



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

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: VULCAN MINE

ALTERNATE NAMES:

GENUNG SPRING MOLY
UNITED LEAD CO.
BLUE ROCK

YAVAPAI COUNTY MILS NUMBER: 384B

LOCATION: TOWNSHIP 8 N RANGE 3 W SECTION 21 QUARTER NW
LATITUDE: N 34DEG 01MIN 20SEC LONGITUDE: W 112DEG 34MIN 32SEC
TOPO MAP NAME: MORGAN BUTTE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

LEAD
MOLYBDENUM
GOLD
SILVER
COPPER OXIDE

BIBLIOGRAPHY:

USGS MORGAN BUTTE QUAD
ADMMR VULCAN MINE FILE
ADMMR GENUNG SPRING MOLY MINE AND PROP. FILE
ADMMR VULCAN MINE COLVO FILE
HICKS, C.J. MOLYBDENUM OCCUR. IN AZ ADMMR PUB
1979 P 26

03/20/90

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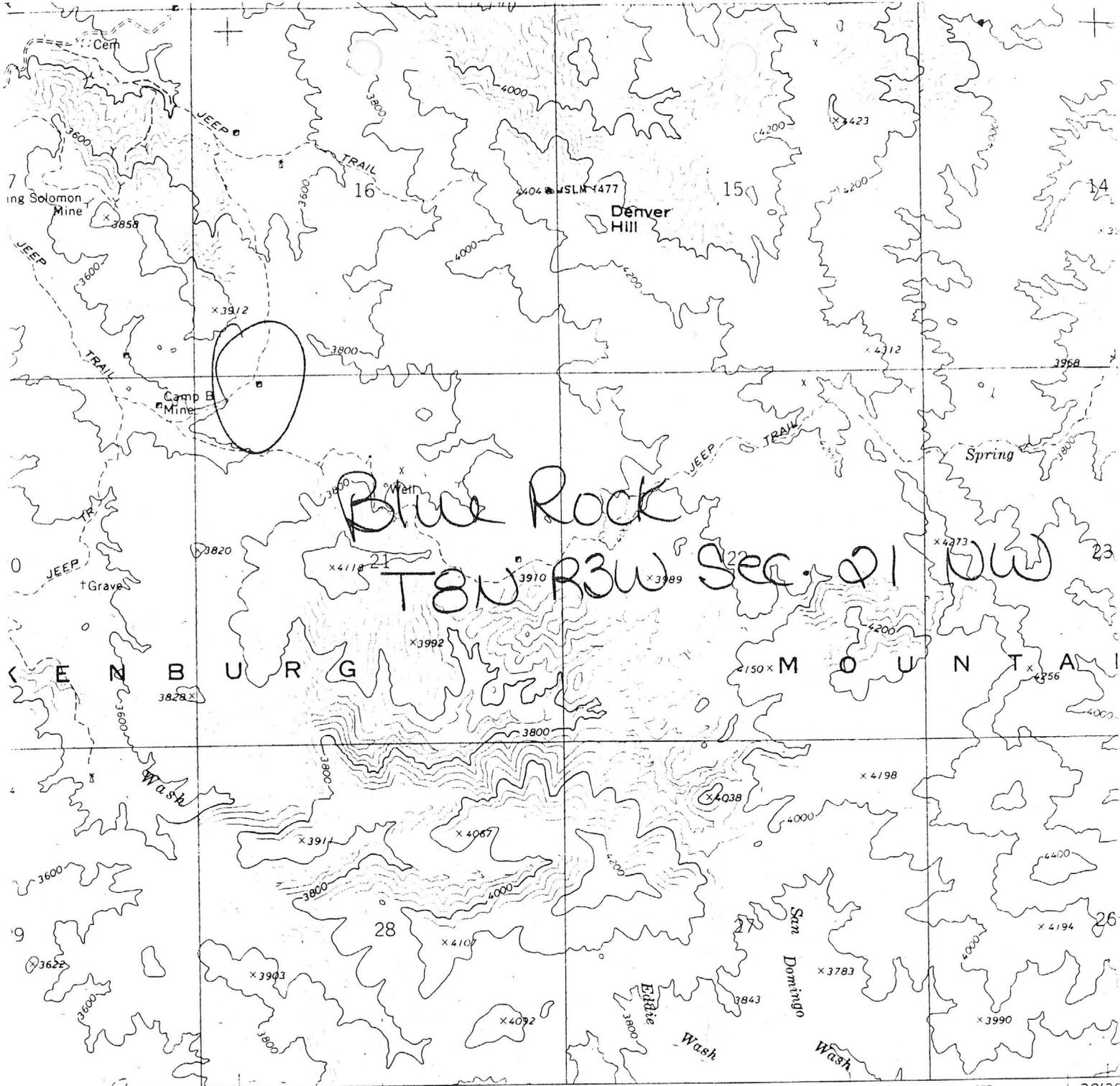
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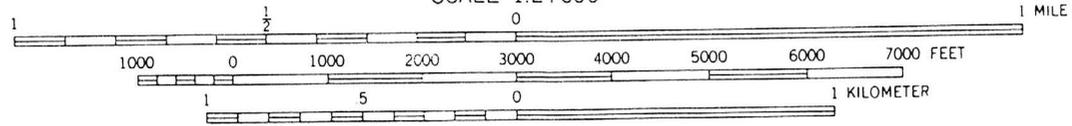
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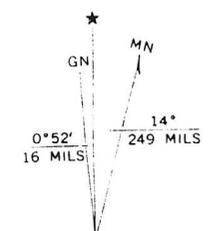
Blue Rock
 T8N R3W Sec. 21 NW

Morgan Butte, AZ 7.5'

(RED PICACHO)
 3451 NE
 SCALE 1:24 000



CONTOUR INTERVAL 40 FEET
 DATUM IS MEAN SEA LEVEL



1969 MAGNETIC NORTH
 AT CENTER OF SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
 FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

July 7, 1955

▲
BLUE ROCK

No information obtainable.

MARK GEMMILL

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date Jan 15th, 1943

Mine Blue Rock

Engineer A. C. Nebeker

District Blue Tank, Maricopa Co *Yavapai*

Location Prescott, Ariz.

Former name none

Owner Chas. Button, and L. J. Button

Address Wickenburg, Arizona

Operator same

Address

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Copper, Lead and silver

Men Employed 2

Production Rate none

Mill: Type & Cap.

Power: Amt. & Type hand

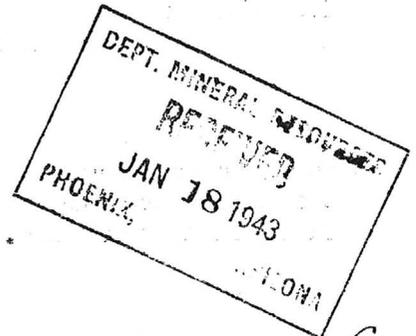
Operations: Present consists in cleaning out a tunnel and shallow winze for purpose of finding where reported high copper values came from.

Operations Planned The owners are planning on developing both the vein showing copper and the one which shows lead and molybdenum.

Number Claims, Title, etc. 7 claims held by location and assessment work.

Description: Topog. & Geog. These claims are 15 miles out east of Wickenburg, Ariz, in the Blue Tank District. It is not a rough country. There are three gulches cutting the property and each gulch has steep sides for about 200 feet. One of these gulches serve as the road bed from the county road to the mine.

Mine Workings: Amt. & Condition There is a 50 foot shaft and a 100 foot shaft both of these need repair before more work can be done in them. There is a 400 foot tunnel on the no 7 claim, this tunnel is accessible for the full length. On No 1 claim there is a combination tunnel and incline winze extending 50 feet. This is now being cleaned up so samples can be cut from the reported copper ores.



Geology & Mineralization The formation consists mostly of granite, the reddish appearing granite and the greenish granite, these are cut by quartz porphyry dikes, and bands of schists. The mineralization consisting of iron, copper carbonate, both carbonate and sulphide of lead carrying a small per centage of molybdenum favor the more highly silicious parts of the formation, and also follows along with the porphyry dikes.

Ore: Positive & Probable, Ore Dumps, Tailings There is no tonnage of ore blocked out. Some picked specimens can be had which will assay high but the bulk of the mineralization which is now exposed is low grade ore.

Mine, Mill Equipment & Flow Sheet Mr Button has on the property a very handy machine shop in which he has a very find lath, press drill, power saw, emery wheels etc and with this equipment he is making up a small flotation mill which will handle about 10 tons per day.

Road Conditions, Route The road is good. To get to the property take the Wickenburg-Constellation road for about 11 miles, to Hamlin Wash, and turn up the wash and follow it right to the mine.

Water Supply They have nice water from a well about 20 feet deep, and it appears that plenty of shallow water can be had.

Brief History About all that can be said of the past, is, that this ground was worked for gold, in the Golden Days, and now they are trying to make a copper and lead mine out of it.

Special Problems, Reports Filed

Remarks It is probable that small ore chutes will be opened while prospecting, but there is no indications at present which indicate there is the makings of a large producer.

The owners are not wanting to sell at this time, and they think they have enough capital of their own, to bring this property into production, so it will more than support them.

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

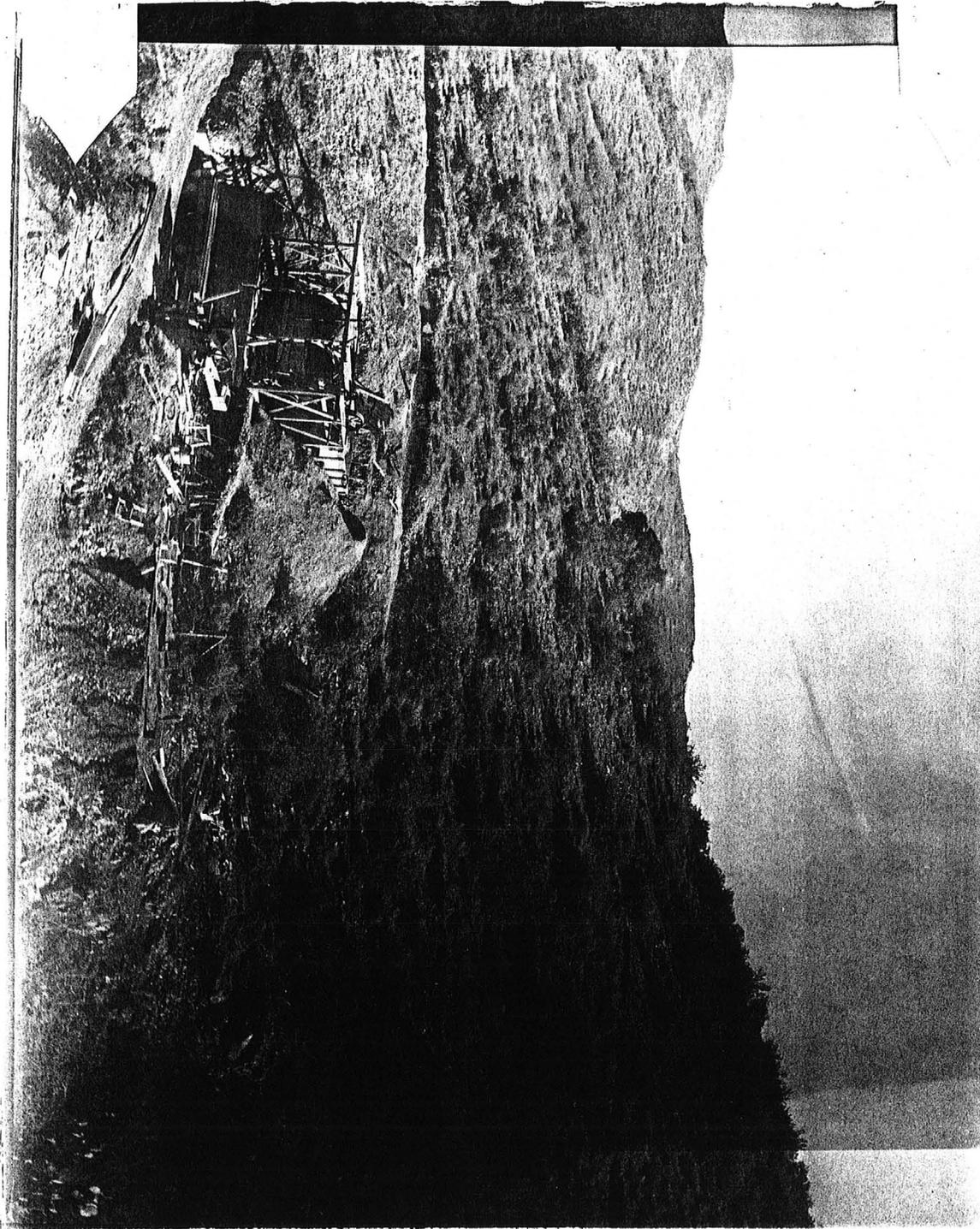

A. C. Nebeker.

Signed.....

