



## **CONTACT INFORMATION**

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

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05/12/87

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: ALICE MINE

ALTERNATE NAMES:

ALICE SHAFT  
CENTRAL NEVADA MLG. CO. PROP.  
PRATT TUNNEL  
TROY COPPER CO. PROPERTY

PINAL COUNTY MILS NUMBER: 138B

LOCATION: TOWNSHIP 3 S RANGE 14 E SECTION 33 QUARTER N2  
LATITUDE: N 33DEG 07MIN 56SEC LONGITUDE: W 110DEG 55MIN 17SEC  
TOPO MAP NAME: SONORA - 7.5 MIN

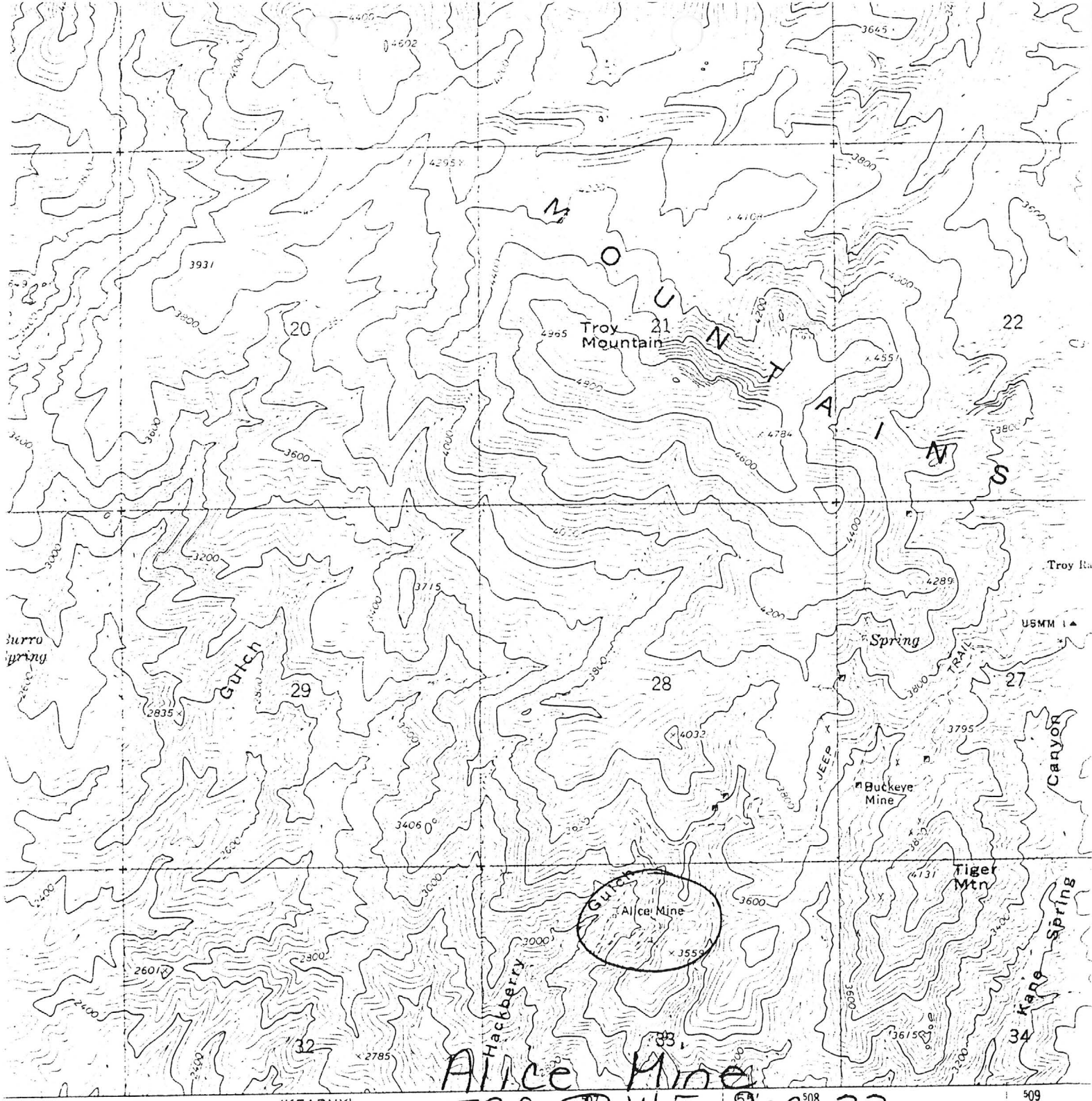
CURRENT STATUS: PAST PRODUCER

COMMODITY:

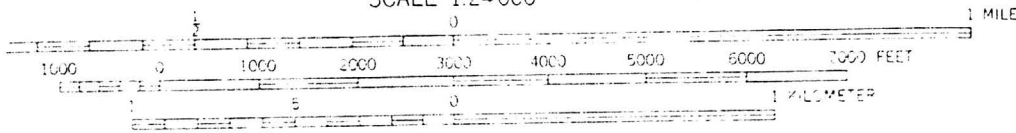
COPPER OXIDE  
LEAD  
GOLD  
SILVER

BIBLIOGRAPHY:

ADMMR ALICE MINE FILE  
RANSOME, F.L., RAY FOLIO 1923, P. 22  
ADMMR U FILE PINAL CU20 (USBM NO 463.2/15083)  
USGS MAP GQ 1021; 1971  
RANSOME, F.L. USGS GEOLOGIC ATLAS OF THE RAY  
FOLIO, P 22  
ADMMR TROY MINE FILE



(KEARNY)  
3850 III SW  
SCALE 1:24,000



CONTOUR INTERVAL 40 FEET  
DOTTED LINES REPRESENT 20-FOOT CONTOURS  
DATUM IS MEAN SEA LEVEL



QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
MADE BY U. S. GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D. C.  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Sonora 7.5'

# The Arizona Daily Star

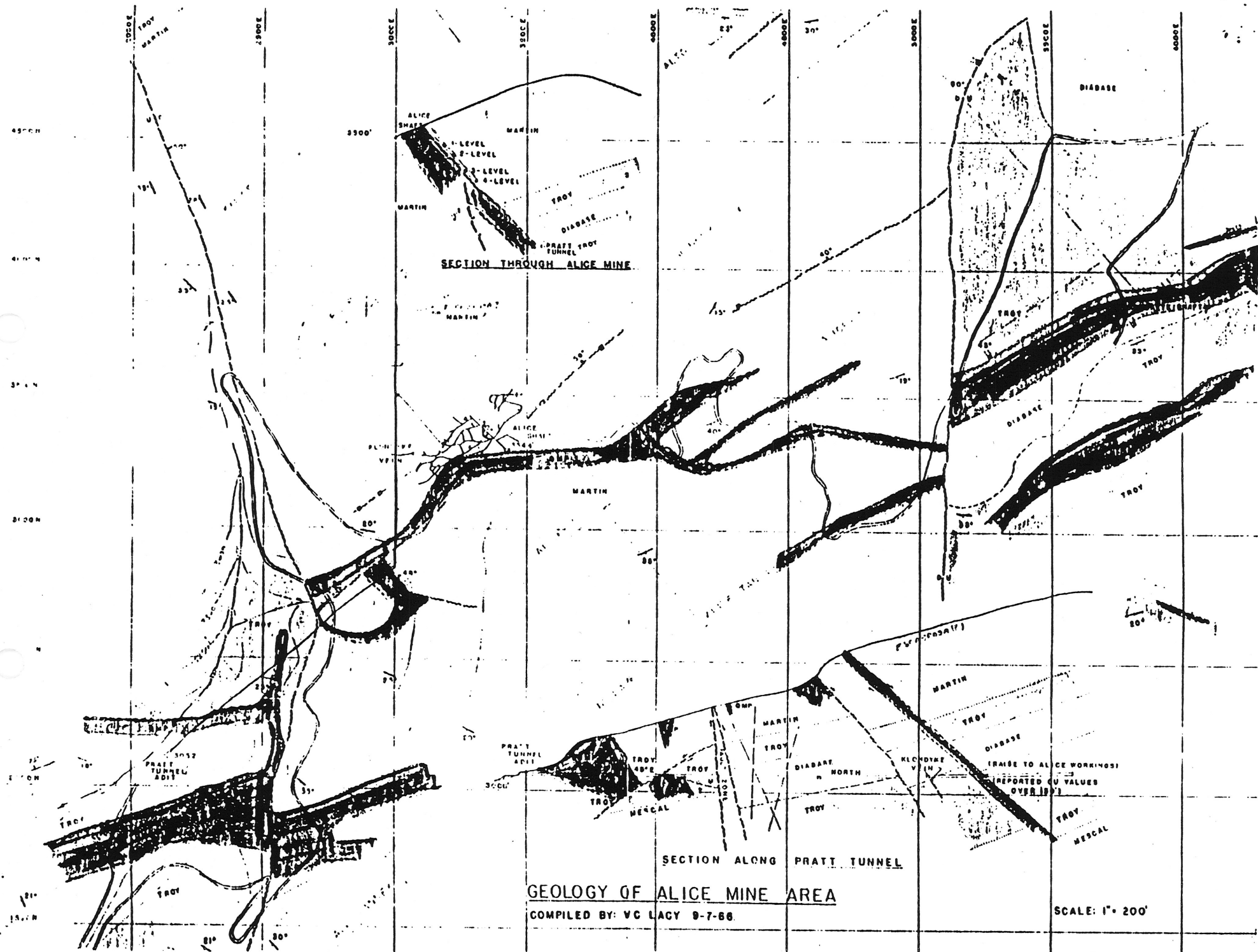
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Final Edition, Tucson, Thursday, February 23, 1990





