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07/16/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: PHOENIX

ALTERNATE NAMES:
HAY PROPERTY

SANTA CRUZ COUNTY MILS NUMBER: 44E

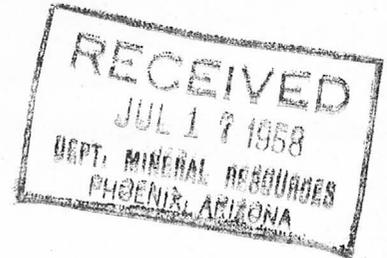
LOCATION: TOWNSHIP 23 S RANGE 16 E SECTION 15 QUARTER S2
LATITUDE: N 31DEG 25MIN 23SEC LONGITUDE: W 110DEG 41MIN 43SEC
TOPO MAP NAME: HARSHAW - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:
LEAD
SILVER
ZINC

BIBLIOGRAPHY:
USBM FILED NOTES PP 9
USBM PRELIMINARY WAR MINERALS REPORT
ADM MR PHOENIX MINE FILE

Patagonia
Arizona
7/16/58



Mr. Frank P. Knight
Director
Department of Mineral Resources
State of Arizona
Mineral Building, Fairgrounds
Phoenix, Arizona

Dear Mr. Knight:

Your inquiry of July 10th, addressed to my Brother, George R. Hay, has reached me. He died in February of 1953.

I have his papers and have searched through them. I quote the only information I have that would interest you. I will put it on a separate sheet.

In addition, my own information is as follows: (I should think these facts might have bearing upon the value of the Phoenix claims you refer to, but I could be entirely mistaken.)

The old Mowry Mine I understand included many claims. One particular claim, located as I remember, about one quarter mile from the main road, NW, was thoroughly explored a few years ago and then abandoned. You doubtless know the Canadian Mining Company, the name I feel sure was, VENTURES UNLIMITED, spent a quarter of a million dollars timbering a shaft that formerly had produced heavily in the early days, and then pursued diamond drilling for a long period of time. Then decided there were no values to be recovered. This property was not very far from the Phoenix claims.

For further comment, please see attached sheet.

Very truly yours,


M. V. Hay, Patagonia, Arizona

Robert Lenon, Mining Engineer, you may know is located at Patagonia. He is the City Clerk of Patagonia, County Engineer for Santa Cruz County, and resides at Patagonia. He could doubtless furnish information on many matters. He lived for some years close to the old Mowry.

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

July 10, 1958

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

<u>Phoenix Mine (Santa Cruz County)</u>	<u>lead and silver</u>
(Property)	(ore)

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

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

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

(COPY)

UNITED STATES DEPARTMENT OF
THE INTERIOR

Bureau of Mines

Southwest Experiment Station

Western Region

Box 4097
University Station
Tucson, Arizona
February 9, 1945

Mr. Geo. R. Hay
Patagonia, Arizona

Dear Mr. Hay:

This is in reply to your letter of January ³¹ asking about the possibility of our drilling your Phoenix group of claims adjoining the Mowry Mine, now that lead is again in demand.

I regret to say I am afraid there is little or no possibility-- at least not in the foreseeable future. As you doubtless know, The Federal Geological Survey studied your area. Their men could find no evidence that the Phoenix group is underlain by limestone, and it seems to us there is not much chance of ore occurring on your claims except associated with limestone.

Very truly yours,

(Signed) J. H. Hedges
District Engineer

April 15, 1942

Mr. George R. Hay
Patagonia, Arizona

Dear Mr. Hay:

I am enclosing a copy of the Mine Owner's
Report on the Phoenix Mine as filed by you.

It is very difficult to obtain private money
and I would urge your application for an RFC development
loan. The RFC have liberalized their attitude toward loans
and I believe it possible to get one at this time, whereas
it has been rather difficult prior to the present emergency.

Yours very truly,

J. S. Coupal

JSC:LP
Enc.

GEO. R. HAY
Patagonia
Arizona



April 8th, 1942.

Mr. J. S. Coupal, Director,
Dept. Of Mineral Resources,
Capitol Building,
Phoenix, Arizona.

Dear Mr. Coupal:-

I appreciate your letter of April 1st, enclosing blank for filing report on the lead mine that I own adjoining the Mowry Mine, and I am enclosing blank, filled out with sufficient data to merit the attention of any parties looking for lead.

While this deposit is merely a prospect at present, it is quite unusual, and has the earmarks of an important mine, with proper development. In this connection it is worth considering that all mines were mere prospects in the beginning.

A former superintendent of the Callahan Zinc-Lead Company, who examined this deposit with me, by name of Fisher, volunteered that he would recommend diamond drilling to his Company, in case they became interested in securing further properties. He was only one of several engineers that have made favorable comment.

I received late bulletin from the Interior Department, announcing their intention to expend a billion dollars, more or less, in mining and power development in the west; so, in view of this proposal, I will probably apply to the R.F.C. for a development loan, but I would rather make a deal with private capital if possible. With lead at 9 cents, the outlook for lead mining is attractive.

Dont bother to answer this letter unless you have information that would be to my further advantage.

With best regards, I remain

Very truly yours

Geo. R. Hay

GEO. R. HAY
Patagonia
Arizona

September 2nd, 1940.

Mr. J. S. Coupal, Director,
Department of Mineral Resources,
Capitol Building,
Phoenix, Arizona.

Dear Mr. Coupal:-

I wish to acknowledge receipt of your letter of the 24th, ult, enclosing copy of my statement concerning my group of Phoenix claims, adjoining the Mowry property, and express my appreciation of your inquiry for further particulars.

There is nothing much to add to my previous statement, except that the company that has undertaken to open up and further explore the old Mowry mine, is making excellent progress under the direction of B. M. Lovelace, and it is probable that we will soon have another producer, in addition to the operations of the A.S.&R. Co., and the Callahan Zinc-Lead Company.

I might add just a word about my claims, in explanation of why I consider them to cover an unusual deposit; and that is because of the very extensive and pronounced mineralization that extends over an area over 300 feet wide and 2000 feet long.

So far as my experience goes, this is a freak deposit occurring in a sheared zone in quartzite, with sufficient evidence in the many outcrops to warrant exploration with at least one diamond drill hole to a depth of at least 500 feet, crosscutting the structure.

Should such exploration penetrate to the sulphide zone at the permanent water level, it is my opinion that commercial bodies of pure silver-lead ore will be encountered.

With best wishes for the welfare of the Small Mine Operators, and kindest regards, I remain

Sincerely yours

Geo. R. Hay

GEO. R. HAY
Patagonia
Arizona

June 17th, 1940.

Mr. J. S. Coupal, Director,
Department of Mineral Resources,
Capitol Building,
Phoenix, Arizona.

Dear Mr. Coupal:-

I received your letter of the 7th inst,
enclosing blank for Mine Owner's Report, which I have filled
out and am enclosing herein.

Miles Carpenter made a cursory examina-
tion of this deposit, and may have an opinion as to its
merit.

Appreciating the work of the Depart-
ment of Mineral Resources in furthering the marketing of
claims owned by the small mine operators of the State, I
remain

Very truly yours

A handwritten signature in cursive script that reads "Geo. R. Hay". The signature is written in dark ink and is positioned below the typed name "Geo. R. Hay".

PHOENIX MINE

SANTA CRUZ COUNTY

6/17/40 Information from George R. Hay - Gold, Silver, Lead - -
Five unpatented claims in Patagonia district, Santa Cruz County.
Only surface development as yet. Ten separate streaks of ore up to
several feet in width. Composite sample averaged 13.9% lead, and 1½ oz.
silver. Selected samples ran up to .16 oz. gold, 35 oz. silver and
43% lead. Adjoins old Mowry Mine. Good road to property. For sale on
reasonable terms.

