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Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED: 10-08-2009

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: CHRISTMAS GIFT

ALTERNATE NAMES:
HORSESHOE MINE
GYPSY
RHEA
HARDTMYER PROPERTY

SANTA CRUZ COUNTY MILS NUMBER: 81B

LOCATION: TOWNSHIP 22 S RANGE 16 E SECTION 16 QUARTER NW
LATITUDE: N 31DEG 31MIN 30SEC LONGITUDE: W 110DEG 43MIN 02SEC
TOPO MAP NAME: ELGIN - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
SILVER
LEAD
COPPER
SILVER

BIBLIOGRAPHY:
KEITH, S.B., 1975, AZBM INDEX OF MINING PROP.
IN SANTA CRUZ CO., BULL. 191
AZBM CARD FILE SANTA CRUZ CO
ADMMR CHRISTMAS GIFT FILE

CHRISTMAS GIFT MINE OR GYPSY MINE 9/84 SANTA CRUZ COUNTY
HARSHAW DISTRICT
T22S R16E Sec. 16

AKA: Lucky Horseshoe, Rhea Group, Hardtmayer Property, Bland Property

MILS Santa Cruz Index #81B

USGS Bull. 582 p. 265

ABM Bull 191, p. 57

USGS PP 658-E, p. 22

Harshaw 7.5 (included in file)

DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

Date Feb. 1949

1. Mine: Gypsy Group
2. Location: Sec. 16 Twp. 22 So Range 16 East Nearest Town Patagonia
   Distance 2 miles Direction S to mine Road Condition 1 3/4 mi. County Road; 1/4 mi. good mine rd.
3. Mining District & County: Harshaw District, Santa Cruz County
4. Former Name of Mine: Rhea (earlier Christmas Gift)
5. Owner: Mrs Eva Henderson
   Address: Box 27, Patagonia
6. Operator: Idle at present
   Address:
7. Principal Minerals: Lead - silver
8. Number of Claims: Nine Lode Nine Placer —
   Patented no Unpatented yes
9. Type of Surrounding Terrain: From canyon bottom rising gently for 1/4 mile, then steep to far end of ground

10. Geology & Mineralization: Country rock andesite in the rhyolite of the main mass of the mountain.

11. Dimension & Value of Ore Body: Values in silver & lead (some copper to about 2%). Ore in wide (50-75ft) leached zone; assuming in veins within the larger formation

12. Ore "Blocked Out" or "In Sight": None visible from surface. Shafts will have to have small repairs to be accessible.

Ore Probable:

13. Mine Workings—Amount and Condition:

	No.	Feet	Condition
Shafts	3	100 to 240'	Deep shaft needs repairs (slight)
Raises			
Tunnels			
Crosscuts	4	400' total	Unknown
Stopes	Winzes	30'	Unknown

14. Water Supply: Well in Canyon on County Road at lower end of Property (Harshaw Creek Canyon)

15. Brief History: See Schrader's Report (USGS Bulletin #582) under the name "Christmas Gift"

16. Signature: Eva Henderson Mrs Eva Henderson, Box 27 Patagonia, AZ 12

17. If Property for Sale, List Approximate Price and Terms: Property is for sale or lease. $25,000 total, over a period of 3 years. 10% royalty on purchase-price

DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

DEPT. MINERAL RESOURCES
RECEIVED
OCT 15 1946
PHOENIX, ARIZONA

Date: Oct-14-1946

1. Mine: GYPSY
2. Location: Sec. ..... Twp. ..... Range ..... Nearest Town: Palagonia
   Distance: About 2 miles Direction: Easterly Road Condition: Good
3. Mining District & County: Palagonia
4. Former Name of Mine: Rhea
5. Owner: Eva Henderson
   Address: Palagonia
6. Operator: .....
   Address: .....
7. Principal Minerals: Lead - silver
8. Number of Claims: 6 Lode ..... Placer .....
   Patented: No Unpatented .....
9. Type of Surrounding Terrain: [illegible]

10. Geology & Mineralization:

11. Dimension & Value of Ore Body:

12. Ore "Blocked Out" or "In Sight":

Ore Probable:

13. Mine Workings—Amount and Condition:

No.	Feet	Condition
Shafts		
Raises		
Tunnels		
Crosscuts		
Stopes		

14. Water Supply: Think it is adequate

15. Brief History: Ore has always paid for the work done on the claim.
There are several adjoining claims that have very good indications. There has been no work on any of the claims since the war.