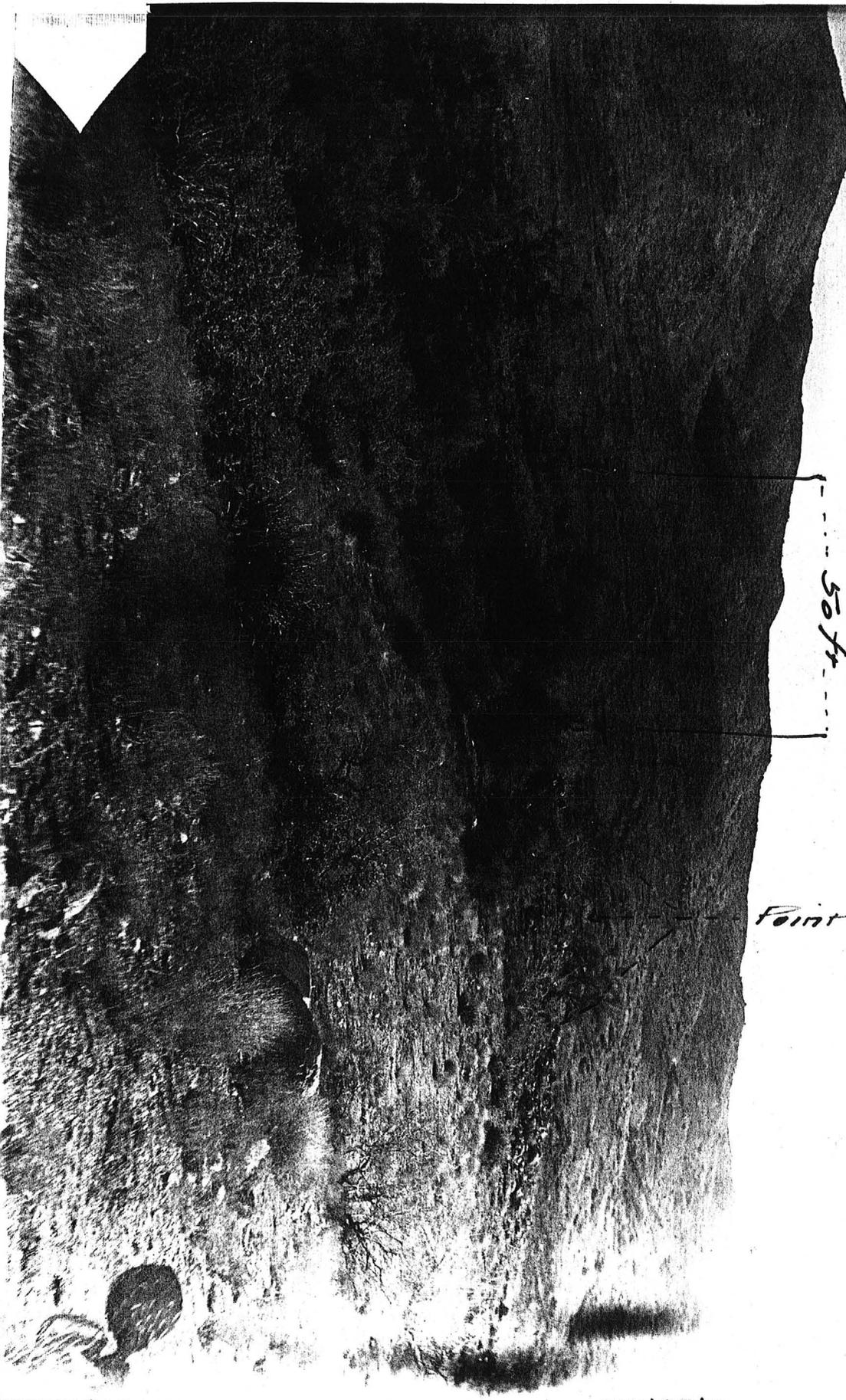
Use additional sheets if necessary. Separate sheets on each problem.

Camp Buildings





Test Mill



50 ft

Point 7.6.5

Outcrop of lava



--- Point 18. 19.

--- Point 15. 16

--- Point 12. 13.

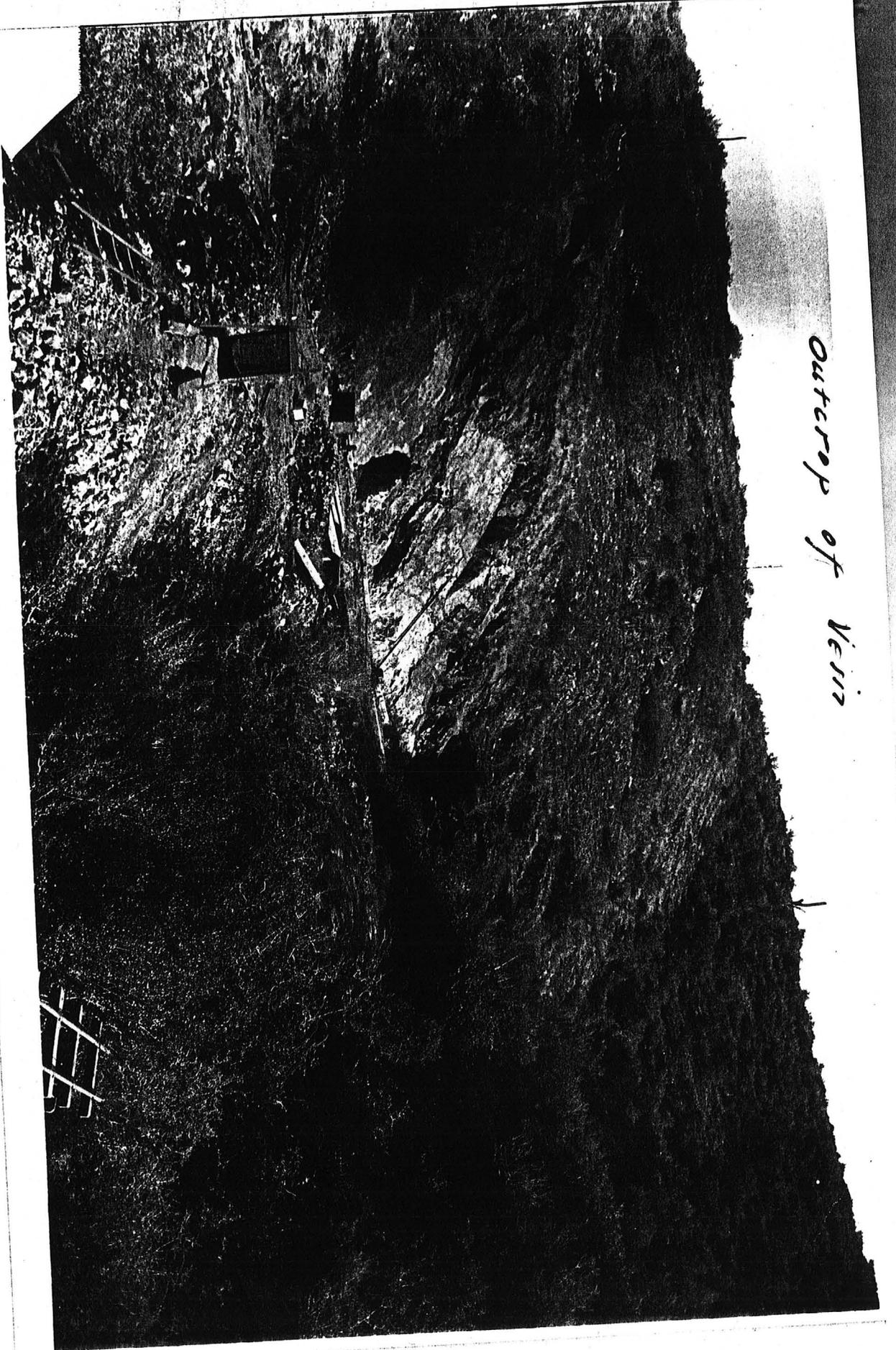
--- Point 8. 9. 10. 11

--- Point 7. 6. 5

--- Point 20. 21. 22.

--- Point 20. 21

Outcrop of Vesir



VULCAN MINE

YAVAPAI COUNTY

11-23-77 - A map of Black Rock District, and a map of Wickenburg showing points of interest, are filed in the Wickenburg general file. 11-23-77 bh

NJN WR 6/22/84: Dennis Farrier, 4930 McConell Avenue, Los Angeles, California 90066 Ph: 213-822-4164 visited. He reported he and his wife Pat own the patented claim group M.S. 2649 including the Texas Belita et al (six claims in all) located in T8N R3W Sec 16 and 21, (Vulcan Mine file) Yavapai County. Mr. Farrier was seeking the mining history of the property. He is interested in putting a cabin on the claims and/or selling them. He was informed of some potential buyers and of compaies active in the area.

see - GENUNG SPRING MOLYBDENUM MINE & PROPERTY

HUBER, LOUIS (OWNER)
1506 East Brill St.
Phoenix, Ariz.

File
MINE - VULCAN MINE - Black Rock-Blue Tank Mining Dist., Yavapai Co.
12 miles NE of Wickenburg- 3 miles south
of Constellation. 1-20-27

May 27, 1957

GENUNG SPRING MOLYBDENUM MINE & PROPERTY
VENUS,
THE GENUNG,
ST. ISABLE,
WULFENITE &
MILLSITE. YAVAPAI COUNTY

Jed

No information on this property.

See - VULCAN MINE - Yavapai County.

MARK GEMMILL

March 14, 1936

American Cyanamid Company,
Mr. H. P. Eastman, Mgr.,
Azusa, Calif.

Dear Sir,

We have had presented to us a property containing wulfenite, and understanding that you are interested in this mineral, we are writing to ask you if you might be interested in a property.

The gold and silver values are nearly three dollars, and on inspection there seems to be a considerable wulfenite content.

The property consists of several claims along the vein, and is in an all year working climate. The road conditions are not bad and the owners are disposed to be very reasonable about price and terms.

We understand that more than \$30,000 worth of wulfenite was shipped, probably during the war, but nothing has been done since.

In case you are interested and care to communicate with us, we will be pleased to go into more detail.

Very truly yours,

Arizona Machinery Company, Inc.,

7. C. Broadgate

wcb/me

A PRELIMINARY EXAMINATION OF THE
GENUNG SPRING MOLYBDENUM MINE & PROPERTY.

LOCATION This group consists of five lode mining claims, the Venus, The Genung, the St. Isable, the Wulfenite and the Millsite. Situated in the Blue Tank Mining District, Yavapai County, Arizona, about 14 miles northeast of Wickenburg, a station on the S.F.,P. & P.Ry.

TRANSPORTATION A wagon road affords transportation to Wickenburg. This road for 12 miles is in good condition and is in daily use by teams and auto trucks operating between the Monte Cristo mines and Wickenburg. The two miles of road connecting the main road with this property can be put into first class shape with very little expense, as the major portion is now completed. This will give me an easy grade to the mill and shaft.

IMPROVEMENTS Surface improvements consist, at present, of mess-house, store-rooms and bunk-houses for about 20 men. Water for domestic and mining purposes has been developed. The concentration mill at present consists of one small gyratory crusher, 18 H.P. gasoline engine, shaking screens, stock bins, and one S.S. & S. Dry concentrating table, together with the necessary countershafting piping, tanks, etc. The mill is connected with the mine by an 18" tram about 175 feet in length.