* GENERAL REFERENCES

- REFERENCE 1 F1 < USBM FILES, PHOENIX MINE >
- REFERENCE 2 F2 < ADMR FILE DATA, PHOENIX MINE >
- REFERENCE 3 F3 < SMITH, GEORGE E., 1956 THE GEOLOGY AND ORE DEPOSITS OF THE MOWRY MINE AREA, SANTA CRUZ COUNTY, ARIZONA. M.S. THESIS, UNIVERSITY OF ARIZONA, 44 pp. >
- REFERENCE 4 F4 < SCHRADER, F.C., 1915, USGS BULL. 582, p. 296-306 >

- F5 < SIMONS, F.S., 1974, USGS MAP I-7162 (1:48000) >
- F6 < PROUT, J.W., 1907, THE SILVER-LEAD DEPOSITS OF THE MOWRY MINE, MOWRY, SANTA CRUZ COUNTY, ARIZONA. M.S. THESIS, UNIVERSITY OF ARIZONA, 18 pp. >
- F7 < BRINSMADE, R.B., 1907, LEAD-SILVER DEPOSITS OF MOWRY, ARIZONA; MINES AND MINERAL VOL. 27, NO. 12, p. 529-531 >

- K5 < MONZONITE AND AS CONTACT FISSURE DEPOSITS BETWEEN LIMESTONE AND MONZONITE >
- N5 < EXTEND INTERRUPTEDLY ALONG CONTACT FISSURE OF MOWRY FAULT FOR 1/2 MILE OR MORE >
- N70 < LIMESTONE BEDS CONTAINING THE MOWRY DEPOSITS; PYROXENE MONZONITE SIMILARLY UPTILTED, CREATING PARALLEL FRACTURES ALONG WHICH MINERALIZATION OCCURRED >
- N75 < FELDSPARS ARE GREATLY KAOLINIZED AND ALTERED TO EPIDOTE >
- N85 < LOCATED NEAR SECTION OF E-W MOWRY FAULT THAT HAS BEEN DISPLACED FROM SECTION OF FAULT ON MOWRY MINE PROPERTY BY THE N-S EAST END FAULT >
- D10 < NO PRODUCTION DATA AVAILABLE >

miles # 44E

U.S. CRIB-SITE FORM
RECORD IDENTIFICATION

RECORD NUMBER B10 < _____ > RECORD TYPE B20 < X, 1, M > DEPOSIT NUMBER B40 < _____ >

REPORT DATE G1 < 82, 04 > INFORMATION SOURCE B30 < 1, 2 > FILE LINK IDENT. B50 < USBM-0040230317 >

REPORTER (SUPERVISOR) G2 < CALDER, SUSAN R. > (last, first, middle initial) (last, first, middle initial)

REPORTER AFFILIATION G5 < ABGMI > SITE NAME A10 < PHOENIX MINE >

SYNONYMS A11 < HAY PROPERTY >

LOCATION

MINING DISTRICT/AREA A30 < HARSHAW DISTRICT >

COUNTY A60 < SANTA CRUZ > STATE A50 < A.Z. > COUNTRY A40 < U.S. >

PHYSIOGRAPHIC PROV A63 < 1, 2, E >

DRAINAGE AREA A62 < 1, 5, 0, 5, 0, 3, 0, 1, W, LOWER COLORADO >

QUADRANGLE NAME A90 < LOCHIEL > LAND STATUS A64 < 4, 1, E, 1, 1, 9, 7, 9, 1 >

SECOND QUAD NAME A92 < HARSHAW > QUADRANGLE SCALE A100 < 6, 2, 5, 0, 0 >

ELEVATION A107 < 5, 3, 0, 0, FT > SECOND QUAD SCALE A91 < 2, 4, 0, 0, 0 >

UTM

NORTHING A120 < 3476350 >

EASTING A130 < 528950 >

ZONE NUMBER A110 < 1, 2 >

* ACCURACY

ACCURATE (circle)

ESTIMATED EST < _____ >

GEODETIC

LATITUDE A70 < 31-25-23, N >

LONGITUDE A80 < 110-41-43, W >

CADASTRAL

TOWNSHIP(S) A77 < 0, 2, 3, 5, E > RANGE(S) A78 < 0, 1, 6, E >

SECTION(S) A79 < 15 >

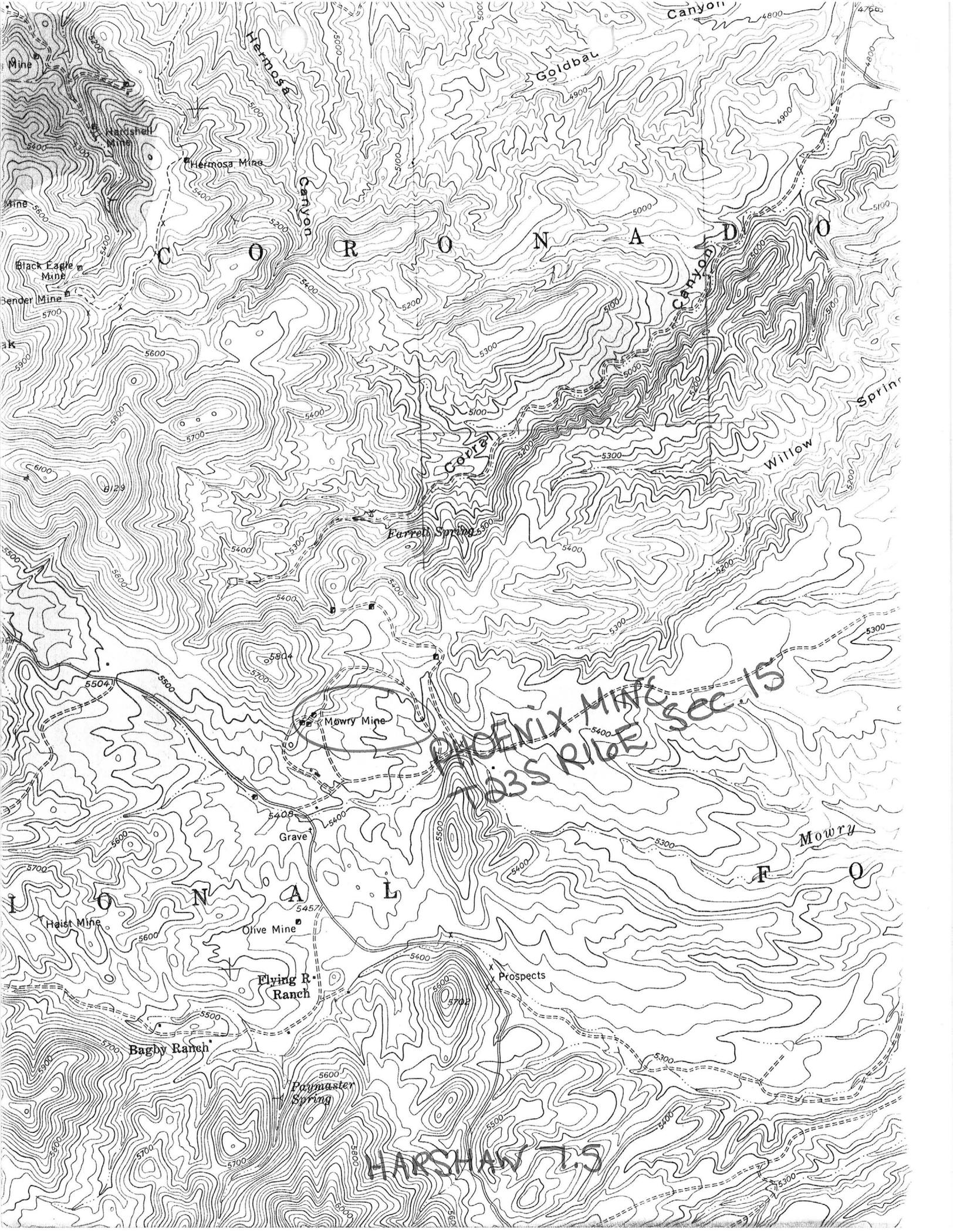
SECTION FRACTION(S) A76 < 52 OF 52 >

MERIDIAN(S) A81 < GILA AND SALT RIVER >

POSITION FROM NEAREST PROMINENT LOCALITY A82 < 9 MILES SOUTH OF PATAGONIA >

LOCATION COMMENTS A83 < 1.5 MILES SE OF AMERICAN PEAK, ADJOINING MOWRY MINE PROPERTY TO EAST >

* ESSENTIAL INFORMATION
* ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED



C O R O N A D O

PHOENIX MINE sec. 15
T. 33 S. R. 10 E

HARSHAW T. 5

Mine
Harshett Mine
Hermosa Mine

Black Eagle Mine
Sender Mine

Hermosa Canyon

Goldball Canyon

Canyon

Willow Spring

Parrell Spring

Mowry Mine

Grave

Mowry

Haist Mine

Olive Mine

Flying R. Ranch

Bagby Ranch

Paymaster Spring

Prospects

D - R - A - F - T
(Subject to Correction and Revision)

15009

PRELIMINARY WAR MINERALS REPORT*

Report of the Bureau of Mines to Secretary of the Interior, Harold L. Ickes

PHOENIX GROUP
Santa Cruz County, Arizona

- Lead -

Summary

The Phoenix group of claims adjoins, on the southeast, the old Mowrey Mine which was for many years one of the most important lead-silver mines of the state. The latter mine is credited with production of 10,000,000 pounds of lead and \$500,000 worth of silver. It is situated in the eastern outlying hills of the middle part of the Patagonia Mountains, which extend south across the Mexican border. This area is near the center of a district with many old mines that have yielded in excess of 23,500,000 pounds copper, 50,500,000 pounds lead, and \$4,500,000 in silver. A number of these mines are now in production. The district is easily accessible by good roads and by rail transportation from the town of Patagonia, 14 miles from these claims.

The Phoenix claims are a potential source of a very large tonnage of low-grade lead ore, which carries some silver values but is practically free of zinc. The ore could be mined and concentrated very cheaply. The claims are underlain by Cretaceous beds, partly quartzite and partly softer shaley beds. A broad shear zone runs lengthwise through the claims and the soft, crushed material in this belt contains much cerussite. Samples of this material from nine surface pits, that are aligned diagonally across a 350-foot width of this zone, average nearly 12 percent lead. Bands of hard quartzitic rock that lie between these shears are virtually barren. A rude concentration can probably be made by coarse crushing and screening.

The position of the water table indicates that the top of the sulfide zone can be expected at little more than 100 feet depth below the crest of the hill on which this material outcrops.

* This preliminary war minerals report has been prepared for the engineers and consultants of the Bureau of Mines for their technical review and criticism, and to keep them informed of the progress of the Bureau of Mines war minerals program. It is not to be made available to others, as the data are subject to correction and revision. The final report, when issued, will be distributed on a limited basis to officials of the Federal war agencies, the owners or operators of the properties described therein, and to certain others with a specific concern in the production of minerals vital to the prosecution of the war.

The Bureau of Mines proposed to initiate a preliminary trench sampling program to determine if the proportion of lead-bearing material in this sheared belt is sufficiently high to yield a practicable mill feed by an open pit mining. The cost of this preliminary sampling is estimated at \$1,500. Geologic mapping by the Geological Survey is recommended to aid in estimating the probability of finding important ore bodies at greater depth.

If the preliminary sampling indicates the presence of important tonnages of ore, then further investigation will be recommended, embracing thorough sampling of the outcrops, core drill sampling at greater depth, and concentration tests of the ore. The details of the possible later phases of the investigation and cost estimates of that work will be presented in a supplementary report after the results of the preliminary sampling are known.

Introduction

The owner of the Phoenix group of claims requested examination and exploration by the Bureau of Mines. The claims have been visited by engineers of the Bureau of Mines on three occasions and samples were cut at all the places where ore is exposed.

Other sources of information consulted were Bulletin 582 of the U. S. Geological Survey, and Bulletin 140, Arizona Bureau of Mines.

Location and Accessibility

This group of claims adjoins the old Mowrey Mine in the middle eastern part of the Patagonia Mountains, 9 miles south of the town of Patagonia. There are two good roads to the locality from Tucson: (1) Twenty-four miles southeast by paved highway (US 80) to Mountain View; thence 28 miles southerly by a winding well-graded and graveled road to Sonoita; thence 12 miles southwest by paved highway 82 to Patagonia and 14 miles by the graded Harshaw Canyon road to the Mowrey Mine, a total distance of 78 miles; (2) the alternate route goes 66 miles south to Nogales, by paved highway (US 89); thence 7 miles northeast, by paved highway 82, to the Nogales water works; thence 14 miles easterly to Washington Camp, by the graded and graveled Sycamore Canyon road, and 4 miles northerly to Mowrey by the Duquesne-Patagonia road, a total distance of 91 miles. The grade up the west slope of the Patagonia Mountains is heavy on the Sycamore Canyon road and requires about two miles of second gear driving to cross it in an automobile. The nearest railroad station is Patagonia, on the Nogales branch of the Southern Pacific Railroad. The camp of Mowrey is served by rural mail delivery

Ownership and Facilities

The claims are held by George R. Hay of Patagonia who relocated them in 1936.

There is a plentiful supply of water for domestic purposes in shallow wells near the Phoenix claims. Sufficient water for a 100-ton concentrating mill was pumped from the Mowrey Mine when that was operating.

There are several buildings in Mowrey camp. Shelter could probably be obtained for a Bureau of Mines' crew.

Some local labor could probably be secured. This is an old established district with a number of operating mines. Patagonia, Harshaw, and Duquesne are all fair-sized camps and there are a number of detached residences along all the roads.

History

The Mowrey Mine, which adjoins the Phoenix group, was worked by Mexicans in the early 1850's. Lieutenant Sylvester Mowrey purchased the mine in 1859. He did a considerable amount of development work and erected a smelter to reduce the high-grade, lead-silver ore that was produced. The mine was seized by the United States Government in 1862 on the charge that lead produced at this mine was being supplied to the Confederate Army. It was relocated during the 1870's and was operated by various owners down to 1910 or later. A 100-ton concentrating mill and smelter were erected in 1904. A large slag dump bears evidence of the tonnage of ore produced.

Many other mines in the area, located in the 1870's, produced a considerable amount of lead, zinc, silver, and some copper. The Harshaw district, 3 to 4 miles north of the Mowrey Mine, is credited with production of 400,000 pounds copper, 13,600,000 pounds lead, and \$3,000,000 worth of silver prior to 1930. The American Smelting and Refining Company is operating a 300-ton concentrating mill on ore from the Trench Mine and the Flux Mine, both in the Harshaw district.

The Mowrey Mine is credited with production of 10,000,000 pounds of lead and \$500,000 worth of silver. The mines in the Washington and Duquesne districts, three miles south of Mowrey, are credited with production of 23,000,000 pounds copper, 27,000,000 pounds lead, and over \$1,000,000 worth of silver, prior to 1926.

The Callahan Zinc Company is operating a 200-ton mill near Duquesne, which is supplied with ore from 6 or 7 mines in the district. Lead, zinc, and copper concentrates are made.

Description of the Area

The Phoenix claims lie mainly on the most northerly unit of a range of four hills that trend north-south and constitute the eastern outline of the middle Patagonia Mountains. This hill, which lies between Willow Spring Canyon and Mowrey Wash, attains an altitude of 5,500 feet. Willow Spring Canyon follows the east-west Mowrey fault, along which the main Mowrey vein was formed. Mowrey Camp is situated near the northern edge of a park-like area west of the hills and at an altitude of 5,400 feet. From there the terrain slopes gently upward for three miles south-east to Guajalote Flat, at 6,800 feet altitude. This is on the crest of the tilted block that constitutes the central unit of the range.

Geology

Schrader described the Mowrey Mine fully in U.S. Geological Survey Bulletin 582. The main vein is in the fault fissure at the contact of upper

Pennsylvanian limestone with granite porphyry or quartz monzonite that underlies the flat south of the fault. The fault fissure is characterized by 2 to 3 feet of clayey fault gangue along the quartz monzonite foot wall and by an almost continuous mineralized zone. A north-south fault or shear zone intersects the main fault and dies out near the top of Mowrey hill to the north. The largest ore shoot was found on the east side of that fault at its junction with the Mowrey fault. There the limestone was replaced by ore for a width of 80 to 100 feet back from the Mowrey fault, nearly down to the 250-foot level. A large irregular dike of gabbro was intruded into the sedimentary rocks toward the east. The top of the dike is near the 250-foot level and the gabbro is the hanging wall of the vein below that level in the eastern part of the mine. The vein below the dike is lower in grade and its mineralization differs from the vein above in that the copper and iron sulfide content increases with depth.