SECTION THROUGH ALICE MINE

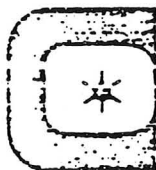
SECTION ALONG PRATT TUNNEL

GEOLOGY OF ALICE MINE AREA

COMPILED BY: VC LACY 9-7-66

SCALE: 1" = 200'





PRELIMINARY GEOLOGICAL REPORT  
on  
"TROY" CLAIM GROUP  
PINAL COUNTY, ARIZONA

F.L. Croteau

February 15, 1971

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F.L. CROTEAU LTD.

PRELIMINARY GEOLOGICAL REPORT

on

"TROY" CLAIM GROUP

PINAL COUNTY, ARIZONA

by

F.L. Croteau, B.Sc.  
P.Eng.      P.Geol.

Vancouver, B.C.  
February 15, 1971

## INTRODUCTION

Acting under instruction from Mr. J. Abrams of Shawnex Mines Ltd. (N.P.L.) of Calgary, Alberta, I have carried out a reconnaissance geological survey of certain mining claims, commonly known as the "Troy" group, located approximately 60 miles northerly from Tuscon, Arizona. The prime purpose of the examination was to ascertain geological conditions, check location of the older workings, examine the area from an accessibility standpoint and to recommend, if advisable, a future program of operations. The area was visited on February 4 and 5, 1971. Messrs. Abrams and J. Gaylor were present during examination of the property. Weather conditions were satisfactory for field examination.

## LOCATION

The claim group is located in the Riverside Mining District in Pinal County in the State of Arizona. Paved roads extend to within 10 miles of the property (Highways 80 and 77) after which a winding, variable elevation trail continues to the claim group. A four-wheel drive vehicle is advisable over the latter portion of the trail. The nearest town where nominal supplies can be obtained is Winkelman. Mining and major supplies would be secured from Tuscon or Phoenix. Good airline services are available at Tucson.

There are no power lines in the immediate vicinity of the property but adequate power is available in the general area and

would necessitate connections less than 10 miles in length.

There are indications of minor springs and some water seepage from former mine workings but any substantial demand for water would have to be met from the Gila River, a distance of approximately 3 miles from the claims.

### CLAIMS

*original*

*Now approx  
56 claims  
25*

The "Troy" group consists of 14 unpatented lode mining claims, the location notices of which are recorded in the office of the County Recorder of Pinal County, Arizona, in the Book and at the Pages of "Record of Mines" set opposite their respective names as follows:

<u>Name of Claim</u>	<u>Book Number</u>	<u>Page</u>
Alice #1	52	331
Alice #2	52	322
Alice #3	52	322
Alice #4	52	327
Alice #5	52	327
Alice #6	52	327
Alice Annex	52	328
Alto	52	328
Burro	52	329
Johnny Boy	52	329
Pratt Spring	52	329
Skyline	52	330
White Tail Deer	52	330
Gaylor		

31 additional claims have been added to this group

All claims are contiguous and are staked in accordance with the laws and regulations governing Mineral Rights in the State of Arizona.

### ACREAGE

There are 280 acres, more or less, included in the 14 claim block.

### TITLE

The claims are currently held by Shawnex Mines Ltd. and associates under an option agreement with Mr. James E. Gaylor. Mr. Gaylor is the owner of, subject only to the paramount title of the United States of America, those certain fourteen (14) unpatented lode mining claims, <sup>Now A TOTAL OF 45 CLAIMS</sup> described in the above section under title of "Claims". The claims are held under the laws and regulations governing Mineral Rights in the State of Arizona.

### HISTORY

Historical records indicate that mining activity in the "Troy" area commenced sometime prior to 1900 but the first recorded information shows in the "Copper Handbook", Volume 2, dated 1902. Between this latter period and 1925 considerable mining was carried out in the area. There were numerous company changes and various mining engineers and mining personnel reported on activities that took place on the "Troy" and adjoining claim groups.



A number of shafts, adits, winzes and underground workings were developed on the various properties, none of which are fully accessible today. However records show that a considerable amount of copper oxide ore was removed from the area.

It would appear that finances and widely varying demand and pricing for copper created an unstable media for mining in the area. Transportation and lack of nearby smelting facilities <sup>in 1902</sup> were also adverse factors.

Comments made through various mining reports indicate that various engineers were conscious of the possibility of copper sulphide ore at depth in the area. This assumption has been proven to be a correct one in various nearby mining operations in southern Arizona.

### TOPOGRAPHY

The general claim area can be described as rugged but is not mountainous. The general elevation of the country increases when one proceeds westward from Highway 77 and leads into an area known locally as the Dripping Spring Mountains. Elevations in the area reach a maximum of 4800 feet but on the claim group are closer to a maximum of 3600 feet above mean sea level.

The area is quite arid and there is little or no tree growth on the claims. Fault action has created a number of sharply

incised valleys and canyons. There are a few springs in existence in the claim area but a main water source would have to be obtained from the Gila River, a distance of three miles westward from the subject property.

Present access to the property is from an easterly direction over a winding road with variable but not severe grades. It would appear that a much shorter route with more equitable grades would be possible.

There is a limited soil cover in the claim area and a general strip mining operation would not necessitate a high stripping ratio to reach rock surfaces.

#### AREAL GEOLOGY

The general area under consideration has been one where most developments of ore have originated as carbonate replacement bodies in the limestone and ultimately these have given way to potential sulphide ore bodies in the deeper seated intrusive bodies.

The general geology is represented by a predominantly sedimentary series of rocks which are underlain by rocks of an intrusive nature. Locally there may be some reversal or juxtaposition of the above sequence due to faulting and other structural causes.

Sedimentary rocks in evidence were quartzite, limestone, phyllitic schist and conglomerate. Intrusives present were diabase, dacite porphyry and granite which ranged to altered granodiorite in composition. The porphyry and diabase occur from reasonable sized dykes to more broad intrusions (diabase) in form. Brecciation is not an uncommon characteristic of the rock formations.

There is considerable evidence of alteration both in the sediments and in the intrusives and can be attributed to the metamorphic and hydrothermal action associated with the intrusive rock formations. The most important alteration effect, associated with the development of ore bodies, is the lime-silicate alteration sequence.

### STRUCTURAL GEOLOGY

The main copper bearing areas of Arizona have been subjected to considerable faulting and fissuring which originated from broad tectonic movements and from the more local intrusions of igneous rock. The faults and fissures thus created have proven to be excellent sources for ore deposition within the sedimentary rock sequence. The intrusive diabase and porphyry bodies were the likely carriers of primary sulphide material from the main igneous mass and should act as focal points for copper ore concentration.

The "Troy" area shows pronounced faulting to occur in a northeast-southwest trending direction and this together with the

resultant fissuring has proved to be the locus for the ore bodies, that occurred in the "Alice" mine. A pronounced north-southerly fault occurs in the more westerly portion of the claim block and creates a sharp demarkation line between the limestone and quartzite bodies and gives definite indication that the quartzite body to the west formed the up-thrown side of the fault.