GEOLOGY The main rock formation, on the property and in the immediate neighborhood, is Gneiss. Considerable faulting is noticeable especially north and west, where several fissures containing copper ores are in partial stage of development. These faults have a general east and west direction. On this property, however, there occurs a normal fault striking northwest and southeast, with a dip of approximately 45 degrees to the southwest. This fault, which is traceable for about 3500 feet, was evidently caused by the intrusion of the diabase dike which is responsible for the mineralization. This dike on the surface varies from a few feet to thirty or more feet in width. The diabase is very porous and, especially on the footwall contact, greatly altered. No later movements or transverse

faults faults are in evidence. At the contact, brecciation and partial silicification of the gneiss were observed. Development to date shows that the dike increases in width with depth. The increase at the shaft varying from about 2 to 6 feet surface, to 8 feet at the 20' level and 10 feet at the 45' level. Two drifts, 45 feet long on the 20' level and 57 feet long on the 45' level, have demonstrated that a continuance of the same conditions could reasonably be expected as work progresses along the strike and at greater depth.

MINERALIZATION The ore is an exceptionally clean Molybdate of Lead (Wulfenite) with small quantities of Galena and some Molybdate, in a gangue composed principally of altered diabase. No interfering elements are in evidence and the concentrates examined are of the first class. This is of importance, for clean concentrates are very much in demand by the ferro-alloy manufacturers. The mineralization is very pronounced on the foot-wall contact and extends into the diabase for from a few inches to 10 feet, as far as present development indicates. Clusters and veinlets of almost pure Wulfenite crystals are frequent, but the commercial ore will be the entire disseminated portion where analysis proves a sufficient molybdenum content. Throughout the mineralized zone, in all crevices and especially along the hanging wall, alteration has produced a highly ferruginous, clayey gouge. This gouge contains a high percentage of molybdenum both as wulfenite and molybdate. The method of ore dressing, at present, is only applicable to the crystalline wulfenite but further research will no doubt provide for the extraction of the finely divided molybdate. The recovery now ranges from 50% to 60% but additional machinery for re-treating the oversize will allow of further concentration of the produce and will result in a higher saving.

ANALYSIS A long series of assays gives an apparent tenor of approximately 2.6% MoO_3 per ton of mine run ore. These assays were made by Mr. E. T. Hager, of Wickenburg, The Rose Chemical Co. of

Los Angeles, Hatcher & Carpenter of Tucson and other firms. Later analysis of ore from the lower levels, shows an increase in average MoO₃ content to ~~3#~~ 3% per ton. This is a very pertinent fact and allows a reasonable presumption that better values will be the rule with depth. Sampling conducted by the Arizona Sampling & Reduction Co. at their plant in Wickenburg, on large lots, follows:

Lots to & including No 226 (surface and mine run)	84,540 lbs.	2.2% MoO ₃ per ton
No.226 (Mine run only)	18,656 lbs.	3.1% " " "

Concentration Tests Lots

		#224	#225	#226	#227
Concentrates	T.1 First Grade	24.00%		27.00%	26.50%
	Second	15.00		17.30	17.40
	T.2 First	24.50	19.50	29.50	
	Second	15.25	8.70	18.50	
Tails	T.1	.18		.25	.30
	T.2	.25		.28	

TONNAGE Approximately 250 tons of ore are on the stock pile. Pre-development allows production from the 20' level with an 8 foot breast and from the 45' level where the breast is about 10 feet. Also the stoping block between these levels. A continuance of drifting and sinking should quickly enable a production of at least 30 tons daily.

CONCLUSIONS Although this examination was conducted rapidly and in a limited time, the value of this property is apparent. The exceptionally clean mine produce is very advantageous. The ore deposition is of a type favorable for an increase in both tonnage and percentage. The development, so far, was conducted in first class systematic manner. The market for molybdenum product is steadily increasing and the price, at late quotations ranges around \$2.00 per pound of MoO₃ contained. From a survey of all conditions relative to this product it is apparent that this price will rule for ~~some~~ some time to come, if it does not increase. Therefore, I recommend the further development of this property along the lines now in progress, allowing for a limited production and continued blocking

of ore reserves. The mill should be put into first class running order by the addition of a drying floor, over-size rolls, another concentrating table, with additional power. Also suitable housing for both the drying floor and new machinery. The new road, which is nearly finished should be completed. Special attention should be directed to the early completion of the mill and its running condition for the present problem is confined to the milling of the ores.

A rough estimate places the cost of these improvements at about \$7,500 but it is better, in all mining operations, to have a surplus, and I would suggest provision for a total of not less than \$10,000. This should place the mine on a paying basis and the rapidity of construction and adjustment will determine the length of time required to arrive at this desirable point.

Respectfully submitted,

(Signed) Louis Huber,

Mining Engineer.

POLAND MINES

INCORPORATED

35 EAST ADAMS STREET
PHOENIX, ARIZONA

360 East Palm Lane
June 22 1928

Mr. F. H. Lerchen,
Montana Mine,
Arivaca, Arizona.

Dear Mr. Lerchen:

I am inclosing the report that I mentioned in my last letter. Will also send you some of the disseminated ore from the Accident shaft on the ground adjoining this on the north. The ore from the Vulcan is coarser in texture but the brecciation is very similar on both surface outcroppings. The samples came from about 40 feet depth from the OBrien group which contains the Accident claim. This group can be optioned and at a reasonable figure if the owner is approached right.

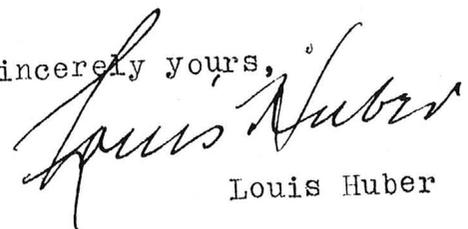
Mr. Fisher in his report did not get very enthusiastic and did not go into the geological features very deeply. Prof. Jones of the Univ. of New Mexico was over the ground and was very much impressed with the size of the outcrop on the Vulcan, classing it as a fumerole. Nearly all of the brecciated stuff carries lead and there are many streaks of galena running through it. If the property ever will amount to anything it will be at depth and indications point to a big ore body if the sulphide zone shows up values.

Havent done anything with the Poland and the other properties adjoining asyet. There is a little activity up the creek but nothing in the way of regular operations. Trust that you will be able to visit up here before long.

Send the inclosed report back when you have digested the contents.

With kindest regards, I am,

Sincerely yours,



Louis Huber

Vulcan

---0000 0 0000---

Messrs Temple, Huber and Pritchett,
Wickenburg - Arizona.

Gentlemen:

Submitted herewith is a report of my findings following the examination of your property, together with maps and other data pertinent thereto.

Very truly yours,

Thos. B. Fisher, E.M.

Long Beach, California
January 20, 1927

REPORT ON
THE VULCAN MINE

of the
proposed

UNITED LEAD COMPANY

LOCATION: (See Map No.1)

This property is located in the Black Rock-Blue Tank Mining District, in the southern part of Yavapai County, Arizona, 12 miles north-east of Wickenburg, a station on the Santa Fe Railway, and 3 miles south of Constellation. The county highway from Wickenburg to Constellation is within 3 miles of the camp and all parts of the property are easily accessible. The property is excellently situated for extensive development. The camp arrangement, water supply, roads and other improvements, can be adapted without expensive outlay to any proposed plan.

WATER SUPPLY:

Water for domestic purposes now developed furnishes approximately 3000 gals. daily. More is available. A concrete dam 30% complete, on Hamlyn wash, will provide reservoir storage for flood water, sufficient for development operations and should larger quantities be later required for mill purposes, water rights and storage can be acquired on Wade creek, 3 miles west. The ground water, developed by deep shafts to the north and south, proves an unflinching source that can be relied upon to a great extent.

POWER:

Power for preliminary development would utilize oil or gasoline. Later, connection for electrical power can be made with the power line of the Central Arizona Light & Power Co., 2½ miles north?

TIMBER:

Timber and lumber can be purchased locally or shipped in from coast points. Local purchases for timber range from \$50 per M. up, delivered at the mine.

SUPPLIES:

Wickenburg is the local supply center, but the wholesale and supply houses of Phoenix and Prescott, where large stocks of mining supplies are available, are easily reached over the excellent State Highways. Emergency deliveries from Phoenix can be made within 3 to 5 hours. Overnight delivery by freight and twice a day express service from Phoenix to Wickenburg, can be had, with 18 hour express service from Los Angeles.

FREIGHT:

Railroad Freight rates at Wickenburg approximate:

Outgoing-	El Paso Smelter	Ore Concentrates \$100 val.	\$11.00	ton
	Douglas "		10.60	
	Selby "		12.50	

Motor Truck freight rates, Wickenburg to the mine, range from \$5 to \$7 per ton.

LABOR:

A plentiful supply of labor, skilled and common, can be drawn upon. The proximity of the Jerome, Ray, Superior, Globe, Miami and Bisbee mines brings in workers of every line. Prices at present range from \$3 per day for common labor, to \$6.00 per day for skilled. The 8 hour day is accepted as standard.

PROPERTY & TITLE: (See Property Map- No.2)

The area embraced is covered by 12 unpatented mining claims.
Elevation 3500 to 4200 feet above sea level.

Name of Claim : Area-Acres : Recorded at Prescott, Arizona
: : Record of Mines-Yavapai County

Name of Claim	Area-Acres	Book	Page
Pole Star	20.	127	191
Pacific	13.43	127	187
Pontiac	18.83	127	190
Palomar	13.9	127	188
✓ Millsite	15.51	100	451
✓ Venus	20.	100	282
Pelon	15.75	127	189
✓ Genung	12.8	100	452
Constance	10.54	110	551
Constance No.1	20.	110	552
Constance 2	14.1	110	553
Fairview	11.21	110	231
Total	186.06	acres	

Title to same is clear and no defects can be found.

HISTORY OF PROPERTY:

The original group, 5 claims, was located in 1896 by John Witherlay, one of the pioneers of the district, and held by him until 1916, when he sold out to Foster and Blackwell. These men shortly afterward sold to H.A. Smith. Under the new ownership, a company was formed to begin development. Some work was accomplished but financial troubles arose, and after a period of litigation the property was sold in 1920 at Sheriff's Sale to H.H. Temple in satisfaction of a mortgage, for the sum of \$9190.00. Since that time the property has been under the present ownership. The property has been increased in size by the acquisition of a number of adjoining claims. During 1916-1917 the property produced

approximately \$30,000 from shallow workings, mainly ores carrying high values in lead-molybdate. During the war and until 1921, no development work was done. Since 1921, a steady program of development has been followed to determine the extent and value of the low-grade lead silver ores, and sufficient work has been done to warrant deep development to explore the deposit at the sulphide level.

Improvements consist of the following -

50 foot Incline shaft, 50 feet drifting	See Assay Map Point	18
70 " Vert Shaft, 108 " "	" "	20
45 " Tunnel		15
35 Open Cut		10

14 minor shafts and cuts,
 5600 feet roads, not including improvements off property
 4 Camp buildings
 1 Garage
 1 Barn
~~Test 11 20 ton (60% complete)~~
~~Assay Laboratory~~
~~Blacksmith Shop~~
~~Pumping plant and pipe lines~~
~~Headframe and equipment~~
 Storage Dam and reservoir (30% complete)

A large quantity of equipment and supplies is on hand, such as tools, track, ore cars, lumber and miscellaneous material. This equipment is for hand work only, and should be added to if air drills are to be used. One Republic truck and one light ford truck are available for transportation.

HISTORY of the DISTRICT:

During the early days of the Wickenburg district, when the gold bonanzas of the Vulture, Congress, Octave and Yarnell were producing their millions, little attention was given to the possibilities of the many occurrences of copper and lead. Later, sporadic attempts were made to develop these deposits, but it was not until the past three years that systematic development was undertaken on any large scale, with the exception of the famous Monte Cristo mine at Constellation. During the past two years the entry of the American Smelting & Refining Co., at the Groom mine, and the Tonopah Belmont Mining Co., at the McNeill mine, has stimulated activity on both sides of the railroad. Owing to the advance of the lead market, numerous lead properties have been active, among them the Tonopah-Belmont, Newsboy, Moon Anchor, Divide Extension, Ballas, Great Southern, Tindale and South Belmont, and development to date gives promise of several producers that may rank with the McNeill mine of the Tonopah-Belmont.