The high-grade ore, down to the 250-foot or 300-foot level consisted of oxidized lead minerals and galena in a gangue of manganese and iron oxides. Schrader believes the ore deposition was associated with the gabbro intrusion, because of the predominance of manganese and iron oxides and the paucity of quartz and calcite. This gabbro outcrops in the camp and also along the road to Washington 1-1/4 miles south of the mine.

The Pennsylvanian limestone of Mowrey hill is unconformably overlain by Cretaceous beds. The lowest of these, as exposed on the Phoenix claims are quartzite, approximately 100 feet thick, overlain by 300 to 400 feet of shaley beds with some quartzite. Above these softer beds is a thinner outcrop of quartzite followed by more shaley beds near the upper limit of the outcrops, beyond which they are masked by late alluvium. A small patch of the Cretaceous appears at the eastern limit of the outcrops north of the Mowrey fault. South of the fault there are no Pennsylvanian limestone outcrops. The eastern range of hills is underlain by the Cretaceous beds. These strike north-south and dip 70° east. The hills rise abruptly from the flat on the west, where the basal quartzite is in contact with the quartz monzonite and with gabbro at the water gap where the Washington road crosses to the east side of the hills along the south fork of Mowrey Wash.

On the Phoenix claims, the middle section of softer beds shows evidence of crushing and shearing along the strike. The soft crushed bands are well mineralized with lead carbonate that is practically free of zinc and carries some silver values. Harder, quartzitic beds that lie between the bands of soft, crushed material carry very little lead. On the outcrops this softer sheared zone appears to be 300 feet to 350 feet wide. It is easily traced by the type of weathering. This material weathers to small rubble, with few pieces larger than two inches in diameter, whereas the massive quartzite weathers to larger angular blocks. The crushed lead-bearing material weathers to a yellowish buff color except toward the north end of the exposures where two pits show a considerable amount of manganese stain.

Development

Eight shallow pits have been excavated along the center line of the No. 1 and No. 2 claims. Pit No. 1 (Figure 1) is 10 feet deep; whereas pits No. 2 to 8 are about 2 to 3 feet deep. Three hundred feet east of No. 8 pit and on claim No. 3 another 10-foot deep pit has been dug. The first eight pits are situated in a strip of ground 1,100 feet long and 15 feet wide, that bears north 20° west. Owing to the fact that the strike of the bedding and the shearing bear north-south, these pits cross diagonally a zone 350 feet wide.

Assays

The owner reported that a composite sample taken from all the pits assayed 13.9 percent lead and 1.5 ounces per ton silver. A character sample, taken at the first visit by a Bureau of Mines' engineer, assayed 13.2 percent lead, 0.80 ounce per ton silver, 0.005 ounce per ton gold.

A systematic sampling of all the pits gave average returns of 11.8 percent lead, with little more than a trace of zinc over average widths of 12 inches while the quartzitic walls of the crushed material assayed barely more than a trace of lead. (See the sample plat, figure 1). It is important to emphasize here that these samples do not represent a single, narrow mineralized shear zone but several such shear zones in a belt 300 to 350 feet wide in which these mineralized shears appear to be closely spaced. It is impossible to estimate, however, what ratio the aggregate width of this mineralized material bears to the total width of the sheared zone since there is no trenching on the outcrop.

Discussion

The available data are sufficient to suggest possibilities only. There is on the claims a large volume () of low-grade zinc-free lead carbonate ore which could be mined by open-cut methods and beneficiated by ore-dressing methods. This possibility can be determined by inexpensive preliminary trench sampling. If the preliminary trench sampling shows that the average material in the broad shear zone is lead ore of milling grade or that a mill feed can be obtained by screening the bulk material, then a thorough sampling will be in order.

Some pertinent factors to be determined are:

- (1) Effect of screening
- (2) Concentrating characteristics
- (3) Depth of oxidation
- (4) The possible presence of limestone sufficiently near the intrusive rock to be the locus of replacement ore bodies.

(1) The mineralized material, exposed in the surface pits is soft and friable while the intervening barren rock is hard. It is probable that a rough concentration, perhaps in the ratio of 2 or 3 into 1 can be made by coarse crushing and screening.

(2) If the preliminary work shows that a large tonnage of mill feed can be obtained, then metallurgical tests should be made. The lead carbonate can probably be concentrated by sulfidizing and flotation.

(3) The ground water level is probably near the base of the hill, a little more than 100 feet below the crest. Water stands at 12 feet from the surface in a well in Mowrey Wash, near the center of Phoenix No. 5 claim. It stands at 30 feet from the surface in a well on the flat about 300 yards southwest of that place. Sulfides should appear near the ground water level on these claims. Partial oxidation extended far below the ground water level in the main Mowrey vein, but that is in the large Mowrey fault fissure which cuts across the bedding through the barrier of steep dipping beds to the east and thus served as a channel for deep drainage out toward the desert valley east of the mountains.

(4) A small block of the upper Pennsylvanian limestone was noted south of Willow Spring Canyon, which probably is on the main Mowrey fault. The position of this limestone block suggests that there may have been considerable displacement along a north-south fault. Geologic mapping might indicate the presence of a wedge of the limestone beneath the Cretaceous beds under the Phoenix claims. If limestone is present there, near the intrusive rock, it would be a likely host for replacement ore bodies.

Suggested Exploration Program

(1) Preliminary trench sampling of the outcrop to determine the extent of mineralization in the shear zone and the average grade of the entire volume of rock in the zone. These trenches should be spaced 200 feet apart and would probably be 350 to 400 feet long. Five such trenches should be sufficient to cover the 1,100-foot length of outcrop now known to be mineralized.

(2) Geologic mapping by the Geological Survey to aid in estimating the possibility of finding important ore bodies at greater depth. If the preliminary trench sampling should indicate the presence of important, workable ore bodies then the exploration program should be continued approximately as follows:

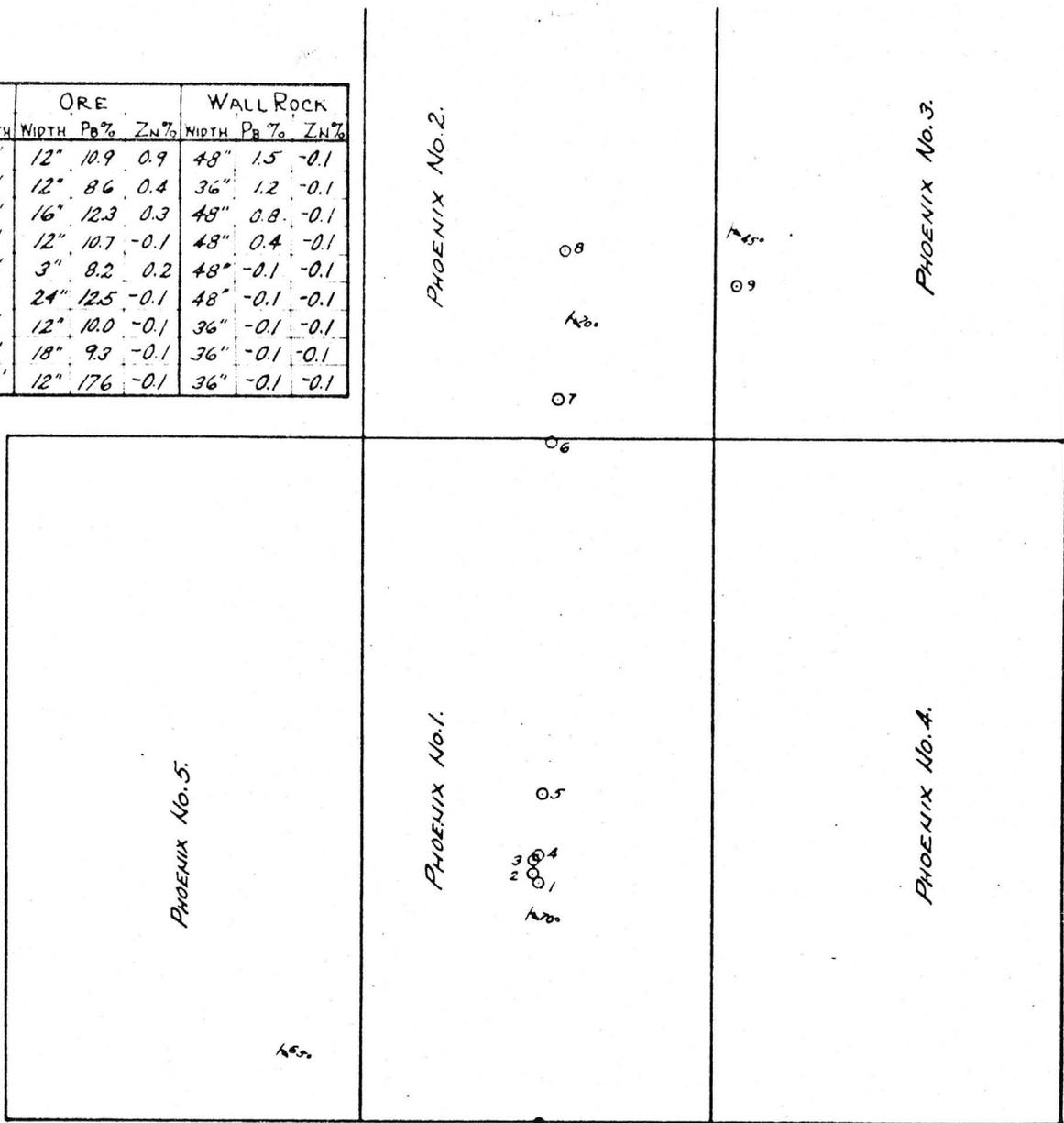
(3) Make ore-dressing tests to determine the best way to treat the ore.

(4) Survey and map the area.

(5) Trench sample the outcrop thoroughly.

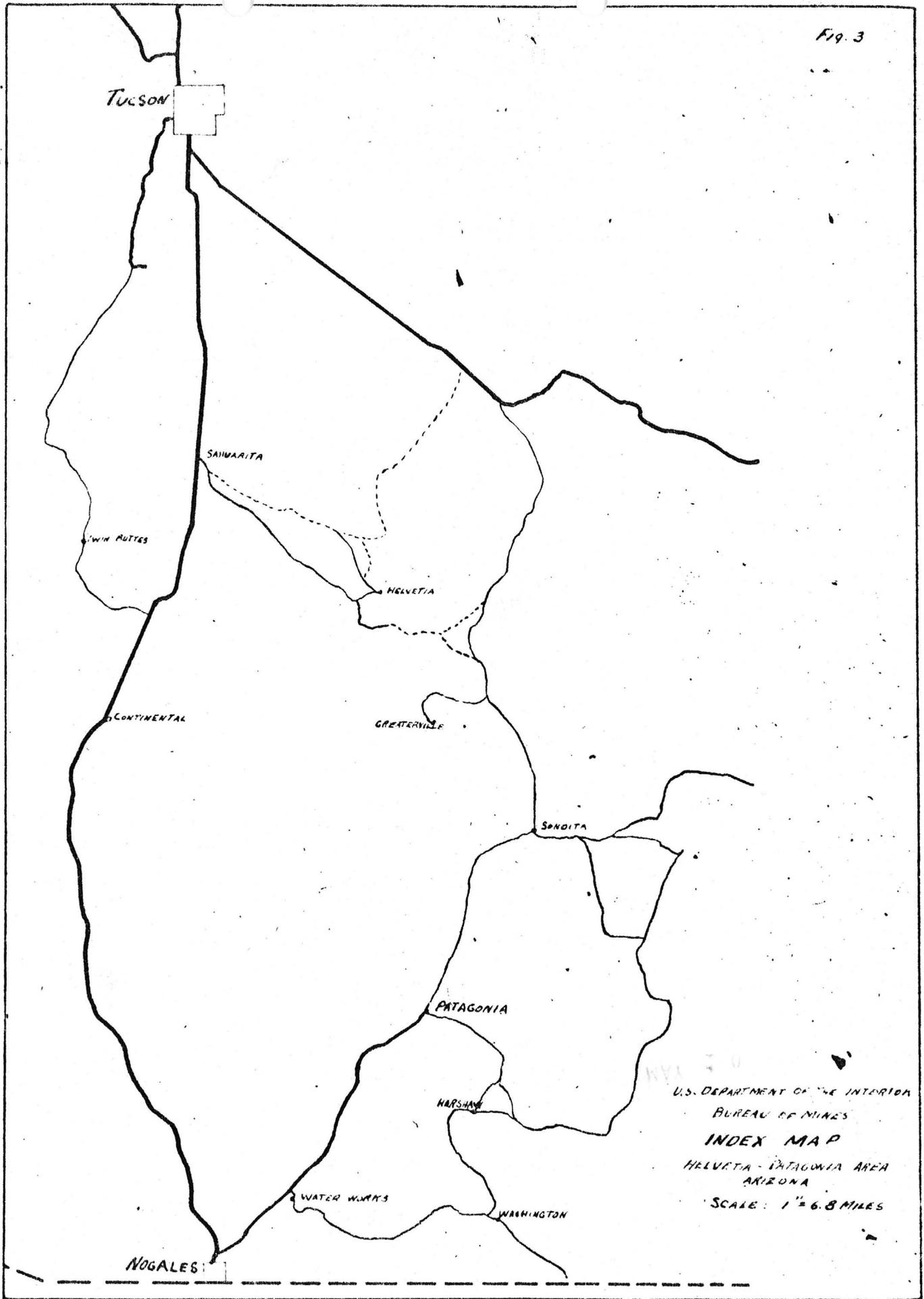
(6) Do diamond drill sampling of the ore at depth. Holes drilled from the east side of the hill and inclined normal to the bedding would probably intersect the ore zone below the top of the sulfide zone.

SAMP No.	DEPTH	ORE			WALL ROCK		
		WIDTH	Pb%	Zn%	WIDTH	Pb%	Zn%
1	10'	12"	10.9	0.9	48"	1.5	-0.1
2	4'	12"	8.6	0.4	36"	1.2	-0.1
3	2'	16"	12.3	0.3	48"	0.8	-0.1
4	2'	12"	10.7	-0.1	48"	0.4	-0.1
5	5'	3"	8.2	0.2	48"	-0.1	-0.1
6	3'	24"	12.5	-0.1	48"	-0.1	-0.1
7	3'	12"	10.0	-0.1	36"	-0.1	-0.1
8	8'	18"	9.3	-0.1	36"	-0.1	-0.1
9	10'	12"	17.6	-0.1	36"	-0.1	-0.1



U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF MINES
FIG. 1.
PHOENIX GROUP
ASSAY PLAT
 PACING AND BRUNTON SURVEY
 CLAIM LINES APPROXIMATE AND UNSURVEYED
 AND INCORRECTLY MONUMENTED.
 SCALE - 1" = 250'

TRACED BY J. L. W. ...
 2-22-43.



MP-21

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date: April 8, 1942

1. Mine: Phoenix Mine
2. Location: Adjoining Mowry Mine - 14 miles southerly from Patagonia, Arizona.
3. Mining District & County: Patagonia Mining District - Santa Cruz County
4. Former name:
5. Owner: Geo. R. Hay
6. Address (Owner): Patagonia, Arizona
7. Operator
8. Address (Operator)
9. President, Owinging Co.
- 9A. President, Operating Co.
10. Gen. Mgr.
14. Principal Minerals: Lead and silver
11. Mine Supt.
15. Production Rate
12. Mill Supt.
16. Mill - Type & Cap.
13. Men Employed
17. Power - Amt. & Type
13. Operations - Present: Not operating now.
19. Operations - Planned: Development will depend on exploration by diamond drill, crosscutting deposit to depth of 500 feet. Two such diamond drill holes should be sufficient to determine extent and quality of ore.
20. Number Claims, Title, etc.: Five unpatented claims - Title clear.
21. Description - Topography & Geography: These claims are accessable from County Road that runs across the property, from which an entirely downhill haul leads to the loading station at Patagonia..
22. Mine Workings - Amt. & Condition: There are no mine workings as such, but numerous open cuts and shallow shafts expose the outcrops of ore on the surface.