16. Signature: Eva Henderson

17. If Property for Sale, List Approximate Price and Terms: yes.

Mining Journal
9/15/42

M

GYPSY (Rhea) August 31, 1942

Harshaw Mining District Earl F. Hastings

Reconstruction Finance Corporation
Preliminary Development Loan

Docket No.	C-ND-27
Date Application Received	August 25, 1942
Date of Field Examination	None
Date of Report	August 31, 1942

1. Name and address of applicant (correspondent):
   H. C. Herrick, Box 1817, Nogales, Arizona.

2. Character of project and estimated cost thereof:
   Build road and bin, equip shop, unwater and retimber workings - $5,000.

3. Location of property:
   Harshaw Mining District, Santa Cruz County, Arizona.

4. Applicant's interest in or ownership of property:
   Applicant has bond and lease on property.

5. Loan requested:
   $5,000.

6. Loan recommended:
   None.

7. Comments:
   (A) Reports indicate that there is geological basis for anticipating commercial ores at depth.

   (B) Considerable development would appear necessary to place this property in production, as there are no commercial ores indicated in the present extent of workings.

   (C) The program, assuming the accuracy of geologic deduction, does not seem justified in that the equipment and man power could be utilized for quicker and surer production in other quarters.

   (D) Added to the docket is correspondence between Department of Mineral Resources and the applicant, and a section map of the property. Credit is to be given the applicant for not wishing to use the map as there obviously is little basis for anticipating an outlined ore body as shown.

ARIZONA DEPARTMENT OF MINERAL RESOURCES

Earl F. Hastings, Assistant Director
and Projects Engineer

MU 29

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date June 20, 1939.

Mine GYPSY

District Red Rock, (Patagonia) Santa Cruz Co. Location 2-1/2 miles east from Patagonia.

Former name Rhea Lucky Horseshoe

Owner A. S. Henderson & Eva Henderson Address Box 27, Patagonia, Ariz.

Operator A. S. Henderson Address

President Not incorporated Gen. Mgr.

Mine Supt. Mill Supt.

Principal Metals Silver, Lead, Gold Copper (Zinc minor) Men Employed

Production Rate Not established Mill: Type & Cap.

Power: Amt. & Type 15 HP Fairbanks-Morse Hoist

Operations: Present Idle

Operations Planned Sink 120 ft shaft to 500 foot level. Depends on financing.

Number Claims, Title, etc. Eight unpatented lode claims on Coronado Nat'l Forest. Located about 1929, by present owner. Original locations made in early '80s.

Description: Topog. & Geog. On N slope of Patagonia Mountain. Medium steep.

Mine Workings: Amt. & Condition 1 shaft, vertical for 120 ft and then incline. Timbered and accessible. On Upper Vein.

1 Tunnel 70 ft, open and accessible.
Numerous shallower cuts and shafts.

(over)

Geology & Mineralization Fissure veins in granite porphyry that has been intruded east to west by rhyolite and andesite porphyry. Two principal veins, Upper and Lower. General strike E-W. Width 2 ft to 20 ft. There has been heavy erosion and downward migration of the minerals. Ores so far opened ~~xxxx~~ were oxidized. Permanent and enriched sulphides believed to begin at about 400 ft level.

Ore: Positive & Probable, Ore Dumps, Tailings

Ore in sight but not blocked out. Shipping records are lost. Some early shipments said to have run 1800 ounces silver per ton, from a glory hole of rich surface ore.

Mine, Mill Equipment & Flow Sheet Hoist and 40 foot head frame. No mill.

Road Conditions, Route Reached by turning south off the Harshaw road about two and a half miles from Patagonia. Road to mine is steep but can be traveled by car or truck.

Water Supply A good spring of water for domestic purposes. Shaft make water in small quantity. Has always been bailed, no pumps.

Brief History Was located in the early '80s. Owned by one Dougherty about 1892 and 3. (Claim probably recorded in Pima County) He sold the property and then bought back in and worked the glory hole.

Was acquired by Dr. A. W. Hardtmayer about 1920 who sunk the shaft described above. At death of Dr. Hardtmayer came into hands of present owners.

Special Problems, Reports Filed

To Dr. A. W. Hardtmayer by H. E. Davis, date Nov. 21, 1926.
By George W. Peirce undated.

Remarks

If property for sale: Price, terms and address to negotiate. For sale or lease. Owner is past 80 years old and unable to do any work personally. Will make most any kind of a deal and main consideration would be a small monthly payment, after the property has been examined and found worth developing.

Attached:
Copy of letter from Geo.W.Pierce, M.E.
Opinion: H.E.Davis, Consulting Engineer, Patagonia, Arizona, November 21, 1936.