On the surface all of these properties, although the deposits are massive and of large extent, contain a low average in lead. Very little high grade or shipping ore is encountered in the oxidized zone, and it is the opinion of most investigators, that the real ore bodies will be at or near the sulphide zone. This will vary to a great extent, due to the difference of elevation above water level. It is evident therefor, that any development program should provide for exploration to a sufficient depth to reach the sulphide level.

Development on properties adjoining the Vulcan lead deposit leads to the conclusion that a shaft 300 feet deep, at a point midway of the main ore shoot, will enter the sulphides. At the

Accident shaft of the O'Brien group to the north, disseminated sulphides with a combined value of from \$36 to \$70 were encountered on the 40 foot level. This will correspond with the 200 foot level of the proposed United shaft, the difference being due to the topography of the country. At the Ada shaft, 1 mile south, high grade sulphides carrying combined values of over \$90 per ton, began to appear at the 50 foot level. At the Monte Cristo and Mizpah mines, $2\frac{1}{2}$ -3 miles north, large bodies of sulphide ores have been developed, and the occurrence of high grade ore on the 1100 foot level of the Monte Cristo is a pertinent factor in determining the value of deep development in this district. 3 miles south the Tindale and Great Southern mines are developing to promising lead properties.

GEOLOGY: (See Map No.3)

The area in the immediate vicinity is a spur of the Bradshaw uplift. Granites, Granite-gneiss and schists form the major portion with many intrusions of both acid and basic rocks; local breccias and limestone, with small areas of later conglomerates.

The main feature on this property is the great fault or shear zone traversing this section from the O'Brien group on the north-west to the Ada group on the south-east, a distance of over 2 miles. The Dip averaging 40-50 degrees to the south-west. Evidence of profound movement is shown by the displacement and brecciation following this fault. Later intrusions of basic rocks followed this fissure and formed additional channels for the mineral bearing solutions.

The main ore body is found on the Genung and Constance claims forming a continuous deposit nearly 1000 feet long and from 4 to over 50 feet in width. Another ore body is found on the

Millsite claim, where surface indications predict a deposit almost as large as the one above.

The footwall rocks are Granite-Gneiss and Schists; no well defined bedding planes are in evidence.

The hanging wall country rock is granitic, but adjacent the ore shoots are areas of breccia and lime. A well defined gouge follows the hanging wall from point 14 to 23.

MINERALIZATION:

Lead, copper, gold and silver are the predominating economic metals. Some zinc occurs in all parts explored.

The ore so far developed is primarily oxidized, although more or less sulphides are found in all the workings. Evidence of surface leaching is plentiful in the upper parts of the outcrop, the silver and copper values being almost entirely gone. Free gold is found along the entire fault. The oxidized silver minerals are found, especially in the harder, more impervious portions. Native silver occurs in small quantities in several openings on the north end where a lower elevation is found.

The lead minerals are disseminated throughout the ore zones and some replacement is found in the footwall rocks to a depth of sometimes 15 feet. Pockets and streaks of galena are exposed in the lower workings, but so far the major portion of the lead is in the form of lead carbonate. Near the creek level, where erosion is deeper, copper begins to appear and secondary replacement by copper carbonate is noted throughout the exposed lime and a portion of the breccia. The heavy iron stained gossan here, predicates a large mineralized section.

ASSAY MAP & VALUES (See Map No.4)

A study of the Assay Map and accompanying detail sheet, will enable a thoro understanding of the size and value of the deposit. No attempt has been made to estimate the value of the ore so far exposed, although a probable tonnage could be estimated. It is evident that this is primarily a development project, and that the data so far available is very favorable and warrants the prediction that exploration at depth will uncover large bodies of commercial ore. The high values in gold and the evidence of former high values in silver are of great interest. The ratio of values in gold and silver, to the percentage of lead is very favorable.

RECOMMENDATIONS:

A study of existing conditions and the compiled data leads to the conclusion that an incline shaft, located midway of the main ore body, will be the most economical method of exploration. Not less than 300 feet should be provided for, with provision for lateral drifts from at least 2 levels. This will be in the ore body at all times and no dead work will be required. Sinking and timbering costs can be held to the lowest figure.

I would suggest that at least \$25,000 be spent for this work and the installation of additional machinery.

CONCLUSION:

After consideration of all the possibilities of the Vulcan property; the final results from proper exploration and development; the general location of the property adjacent to others in the district; its formations, and large ore bodies which are so prominently in evidence; the recommended preliminary work will no doubt develop a substantial quantity and quality of commercial ore.

However, by no means should the financing cease at the above stated amount of \$25,000, as it would only be for preliminary expenditures. You should prepare for at least a fund of \$100,000 to place the property on a commercial footing. You should adhere to strict economy, as should be practiced in all mining ventures, and see that this economy is strictly practiced, but discriminate between true and fictitious economy.

The writer feels sure that if the course outlined is followed, the results will bring very favorable results to you and your enterprise.

Its accessibility and location makes it possible for year round operation and most favorable for this class of mineral product owing to your close proximity to the El Paso and Douglas smelters.

A.T. & S.

Congress

Yarnell

Octavo

Crown Point

A.W. Gold Bar E.W. R.I.V. R.I.E.

Monte Cristo
Groom
Haystone
Sampson
UNITED LEAD
Mardi's
Great Southern

Wickenburg

Bella's

Vulture Mine
Newsboy

A.T. & S.F. RR.

G.L.S.R. MERIDIAN

T.B.N

7 N

6 N

x Tempeuk
Chadwick

Peoria

Gendale

Phoenix

S. P. Ry.

Tempe

Map # 1 # 2

Jones

King

Smuggler

Texas

O'Brien

UNITED

Verde-Witherlay

LEAD

Avalon

COMPANY

Sec. 17

Sec. 16

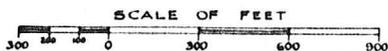
Sec. 20

Sec. 21

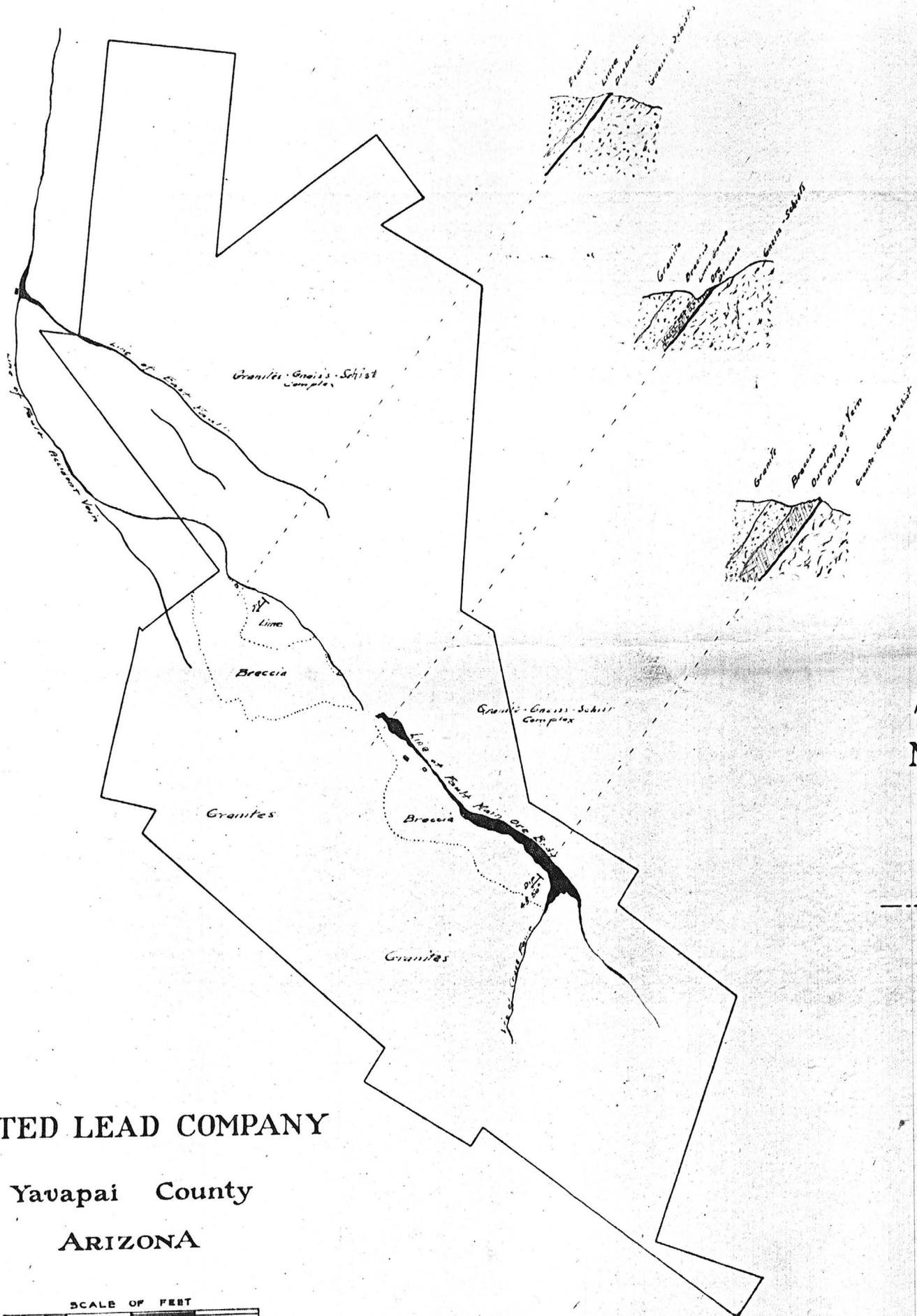
T. 8 N. R. 3 W.