(over)

23. Geology & Mineralization: This prospect is an extensive deposit, approximately 300 feet wide and 2,000 feet long, and consists of parallel streaks of ore, from a few inches to several feet in width. From 10 shallow open cuts on the surface, on 10 parallel streaks of ore, 1 sack of 100 pounds was taken from each of these open cuts, making a 1,000 pound sample, which was shipped to Hawley & Hawley at Douglas, with the result of an average of 13.9% lead and 1-1/2 ounces in silver. However, separate assays ran up to - Gold, .16 ozs., silver, 31.0 ozs., and lead, 43.0%.
24. Ore: Positive & Probable, Ore Dumps, Tailings: The deposit occurs in a cretaceous formation, overlying the Mowry limestone, and was formed by the same intrusive dike of quartz-monzonite, that uptilted the limestone at the Mowry, with the ore bodies in the limestone following the contact. In the case of this deposit, the cretaceous formation was similarly uptilted, creating parallel fractures, through which the lead solutions reached the surface and were deposited as carbonates.
25. Mine, Mill Equipment & Flow-Sheet: The mineralization is very extensive Over this wide area, and highgrade silver values may be reasonably anticipated with development; both on account of favorable surface indications, and because the adjoining Mowry Mine was a famous producer of highgrade silver ore in the early days.
26. Road Conditions, Route:
27. Water Supply: There is abundance of water in this section for any purpose.
28. Brief History
29. Special Problems, Reports Filed:
30. Remarks: This deposit is more or less of a freak occurrence, as it is the only one of its kind in this district, and as such, merits careful consideration. Inasmuch as the Mowry ores were free from zinc or other refractory elements, it may be reasonable presumed that the ores of this property will be free from refractories.
31. If property for sale - Price, terms and address to negotiate: \$50,000 on standard bond and lease, with no cash required. Or - will consider any reasonable offer.

32. Signed: Geo. R. Hay

MP-21

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date: April 8, 1942

1. Mine: Phoenix Mine
2. Location: Adjoining Mowry Mine -
14 miles southerly from Patagonia,
Arizona.
3. Mining District & County: Patagonia
Mining District - Santa Cruz County
4. Former name:
5. Owner: Geo. R. Hay
6. Address (Owner): Patagonia, Arizona
7. Operator
8. Address (Operator)
9. President, Owning Co.
- 9A. President, Operating Co.
10. Gen. Mgr.
14. Principal Minerals: Lead and silver
11. Mine Supt.
15. Production Rate
12. Mill Supt.
16. Mill - Type & Cap.
13. Men Employed
17. Power - Amt. & Type
18. Operations - Present: Not operating now.
19. Operations -- Planned: Development will depend on exploration by diamond
drill, crosscutting deposit to depth of 500 feet.
Two such diamond drill holes should be sufficient to
determine extent and quality of ore.
20. Number Claims, Title, etc.: Five unpatented claims - Title clear.
21. Description - Topography & Geography: These claims are accessible from
County Road that runs across the property, from which an entirely downhill
haul leads to the loading station at Patagonia..
22. Mine Workings - Amt. & Condition: There are no mine workings as such, but
numerous open cuts and shallow shafts expose the outcrops of
ore on the surface.

(over)

23. Geology & Mineralization: This prospect is an extensive deposit, approximately 300 feet wide and 2,000 feet long, and consists of parallel streaks of ore, from a few inches to several feet in width. From 10 shallow open cuts on the surface, on 10 parallel streaks of ore, 1 sack of 100 pounds was taken from each of these open cuts, making a 1,000 pound sample, which was shipped to Hawley & Hawley at Douglas, with the result of an average of 13.9% lead and 1-1/2 ounces in silver. However, separate assays ran up to - Gold, .16 ozs., silver, 31.0 ozs., and lead, 43.0%.
24. Ore: Positive & Probable, Ore Dumps, Tailings: The deposit occurs in a cretaceous formation, overlying the Mowry limestone, and was formed by the same intrusive dike of quartz-monzonite, that uptilted the limestone at the Mowry, with the ore bodies in the limestone following the contact. In the case of this deposit, the cretaceous formation was similarly uptilted, creating parallel fractures, through which the lead solutions reached the surface and were deposited as carbonates.
25. Mine, Mill Equipment & Flow-Sheet: The mineralization is very extensive Over this wide area, and highgrade silver values may be reasonably anticipated with development; both on account of favorable surface indications, and because the adjoining Mowry Mine was a famous producer of highgrade silver ore in the early days.
26. Road Conditions, Route:
27. Water Supply: There is abundance of water in this section for any purpose.
28. Brief History
29. Special Problems, Reports Filed:
30. Remarks: This deposit is more or less of a freak occurrence, as it is the only one of its kind in this district, and as such, merits careful consideration. Inasmuch as the Mowry ores were free from zinc or other refractory elements, it may be reasonable presumed that the ores of this property will be free from refractories.
31. If property for sale - Price, terms and address to negotiate:
\$50,000 on standard bond and lease, with no cash required. Or - will consider any reasonable offer.

32. Signed: Geo. R. Hay

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date: April 8, 1942

1. Mine: Phoenix Mine
2. Location: Adjoining Mowry Mine - 14 miles southerly from Patagonia, Arizona.
3. Mining District & County: Patagonia Mining District - Santa Cruz County
4. Former name:
5. Owner: Geo. R. Hay
6. Address (Owner): Patagonia, Arizona
7. Operator
8. Address (Operator)
9. President, Owing Co.
- 9A. President, Operating Co.
10. Gen. Mgr.
14. Principal Minerals: Lead and silver
11. Mine Supt.
15. Production Rate
12. Mill Supt.
16. Mill - Type & Cap.
13. Men Employed
17. Power - Amt. & Type
18. Operations - Present: Not operating now.
19. Operations - Planned: Development will depend on exploration by diamond drill, crosscutting deposit to depth of 500 feet. Two such diamond drill holes should be sufficient to determine extent and quality of ore.
20. Number Claims, Title, etc.: Five unpatented claims - Title clear.
21. Description - Topography & Geography: These claims are accessible from County Road that runs across the property, from which an entirely downhill haul leads to the loading station at Patagonia..
22. Mine Workings - Amt. & Condition: There are no mine workings as such, but numerous open cuts and shallow shafts expose the outcrops of ore on the surface.

(over)

23. Geology & Mineralization: This prospect is an extensive deposit, approximately 300 feet wide and 2,000 feet long, and consists of parallel streaks of ore, from a few inches to several feet in width. From 10 shallow open cuts on the surface, on 10 parallel streaks of ore, 1 sack of 100 pounds was taken from each of these open cuts, making a 1,000 pound sample, which was shipped to Hawley & Hawley at Douglas, with the result of an average of 13.9% lead and 1-1/2 ounces in silver. However, separate assays ran up to - Gold, .16 ozs., silver, 31.0 ozs., and lead, 43.0%.
24. Ore: Positive & Probable, Ore Dumps, Tailings: The deposit occurs in a cretaceous formation, overlying the Mowry limestone, and was formed by the same intrusive dike of quartz-monzonite, that uptilted the limestone at the Mowry, with the ore bodies in the limestone following the contact. In the case of this deposit, the cretaceous formation was similarly uptilted, creating parallel fractures, through which the lead solutions reached the surface and were deposited as carbonates.
25. Mine, Mill Equipment & Flow-Sheet: The mineralization is very extensive Over this wide area, and highgrade silver values may be reasonably anticipated with development; both on account of favorable surface indications, and because the adjoining Mowry Mine was a famous producer of highgrade silver ore in the early days.
26. Road Conditions, Route:
27. Water Supply: There is abundance of water in this section for any purpose.
28. Brief History
29. Special Problems, Reports Filed:
30. Remarks: This deposit is more or less of a freak occurrence, as it is the only one of its kind in this district, and as such, merits careful consideration. Inasmuch as the Mowry ores were free from zinc or other refractory elements, it may be reasonable presumed that the ores of this property will be free from refractories.
31. If property for sale - Price, terms and address to negotiate:
\$50,000 on standard bond and lease, with no cash required. Or - will consider any reasonable offer.