Signed A S Anderson

Use additional sheets if necessary.

Signed without glasses. Came to Arizona 1891.

THE HARDTMAYER PROPERTY

(The Rhea and Lucky Horseshoe Groups)
Situated in Harshaw Mining District,
Santa Cruz County, Arizona.

BY HOWARD E. DAVIS. E. M.

ECONOMIC DETAIL

Location of propety: This property is located about 2.5 miles southeast of the village of Patagonia, Santa Cruz County, some 23 miles northeast of Nogales, the county seat of Santa Cruz County.

Transportation facilities: Patagonia is located on the Nogales-Benson branch of the Southern Pacific railway, and very low haulage rates on ores and concentrates are given by the Southern Pacific to smelters in Arizona and Texas. The town is also located on the state highway between Nogales and Bisbee, this being part of the through highway from southern Arizona parts to El Paso.

The property is located on the county automobile highway from Patagonia to the mining camp of Harshaw, this highway crossing the easterly end of the property. Automobiles with rated capacity load may be driven in high gear to the property from Patagonia, in but a few minutes. With a few hundred dollars expense a road can be built from the highway to any feasible working point on the property, and after this is done haulage between Patagonia and the mine can be done by trucks at a cost of less than $1.00 per ton.

Comparatively shallow wells, sunk in gravel of Sonoita creek, the floor of which is less than 250 feet below the most practical working points on the property, will give abundance of potable water for domestic purposes and for milling. The gravel beds of Sonoita creek are very thick; form large storage reservoirs, and the creek and its tributaries above this point drain an immense area where average rainfall ranges from 10 to 15 inches.

Timber There is no timber on the property excepting scrub oak and mesquite, sufficient for fuel for domestic purposes. Timber for mining and construction purposes must be brought in. Purchased in carload lots direct from the Northwest or from Los Angeles dealers, mine timbers cost from $30.00 to $35.00 per thousand ft., and lumber for surface construction about $45.00 per thousand feet laid down in Patagonia. Local prices in small lots range from $45.00 to $70.00 per thousand feet, according to grade and character of lumber.

Power Power must be provided by internal combustion engines, preferably of the Diesel or semi-Diesel type, burning distillate or fuel oil.

If fule oil is used in carload, storage should be provided at Patagonia. On these fuels Patagonia enjoys prices comparable with those at Tucson and Nogales. Expense of conveying oil to property will be small.

Labor Labor is easily secured, at prices from $3.50 to $4.00 per day for muckers and Mexican miners; $4.50 to $5.00 for American miners and drill runners; and $5.50 to $7.00 per day for capable hoist-men, machinists and shift bosses.

Machinery and Mining Supplies Large supply houses at Tucson and El Paso give quick service on machinery and all classes of mining supplies, excluding powder and fuse, at prices comparable with those enjoyed by practically any mining center west of the Rocky Mountains.

GEOLOGIC FEATURES

General Geology U. S. Geological Survey Bulletin No. 582, on "Mineral Deposits of the Santa Rita and Patagonia Mountains" is an extended treatise on the general geology of the region.

On page 248 of this bulletin, speaking of ore deposits in the Harshaw section of the large area covered, is found the following:

"The ore deposits occur principally in veins in the diorite-granite-porphyry and rhyolite, generally in association with the younger intrusive rocks. They consist chiefly of lead-silver ores carrying some gold. Some of the mines, however, contain principally copper minerals. The veins are mostly large and the ores in general are very easily reduced."

In explanation as to "older" and "younger" rocks it must be understood that this same U.S.G.S. bulletin gives certain rock classifications, confirmed and accepted by geologists not in government service.

The "older" rocks of igneous or intrusive nature belong principally to the Mesozoic geologic era, and generally speaking embrace the granites, quartz-monzonites, quartz diorites, alaskites and gabbros.

The younger intrusive rocks embrace those of the tertiary geologic era and consist of the rhyolites, quartz-porphyries and andesites.

Intimate Geology On the Hardtmayer property the principal country rock is granite porphyry, intruded in a general easterly-westerly direction by rhyolite and andesite; the andesite being slightly younger than the rhyolite, and having been intruded through it in places, as well as through the granite-porphyry. There are also intrusions of what appear to be quartz-porphyry, but owing to extensive dynamo-regional amorphosis the apparent quartz-porphyry may be but a phase of the rhyolite, which in itself is inclined to be porphyritic.

The andesite in particular, is locally and intensely porphylitically altered and sericitized and kaolinized, and seritization and kaolinization is also general in the rhyolite and quartz-porphyry in the vicinity of contacts with other ricks, and wherever rock movements have crushed or strained the rocks.