Guyrene

PROPERTY MAP
UNITED LEAD COMPANY
Yavapai County
ARIZONA



Map #



UNITED LEAD COMPANY

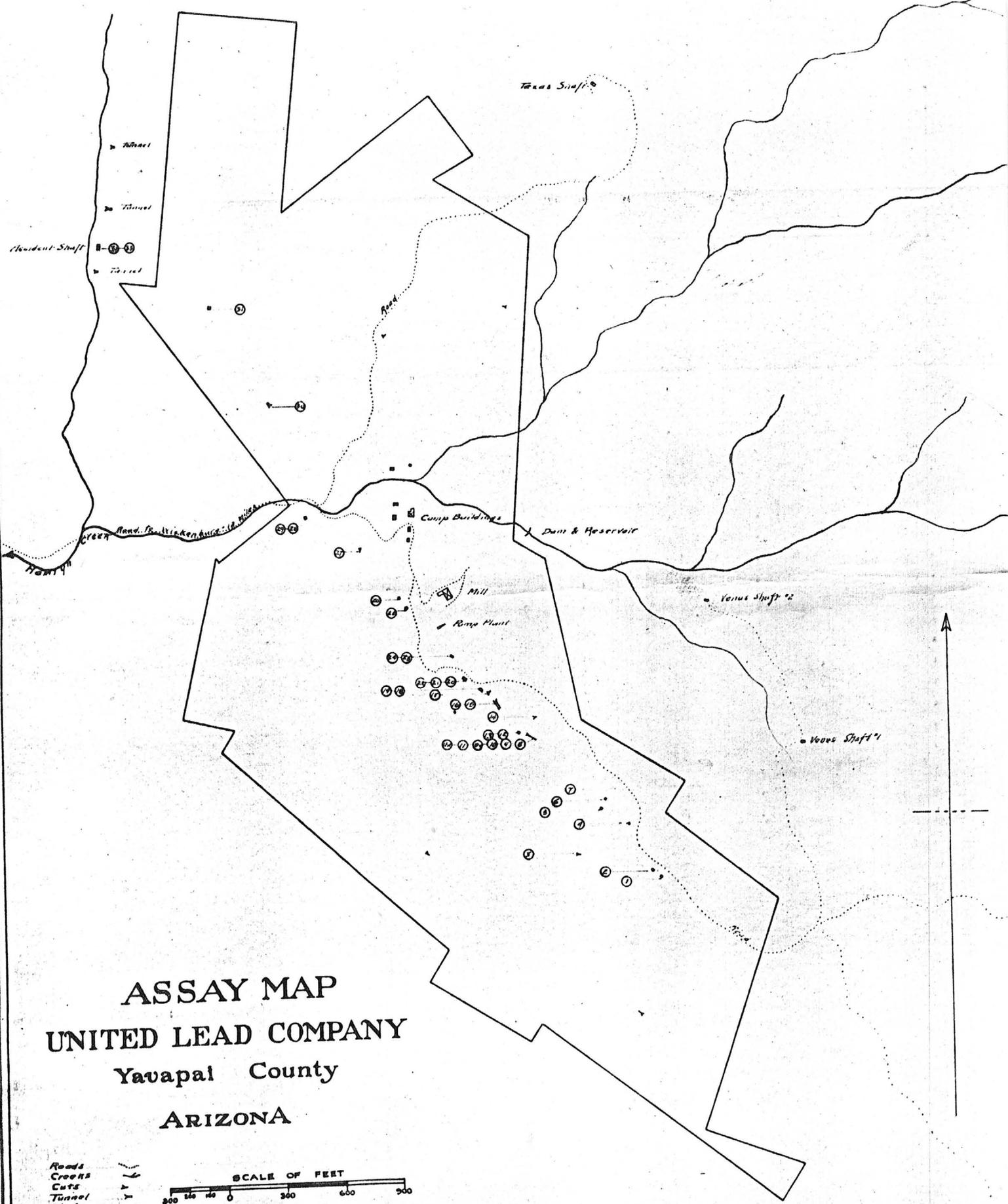
Yavapai County

ARIZONA

ASSAY RETURNS

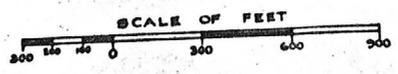
Location of Sample and Number	Values				Total per Ton
	Gold-Silver		Lead-Copper		
	oz.	oz.	%	%	
1. Dump St. Isabel 10' shaft GS	.04	tr	.25		\$ 1.10
2. " 10" " GS	.06	.8	1.90		3.96
3. Constance Vein 4" HW GS	.35	1.5	6.30		15.46
4. Average 2 ft. on f-wall	.20	.75	2.00		6.85
5. Dump Upper shaft #1 GS	.40	2.	1.5		11.00
6. " " #2 GS	.05	.15	.4		1.57
7. Chip sample 20ft cs Outcrop	.25	10.00			11.00
8. Average 10 ft at face 30' Cut	.30	1.00	2.		9.00
9. Average 7 ft at 20' sta. "	.10	1.00	4.		7.40
10. Average 5 ft at 10' sta. "	.10	.50	4.		7.10
10A Sorted Siliceous Ore GS	.40	1.50	10.		20.90
11. Average 5 ft. at start 30' Cut	.02	.50	2.40		3.58
11A Sorted HighGrade Ore GS	.70	40.00	64.00		110.80
12. Average 3 ft top of 12' shaft	.06	1.	7.80		11.16
13. Average 6 ft bottom "	.20	1.	5.00		10.60
14. Top of outcrop g.s	.02	tr	.4		.88
15. Average 1 ft H-wall gouge, tunnel	.12	1.5			3.30
16. Average 4 ft "	.15	tr	1.7		4.44
17. Average 1 ft. F-wall "	.40	1.			8.60
18. Average 2 ft surface Inc. shaft	.35	.5	5.		13.30
19. Average 4 ft 50' level "	.30	3.	4.5		13.20
20. Average 3 ft bottom 70' V-shaft	.20	7.	2.6		11.32
21. Average 2 ft St. 30-drift "	.20	4.5	3.		10.30
22. Average 3 ft St. 100- " "	.25	3.	4.5		12.20
23. Average 4 ft bottom 10' shaft	.50	1.	4.		15.40
24. Average 4 ft top "	.32	.70	.05		6.83
25. GS from dump - Cut	.06	tr		.75	3.00
26. " " Shaft	.12	tr		1.1	5.04
27. Sorted sample Cut	.20	1.5		3.5	13.20
28. Average 6 ft lower Shaft	.12	tr			2.40
29. GS seam on H-wall gouge	.40	146.00			95.60
30. Average 8 in. Pacific tunnel	.15	6.00	3.		10.20
31. Average 12 in. Polestar Cut	.08	tr	1.		2.80
32. GS Sulphide Ore-Accident shaft	1.4	18.00	6.00		46.00
33. GS " " " "	2.	21.00	13.50		68.80

GS indicates grab samples. Averages from channel cuts.
 Sample number locations are indicated by number on assay map.
 Gold @ 20.00 oz. Silver @ .60 oz. Lead @ 6¢ lb Copper @ 12¢ lb.



ASSAY MAP
UNITED LEAD COMPANY
 Yavapai County
ARIZONA

- Roads
- Creeks
- Cuts
- Tunnel
- Shaft
- Buildings
- Assay No's



Map

May 27, 1957

GENUNG SPRING MOLYBDENUM MINE & PROPERTY
VENUS, .
THE GENUNG,
ST. ISABLE,
WULFENITE &
MILLSITE.

YAVAPAI COUNTY

Jed

No information on this property.

See - VULCAN MINE - Yavapai County

MARK GEMMILL.

Wickenburg, Arizona.
February 13th. 1936.

Dear Bill:-

The following will give you the information you will need.

Name of Claim	Book of Mines	Page.
Constance	110	551 ✓
Constance No.1	110	552 ✓
Constance No.2	110	553 ✓
Gray Horse	113	82 ✓
Gray Horse No.1	113	83 ✓
Gray Horse No.2	113	84 ✓
Santa Isabel	100	449 ✓
Genung Springs	100	452 ✓
Wulfenite	100	450 ✓
Millsite	100	451 ✓
Venus No.1	100	282 ✓

These 11 claims comprise the group from which the samples were mostly taken. There was some float from the locations I made upon which no work has been performed.

Will expect to meet you Saturday noon or sooner here in the bustling city of Wickenburg.
Don't forget the Aneroid.

Your friend.

Jolin

Also

Book 124 of Mines.

Page 159 ✓

" 160 ✓

" 161 ✓

15

Form No. 2.

(Place of signature)
(Date)

Arizona Machinery Company, Inc.,
231 North Cortez St.,
Prescott, Arizona.

Gentlemen:

1. Subject to the provisions of paragraph 3, the undersigned grants to you, from date until _____? the right to purchase from (it-me-us), the following items of personal property for the price set opposite each item:
(ITEM) (PRICE)

(ITEM)	(PRICE)
1-WM-2-E MILLHERRA, 2000	
Blue John's D121	
1300 (WM-2-E)	
MORSE	
Top John 12-17	
WM FOLLEN - HOUSE BLACKHART	
1200, 2-E	
O. JOHN HUBBARD	
1200	

2. Upon payment to the undersigned of the said price or prices, the undersigned will make and deliver to your company, or to its nominee, a proper bill of sale conveying to the purchaser the item or items purchased.

3. The undersigned reserves the right to make sale of any or all of the foregoing items to any person, firm or corporation, but in that event and at the time of such sale, the undersigned will pay your company ten per cent. (10%) of the sale price as compensation for its services in offering for sale and endeavoring to accomplish the sale of said item or items of personal property.

Accepted: _____
Arizona Machinery Company, Inc.,
By: _____
Its President

(signature)

~~1500' S-E~~

PA: 1500'
ALIZONA MACHINERY COMPANY, INC.
Accepted:

(signature)

of items of personal property
for sale and encroaching to accomplish the sale of said item
of the sale by MILL SITE for its purposes in offering
the undersigned will buy any property for LOCATORS
corporation' and in case of sale at the time of such sale
of any or all of the items to any person' from or
for JUNE 23-16 REC. JULY 6-16 the right to make sale
belonging to the 1000' the item of items belonging
long company' or to its nominee' a proper bill of sale con-
sists of bills' the undersigned will make and deliver to
S: 1/2 MI. S. E. WITHERLY - O'BRIEN STREET of the said

O'BRIEN PROPERTY
300'
300'
SE.

NW COR.
300'
N
WITHERLY
NE COR.

1500'
O'BRIEN PROPERTY

1500' S-E

T.W. FOSTER - HARRY BLACKWELL
LOC. JUNE 18-16 REC. JULY 6-16
WOLFENITE

1300' (N.W-S-E)

BLUE TANKS DIST.

1-MI. S.E. WITHERLY'S COMP

DISCOVERY
200'

300' N.E.
300'

300' S-W
K
300'

(ITEM) (PRICE)
of personal property for the price set opposite each item:
the right to purchase from (if any) the following items
undersigned belongs to 1500' N-W

SANTA ISABELL

Gentlemen:
Blesscott, Arizona
321 Foster Street St.
ALIZONA MACHINERY COMPANY, INC.

(Date)
(Place of signature)

Form No. 3

Form No. 2.

(Place of signature)
(Date)

Arizona Machinery Company, Inc.,
231 North Cortez St.,
Prescott, Arizona.

Gentlemen:

1. Subject to the provisions of paragraph 3, the undersigned grants to you, from date until _____ ? the right to purchase from (it-me-us), the following items of personal property for the price set opposite each item:

(ITEM)

(PRICE)

2. Upon payment to the undersigned of the said price or prices, the undersigned will make and deliver to your company, or to its nominee, a proper bill of sale conveying to the purchaser the item or items purchased.

3. The undersigned reserves the right to make sale of any or all of the foregoing items to any person, firm or corporation, but in that event and at the time of such sale, the undersigned will pay your company ten per cent. (10%) of the sale price as compensation for its services in offering for sale and endeavoring to accomplish the sale of said item or items of personal property.

(signature)

Accepted: _____
Arizona Machinery Company, Inc.,
By:

Its President

Arizona Machinery Company, Inc.
Accepted:

1500' (signature)

of items of personal property to accompany the sale of said items
for sale and encumbering, to accompany the sale of said items
of the sale of the following items to and between the following
the undersigned, T.W. Foster and H. Blackwell, for and on behalf of
corporation, T.W. Foster - H. Blackwell - Loc.
of and of all of the following items to and between the following
3. The undersigned hereby agrees the right to make sale
relating to the business of the items of items described.
Arizona Machinery Company, Inc. to its nominee, a proper bill of sale
price of \$1100.00 the undersigned will make and deliver to
5. SOUTH WESTERLY

B-TANK DIST.
1 1/2 M. EAST - WHITE GOLD CAMP

1500' N-W

300'
300'

S.W. COR.
300'
SOUTH WESTERLY
N
300'

S.-E. COR.

1500'

SANTA ISABELL
T.W. FOSTER - H. BLACKWELL - LOC.
MAY-19-16
BLUETANK DIST. 1 MI. E - CAMP B.
1100'

REC. JULY-6-16

DISCOVERY
400'

300'
S-END
300'

S.W. COR.
300'
N.
300'-W

(ITEM) (WHICH
of personal property for the price set opposite each item:
the right to purchase from (T.W. Foster) the following items
undersigned agrees to sell from date hereof
1. subject to the provisions of Article 2, the
Gentlemen:

Foster, Arizona.
321 North Center St.,
Arizona Machinery Company, Inc.

(Date)
(Place of signature)

ROLL NO. 8

EA: SW 1500'

ARIZONA MACHINERY COMPANY, INC.

Accepted: CONSTANCE (Signature)

CHRIST YOUNG LOC. NOV. 6-15
BLUE TANKS DIST. 2 MI. FROM CAMP "B"

1000' S-W DISCOVERY 500' N-W

AMENDED LOC - SANTA ISABELL CLAIM -
MADE FOR BENEFIT OF ARIZONA MOLYBDENUM CO.
AND ITS STOCKHOLDERS.

N-END CENTER OF CONSTANCE BEING IDENTICAL WITH
THE S-END CENTER OF GENUING SPR. CLAIM.
REC. NOV. 19-18

1500' N-W

1500' S-W

CONSTANCE No. ONE

CHRIST YOUNG LOC. 6 - NOV. 1918
1/2 MI. S.W. CAMP "B"
BLUE TANKS DIST.