### CLAIM GEOLOGY

A reasonable portion of the claim block is exposed as rock outcrop and a fair idea can be secured of rock sequence and some of the structural controls. The main area of previous exploration and mining was centred around the "Alice" shaft which is located in the north-easterly corner of the Alice No. 2 claim. Later, in an effort to reach the "Alice" orebody at greater depth, an adit known as the "Pratt" tunnel was driven from a point in the east central portion of Alice No. 1. (These locations can be more readily seen on the accompanying maps.)

The presently known ore body lies along and may well have been associated with the NE-SW trending "Climax" fault.

Previous geological work reported from the "Alice" mine workings and the "Pratt" tunnel indicate a descending series comprised as follows:

Martin Limestone (Devonian)  
Troy Quartzite (Cambrian)  
Diabase Sill (Mesozoic)  
Troy Quartzite (Cambrian)

with the entire above series intruded intermittently and irregularly by Quartz Monzonite Porphyry (possibly of Tertiary age) occurring both fairly massively and as definite dykes.

Ore in the "Alice" shaft occurred along and adjoining a contact zone between the Martin Limestone and a prominent Quartz Monzonite Porphyry dyke. A fault zone was the apparent locus for the Quartz Monzonite Porphyry intrusion.

The sedimentary formations are well developed and readily distinguishable. The limestone is a dark grey, fossiliferous formation, massive in nature and thus readily subject to fracture. The quartzite is a dense, clean silica type and shows a well developed conglomerate base. Specimens of intrusive material seen on the "Pratt" tunnel dump were relatively fresh in appearance while surface outcrop specimens showed marked weathering effects.

A local zone approximating a phyllitic schist occurs on surface at the approximate position where the vertically upward extension of the "Pratt" tunnel would intersect the main N-S fault separating the limestone and quartzite bodies. This may be an occurrence of Pinal Schist (Pre Cambrian).

## ECONOMIC GEOLOGY

There is no record of the mining activity or production that may have taken place in the Troy area previous to 1900. Records show that mining was actively in progress in 1900 and that a vein 3.0 to 11.0 feet wide was being mined from a 400 foot shaft with a number of supporting levels. Grade of copper was 12 per cent and 3000 tons of ore were reported stockpiled at the "Alice" mine. In 1901 production was reported at 120,000 pounds of copper secured from a 500 ton shipment of ore. Similar production averaging in the 8.0 to 16.0 per cent copper range carried on intermittently until about 1922.

It was apparent in the early 1920's that unstable copper prices and the likelihood that the oxide ore in the "Alice" workings may have been decreasing in volume and grade. The latter assumption is made on the basis of a 1917 newspaper report which stated "The Alice shaft is down 400 feet and passed through 50 feet of 4.0 per cent sulphide ore, too low grade to be handled profitably at the time it was opened. This ore will be developed through what is known as the Pratt tunnel".

Other mines in the area known as the Buckeye, Manhattan, and Rattler were productive but to what extent is unknown to the writer.

Ore mined from the area was essentially copper oxide and little or no effort was made to mine or to advance exploration of sulphide bodies. Conversation with technical personnel has indicated that oxide bodies vary widely in size and that when any accumulation occurs the general area should be closely examined for deeper seated or repeat bodies that may be quite extensive in nature. It has also been proven in Arizona that oxide bodies commonly give way to primary sulphide bodies which form the majority of the "porphyry copper" bodies of that state.

The subject claim block occurs near the boundary between Pinal and Gila counties and some generalized descriptions of ore occurrences in those areas is as follows:

1. Vein deposit with some replacement ore in limestone.  
Underground.
2. Chalcocite blanket in schist and chalcopryrite in diabase.  
Open Pit.
3. Disseminated in granite and monzonite porphyry.  
Underground.
4. Disseminated in quartz monzonite. Open cut.
5. Vein deposit with some supergene enrichment. Underground.



6. Limestone replacement deposits. Underground.

Understandingly grades vary over a considerable range and in general enrichment is associated with the main fault and fissure areas of the formation.

CONCLUSIONS

1. The subject area has a record of production from oxide ore bodies and old reports indicate that primary sulphides were encountered during extraction of the oxide ores.
2. Structural conditions on the property are favourable for the accumulation of ore bodies.
3. The broad sedimentary cover on the property has been subject to fault activity and to substantial igneous intrusion.
4. The igneous intrusives are essentially diabase, which appears to occur as a sill or flatly bedded deposit, and Quartz Monzonite Porphyry which occurs as small masses and more particularly as dykes ranging from a few feet thickness to around 200 feet.
5. Ore occurrences appear to be a function of fault action. The fault areas having opened the channels along which igneous intrusion took place carrying the copper sulphides.

into areas where ultimate near surface oxidation took place.

6. As a consequence of Item 5 the main areas of exploratory concentration should be those embracing faults and intrusive rock formation.
7. Recorded information shows that minor copper oxide occurrences will commonly lead to major bodies both in the horizontal and vertical planes, and that oxidation is not merely a near surface phenomenon.
8. The substantiation of primary sulphide bodies on the claim group is a feature that requires deep seated geophysical techniques.
9. No useful purpose would be served through conducting a geochemical survey.
10. Sufficient water for diamond drill purposes should be available due to a limited seepage from the Pratt tunnel.
11. No useful purpose would presently be served by any attempt to rehabilitate the "Alice" shaft or the "Pratt" tunnel.
12. Old maps indicate that there may be linkage between the former "Alice" mine workings and the "Pratt" tunnel.

This would appear from maps and conversation with local individuals to be a rambling type of decline as opposed to a standard winze. This must be classed as conjecture since no formal record exists.

### RECOMMENDATIONS

1. A program embracing 10 line miles of Induced Potential geophysical surveying which would explore to a 1000 foot vertical depth should be carried out to establish the primary sulphide potential of the property.
2. Regardless of any negative results that may be obtained from the above geophysical survey it will be necessary to carry out a diamond drilling program that would approximate 2000 feet and cover 4 holes of 500 foot depth. This must be done to adequately test for possible copper oxide bodies since they will not respond to geophysical methods.
3. Check the current status of all corner and location monuments.
4. Some road improvements are necessary and will become more so when moving in a diamond drill.
5. Should geophysical survey indications be favourable an immediate investigation should be made in regard to further land acquisition.

The approximate cost to carry out the above recommendations would be as follows:

Geophysical survey 10 miles @ \$400 per mile	\$ 4,000
Diamond Drilling 2000 feet @ \$10 per foot	\$20,000
Road improvement	\$ 2,000
Assay, sampling, etc.	\$ 500
Transportation and camp maintenance	\$ 3,000
Engineering and supervision	\$ 2,500
	<hr/>
	\$32,000

Respectfully submitted,

  
F.L. Croteau, B.Sc.  
P.Eng. P.Geol.

Vancouver, B.C.  
February 15, 1971

CERTIFICATE

I, F.L. Croteau, of 1055 West Hastings Street, Vancouver,  
in the Province of British Columbia, certify that:

1. I am a graduate of the University of Saskatchewan and hold the degree of B.Sc. in Mining Geology. Year of graduation was 1936.
2. I am a Registered Professional Engineer in the Province of British Columbia and in the Yukon Territory, a Registered Professional Geologist in the Province of Alberta and hold a licence to practise Professional Engineering in the Province of Saskatchewan.
3. I have practised my profession in Canada, the United States, Mexico and the West Indies since 1936.
4. That the claims are properly staked under the Mining Regulations of the State of Arizona.
5. I have no interest direct or indirect in the lands or securities of Shawnex Mines Ltd. (N.P.L.)
6. That the material in this report is based on personal inspection of the claims, perusal of numerous reports and maps and personal discussion with technical personnel at the University of Arizona.

Respectfully submitted,



F.L. Croteau, B.Sc.  
P.Eng. P.Geol.

