND	21135	160	3382	0	19719	6671
LDGS,ETC.	330	160	53	0	19719	105
ERSONAL PROPERTY	0	0	0	0	0	00
TOTALS ➡	21465		3435	0		6776

1996-1997 TAX COMPARISON (4)

ODE	TAX JURISDICTION	1997 PRIMARY	1997 SECONDARY	1997 TOTAL	1996 TOTAL	DIFFERENCE
9	YAV CO PAYMENT AHCCCS AND ALTCS	2172	00	2172	2279	-10
0	YAVAPAI COUNTY	4034	00	4034	4237	-20
001	SCHOOL EQUALIZATION	1821	00	1821	1821	0
002	TAX COURT JUDGMENT-B	00	00	00	6288	-628
020	BAGDAD UNIFIED SD #20	13654	5005	18659	15819	284
150	YAVAPAI COMMUNITY COLLEGE	5011	363	5374	5415	-4
900	FIRE DISTRICT ASSISTANCE FUND	00	345	345	345	0
900	YAVAPAI COUNTY LIBRARY DIST	00	359	359	391	-3
001	YAVAPAI FLOOD CONTROL DISTRICT	00	704	704	703	0
	TOTALS ➡	26692	6776	33468	37298	-383

TEAR OFF ALONG DOTTED LINES

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ROSS JACOBS
COUNTY TREASURER
1015 FAIR STREET
PRESCOTT AZ 86301

J S TUNGSTEN CORP
3168 E BERRIDGE LN
PHOENIX AZ85016

TAX ROLL NUMBER
47622
PARCEL IDENTIFICATION
300-03-001 2
TAX AREA CODE
2000

RECEIPT REQUESTED ( )

TOTAL TAX DUE IS $25.00 OR LESS FULL AMOUNT IS DUE NOW.
PAYMENT INSTRUCTIONS ON REVERSE SIDE OF NOTICE.
ER ADDRESS CORRECTION ON THE BACK OF THIS COUPON.

1997 2ND HALF COUPON

PAY 2ND HALF	PAY ➡	167.34

nd HALF TAXES DELINQUENT AFTER MAY 1, 1998

13300030010021997000000016734

PLEASE RETURN THIS PORTION WITH PAYMENT TO:

ROSS JACOBS
COUNTY TREASURER
1015 FAIR STREET
PRESCOTT AZ 86301

U S TUNGSTEN CORP
3168 E BERRIDGE LN
PHOENIX AZ85016

TAX ROLL NUMBER
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PARCEL IDENTIFICATION
300-03-001 2
TAX AREA CODE
2000

RECEIPT REQUESTED ( )

PLEASE RETURN BOTH COUPONS WHEN PAYING FULL YEAR TAX

*IF TOTAL TAX DUE IS $25.00 OR LESS FULL AMOUNT IS DUE NOW.
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ENTER ADDRESS CORRECTION ON THE BACK OF THIS COUPON.

1997 1ST HALF COUPON

TO PAY 1ST HALF ONLY	PAY ➡	167.34
TO PAY FULL YEAR TAX	PAY ➡	334.68

NOTE: 1st HALF TAXES DELINQUENT AFTER NOV 1, 1997

13300030010021997000000016734

Mine: Zannarapolis Tungsten

County: Yavapai

ADMMR File: Zannarapolis Tungsten

Date: May 2, 1986

Engineer: Ken Phillips

3168 E Bearedge Lane
PV 85016
954-8833

On the above date, together with George Kokalis and Pat Phillips, a visit was made to the camp and property known as Zannarapolis Tungsten. The purpose of the trip was to recover maps and records abandoned upon the death of John Zannaras. The property has been willed to the Holy Trinity Greek Orthodox Church of Phoenix. George Kokalis is the executor of the estate.

Books, maps, reports, and personal records were sorted through to recover those pertinent to the mining claims and mineral deposits. Those of a technical nature have been obtained for inclusion in the mine file. Those of a legal nature are being retained by Mr. Kokalis and the personal letters and papers are being destroyed. Also recovered were six boxes of potentially dangerous chemicals from the assay lab at the property.

Although access roads to the property are gated and locked, some vandalism had already taken place.

The crushing plant consisting of primary jaw crusher, rolls, screens, generator set and bins was mostly intact. The numerous buildings on the property were in good shape.

Although long considered a tungsten mine, the Zannaras brothers have had many exploration companies look at this property as a copper prospect. Data obtained from some of those companies is included in the recovered information and has been added to the file.

ZANNARAPOLIS TUNGSTEN

YAVAPAI COUNTY
EUREKA DISTRICT

Visited John Zannaras and examined several dozer cuts. The geochemical sampling indicates a good size ore body - 1000' by 3000' Zn-Cu. Several companies are interested.