1000 S-W

500' N-W

Disc.

REC. NOV. 19-18

WITNES F.F. NICHOLS

1500' N-E

1500'

CONSTANCE No. 2

CHRIST YOUNG LOC. NOV. 18-18
BLUE TANKS DIST. 3/4 MI. S-E DIRECTION
MILL ON ARIZ. MOLY. CO. PROPERTY.

GENTLEMEN:

Blaschott ARIZONA

321 MOLYBDENUM

ARIZONA MACHINERY COMPANY, INC.

1500' S-E

Discovery

REC. NOV. 19-18

(Date)
(Place of signature)

1500'

GRAY HORSE No. ONE

H. H. TEMPLE - LOC. JAN. 8-19

BLUE TANK DIST

1200 S. E. QUARTERLY 300' N. W. 1/4

REC. MAR. 22-19

GRAY HORSE

H. H. TEMPLE - LOC. JAN. 8-19

REC. MAR. 22-19

750' S-E 1/4

750' N.W. 1/4

(NAME)

(PLACE)

of [illegible] [illegible] for the [illegible] and opposite each item: the right to purchase from (if we can) the following items [illegible]

1. subject to the provisions of paragraph 2. the Gentlemen:

- Blanchard, Arizona.
- 221 North Center St.
- Arizona Descriptive Company, Inc.

(Date)
(Place of signature)

GRAY HORSE NO. TWO

H. H. TEMPLE - LOCATOR JAN. 8 - 19

BLUE TANK DIST.

800' S-E.

DISCOVERY

700' N-W

(HERE) (WHICH)
of persons hereby for the place set opposite each item:
the REC. MAR. 22 - 19 (19-18-18) the following items
understand hereby to you, from date until
1. subject to the provisions of paragraph 2, the
gentlemen:
Besscott, Arizona.
SST JOHN COLTON et al.
ARIZONA MACHINERY COMPANY, INC.

(Date)
(Place of signature)

FORM NO. 5

A PRELIMINARY EXAMINATION OF THE
GENUNG SPRING MOLYBDENUM MINE & PROPERTY.

LOCATION This group consists of five lode mining claims, the Venus The Genung, the St. Isable, the Wulfenite and the Millsite. Situated in the Blue Tank Mining District, Yavapai County, Arizona, about 14 miles northeast of Wickenburg, a station on the S.F., P. & P.Ry.

TRANSPORTATION A wagon road affords transportation to Wickenburg. This road for 12 miles is in good condition and is in daily use by teams and auto trucks operating between the Monte Cristo mines and Wickenburg. The two miles of road connecting the main road with this property can be put into first class shape with very little expense, as the major portion is now completed. This will give an easy grade to the mill and shaft.

IMPROVEMENTS Surface improvements consist, at present, of mess-house, store-rooms and bunk-houses for about 20 men. Water for domestic and mining purposes has been developed. The concentration mill at present consists of one small gyratory crusher, 18 H.P. gasoline engine, shaking screens, stock bins, and one S.S. & S. Dry concentrating table, together with the necessary countershafting, piping, tanks, etc. The mill is connected with the mine by an 18" tram about 175 feet in length.

GEOLOGY The main rock formation, on the property and in the immediate neighborhood, is Gneiss. Considerable faulting is noticeable especially north and west, where several fissures containing copper ores are in partial stage of development. These faults have a general east and west direction. On this property, however, there occurs a normal fault striking northwest and southeast, with a dip of approximately 45 degrees to the southwest. This fault, which is traceable for about 3500 feet, was evidently caused by the intrusion of the diabase dike which is responsible for the mineralization. This dike on the surface varies from a few feet to thirty or more feet in width. The diabase is very porous and, especially on the rootwall contact, greatly altered. No later movements or transverse

faults faults are in evidence. At the contact, brecciation and partial silicification of the gneiss were observed. Development to date shows that the dike increases in width with depth. The increase at the shaft varying from about 2 to 6 feet surface, to 8 feet at the 20' level and 10 feet at the 45' level. Two drifts, 45 feet long on the 20' level and 57 feet long on the 45' level, have demonstrated that a continuance of the same conditions could reasonably be expected as work progresses along the strike and at greater depth.

MINERALIZATION The ore is an exceptionally clean Molybdate of Lead (Wulfenite) with small quantities of Galena and some Molybdate, in a gangue composed principally of altered diabase. No interfering elements are in evidence and the concentrates examined are of the first class. This is of importance, for clean concentrates are very much in demand by the ferro-alloy manufacturers. The mineralization is very pronounced on the foot-wall contact and extends into the diabase for from a few inches to 10 feet, as far as present development indicates. Clusters and veins of almost pure wulfenite crystals are frequent, but the commercial ore will be the entire disseminated portion where analysis proves a sufficient molybdenum content. Throughout the mineralized zone, in all crevices and especially along the hanging wall, alteration has produced a highly ferruginous, clayey gouge. This gouge contains a high percentage of molybdenum both as wulfenite and molybdate. The method of ore dressing, at present, is only applicable to the crystalline wulfenite but further research will no doubt provide for the extraction of the finely divided molybdate. The recovery now ranges from 50% to 60% but additional machinery for re-treating the oversize will allow of further concentration of the produce and will result in a higher saving.

ANALYSIS A long series of assays gives an apparent tenor of approximately 2.6% MoO₃ per ton of mine run ore. These assays were made by Mr. E. T. Hager, of Wickenburg, The Rose Chemical Co. of

Los Angeles, Hatcher & Carpenter of Tucson and other firms. Later analysis of ore from the lower levels, shows an increase in average MoO₃ content to ~~3.1~~ 3% per ton. This is a very pertinent fact and allows a reasonable presumption that better values will be the rule with depth. Sampling conducted by the Arizona Sampling & Reduction Co. at their plant in Wickenburg, on large lots, follows:

Lots to & including No 226 (surface and mine run)	84,540 lbs.	2.2% MoO ₃ per ton
No.226 (Mine run only)	18,656 lbs.	3.1% " " "

Concentration Tests Lots

		#224	#225	#226	#227
Concentrates	T.1 First Grade	24.00%		27.00%	26.50%
	Second	15.00		17.30	17.40
	T.2 First	24.50	19.50	29.50	
	Second	15.25	8.70	18.50	
Tails	T.1	.18		.25	.30
	T.2	.25		.28	

TONNAGE Approximately 250 tons of ore are on the stock pile. Pres-development allows production from the 20' level with an 8 foot breast and from the 45' level where the breast is about 10 feet. Also the stoping block between these levels. A continuance of drifting and sinking should quickly enable a production of at least 30 tons daily.

CONCLUSIONS Although this examination was conducted rapidly and in a limited time, the value of this property is apparent. The exceptionally clean mine produce is very advantageous. The ore deposition is of a type favorable for an increase in both tonnage and percentage. The development, so far, was conducted in first class systematic manner. The market for molybdenum product is steadily increasing and the price, at late quotations ranges around \$2.00 per pound of MoO₃ contained. From a survey of all conditions relative to this product it is apparent that this price will rule for ~~xx~~ some time to come, if it does not increase. Therefor, I recommend the further development of this property along the lines now in progress, allowing for a limited production and continued blocking

of ore reserves. The mill should be put into first class running order by the addition of a drying floor, over-size rolls, another concentrating table, with additional power. Also suitable housing for both the drying floor and new machinery. The new road, which is nearly finished should be completed. Special attention should be directed to the early completion of the mill and its running condition for the present problem is confined to the milling of the ores.

A rough estimate places the cost of these improvements at about \$7,500 but it is better, in all mining operations, to have a surplus, and I would suggest provision for a total of not less than \$10,000. This should place the mine on a paying basis and the rapidity of construction and adjustment will determine the length of time required to arrive at this desirable point.

Respectfully submitted,

(Signed) Louis Huber,

Mining Engineer.

see - GENUNG SPRING MOLYBDENUM MINE & PROPERTY

HUBER, LOUIS (OWNER)
1506 East Brill St.
Phoenix, Ariz.

MINE - VULCAN MINE - ^{Black} Black Rock-Blue Tank Mining Dist., Yavapai Co.
12 miles NE of Wickenburg- 3 miles south
of Constellation. 1-20-27

GRAY HORSE NO. TWO

H. H. TEMPLE - LOCATOR JAN. 8 - 19

BLUE TANK DIST.

800' S-E.

DISCOVERY

700' N-W

(1173)
REC. MAR. 22 - 19

DEPOSITED:
1000000' V.L.P. 1917
SPT. MOUNTAIN COLLEGE OF

ROLL NO. 3

POLAND MINES

INCORPORATED

35 EAST ADAMS STREET
PHOENIX, ARIZONA

360 East Palm Lane
June 22 1928

Mr. F. H. Lerchen,
Montana Mine,
Arivaca, Arizona.

Dear Mr. Lerchen:

I am inclosing the report that I mentioned in my last letter. Will also send you some of the disseminated ore from the Accident shaft on the ground adjoining this on the north. The ore from the Vulcan is coarser in texture but the brecciation is very similar on both surface outcroppings. The samples came from about 40 feet depth from the OBrien group which contains the Accident claim. This group can be optioned and at a reasonable figure if the owner is approached right.

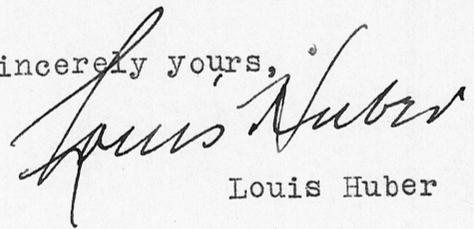
Mr. Fisher in his report did not get very enthusiastic and did not go into the geological features very deeply. Prof. Jones of the Univ. of New Mexico was over the ground and was very much impressed with the size of the outcrop on the Vulcan, classing it as a fumerole. Nearly all of the brecciated stuff carries lead and there are many streaks of galena running through it. If the property ever will amount to anything it will be at depth and indications point to a big ore body if the sulphide zone shows up values.

Havent done anything with the Poland and the other properties adjoining asyet. There is a little activity up the creek but nothing in the way of regular operations. Trust that you will be able to visit up here before long.

Send the inclosed report back when you have digested the contents.

With kindest regards, I am,

Sincerely yours,



Louis Huber

---0000 0 0000---

Messrs Temple, Huber and Pritchett,
Wickenburg - Arizona.

Gentlemen:

Submitted herewith is a report of my findings
following the examination of your property, together with
maps and other data pertinent thereto.

Very truly yours,

Thos. B. Fisher, E.M.

Long Beach, California
January 20, 1927

REPORT ON
THE VULCAN MINE
of the
proposed
UNITED LEAD COMPANY

LOCATION: (See Map No.1)

This property is located in the Black Rock-Blue Tank Mining District, in the southern part of Yavapai County, Arizona, 12 miles north-east of Wickenburg, a station on the Santa Fe Railway, and 3 miles south of Constellation. The county highway from Wickenburg to Constellation is within 3 miles of the camp and all parts of the property are easily accessible. The property is excellently situated for extensive development. The camp arrangement, water supply, roads and other improvements, can be adapted without expensive outlay to any proposed plan.

WATER SUPPLY:

Water for domestic purposes now developed furnishes approximately 3000 gals. daily. More is available. A concrete dam 30% complete, on Hamlyn wash, will provide reservoir storage for flood water, sufficient for development operations and should larger quantities be later required for mill purposes, water rights and storage can be acquired on Wade creek, 3 miles west. The ground water, developed by deep shafts to the north and south, proves an unfailing source that can be relied upon to a great extent.

POWER:

Power for preliminary development would utilize oil or gasoline. Later, connection for electrical power can be made with the power line of the Central Arizona Light & Power Co., $2\frac{1}{2}$ miles north?

TIMBER:

Timber and lumber can be purchased locally or shipped in from coast points. Local purchases for timber range from \$50 per M. up, delivered at the mine.

SUPPLIES:

Wickenburg is the local supply center, but the wholesale and supply houses of Phoenix and Prescott, where large stocks of mining supplies are available, are easily reached over the excellent State Highways. Emergency deliveries from Phoenix can be made within 3 to 5 hours. Overnight delivery by freight and twice a day express service from Phoenix to Wickenburg, can be had, with 18 hour express service from Los Angeles.