Vancouver, B.C.  
February 15, 1971

38 So. Main St.  
P. O. Box 1389

# JACOBS ASSAY OFFICE

Phone 2-0813

## REGISTERED ASSAYERS

DUPLICATE

Certificate No. 53452

Tucson, Arizona

April 4<sup>th</sup>

1958

Sample Submitted by Mr. Universal Paper Corp

SERIAL	SAMPLE MARKED	GOLD		GOLD		SILVER		COPPER		LEAD			
		Ozs.	Per ton	Value	Per ton	Ozs.	Per ton	Per cent	Wet Assay	Per cent	Wet Assay	Per cent	Wet Assay
				\$									
156231	0							304					
32	1							217					
33	2							201					
34	3							242					
35	4							646					
36	5							147					
37	6							560					
38	7							514					
39	8							570					
40	9							473					
41	10							018					
42	2							020					
43	3							094					
44	4							21.25					
45	5							734					
46	6							745					
47	7							341					

\* Gold Figured \$35.00 per oz. Troy

Charges \$ 25.50

Very respectfully

Ben P. Jacobs

This would be <sup>500</sup> ~~425~~ ore in 1989

PICK SAMPLES FROM  
KLONDIKE VEIN

CAVED

4.73

3.41

7.95

7.54

21.25

5.70

5.14

.94

.20

.18

5.00

1.47

.42

2.42

2.01

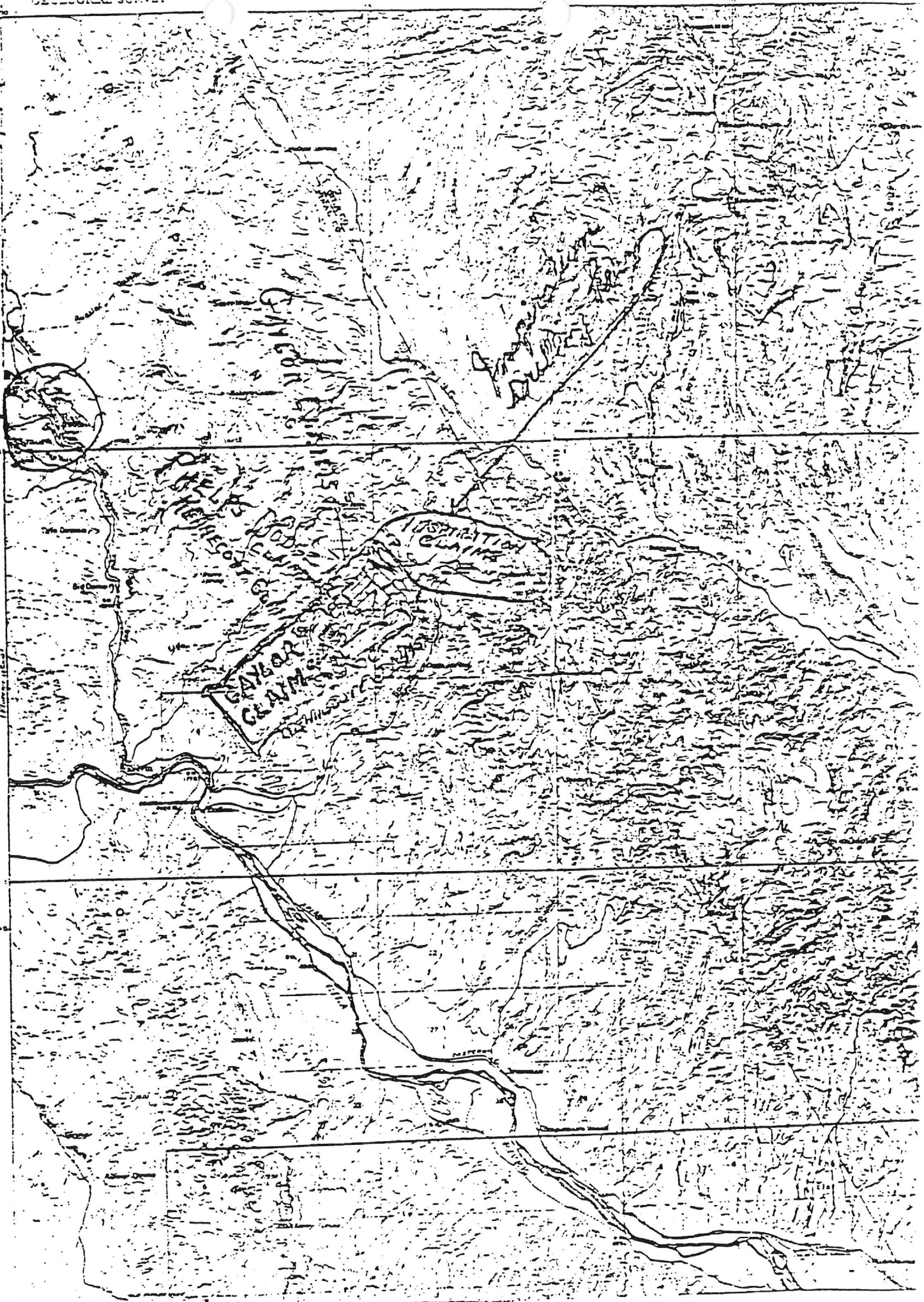
2.12

3.04

UNIVERSAL COPPER CORP.  
**PRATT TUNNEL.**  
1600' FROM PORTAL



Kennett  
open pit



James E. Gaylor, Pres.  
June E. Thiele, V-Pres.

**GAYLOR ENTERPRISES**

6742-D Calle La Paz  
Tucson, Arizona 85715

Phone: (602) 886-9663

GEOLOGY DEPARTMENT

December 14, 1987

Gentlemen:

Re: Offer of Copper Mining Claims

I am offering my 45 copper mining claims for sale. There is a good showing of silver and traces of gold on these 900 acres. They are in the prime copper mining area of Arizona that produced *in 1925* 74% of United States copper for \$1,300,000,000.00. Gold and silver are by-products of such mining; 3,900,000 ounces of silver and 52,000 ounces of gold.

These claims are ideally situated for mining; just two miles from the Gila River with the highway and railroad on my side of the river. Also, just two miles to the Kennecott open pit at Ray (now owned by ASARCO). See "Kennecott" sheet attached. My claims include the old Alice Mine workings and the half-mile long Pratt Tunnel (1902 to 1907). High grade carbonate ore was mined from the Alice mine running from 8% to 16% copper and some gold. Work was discontinued because of a 31% drop in the price of copper at that time. They could not process sulfide ore at the turn of the century so the 200 feet of 2% sulfide ore in the Pratt tunnel was too "low grade" for them to consider at that time. Today it is considered "high grade" ore by anybody's standards.

The only two drill holes on the 900 acres went through 200 feet of trace copper and silver. The holes did not hit the targeted ore body; however, the good mineralization in the holes indicated that we were close to the ore body.

Enclosed is a report by F. L. Croteau, Ltd. In addition to this report I have a safe full of reports, maps, charts, and other such data at my home that can be examined at our mutual convenience.

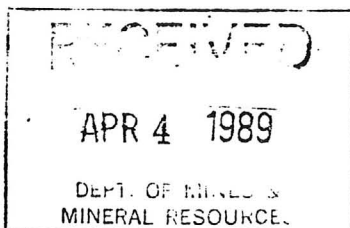
*depletion of the*  
The U.S. National Defense stockpile of copper, the new scientific requirements for copper, to say nothing of the population explosion, has doubled the price of copper in the last few months. The demand and price of copper can only go up from now on.

If interested in this property you and your geologist will be shown every courtesy. However, no lengthy free option for drilling will be given. These claims are firmed up legally and filed with the Bureau of Land Management. I am the sole owner of these unpatented claims. I am asking \$2,450,000, with \$50,000 at the time of signing of the contract, with the balance negotiable.

Very sincerely yours,

*James E. Gaylor*  
James E. Gaylor, President

JEG/jet



*This is an old report but  
will add in detail to  
the other report on my  
Copper property.*

*James E. Gaylor*

6742-D E. CALLE LA PAZ  
TUCSON, ARIZONA 85715

September 1979

PHONE: 886-9663  
AREA CODE: 602

GEOLOGY DEPARTMENT

Gentlemen:

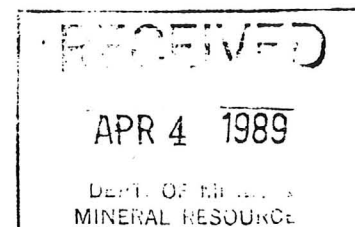
Re: Offer of Copper Mining Claims.

I am hereby offering my <sup>3445</sup> copper mining claims (<sup>900</sup> ~~200~~ acres) which have a good showing of copper, silver, and gold. This property is located in the heart of the "Copper Porkchop" of Arizona, just five miles southeast of Kennecott's open pit copper mine at Ray. My claims come to within 1-1/2 miles of the Gila River; with the highway and railroad on my side of the river. I understand that Kennecott is building a \$9,500,000 copper refinery at Ray.