FTJ WR 9/8/67

Visited Zannaras property. Drilling stations are being bulldozed on the Lawler claims adjoining Zannaras, by Standard Metals. No activity on Zannaras claims.

11/10/67 FTJ WR

No activity on the Zannaris property nor the Lawlor claims, although Standard Metals still holding option.
FTJ WR 6/20/69

John Zannaras said that Cominco was examining his copper prospect near Bagdad.
FTJ WR 10/23/70

It is rumored that Cyprus Corp., is doing some exploratory drilling on some of the Zannaras property. GW WR 5/24/72

Went to Zannaras brothers' camp. They have leased a part of their 22 patented claims to Cyprus who has been doing some drilling and geologic work on them. They know of no bentonite either. GW WR 9-29-73

KP WR 5/1/79 - A telephone call was received from a Richard Larr (sp ?) regarding the Zannaropolis Tungsten claims. The man recited a 8-10 minute high speed monotone monolog about his families' investment in the property years ago. He then (upon completion of his talking) said he would send us a letter and hung up. I said no more than "hello". He made no requests for information, although much monolog was not understandable due to his high speed. 6/19/79 a.p.

KAP WR 5/2/86: Assisted George Kokalis, the representative of the Holy Trinity Greek Orthodox Church which owns the patented and unpatented Zanneropolis mining claims in Arizona, I was able to get an opportunity to visit with Burton Barr regarding the Department's budgetary problems. A separate report has been written.

ZANNARAPOLIS TUNGSTEN YAVAPAI COUNTY

Simplot of Idaho drilled 2 or 3 holes on Zannaras Tungsten, but apparently dropped the option.

FTJ WR 3/4/66

Visited John Zannaras property. He is apparently not exploring the tungsten but has 14 patented and 70 unpatented claims that he has been working on, by way of numerous open cuts and then takes samples for Geo Chem. testwork. A preliminary report will be written.

FTJ WR 6/23/67

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*

IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF HEARINGS AND APPEALS
INTERIOR BOARD OF LAND APPEALS
4015 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22203

U. S. TUNGSTEN CORPORATION

IBLA 74-162 Decided September 23, 1974

Appeal from decision (A-5338) of Arizona State Office, Bureau of Land Management, dismissing protest against approval of a right-of-way for water pipeline.

Affirmed.

1. Mining Claims: MILLSITES; RIGHTS OF WAY - applications; WATER.

Except where the United States itself asserts an interest, the Department does not adjudicate water rights and will not deny an application for right-of-way to transport water to a millsite upon the basis of a protest of the amount of water to be used under a State water permit or on the basis of an alleged conflict with the protestant's own water rights where it appears the protestant has a remedy at law to protect its interests.

APPEARANCES: Gerald L. Diddy, Esq., of Wickenburg, Arizona, for appellant; Jon S. Cohen, Esq., of Snell and Wilmer, Phoenix, Arizona, for permittee.

OPINION BY ADMINISTRATIVE JUDGE GOSS

U. S. Tungsten Corporation has appealed from a decision of the Arizona State Office, Bureau of Land Management, dated November 16, 1973, which dismissed its protest against the granting of a water pipeline right-of-way to Bagdad Copper Corporation 1/ through public lands in sections 20 and 28, T. 15 N., R. 9 W., and sections 1, 12,

1/ Cyprus Mines Corporation has succeeded to the interest of Bagdad Copper Corporation.

INDEX CODE:
43 CFR §2802(1973)
43 CFR §2802.1-5(1973)
43 CFR §2802.1-5(b)(1973)
43 CFR §2802.2-1(a) (1973)
43 CFR §2871.0-3(5) (1973)

Claims on BLM Microfiche, April 1986
Zonneropolis Tungsten, Gavapai County.

AMC #	Lead File	Claim Name	¼	Sec	T	R	Assess
70434	SAME	CZ-1	SE SW	24 19	14 14	10 9	1985
70435	70434	CZ-2	SE SW	24 19	14 14	10 9	1985
70435	70434	CZ-3	SE SW	24 19	14 14	10 9	1985
70437	70434	Mineral Dyke NE	NE	30	14	9	1985
70438	70434	Mineral Dyke SE #1	SE	30	14	9	1985
70439	70434	Mineral Dyke SE #2	SE	30	14	9	1985
70440	70434	Mineral Dyke #1	W½ SE	30 25	14 14	9 10	1985
70441	70434	Mineral Dyke #5	SW	30	14	9	1985
70442	70434	Mineral Dyke #6	SW	30	14	9	1985
70443	70434	Mineral Dyke #7	SE	25	14	10	1985
70444	70434	Mineral Dyke #8	SE	25	14	10	1985
70445	70434	Mineral Dyke #9	S½	25	14	10	1985
70446	70434	Mineral Dyke #13	W½	25	14	10 W	1985
70447	70434	Mineral Dyke #15	W½	25	14	10 W	1985
70448	70434	Mineral Dyke #17	SE	26	14	10	1985
70449	70434	Mineral Dyke #18	NW	31	14	9	1985
70450	70434	Mineral Dyke #19	N½	31	14	9	1985
70451	70434	Mineral Dyke #21 Exc	SE NE	19 30	14 14	9 9	1985
70452	70434	Mineral Dyke #22	N½	30	14	9	1985
70453	70434	Mineral Dyke #34	NW NE	25 26	14 14	10 10	1985
70454	70434	Mineral Dyke #35	NW NE	25 26	14 14	10 10	1985
70455	70434	Mineral Dyke #36	SW NW	24 25	14 14	10 10	1985
70456	70434	Mineral Dyke #37	NW	25	14	10	1981 Closed 10/14/83
70457	70434	Mineral Dyke #38	NW	25	14	10	1985