FREIGHT:

Railroad Freight rates at Wickenburg approximate:

Outgoing- El Paso Smelter	Ore Concentrates \$100 val.	\$11.00	ton
Douglas "		10.60	
Selby "		12.50	

Motor Truck freight rates, Wickenburg to the mine, range from \$5 to \$7 per ton.

LABOR:

A plentiful supply of labor, skilled and common, can be drawn upon. The proximity of the Jerome, Ray, Superior, Globe, Miami and Bisbee mines brings in workers of every line. Prices at present range from \$3 per day for common labor, to \$6.00 per day for skilled. The 8 hour day is accepted as standard.

PROPERTY & TITLE: (See Property Map- No.2)

The area embraced is covered by 12 unpatented mining claims.
Elevation 3500 to 4200 feet above sea level.

Name of Claim : Area-Acres : Recorded at Prescott, Arizona
: : Record of Mines-Yavapai County

Name of Claim	Area-Acres	Book	Page
Pole Star	20.	127	191
Pacific	13.43	127	187
Pontiac	18.82	127	190
Palomar	13.9	127	188
✓ Millsite	15.51	100	451
✓ Venus	20.	100	282
Pelon	15.75	127	189
✓ Genung	12.8	100	452
Constance	10.54	110	551
Constance No.1	20.	110	552
Constance 2	14.1	110	553
Fairview	11.21	110	231
Total	186.06	acres	

Title to same is clear and no defects can be found.

HISTORY OF PROPERTY:

The original group, 5 claims, was located in 1896 by John Witherlay, one of the pioneers of the district, and held by him until 1916, when he sold out to Foster and Blackwell. These men shortly afterward sold to H.A. Smith. Under the new ownership, a company was formed to begin development. Some work was accomplished but financial troubles arose, and after a period of litigation the property was sold in 1920 at Sheriffs Sale to H.H. Temple in satisfaction of a mortgage, for the sum of \$9190.00. Since that time the property has been under the present ownership. The property has been increased in size by the acquisition of a number of adjoining claims. During 1916-1917 the property produced

approximately \$30,000 from shallow workings, mainly ores carrying high values in lead-molybdate. During the war and until 1921, no development work was done. Since 1921, a steady program of development has been followed to determine the extent and value of the low-grade lead silver ores, and sufficient work has been done to warrant deep development to explore the deposit at the sulphide level.

Improvements consist of the following -

50 foot Incline shaft, 50 feet drifting	See Assay Map Point	18
70 " Vert Shaft, 108 " "	" "	20
45 " Tunnel		15
35 Open Cut		10

14 minor shafts and cuts,
 5600 feet roads, not including improvements off property
 4 Camp buildings
 1 Garage
 1 Barn
~~Test Mill 20 ton (60% complete)~~
~~Assay Laboratory~~
~~Blacksmith Shop~~
~~Pumping plant and pipe lines~~
~~Headframe and equipment~~
 Storage Dam and reservoir (30% complete)

A large quantity of equipment and supplies is on hand, such as tools, track, ore cars, lumber and miscellaneous material. This equipment is for hand work only, and should be added to if air drills are to be used. One Republic truck and one light ford truck are available for transportation.

HISTORY of the DISTRICT:

During the early days of the Wickenburg district, when the gold bonanzas of the Vulture, Congress, Octave and Yarnell were producing their millions, little attention was given to the possibilities of the many occurrences of copper and lead. Later, sporadic attempts were made to develop these deposits, but it was not until the past three years that systematic development was undertaken on any large scale, with the exception of the famous Monte Cristo mine at Constellation. During the past two years the entry of the American Smelting & Refining Co., at the Groom mine, and the Tonopah Belmont Mining Co., at the McNeill mine, has stimulated activity on both sides of the railroad. Owing to the advance of the lead market, numerous lead properties have been active, among them the Tonopah-Belmont, Newsboy, Moon Anchor, Divide Extension, Ballas, Great Southern, Tindale and South Belmont, and development to date gives promise of several producers that may rank with the McNeill mine of the Tonopah Belmont.

On the surface all of these properties, although the deposits are massive and of large extent, contain a low average in lead. Very little high grade or shipping ore is encountered in the oxidized zone, and it is the opinion of most investigators, that the real ore bodies will be at or near the sulphide zone. This will vary to a great extent, due to the difference of elevation above water level. It is evident therefor, that any development program should provide for exploration to a sufficient depth to reach the sulphide level.

Development on properties adjoining the Vulcan lead deposit leads to the conclusion that a shaft 300 feet deep, at a point midway of the main ore shoot, will enter the sulphides. At the

Accident shaft of the O'Brien group to the north, disseminated sulphides with a combined value of from \$36 to \$70 were encountered on the 40 foot level. This will correspond with the 200 foot level of the proposed United shaft, the difference being due to the topography of the country. At the Ada shaft, 1 mile south, high grade sulphides carrying combined values of over \$90 per ton, began to appear at the 50 foot level. At the Monte Cristo and Mizpah mines, $2\frac{1}{2}$ -3 miles north, large bodies of sulphide ores have been developed, and the occurrence of high grade ore on the 1100 foot level of the Monte Cristo is a pertinent factor in determining the value of deep development in this district. 3 miles south the Tindale and Great Southern mines are developing to promising lead properties.

GEOLOGY: (See Map No.3)

The area in the immediate vicinity is a spur of the Bradshaw uplift. Granites, Granite-gneiss and schists form the major portion with many intrusions of both acid and basic rocks; local breccias and limestone, with small areas of later conglomerates.

The main feature on this property is the great fault or shear zone traversing this section from the O'Brien group on the north-west to the Ada group on the south-east, a distance of over 2 miles. The Dip averaging 40-50 degrees to the south-west. Evidence of profound movement is shown by the displacement and brecciation following this fault. Later intrusions of basic rocks followed this fissure and formed additional channels for the mineral bearing solutions.

The main ore body is found on the Genung and Constance claims forming a continuous deposit nearly 1000 feet long and from 4 to over 50 feet in width. Another ore body is found on the

Millsite claim, where surface indications predict a deposit almost as large as the one above.

The footwall rocks are Granite-Gneiss and Schists; no well defined bedding planes are in evidence.

The hanging wall country rock is granitic, but adjacent the ore shoots are areas of breccia and lime. A well defined gouge follows the hanging wall from point 14 to 23.

MINERALIZATION:

Lead, copper, gold and silver are the predominating economic metals. Some zinc occurs in all parts explored.

The ore so far developed is primarily oxidized, although more or less sulphides are found in all the workings. Evidence of surface leaching is plentiful in the upper parts of the outcrop, the silver and copper values being almost entirely gone. Free gold is found along the entire fault. The oxidized silver minerals are found, especially in the harder, more impervious portions. Native silver occurs in small quantities in several openings on the north end where a lower elevation is found.

The lead minerals are disseminated throughout the ore zones and some replacement is found in the footwall rocks to a depth of sometimes 15 feet. Pockets and streaks of galena are exposed in the lower workings, but so far the major portion of the lead is in the form of lead carbonate. Near the creek level, where erosion is deeper, copper begins to appear and secondary replacement by copper carbonate is noted throughout the exposed lime and a portion of the breccia. The heavy iron stained gossan here, predicates a large mineralized section.

ASSAY MAP & VALUES (See Map No.4)

A study of the Assay Map and accompanying detail sheet, will enable a thoro understanding of the size and value of the deposit. No attempt has been made to estimate the value of the ore so far exposed, although a probable tonnage could be estimated. It is evident that this is primarily a development project, and that the data so far available is very favorable and warrants the prediction that exploration at depth will uncover large bodies of commercial ore. The high values in gold and the evidence of former high values in silver are of great interest. The ratio of values in gold and silver, to the percentage of lead is very favorable.

RECOMMENDATIONS:

A study of existing conditions and the compiled data leads to the conclusion that an incline shaft, located midway of the main ore body, will be the most economical method of exploration. Not less than 300 feet should be provided for, with provision for lateral drifts from at least 2 levels. This will be in the ore body at all times and no dead work will be required. Sinking and timbering costs can be held to the lowest figure.

I would suggest that at least \$25,000 be spent for this work and the installation of additional machinery.

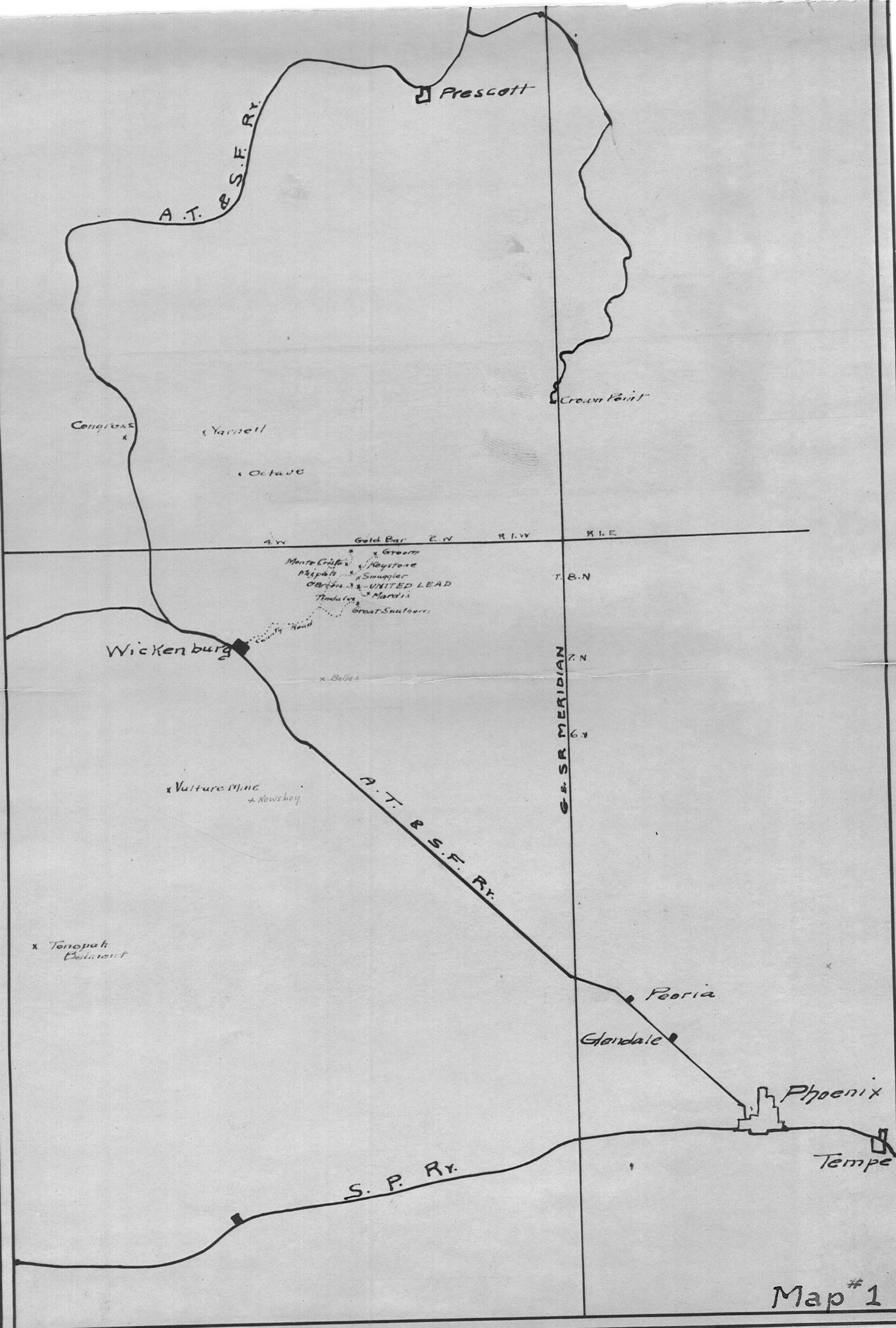
CONCLUSION:

After consideration of all the possibilities of the Vulcan property; the final results from proper exploration and development; the general location of the property adjacent to others in the district; its formations, and large ore bodies which are so prominently in evidence; the recommended preliminary work will no doubt develop a substantial quantity and quality of commercial ore.