These claims include the old Alice Mine from which 50,000 tons of high grade carbonate ore was mined in 1902, running from 8 to 16% copper. Work was discontinued due to a 31% drop in copper prices, from 16¢ to 11¢ per pound, and other difficulties. They could not process sulfide ores at the turn of the century and ore under 7% was considered too low in grade for them to mine profitably. So the 200 feet of sulfide ore they found in the Pratt Tunnel, reported to average 2% copper, was too "low grade" for them to even consider. Today, it is considered high grade ore by anyone's standards. This ore, with its high silica content, could be very profitably mined today. I have the original map of the Pratt Tunnel made by Mr. Mead in 1904. The map shows that two beds of brecciated quartzite were crosscut near the end of the tunnel; the first, 30 feet wide, was drifted on for 120 feet, and the second, 260 feet wide, was drifted on for 80 feet. The old reports indicate that this quartzite ran 2% copper; and the fact that the drifts were driven on the quartzite, and at no other part of the tunnel, indicates that encouraging values were encountered. Of course, at that time ore of 2% copper content had no commercial value. It was just waste rock to the old-timers. All of the work done at the Alice Mine and Pratt Tunnel was done 77 years ago with the end in view of obtaining carbonate ores only.

The economics for mining here today are excellent; with high silica ore in the tunnel, close to the Gila River, highway, and railroad; and surrounded by 7 smelters and 2 refineries. Several firms attempted to reach the Alice ore bodies during both World Wars I and II, but they gave up when they ran out of money, the war ended and the price of copper took a sharp drop. The U.S. Government thought enough of this property to give an R.F.C. loan during World War II.

Altogether, now, the future of the property is very bright. It must be borne in mind that the condition of a number of copper properties, which today are large producers, was at one time not



at all as encouraging as is the present showing on these claims. My claims, along with surrounding claims, some of which are open for location, has every promise of becoming one of the greatest copper producers of Arizona. According to old newspaper clippings there was an operating gold mine at the turn of the century just east of my claims. There are no less than twelve porphyry dikes traversing the area, all of which have had an important bearing on the mineralization of the area, and with exploration at depth will be found to contain primary copper sulphides in sufficient quantity to be commercial ore under the present modern methods of mining and ore reduction. The dikes vary from fifty feet to over two hundred feet in width.

The mineralogical character of the ore on my claims is virtually the same as that of the ores produced in the various mines at Globe, Cananea, Clifton, Magma, Copper Queen, Ray, etc., where rich surface carbonate ores were found in limestone and other sedimentary rocks, the source of which was traceable to primary sulphide ores occurring at depth in porphyry and diabase dikes. In the Pratt Tunnel there is 50 feet (from 1600 to 1650) where the mineralization consists of fine particles of copper sulphide and native copper near the granite porphyry dike averaging 2.5% copper. This mineralization is undoubtedly the Alice vein exposed at a depth below the limestone, and the mineralization in the quartzite is traceable to the granite porphyry dike. The fact that the values are in the quartzite is conclusive evidence that further depth is required in order to reach the primary sulphide ore.

In 1900 the Troy Copper Company may have had just about the largest copper mining operation in Arizona going at that time on these claims. There was the town of Troy (now nothing but a chimney) just north of my claims where they had stores, a whorehouse, bars, and a post office. The stagecoach went right through Troy from Globe to Tucson. The old COPPER HANDBOOKS show:

#### 1902 (Vol. II)

Troy Copper Company, organized in 1900 with 100,000 shares @ \$10. Ames Bldg., Boston, Mass. "Mine is working 70 men, has three shafts, deepest one is 400 feet; 6,500 feet of tunnels and drifts. Oxide and sulphide ores are found in veins 3 feet to 11 feet wide, of unknown length and depth, and averaging 12% copper. About 3,000 tons of ore is stocked at the mine. Production for 1901 was 120,000 pounds secured from a 500-ton shipment of 12% copper made to the smelter for purposes of securing a thorough reduction test. Company estimates output for 1902 at 3,600,000 pounds." (The demand for copper in 1902 wasn't so great for only about a third of the population we have today in the United States. The price of copper then was only about 10¢ per pound.)



1903 (Vol. III)

At this time the area was very remote without railroad or highway nearby as we have today. The Handbook states: "The expensive wagon haul of 75 miles to Casa Grande has been a serious drawback in past operations." (Sometimes in those days the rivers would flood and they would be without coking coal, petroleum, and other supplies for weeks. There was a lot more water in Arizona 77 years ago than there is now, before the man with the pale face overgrazed the land.

1904 (Vol. IV)

"The main working tunnel of the Alice Mine (the Pratt Tunnel) is about 1,700 feet long (later lengthened to 2,230 feet) and will intersect the lode at a depth of nearly 800 feet. Ores from the Alice Mine run from 8 to 16% copper. The company has expended \$500,000 (a lot of money in 1904) in development and equipment and the property is regarded as valuable if given the railroad facilities absolutely necessary for its profitable operation." (Of course, now, there is a railroad and a good paved highway nearby.)

1905 (Vol. V)

"The Buckeye winze (now on my property) is said to show a 25-foot vein of malachite, giving smelter returns of 6 to 10% copper. The new smelter was blown in January 1905, but closed down after 10 days, owing to washouts which prevented receipt of coke and petroleum."

Very little mining was done in the area after that time, and all of the good sulphide ores which was just so much waste rock to them in those days are still there. Thirty-two tons of ore was shipped as a test in January 1914 from the Rattler Mine (just northeast of my claims) to American Refining smelter at Hayden assayed 5.22% copper.

During World War I Mr. John C. Devine, who had been employed by the Ray Mine (then called Ray Consolidated Copper Co.) for ten years, voluntarily resigned from his job as Assistant Superintendent and raised money to reopen the Alice Mine and Pratt Tunnel, because he had worked there before, and he was the best informed man about the underground conditions there. In an old newspaper clipping found at the University of Arizona he stated: "Eventually the main Troy workings will be on the west end of the group. The Buckeye shaft is down 500 feet and a cross-cut will be run from the bottom to tap the Climax Fault, 1,000 feet distant, which has an excellent copper showing on the surface. The Alice Shaft is down 400 feet and passes through 50 feet of 4% sulphide ore, too low in grade (in 1902) to be handled profitably at the time it was opened. This ore will be developed through what is known as the Pratt Tunnel."

Mr. Devine spent nearly a year trying to reach the ore in the back of the tunnel, toward the end of World War I, but he had uncaved only 1200 feet from the portal when the war ended and the price of copper dropped 33% and he gave it up. Mr. Devine apparently was considered a highly respected and conservative mining man at that time. He is now deceased.

In another announcement to the newspaper on November 30, 1918, Mr. Devine stated: "Three shifts of men are now at work opening up the old Pratt Tunnel at the Alice Mine in order to reach some large ore bodies of low grade (now high grade) concentrating ores that are known to exist in this portion of the property. It is expected that the first of these large ore bodies will be reached early in January at the rate the work is progressing. A commercial mine of considerable size will be opened up through the Pratt Tunnel." Devine had worked in the tunnel in 1902 when it was open and clean (before more than 50 years of contamination and leaching from the spring water coming down from the Alice workings) and he had taken samples. He obviously knew there were good copper values to go after. Unfortunately, he never reached the ore bodies. Today the tunnel is caved in 700 feet from the portal, and it is considered too dangerous to reopen.

Devine further stated: "The Pratt Tunnel which was driven a distance of about 2,230 feet some years ago, has opened up some ore in two different places. The elevation of this tunnel is about 250 feet deeper than the Alice Shaft, and just brings the development to the primary zone, where both primary and secondary sulphides are in evidence quite abundantly. This part of the property offers a better opportunity than any other for the opening up of a mine of large proportions, and there is no doubt in my mind that any development extended to the east from this tunnel following the present low grade ore, will from time to time encounter deposits of high grade ore, the existence of which was fairly well determined by the work done from the Alice Mine shaft.