AMC #	Lead File	Claim Name	1/4,	Sec	T	R	Asses
70458	70434	Mineral Dyke #39	S½	24	14	10	1985
70459	70434	Mineral Dyke #40	SE	24	14	10	1985
70460	70434	Mineral Dyke #41	S½	24	14	10	1985
70461	70434	Mineral Dyke #42	SE	24	14	10	1985
70462	70434	Mineral Dyke #43	SE NE	19 30	14 14	9 9	1985
70463	70434	Mineral Dyke #44	S½ N½	19 30	14 14	9 9	1985
70464	70434	Mineral Dyke #50	NW	31	14	9	1981 Closed 10/14/83
70465	70434	Mineral Dyke #51	N½	31	14	9	1981 Closed 10/14/83
70466	70434	Mineral Dyke #52	SW	30	14	9	1985
70467	70434	Mineral Dyke #53	S½	30	14	9	1985
70468	70434	Mineral Dyke #54	SW	30	14	9	1985
70469	70434	Mineral Dyke #55	NE	36	14	10	1985
70470	70434	Mineral Dyke #57	S½	30	14	9	1985
70471	70434	Mineral Dyke #58	S½	30	14	9	1985
70472	70434	Mineral Dyke #59	SE	30	14	9	1985
70473	70434	Mineral Dyke #60	SE	30	14	9	1985
70474	70434	Mineral Dyke #62	E½	30	14	9	1985
70475	70434	Mineral Dyke #64	NE	30	14	9	1985
70476	70434	Mineral Dyke #66	NE	25	14	10	1985
70477	70434	Mineral Dyke #68	NE	25	14	10	1985
70478	70434	Mineral Dyke #69	NE	25	14	10	1985
70479	70434	Mineral Dyke #70	NE	25	14	10	1985
70480	70434	Mineral Dyke #71	NE	25	14	10	1985
70481	70434	Mineral Dyke #72	NE	25	14	10	1985

AMC #	Lead file	Claim name	1/4	Sec	T	R	
70482	70434	Mineral Dyke #73	E½	25	14	10	1985
70483	70434	Mineral Dyke #74	E½	25	14	10	1985
70484	70434	Mineral Dyke C	W½	25	14	10	1985
70485	70434	Mineral Dyke D	W½	25	14	10	1985
70486	70434	Mineral Dyke E	C	25	14	10	1985
70487	70434	Mineral Dyke F	N½	25	14	10	1985
70488	70434	Mineral Dyke G	N½	25	14	10	1985
70489	70434	Mineral Dyke H	N½	25	14	10	1985
70490	70434	Mineral Dyke I	W½ NE	30 25	14 14	9 10	1985
70491	70434	Mineral Dyke J	W½	30	14	9	1985
70492	70434	Mineral Dyke K	SW SE	30 25	14 14	9 10	1985
70493	70434	Mineral Dyke N	NW	30	14	9	1985
70494	70434	Mineral Dyke O	NW SW	30 19	14 14	9 9	1985
70495	70434	Mineral Dyke P	NW SW	30 19	14 14	9 9	1985
70496	70434	Mineral Dyke Q	NW SW NW	30 19 30	14 14 14	9 9 9	1985
70497	70434	Mineral Dyke R	SW SE	19 24	14 14	9 10	1985
70498	70434	Mineral Dyke S	W½	30	14	9	1985
70499	70434	Mineral Dyke T	SW	30	14	9	1985
70500	70434	Mineral Dyke U	S½	25	14	10	1985
70501	70434	Mineral Dyke V	SE	25	14	10	1985
70502	70434	Mineral Dyke W	E½	26	14	10	1985
88655	Same	B 20	S½	25	14	10	1981
88656	88655	B 21	NE	30	14	9	1981
88657	88655	B 22	E½	25	14	10	1981