32. Signed: Geo. R. Hay

MP-21

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date: April 8, 1942

1. Mine: Phoenix Mine
2. Location: Adjoining Mowry Mine - 14 miles southerly from Patagonia, Arizona.
3. Mining District & County: Patagonia Mining District - Santa Cruz County
4. Former name:
5. Owner: Geo. R. Hay
6. Address (Owner): Patagonia, Arizona
7. Operator
8. Address (Operator)
9. President, Owning Co.
- 9A. President, Operating Co.
10. Gen. Mgr.
14. Principal Minerals: Lead and silver
11. Mine Supt.
15. Production Rate
12. Mill Supt.
16. Mill - Type & Cap.
13. Men Employed
17. Power - Amt. & Type
18. Operations - Present: Not operating now.
19. Operations -- Planned: Development will depend on exploration by diamond drill, crosscutting deposit to depth of 500 feet. Two such diamond drill holes should be sufficient to determine extent and quality of ore.
20. Number Claims, Title, etc.: Five unpatented claims - Title clear.
21. Description - Topography & Geography: These claims are accessible from County Road that runs across the property, from which an entirely downhill haul leads to the loading station at Patagonia..
22. Mine Workings - Amt. & Condition: There are no mine workings as such, but numerous open cuts and shallow shafts expose the outcrops of ore on the surface.

(over)

23. Geology & Mineralization: This prospect is an extensive deposit, approximately 300 feet wide and 2,000 feet long, and consists of parallel streaks of ore, from a few inches to several feet in width. From 10 shallow open cuts on the surface, on 10 parallel streaks of ore, 1 sack of 100 pounds was taken from each of these open cuts, making a 1,000 pound sample, which was shipped to Hawley & Hawley at Douglas, with the result of an average of 13.9% lead and 1-1/2 ounces in silver. However, separate assays ran up to - Gold, .16 ozs., silver, 31.0 ozs., and lead, 43.0%.
24. Ore: Positive & Probable, Ore Dumps, Tailings: The deposit occurs in a cretaceous formation, overlying the Mowry limestone, and was formed by the same intrusive dike of quartz-monzonite, that uptilted the limestone at the Mowry, with the ore bodies in the limestone following the contact. In the case of this deposit, the cretaceous formation was similarly uptilted, creating parallel fractures, through which the lead solutions reached the surface and were deposited as carbonates.
25. Mine, Mill Equipment & Flow-Sheet: The mineralization is very extensive Over this wide area, and highgrade silver values may be reasonably anticipated with development; both on account of favorable surface indications, and because the adjoining Mowry Mine was a famous producer of highgrade silver ore in the early days.
26. Road Conditions, Route:
27. Water Supply: There is abundance of water in this section for any purpose.
28. Brief History
29. Special Problems, Reports Filed:
30. Remarks: This deposit is more or less of a freak occurrence, as it is the only one of its kind in this district, and as such, merits careful consideration. Inasmuch as the Mowry ores were free from zinc or other refractory elements, it may be reasonable presumed that the ores of this property will be free from refractories.
31. If property for sale - Price, terms and address to negotiate: \$50,000 on standard bond and lease, with no cash required. Or - will consider any reasonable offer.

32. Signed: Geo. R. Hay

MP-21

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date: April 8, 1942

1. Mine: Phoenix Mine
2. Location: Adjoining Mowry Mine - 14 miles southerly from Patagonia, Arizona.
3. Mining District & County: Patagonia Mining District - Santa Cruz County
4. Former name:
5. Owner: Geo. R. Hay
6. Address (Owner): Patagonia, Arizona
7. Operator
8. Address (Operator)
9. President, Owning Co.
- 9A. President, Operating Co.
10. Gen. Mgr.
14. Principal Minerals: Lead and silver
11. Mine Supt.
15. Production Rate
12. Mill Supt.
16. Mill - Type & Cap.
13. Men Employed
17. Power - Amt. & Type
18. Operations - Present: Not operating now.
19. Operations - Planned: Development will depend on exploration by diamond drill, crosscutting deposit to depth of 500 feet. Two such diamond drill holes should be sufficient to determine extent and quality of ore.
20. Number Claims, Title, etc.: Five unpatented claims - Title clear.
21. Description - Topography & Geography: These claims are accessible from County Road that runs across the property, from which an entirely downhill haul leads to the loading station at Patagonia..
22. Mine Workings - Amt. & Condition: There are no mine workings as such, but numerous open cuts and shallow shafts expose the outcrops of ore on the surface.

(over)

23. Geology & Mineralization: This prospect is an extensive deposit, approximately 300 feet wide and 2,000 feet long, and consists of parallel streaks of ore, from a few inches to several feet in width. From 10 shallow open cuts on the surface, on 10 parallel streaks of ore, 1 sack of 100 pounds was taken from each of these open cuts, making a 1,000 pound sample, which was shipped to Hawley & Hawley at Douglas, with the result of an average of 13.9% lead and 1-1/2 ounces in silver. However, separate assays ran up to - Gold, .16 ozs., silver, 31.0 ozs., and lead, 43.0%.
24. Ore: Positive & Probable, Ore Dumps, Tailings: The deposit occurs in a cretaceous formation, overlying the Mowry limestone, and was formed by the same intrusive dike of quartz-monzonite, that uptilted the limestone at the Mowry, with the ore bodies in the limestone following the contact. In the case of this deposit, the cretaceous formation was similarly uptilted, creating parallel fractures, through which the lead solutions reached the surface and were deposited as carbonates.
25. Mine, Mill Equipment & Flow-Sheet: The mineralization is very extensive Over this wide area, and highgrade silver values may be reasonably anticipated with development; both on account of favorable surface indications, and because the adjoining Mowry Mine was a famous producer of highgrade silver ore in the early days.
26. Road Conditions, Route:
27. Water Supply: There is abundance of water in this section for any purpose.
28. Brief History
29. Special Problems, Reports Filed:
30. Remarks: This deposit is more or less of a freak occurrence, as it is the only one of its kind in this district, and as such, merits careful consideration. Inasmuch as the Mowry ores were free from zinc or other refractory elements, it may be reasonable presumed that the ores of this property will be free from refractories.
31. If property for sale - Price, terms and address to negotiate: \$50,000 on standard bond and lease, with no cash required. Or - will consider any reasonable offer.

32. Signed: Geo. R. Hay

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

DEPT. MINERAL RESOURCES
PATAGONIA
APR 10 1942
ALCO

Date April 8th, 1942.

- 1. Mine Phoenix Mine
- 2. Location - Adjoining Mowry Mine - 14 miles southerly from Patagonia, Arizona.
- 3. Mining District & County Patagonia Mining District - Santa Cruz
- 4. Former name County
- 5. Owner ✓ Geo. R. Hay
- 6. Address (Owner) Patagonia, Ariz.
- 7. Operator
- 8. Address (Operator)
- 9. President, Owinging Co.
- 9A. President, Operating Co.
- 10. Gen. Mgr.
- 14. Principal Minerals ✓ Lead & Silver
- 11. Mine Supt.
- 15. Production Rate
- 12. Mill Supt.
- 16. Mill: Type & Cap.
- 13. Men Employed
- 17. Power: Amt. & Type
- 18. Operations: Present Not operating now.

19. Operations: Planned Development will depend on exploration by diamond drill, crosscutting deposit to depth of 500 feet. Two such diamond drill holes should be sufficient to determine extent and quality of ore.

20. Number Claims, Title, etc. Five unpatented claims - Title clear.

21. Description: Topography & Geography These claims are accessible from County Road that runs across the property, from which an entirely down hill haul leads to the loading station at Patagonia.