"The work done on the east side of the Alice shaft on the lowest level cut a porphyry fault running somewhat across the general trend of formations, and it is this fault that produced some very high grade ore, and appeared to be making downward with increasing strength. It would require driving the Pratt Tunnel five or six hundred feet east in order to cut this ore, and considering the pitch of the orebody a stoping backing of about 400 feet would result from this development. The limit or volume of ore that could be mined here once the property is properly opened up should be very extensive, and judging from a comparison of the formations here with those of other large producers in the district, mining costs could be maintained as low or lower than those of any other property now producing on a large scale. Due to the possibility of considerable high grade ore running 10% or better being encountered on cross faults

throughout the area, it can be stated beyond the adventure of a doubt, that commercially the property will average better than 5% copper on a very large scale of operation.

Devine continued: "The property is so situated with relation to the railroad that transportation facilities should be ideal. It has been suggested in this connection that an aerial tramway might be considered to deliver supplies to the portal of the Pratt Tunnel and to transport ore from this end of the property to the railroad. The project is entirely feasible and the distance would be reduced to three miles--all down grade to the railroad and highway. The proximity of the Hayden Smelting plant just a few miles away is an economic factor of more than ordinary value. The short railroad haul together with the efficient method of transporting ores and concentrates that could be developed, would contribute largely to the profitable marketing of the low grade ores now available on the property, which have been heretofore not considered commercial, primarily due to inadequate transportation facilities." Of course, today, an ore belt and/or trucks on a paved road with a concentration mill on the Gila River would be the best way to go.

Mr. G. G. Wald, an engineer of the Ray Consolidated Copper Company, reported, sometime around 1916, as follows: "The property lies in the mineral belt of the Southwest, and surface indications and geological conditions are favorable for the mineralization of the Climax Vein, especially at its intersection with the various NE to SW cross faults. The fact that the faults intersect at acute angles is a favorable condition, as the zone of shattering is larger than if they cut at right angles. These shattering zones, and also the limestone beds are most likely to contain ore bodies." The Climax Fault, on my claims, is a very strong fissure. The prominent features are its strength and regularity traceable on its surface for a distance of 2,000 feet. Copper values are to be seen along its surface. I, personally, picked up a 3-pound lump of ore that assayed 36.5% copper. A large sample taken from the Pratt Tunnel dump assayed 5.1%.

Mr. Roy G. Mead, who was employed from 1912 to 1916 by the Department of the Interior as Mineral Examiner of the General Land Office, stated in a report written about that time: "The Alice Vein is a contact vein having a limestone hanging wall and a granite porphyry dike for a footwall. The general strike of the vein is about north 60 degrees east, and the dip about 45% to the northwest. The vein filling is iron oxide accompanied with copper carbonate ores. This vein has been explored to a depth of about 350 feet by means of the Alice incline shaft and the Pratt Tunnel, and a large tonnage of carbonate ores extracted which had a copper content in excess of 10%. The development work on this vein, while quite extensive, was done for the purpose of extracting the carbonate ores, and not with the view of developing the primary ore bodies; there-



fore, sufficient depth has not been attained to reach the primary ores. A map compiled by the writer several years ago when the ore body was exposed, is a geological section of the ore exposure of the shaft of the third and fourth levels of the Alice Mine. The ore exposed at that time was high grade and assayed from 6 to 12% copper." I have the map showing the four working levels in the Alice Mine.

When the old caved-in Pratt Tunnel was reopened by me in 1958 (after four years of work) to 1,600 feet from the portal the Phelps Dodge geologist cut a 9-foot sample that assayed 1.55% copper. At about the same time Magma Copper took a 14-foot sample that ran 1.20% copper, with a good showing of gold and silver and 82% silica. The 200 feet of sulphide ore was later exposed when the tunnel was opened further back, but they never came back for further sampling, because in 1958 this was considered too "low grade" to satisfy them. Today most Arizona copper companies are mining ore of less than 1% copper-- much of it in the open pits closer to 1/2 of 1%. I took samples of good high grade ore in the Pratt Tunnel that assayed 3.04, 2.12, 2.01, 2.42, 1.47, 5.00, 5.14, 5.70, 4.73, 21.25, 7.54, 7.95, and 3.41% copper. See attached Assay Report.

Geologist F. L. Croteau of Canada inspected and reported on my claims February 1971 for Rimrock Mines of Canada, who had an option on the property at that time:

"The main copper bearing areas of Arizona have been subjected to considerable faulting and fissuring which originated from broad tectonic movements and from the more local intrusions of igneous rock. The faults and fissures thus created have proven to be excellent sources for ore deposition within the sedimentary rock sequence. The intrusive diabase and porphyry bodies were the likely carriers of primary sulphide material from the main igneous mass and should act as focal points for copper ore concentration. The Alice Mine area shows pronounced faulting to occur in a NE to SW trending direction and this together with the resultant fissuring has proved to be the locus for the ore bodies that occurred in the Alice Mine. A pronounced north-southerly fault occurs in the more westerly portion of the claim block and creates a sharp demarkation line between the limestone and quartzite bodies and gives definite indication that the quartzite body to the west formed the up-thrown side of the fault.

"Previous geological work reported from the Alice Mine-Pratt Tunnel indicate a descending series comprised as follows: Martin Limestone (Devonian), Troy Quartzite (Cambrian), Diabase Sill (Mesozoic), with the entire series intruded intermittently and irregularly by Quartz Monzonite Porphyry (possibly Tertiary) occurring both fairly massively and as definite dykes. The subject area has a record of production from oxide ore bodies and old reports indicate that primary sulphides were encountered

during extraction of the oxide ores. Structural conditions on the property are favorable for the accumulation of ore bodies. The igneous intrusives are essentially diabase and quartz monzonite porphyry which occur as dykes ranging from a few feet to around 200 feet and wider in thickness. Recorded information shows that minor copper oxide occurrences will commonly lead to major bodies both in the horizontal and vertical planes, and that oxidation is not merely a near-surface phenomenon. The substantiation of primary sulphide bodies on the claim group is a feature that requires deep-seated geological techniques."

Mr. Croteau went on to recommend geophysical work and drilling. The above report is similar to a report in PAY DIRT for June 1975 pertaining to the Pinto Valley's 350-million ton orebody: "The Pinto Valley orebody, like most of the large copper deposits, is of the porphyry or disseminated type. The principal ore mineral is chalcopyrite, occurring in very small grains and veinlets throughout the rock mass. A small amount of molybdenite is also present. Most of the mineralization occurs in an uplifted block of quartz monzonite porphyry."

Mr. George A. Checklin, B. Sc., P. Eng., carried out geological work on the Alice Mine claims between May and November 1972, and was the geologist recording the two drill holes for Rimrock Mining Co. He had no financial interest, either directly, or indirectly, in the lands or securities of Rimrock. He stated: "Silver, zinc and copper mineralization is present through much of the drill core, as well as molybdenite more locally. The quartz monzonite porphyry intrusives are potential mineralizers of adjoining silica-rich rocks, and may themselves be mineralized. Among the sediments the Troy Quartzite in particular is susceptible to mineralization. Other bodies of quartz monzonite porphyry, besides those encountered in the drill holes, outcrop on the property. Exploration of this property should continue. More geological mapping and another program of diamond drilling are recommended." (Drilling was terminated by the Metler Bros. Drilling Company before the drilling program was completed, because of some disagreement with Rimrock, and not by the Rimrock Mining Company. Rimrock, a small company with limited funds, bought an oil rig and hit several dry holes which broke them financially. They gave up this property very reluctantly.)

Checklin continues: "An induced polarization survey was carried out by Scintrex Mineral Surveys in June 1971. This survey encountered difficult ground contact problems (dryness, rock outcroppings, etc.) and severe telluric current noise, and coverage, therefore, was rather incomplete. However, one complete anomaly was outlined to the east of the Alice Shaft and part of another anomaly was outlined in the Buckeye Shaft area. Diamond Drill Hole 61 was evidently drilled into an unstable area. The hole passed through several slips and faults and these

included a wide fault zone near the bottom. There was over 500 feet of intruded quartz monzonite porphyry in this hole. Hole No. 81 went down into a relatively stable area but the target was not reached because the hole was not completed. Pyrite is found in all the rocks. Pyrite is particularly important in the Quartz monzonite porphyry and the Troy quartzite. The Troy quartzite seems to be fairly susceptible to the deposition of sulphides, since this type of mineralization occurred in much of the drill core from this formation in both holes. The supposed Mescal sediments also seem to be somewhat susceptible to mineralization. A band of such sediments sandwiched between two of four thin fine-grained porphyry intrusives in a strong fault zone carried marked chalcopryite, cuprite, and native copper. Some sections carried some disseminated molybdenite. Apparently more important, however, were sections of porphyry which carried a red or reddish-brown mineral which had an adamantine lustre and a bright orange-red streak. Although tentatively identified at first as suprite, this is more likely to be ruby silver. Other mineralization included native copper and a little yellow-brown sphalerite. The latter was generally surrounded by dark sulphide. In other rocks besides the quartz monzonite porphyry chalcopryite occurred in a number of places. The diabase and the volcanics contained some very fine-grained chalcopryite. Some malachite was present in the top part of the Troy quartzite and locally further down. A little gold is present locally. In summary, silver, zinc, and copper minerals are present through much of the Troy quartzite and the quartz monzonite porphyry in the two holes drilled, and molybdenite is present locally."