AMC#	Lead file	Claim Name	¼	Sec	T	R	Assess	
88658	88655	B23	W½	30	14	9		
			E½	25	14	10	1981	
88659	88655	B24	NW	30	14	9		
			SE	25	14	10	1981	
88660	88655	B25	NW	30	14	9		
			NE	25	14	10	1981	Closed 10/14/83
			SW	19	14	10		
			SE	24	14	10		
88661	88655	B26	NE	25	14	10		
			NW	30	14	9	1981	
88662	88655	B27	SW	30	14	9		
			SE	25	14	10	1981	
			NE	36	14	10		
			NW	31	14	9		
88663	88655	B28	SE	30	14	9		
			SW	29	14	9	1981	
88664	88655	Mineral Dyke 23-II	E½	30	14	9	1981	
92862	88655	Mineral Dyke No 64-11	NE	30	14	9	1981	

Listed under U S Tungsten

66269	66260	Phoebe No 1	N½	25	14	10	1981	Closed 10/14/83
66270	66260	Phoebe No 2	E½	25	14	10	1981	Closed 10/14/83

November 20, 1968

Mr. Olaf Sund
Phelps Dodge Corporation
Western Exploration Office
Post Office Box
Prescott, Arizona

Dear Mr. Sund:

I am enclosing two reports of Geochemical assays dated October 30, 1968 and November 13, 1968, which cover a portion of the copper outcrops in the Western portion of our claims which we trenched recently with a D9 Bulldozer.

The first nine samples of the October 30, 1968 report were taken every forty feet, or less, apart.

After some field tests I noticed that all the grounds which were exposed by the trenching were anomalous in copper and I decided to take general samples instead of samples at points 30 to 40 feet away. The General Samples were taken in the following manner:

Starting from South, I divided each trench to distances ranging from 100 feet to 170 feet and placed stone monuments indicating these distances. Small rock chips were taken every two feet along each distance which was previously indicated by the stone monuments. About 4 - 5 pounds of rock chips were collected in each sample, which were ground, quartered and assayed by the Rocky Mountain Geochemical Laboratories, 519 North Washington Ave., Prescott, Arizona, 86301. All the samples of the November 13, 1968 report are General Samples, as well as Samples No. 10, No. 11 and No. 12 of the October 30, 1968 report are general samples obtained in the above described manner.

To check the sampling and testing, a week later after picking the samples of the October 30, 1968 samples, I went back, and split in two the distance of General Sample No. 2 of the 3rd row (trench), and picked up general samples for the split distance which I estimated to be 170 feet, and made two samples, No. 19 and No. 20, of the November 13, 1968 report. As it is shown in the reports, the first report for the entire distance of No. 2, for the 3rd row is 400 p.p.m., and for the split parts - 440 p.p.m. and 460 p.p.m which checks favorably both for sampling and testing.

Distribution of Mineralization: It is well known that in the Duval property at Mineral Property in Mohave County north of our properties, the mineralization is found in the factures (that is the mineral is not uniformly distributed in the rock). In fact in page 1271 of the Graton-Sales book it is reported:

"About 90 per cent of the Sulphides
occur as fracture fillings"

it is assumed that the same condition is applicable in our place, and therefore the distribution of the copper anomalies is probably associated with the degree, extent and nature of the factures, at the different areas of the trenched ground.

Outcrops of our Copper and Copper and Zinc properties:
If we assume that the ores in our properties after their formation, were deformed resulting to ores with pronounced Schistose texture as it happens in the Copper Queen (Graton-Sales - pages 1320-1321) then the question arises; Will these Schistose texture ores upon oxidation leave in their oxidozed outcrops the typical box-shaped pattern of the well defined sulphide crystal, or will they leave as oxidized outcrops a deformed Schistose pattern which will be unrecognizable by those who eagerly are seeking the box-type pattern and failing to see it, will get an erroneous conclusion, under these conditions.

It is my opinion that Geochemistry is of great help. I believe the above condition not only prevails in the copper anomalous area which we trenched, but also that it is very prominent because the sulphides of this area are fine grained.

Possibility of Lower Grade Copper-Zinc deposits in our grounds:
I quote from Graton-Sales on page 1313 -

"A few hundred feet northwest of the
lens is an area of scattered mineral-
ization, locally of ore grade, several
hundred feet in diameter on the surface,
in rocks 100 to 400 feet statigraphically
lower than the main lens. These two mani-
festations of Mineralization are only
slightly explored at present, so cannot
be further described in this paper."

In our properties there is an area of almost half a mile, and in places, one thousand feet wide, anomaleous in Zinc and Copper (The Bulldozer Hill).

It is unquestionable that the work of the Cyprus Mines Co. in the adjoining properties has been the source of valuable information for this district.

Yours very truly

JPZ:lfb

JOHN P. ZANNARAS