However, by no means should the financing cease at the above stated amount of \$25,000, as it would only be for preliminary expenditures. You should prepare for at least a fund of \$100,000 to place the property on a commercial footing. You should adhere to strict economy, as should be practiced in all mining ventures, and see that this economy is strictly practiced, but discriminate between true and fictitious economy.

The writer feels sure that if the course outlined is followed, the results will bring very favorable results to you and your enterprise.

Its accessibility and location makes it possible for year round operation and most favorable for this class of mineral product owing to your close proximity to the El Paso and Douglas smelters.



Map # 1

U.S.L.M.
1477

Denver

Jones

King

Smuggler

Texas

UNITED

O'Brien

LEAD

Verde-Witherlay

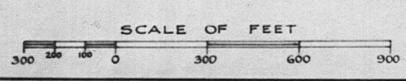
Avalon

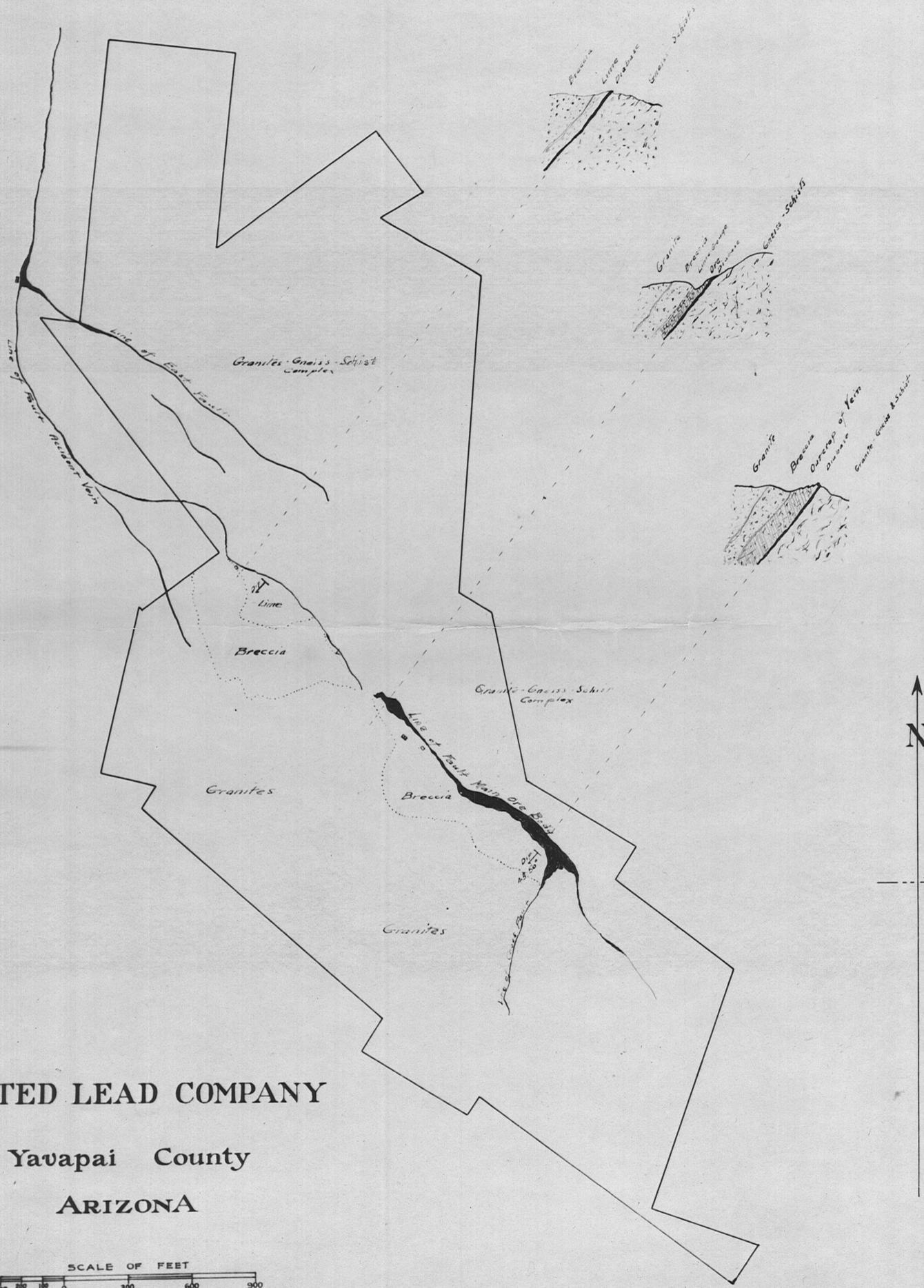
COMPANY

Sec. 17 Sec. 16
Sec. 20 Sec. 21
T. 8 N. R. 3 W.

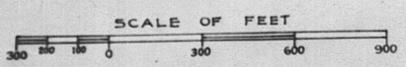
PROPERTY MAP
UNITED LEAD COMPANY
Yavapai County
ARIZONA

Guyrene





UNITED LEAD COMPANY
Yavapai County
ARIZONA



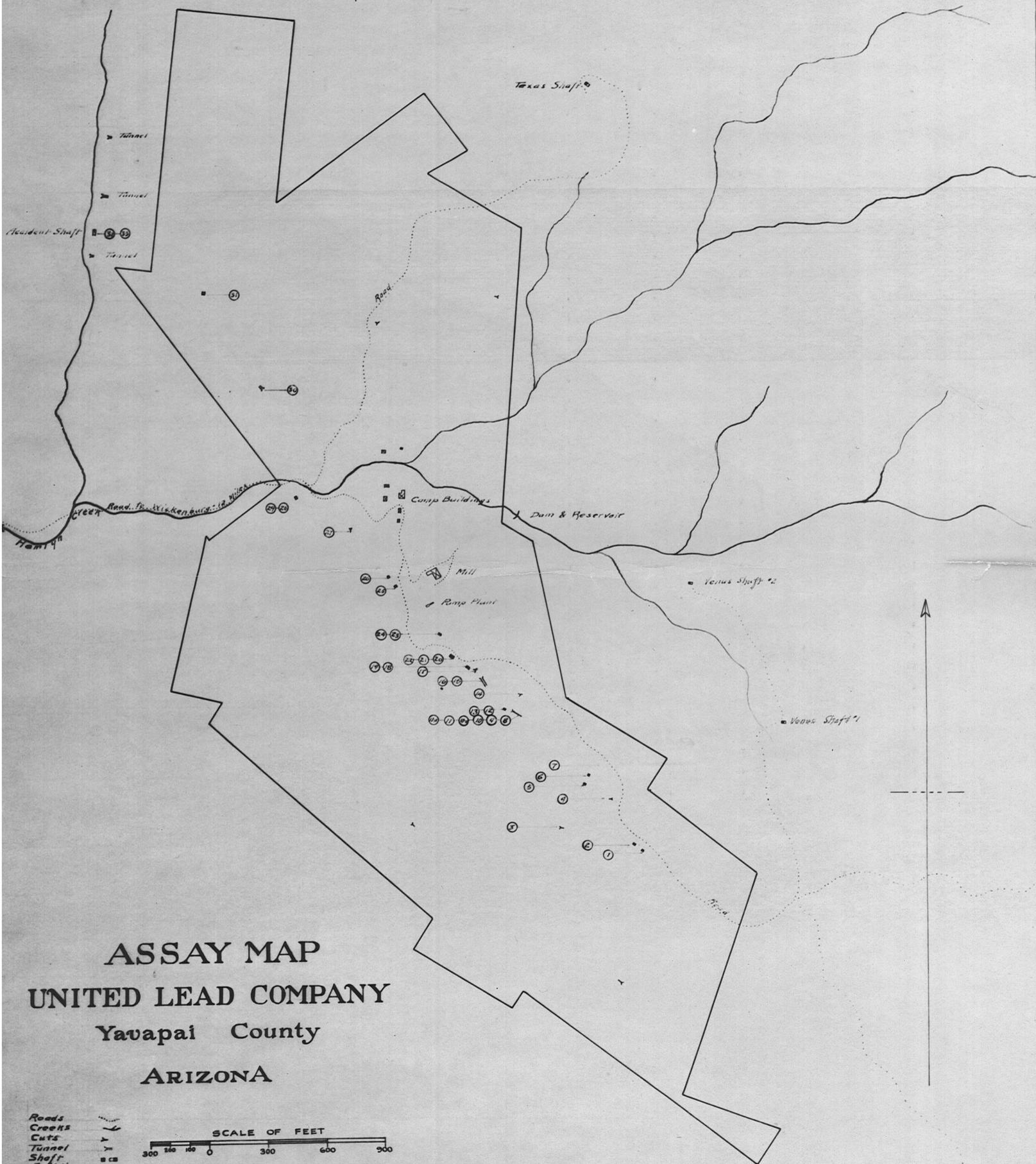
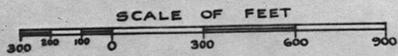
ASSAY RETURNS

Location of Sample and Number	Values				Total per Ton
	:: Gold- :: oz.	Silver- oz.	Lead- %	Copper %	
1. Dump St. Isabel 10' shaft GS	.04	tr	.25		\$ 1.10
2. " " 10" " GS	.06	.8	1.90		3.96
3. Constance Vein 4" HW GS	.35	1.5	6.30		15.46
4. Average 2 ft. on f-wall	.20	.75	2.00		6.85
5. Dump Upper shaft #1 GS	.40	2.	1.5		11.00
6. " " #2 GS	.05	.15	.4		1.57
7. Chip sample 20ft cs Outcrop	.25	10.00			11.00
8. Average 10 ft at face 30' Cut	.30	1.00	2.		9.00
9. Average 7 ft at 20' sta. "	.10	1.00	4.		7.40
10. Average 5 ft at 10' sta. "	.10	.50	4.		7.10
10A Sorted Siliceous Ore GS	.40	1.50	10.		20.90
11. Average 5 ft. at start 30' Cut	.02	.50	2.40		3.58
11A Sorted HighGrade Ore GS	.70	40.00	64.00		110.80
12. Average 3 ft top of 12' shaft	.06	1.	7.80		11.16
13. Average 6 ft bottom "	.20	1.	5.00		10.60
14. Top of outcrop g.s	.02	tr	.4		.88
15. Average 1 ft H-wall gouge, tunnel	.12	1.5			3.30
16. Average 4 ft "	.15	tr	1.7		4.44
17. Average 1 ft. F-wall "	.40	1.			8.60
18. Average 2 ft surface Inc. shaft	.35	.5	5.		13.30
19. Average 4 ft 50' level "	.30	3.	4.5		13.20
20. Average 3 ft bottom 70' V-shaft	.20	7.	2.6		11.32
21. Average 2 ft St. 30-drift "	.20	4.5	3.		10.30
22. Average 3 ft St. 100- " "	.25	3.	4.5		12.20
23. Average 4 ft bottom 10' shaft	.50	1.	4.		15.40
24. Average 4 ft top "	.32	.70	.05		6.83
25. GS from dump - Cut	.06	tr		.75	3.00
26. " " Shaft	.12	tr		1.1	5.04
27. Sorted sample Cut	.20	1.5		3.5	13.20
28. Average 6 ft lower Shaft	.12	tr			2.40
29. GS seam on H-wall gouge	.40	146.00			95.60
30. Average 8 in. Pacific tunnel	.15	6.00	3.		10.20
31. Average 12 in. Polestar Cut	.08	tr	1.		2.80
32. GS Sulphide Ore-Accident shaft	1.4	18.00	6.00		46.00
33. GS " " " "	2.	21.00	13.50		68.80

GS indicates grab samples. Averages from channel cuts.
 Sample number locations are indicated by number on assay map.
 Gold @ 20.00 oz. Silver @ .60 oz. Lead @ 6¢ lb Copper @ 12¢ lb.

ASSAY MAP
UNITED LEAD COMPANY
Yavapai County
ARIZONA

Roads
 Creeks
 Cuts
 Tunnel
 Shaft
 Buildings
 Assay No's



Map #4