Scintrex Mineral Surveys found two impressive anomalies, while covering only a tiny portion of the claims. Their report is available for your inspection at my home. One of the two drill holes went through over 200 feet of silver. The holes did not hit the targeted copper ore body; however, the good mineralization in the holes indicated that we were close. Rimrock was anxious to continue drilling because they received so much encouragement from the two holes, but, unfortunately, they were unable financially to continue.

The Checklin report continues: "The widespread silver-zinc mineralization raises the possibility that large low-grade silver deposits, as well as copper deposits, may exist within the area of the claims. The main base-metal sulphide appearing in the two drill holes is dark-grey sphalerite, with which the silver minerals are probably closely associated. Galena (lead) was not seen in the core. In a number of cases (as in Bingham, Utah, and Butte, Montana) copper deposits lie closer to the parent intrusion, while silver, lead and zinc deposits are further out toward the perimeter. Silver, zinc, and lead occurring together suggest fringe areas of copper mineralization. The lead will be found further out than the zinc. Silver deposits were being mined early in the history of Globe, Arizona.

The Silver King Mine at Superior was an important producer of silver before it became a copper mine. The Ray copper deposits produce silver-bearing ores. Apart from the Alice vein porphyry dike there are numerous other porphyry bodies to be seen on the claims. There is a large body of quartz monzonite porphyry about 700 feet SW of the Alice Shaft. Malachite was found on the surface. A width of 350 feet is indicated. East of the Alice Shaft there is a proliferation of porphyry dikes, some of which apparently stem from the Alice Vein. At the east end of the claims a large body of quartz monzonite porphyry parallels a diabase body, and both of these intrusives lie within an area of Troy quartzite. Since the Troy quartzite can carry sulphide mineralization there is a possibility of a zone of enrichment at some depth below the surface. On this group of claims there are numerous drill targets. The two holes drilled in 1972 indicate that the area north of the Alice Mine is underlain by rocks carrying widespread sulphide mineralization. All other quartz monzonite porphyry bodies in the area were potential mineralizing agents and may carry metallic minerals themselves."

The way the faults and beds, especially the Alice vein, are making nearly straight down into the earth they could very well go down for a mile as the ore did at the Magma Mine at Superior, not far away. After 50 years of mining they are still taking out extremely high-grade copper ore from a depth of over 5,000 feet. All they had to start with at the turn of the century was a little vein of silver. They didn't look nearly as good then as the Alice Mine looks today. Yet they have sold nearly two billion dollars worth of copper--with no end in sight!

Dr. Bill Lacy, Professor of Geology at the University of Arizona, stated to me after examining the property: "There could be 2,000,000 tons of high-grade ore just in and around the Alice Mine." If this averaged 5% copper at today's prices it would approximate \$200,000,000 worth of copper, plus some gold, silver, and moly. This is good copper ore to process because in places the silica runs as high as 95%. Our National Defense Stockpile is depleted of copper while large amounts of copper is being used in solar energy collectors. The \$33,000,000,000 MX and other stepped-up defense programs will chew up a lot of copper. Any kind of military emergency could quickly push the price of copper up to two or three dollars per pound. In the future we will have to reckon with inflation caused by over-population and the "Unthinkable War."

All claims are contiguous. Maps, plats, and claim notices and Work Affidavits are filed in both the Bureau of Land Management in Phoenix and the Pinal County Courthouse in Florence.

~~\_\_\_\_\_~~

~~\_\_\_\_\_~~

Very sincerely yours,

*James E. Gaylor*  
James E. Gaylor

30 So. Main St.  
P. O. Box 1939

# JACOBS ASSAY OFFICE

## REGISTERED ASSAYERS

PHONE Main 2-7010

Certificate No. **53452**

Tucson, Arizona.

**April 4<sup>th</sup> 1958**

Sample Submitted by Mr. **Universal Copper Corp**

SERIAL	SAMPLE MARKED	GOLD Ozs. <del>Per</del> <del>Assay</del>	GOLD Value <del>Per</del> <del>Assay</del>	SILVER Ozs. <del>Per</del> <del>Assay</del>	COPPER Per cent Wet Assay	LEAD Per cent Wet Assay	PERCENT Wet Assay
			\$				
156231	0				304		
32	1				212		
33	2				201		
34	3				242		
35	4				043		
36	5				147		
37	6				500		
38	7				574		
39	8				570		
40	9				473		
41	10				018		
42	2				020		
43	3				044		
44	4				21.25		
45	5				754		
46	6				795		
47	7				341		

\* Gold Priced \$35.00 per oz. Troy

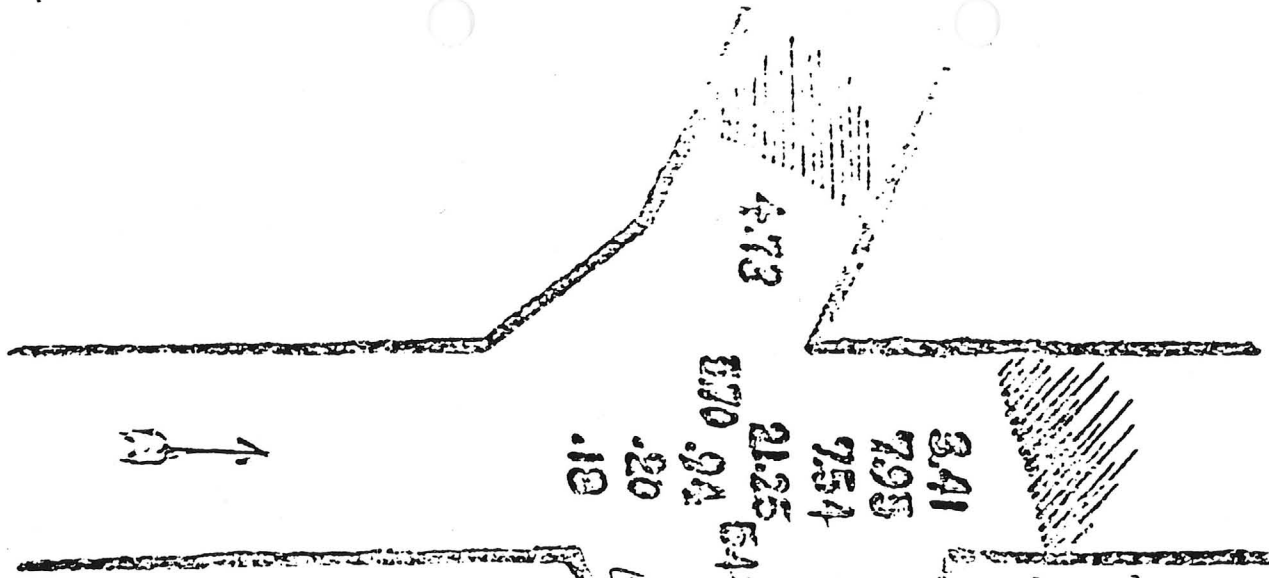
Very respectfully,

*Ben P. Jacobs*

Charges \$

25.50  
3.50  
28.50





50' Band of - basaltic  
 gneiss with disseminated  
 Copper  
 Should average  
 above 1%

Phelps Dodge cut 9 feet av. 1.55% Cu  
 Miami Copper Co. cut 14 " av. 1.30% Cu  
 .10% Silver