22. Mine Workings: Amt. & Condition There are no mine workings as such, but numerous open cuts and shallow shafts expose the outcrops of ore on the surface.

23. Geology & Mineralization This prospect is an extensive deposit, approximately 300 feet wide and 2000 feet long, and consists of parallel streaks of ore, from a few inches to several feet in width. From 10 shallow open cuts on the surface, on 10 parallel streaks of ore, 1 sack of 100 pounds was taken from each of these open cuts,
24. Ore: Positive & Probable, Ore Dumps, Tailings making a 1000 pound sample, which was shipped to Hawley & Hawley, at Douglas, with the result of an average of 13.9% lead and 1 1/2 ounces in silver. However, separate assays ran up to - Gold .16 ozs, silver 31.0 ozs, and lead 43.0%.
- 24A. Dimensions and Value of Ore body The deposit occurs in a cretaceous formation, overlying the Mowry limestone, and was formed by the same intrusive dike of quartz-monzonite, that uptilted the limestone at the Mowry, with the ore bodies in the limestone following the contact. In the case of this deposit, the cretaceous formation was similarly uptilted, creating parallel fractures, through which the lead solutions reached the surface and were deposited as carbonates.
25. Mine, Mill Equipment & Flow-Sheet
26. Road Conditions, Route The mineralization is very extensive over this wide area, and highgrade silver values may be reasonably anticipated with development; both on account of favorable surface indications, and because the adjoining Mowry Mine was a famous producer of highgrade silver ore in the early days.
27. Water Supply There is abundance of water in this section for any purpose.
28. Brief History
29. Special Problems, Reports Filed
30. Remarks This deposit is more or less of a freak occurrence, as it is the only one of its kind in this district, and as such, merits careful consideration. In as much as the Mowry ores were free from zinc or other refractory elements, it may be reasonably presumed that the ores of this property will be free from refractories.
31. If property for sale: Price, terms and address to negotiate. \$50,000 on standard bond and lease, with no cash required.
Or - Will consider any reasonable offer.

32. Signature Geo. R. Hay

33. Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date June 17th, 1940.

1. Mine Phoenix
2. Location Adjoining Howry Mine on south east boundary. 15 miles south from Patagonia
3. Mining District & County Patagonia District Santa Cruz County
4. Former name L.S.L.
5. Owner Geo. R. Hay
6. Address (Owner) Patagonia, Arizona.
7. Operator "
8. Address (Operator)
9. President, Owing Co.
- 9A. President, Operating Co.
10. Gen. Mgr.
14. Principal Minerals Gold-silver-lead
11. Mine Supt.
15. Production Rate
12. Mill Supt.
16. Mill: Type & Cap.
13. Men Employed
17. Power: Amt. & Type
18. Operations: Present None
19. Operations: Planned
20. Number Claims, Title, etc. 5 unpatented claims - Geo. R. Hay - sole owner.
21. Description: Topography & Geography Low-rolling ground- accessible by County Road. not far from County Highway running from Patagonia to Washington Camp.
22. Mine Workings: Amt. & Condition The claims are in a prospective stage of development, the surface work consisting of some fifteen open cuts on as many streaks of ore, and location holes on each claim.

23. **Geology & Mineralization** The claims cover a deposit of silver-lead ore, with some gold values, that occurs in a sheared zone in quartzite, which appears to overlie the limestone on the adjoining Howry property. It appears that intrusion of quartz-monzonite that uptilted the limestone and created the Howry Mine on the contact, also uptilted the quartzite and fractured it in parallel breaks, creating a series of parallel streaks of ore in an area about 300 feet wide and 2000 feet long.
24. **Ore: Positive & Probable, Ore Dumps, Tailings**
- 24A. **Dimensions and Value of Ore body** One sack of ore from ten separate parallel streaks of ore, up to several feet in width, making a sample of about 1000 pounds, averaged 13.9 % lead and 1-1/2 ounces in silver. Selected samples from these outcrops ran up to - .13 ozs gold, 85. ozs in silver and 48. % lead.
25. **Mine, Mill Equipment & Flow-Sheet**
26. **Road Conditions, Route** An excellent road runs to the claims, with an easy down grade haul to Patagonia, about 15 miles.
27. **Water Supply** Water for domestic use is on the claims; while water for milling purposes could be obtained at the Howry in any amount required for any milling operation. The Howry Mine is being reopened at present by Lovelace.
28. **Brief History** These claims are a prospect, with their history yet to be discovered.
29. **Special Problems, Reports Filed** It appears that this deposit should be diamond drilled to a depth of at least 500 feet, and across the deposit to determine its commercial value at a minimum of expense.
30. **Remarks** The Howry Mine was the most important silver-lead producer in this section in the early days; the ore being free from impurities and averaging very high in silver values. The orebody was roughly 72 feet wide and 600 long and is reported to have produced several million dollars down to the 400 foot level.
31. **If property for sale: Price, terms and address to negotiate.** The property is for sale at a tentative price of \$30,000. on reasonable terms.

32. **Signature** Geo. P. Hay

33. **Use additional sheets if necessary.**

MP-21
DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date June 17, 1940

1. Mine Phoenix
2. Mining District & County Patagonia District
Santa Cruz County
3. Former name L.S.I.
4. Location Adjoining Mowry Mine on south
east boundary. 15 miles south
from Patagonia.
5. Owner Geo. R. Hay ✓
6. Address (Owner) Patagonia, Arizona
7. Operator same
8. Address (Operator)
9. President
10. Gen. Mgr.
11. Mine Supt.
12. Mill Supt.
13. Principal Metals Gold, silver, lead. ✓ ✓ ✓
14. Men Employed
15. Production Rate
16. Mill: Type & Cap.
17. Power: Amt. & Type
18. Operations: Present none

19. Operations Planned

20. Number Claims, Title, etc. Five unpatented claims - Geo. R. Hay, sole owner.

21. Description: Topography & Geography Low rolling ground, accessible by County road.
Not far from County Highway running from
Patagonia to Washington Camp.

22. Mine Workings: Amt. & Condition The claims are in a prospective stage of development,
the surface work consisting of some fifteen open cuts
on as many streaks of ore, and location holes on each
claim.

23. **Geology & Mineralization** The claims cover a deposit of silver-lead ore, with some gold values, that occurs in a sheared zone in quartzite, which appears to overlie the limestone on the adjoining Mowry property. It appears that intrusion of quartz-monzonite that uptilted the limestone and created the Mowry Mine on the contact, also uptilted the quartzite and fractured it in parallel breaks, creating a series of parallel streaks of ore in an area about 300 feet wide and 2000 feet long.
24. **Ore: Positive & Probable, Ore Dumps, Tailings**
- 24-A **Vein Width, Length, Value, etc.** One sack of ore from ten separate parallel streaks of ore, up to several feet in width, making a sample of about 1000 pounds, averaged 13.9% lead and 1-1/2 ounces in silver. Selected samples from these outcrops ran up to - .16 ozs. gold, 35. ozs. in silver and 4.3% lead.
25. **Mine, Mill Equipment & Flow Sheet**
26. **Road Conditions, Route** An excellent road runs to the claims, with an easy down grade haul to Patagonia, about 15 miles.
27. **Water Supply** Water for domestic use is on the claims; while water for milling purposes could be obtained at the Mowry in any amount required for any milling operation. The Mowry Mine is being reopened at present by Lovelace.
28. **Brief History** These claims are a prospect, with their history yet to be discovered.
29. **Special Problems, Reports Filed** It appears that this deposit should be diamond drilled to a depth of at least 500 feet, and across the deposit to determine its commercial value at a minimum of expense.
30. **Remarks** The Mowry Mine was the most important silver-lead producer in this section in the early days; the ore being free from impurities and averaging very high in silver values. The ore body was roughly 72 feet wide and 600 long and is reported to have produced several million dollars down to the 400 foot level.
31. **If property for sale: Price, terms and address to negotiate.** The property is for sale at a tentative price of \$30,000 on reasonable terms.
32. **Signed**.../sd/... Geo. R. Hay.....
33. **Use additional sheets if necessary.**