Trace Gold

Estimated  
 .10 oz. Gold  
 Silver in this area

UNIVERSAL COPPER CORP.  
 PRATT TUNNEL  
 1000' FROM TUNNEL

REFERENCE 1 F1 < RANJIVE, FL. - ES GEOLOGIC ATLAS OF THE US. 1/ 2, p22

REFERENCE 2 F2 < ADGMI-USDM FILE DATA

REFERENCE 3 F3 < USGS GR 1021, 1971

REFERENCE 4 F4 < \_\_\_\_\_

Mile 138B

RECORD NUMBER B10 < \_\_\_\_\_ > RECORD TYPE B20 < X, I, M > DEPOSIT NUMBER B40 < \_\_\_\_\_ >  
REPORT DATE G1 < 8.2 YR. 0.3 MO. > INFORMATION SOURCE B30 < 1, 2, \_\_\_\_\_ > FILE LINK IDENT. B60 < WJBN-004024 0101 >

REPORTER(SUPERVISOR) G2 < GEST, DANE (last, first, middle initial) > < \_\_\_\_\_ (last, first, middle initial) >  
REPORTER AFFILIATION G5 < AGMT > SITE NAME A10 < ALICE MINE >  
SYNONYMS A11 < TROY PROPERTY, PRATT TUNNEL

WINNING DISTRICT/AREA	A30	< DRIFTINGS SPRINGS DISTRICT			
COUNTY	A60	< PINAL	STATE A50	< A2	COUNTRY A40
PHYSIOGRAPHIC PROV	A63	< 1,2,3			< U.S.
DRAINAGE AREA	A62	< 1,5,0,5,0,1,0,0,3, LOWER COLORADO			
QUADRANGLE NAME	A90	< SONORA		LAND STATUS A64	< 4,9,3,3,3, (1,9,7,9)
SECOND QUAD NAME	A92	< (1,9,6,4)		QUADRANGLE SCALE A100	< 2,4,0,0,0
ELEVATION	A107	< 3,0,8,0,3, F.T.		SECOND QUAD SCALE A91	< ( )

NORTHING A120 (3,6,6,5,7,5,0)  
EASTING A130 (5,0,7,1,7,0)  
ZONE NUMBER A110 (+12)

ACCURATE ACC (circle)  
ESTIMATED EST < \_\_\_\_\_

\* LATITUDE A70 < \_\_\_\_\_ N >  
\* LONGITUDE A80 < \_\_\_\_\_ W >

TOWNSHIP(S) A77 < 0, 0, 3 S : : : : : >

RANGE(S) A78 < 0, 1, 4 E : : : : : >

SECTION(S) A79 < 33 : : : : : >

SECTION FRACTION(S) A76 < NORTH CENTRAL : : : : : >

MERIDIAN(S) A81 < GILA AND SALT RIVER : : : : : >

POSITION FROM NEAREST PROMINENT LOCALITY A82 < 1 MILE W OF TIGER MTN, IN HACKBERRY GULCH  
LOCATION COMMENTS A83 < LOCATED AND NAMED ON QUADRANGLE. POSSIBLY THE PRATT TUNNEL IS AN ADIT  
SHOWN 1/3 MILE NE OF MINE.

+ ESSENTIAL INFORMATION  
 + ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

COMMODITIES PRESENT	C10 < C.U., P.A.U.
ORE MINERALS	C30 < CHALCOPYRITE, NATIVE GOLD, NATIVE SILVER
COMMODITY SUBTYPES	C41 <
GEN. ANALYTICAL DATA	C43 <
COM. INFO. COMMENTS	C50 <

**PRODUCER**

MAJOR PRODUCTS	<b>MAJOR</b>	(C, U, )
MINOR PRODUCTS	<b>MINOR</b>	(A, U, , , A, G, , , , , , , , , , , , , , )
POTENTIAL PRODUCTS	<b>POTEN</b>	( , , , , , , , , , , , , , , , , , , , )
OCCURRENCES	<b>OCCUR</b>	( , , , , , , , , , , , , , , , , , , , )

MAIN COMMODITIES PRESENT C11 < | | | | | | | | | | | | | | | | | | | | | |

MINOR COMMODITIES PRESENT C12 < | | | | | | | | | | | | | | | | | | | | | |

OCCURRENCES OCCUR < | | | | | | | | | | | | | | | | | | | | | |

PRODUCTION YES (circle)      PRODUCTION SIZE SML MED LGE (circle one)



October 17, 1959.

The Alice Mine.  
Near Kalvin & Ray, Arizona.

Do not expect this to be a real mining report as I am just copying what I jotted down from time to time as I got a hold of it here and there.

According to Gaylor the property consists of 14 unpatented mining claims in Gila County, with a total acreage of 567. However, this cannot be correct inasmuch as at 20 acres per claim they should have only 280 acres if every claim should be full legal size.

A long tunnel, the Pratt, was driven into the hillside, 2130 feet, and it was recently re-opened but it is still in poor shape and deep in mud. There is an ore showing about three-quarters of the way in, which according to assays of samples taken by Gaylor, runs up to 5 per cent copper. One assay shows 21% copper but no width is given. There is also an incline shaft down from the surface with levels driven at the 100, 200, 300 and 400 foot levels,--the latter apparently being the bottom, but I could not find or hear of any ore in these workings. The amount of development work in these four levels appears to be about 2500 feet, but the shaft is caved in at about the 200 foot level. Walter Heinrichs told me that there is a connection between these workings and the long drift from the surface which is mentioned above, but he did not know what its elevation would be in relation to the workings in the shaft.

Mine formations would appear to be mostly, limestone, quartzite and schist with intrusions of diabase, granites, granodiorite and porphyry. There are about 12 porphyry dikes with thicknesses from 50 to 100 feet. The portal of the long tunnel is in dacite. The ore occurs along fault fissures in the granites and diabase, as per a report by R. G. Mead in 1904, and also in fractures of sedimentary rocks, usually along or near the porphyry dikes. The ore is copper carbonate and sulfides.

It seems impossible to get anyone or any report tied down as to tonnages produced or yet in place, but Gaylor's files include no smelter settlement sheets, or at least none which he would show me. He only allowed me to see certain papers which he sorted out of his "Alice" file. He did tell me that the Troy Copper Company of Maine owns the Alice mine from 1902 until 1916, and they reported 10% copper, 3 to 11 feet wide at the bottom of the Alice shaft, 400 feet below the surface but it seems dam strange to me that any company would quit mining with that grade in sight. Also that they shipped 500 tons of ore in 1901 and were paid for 120,000 pounds of copper,

Mr. E. H. Crabtree

THE EAGLE-PICHER COMPANY  
TUCSON, ARIZONA

and in 1902 were paid for 3,600,000 pounds of copper. In R. G. Mead's report he includes a memo of several tons of ore being shipped to the Humboldt smelter sometime prior to 1914, which assayed 3.5% copper, 30% silica, 24% iron, 0.5% lime and 3.8% sulphur. Also in January 1914 there was shipped 32 tons of ore to the ASAR smelter at Hayden which assayed 5.22% copper, 30.8 iron, and 19.2 % insol.

Gaylor also said there was some information contained in The Mines Register Handbook, a copy of which is in the library at the University here. If you do not have a copy and would be interested in what it contains you might let me know and I'll have a look at it. He says it shows shipments up to 500 tons.

Gaylor also read a very recent letter to him from The Atomic Energy Commission in California regarding the possibility of thermo-nuclear leaching-in-place at the Alice Mine. He also had had a recent letter from Dow Chemical Company regarding new re-agents or new recovery systems, but did not offer to let me read either one of these letters.

Farther back in this epistle I mentioned Walter Heinrich. He told me that he and Bob Thurmond examined this Alice Mine eight years ago but found or saw nothing of interest in the way of ore, altho they sampled the available openings both at that time and again this past spring after Gaylor had had the main, long drift re-opened after a fashion. He did not agree with the old reports on the property which Gaylor had shown him.

I am enclosing copy of a promotion letter which Gaylor gave me and which I marked up to some extent before I thought of sending it to you. He says he has 26 big companies on the string for the mine, one of which is Eagle-Picher!!!!

I do hope, Ed, that some of the above junk will be at least of a little help to you.

Lundy and I both send our best wishes to Gerda and yourself,

As always,

P.S.

I tried to get Ben Coll on the phone but he is not at home. Let me know if you wish him to tell me what they found at the Alice, and I'll call him later.

*G.  
Heinrich says they mined gold in the granite.  
just North-E. of the Alice, in the old days.*

by Grover Duff (?)