This condition is especially favorable for (and really necessary for) the replacement of rock elements by metallic elements; and for the downward movement of minerals in the form of sulphate, carbonate and oxide solutions ahead of erosion, in order that they may be re-deposited and concentrated in greater depth to form large bodies of commercial value.

In sheared and strained zones, and in veins, this serictization and kaolinization is so intense that the original rock structure is absolutely unrecognizable.

Vein System On the property, traversing its length in an easterly-westerly direction, are two prominent main vein systems, of horizontal persistence for several thousand feet, and of great strength. The ends of these veins are only lost from observation where they are covered with erosional detritus.

The most northerly system is approximately 100 feet in width, in several parallel bands between which are blocks of shattered country rock. The vein channels proper each are from two to 20 feet wide, and the vein filling as shown at surface consists of iron and manganese stained quartz, banded and showing crustification.

The northerly vein system has an average strike of about North 85 degrees west, and it appears to stand almost vertical. It is a true fissure with definite walls.

The southerly vein ranges from 20 to 75 feet in width, and practically parallels the first named vein, at a distance of about 600 feet. Its strike ranges from North 65 degrees west to North 85 degrees west, and its dip is toward the north at an angle of from five to fifteen degrees from the vertical. This is also a true fissure, although in local zones it takes the nature of a contact fissure between granite-porphyry and andesite, or between granite-porphyry and rhyolite.

Vein Filling Consists of quartz, some barium, brecciated and serictized and kaolinized wall rock, and ore minerals which will be discussed under "Mineralization". The vein filling is of a nature peculiar to Tertiary rocks, and on the dumps of various openings are found quartz in large and small pieces which, if thrown upon dumps at Tonapah or Goldfield in the Tertiary gold-silver belt would not be recognized as having come from a zone some 1,000 miles removed from Tonopah or Goldfield.

Mineralization Along the two main vein systems no development has gone below the zone of oxidization nor into the zone of stable redeposition and enrichment. Yet, along these veins sampling shows very general existent mineralization in silver, lead, gold and copper.

Oxidization and leaching have been so intense that it is surprising that ANY surface values remain, and the metallic remnants at surface represent zones where silicification was so intense and complete that mineral bearing quartz was unusually resistant to oxidizing influences.

Vein filling shows aside from gangue minerals named under "Vein Filling" the following minerals:

IRON in the form of limonite, hemitite and pyrite, the pyrite

usually being gold bearing and somewhat cupiferous.

MANGANESE in the form of its oxide (pyrolusite), as a black coating on surface rocks, and in the form of either black coatings underground, or of the dendritic (fern like) crystals or tracings of this oxide on planes within what appear to be solid masses of quartz or wall rock breccia.

GOLD, associated with pyrite, or left as free gold in cavities where pyrite has broken down into hematite, limonite, and finally migrated.

SILVER in the form of argentite, or associated with ores of lead and copper.

LEAD principally at the shallow depths attained in the form of carbonates and oxides, but showing in some residual galena and in some lead bearing tetrahedrite, in the form of sulphides.

COPPER in the form of carbonate and silicate incrustations on the walls of old shallow workings and in outcrops; and in the form of Chalcopyrite, cuperiferous pyrite not rich enough in copper to be called chalcopyrite; massive chalcosite, bearing silver, and tetrahedrite carrying lead and silver.

ZINC traces, but not important.

Depth of Oxidized Zone The property lies along and paralleling the northerly flank of a rather high mountain range. At the eastern end of the property, on the Sonoita creek floor the elevation is about 4,800 feet. The extreme or southerly edge elevation of the property is about 4,800 feet, and thence southerly the mountain lifts to elevation of about 6,000 feet.

Present workings and sites of eventual working shafts, represent an elevation of about 4,300 to 4,400 feet.

Assuming that 100 feet below the level of the Sonoita creek floor represents the true water level, permanent then the oxidized zone on this property should be limited to 300 or 400 feet below the collar of a properly placed working shaft. This would be about 300 feet in depth on the northerly vein and about 400 feet on the southerly vein.

The fact that primary sulphide ores are found at less depth than this in this property (although these ores have been attacked by oxidization and partially leached) lends strength as to my estimate as to water level and as to distance to the bottom of the highly oxidized zone.

Zone of Enrichment The zone of enrichment due to the deposition of ores leached from upper parts of the vein, should begin about the water level, and continue downward for some considerable depth.

Vein and rock conditions, and evidences of chemical action are such as to indicate that downward migration of metallic values in solution has been very general and has largely kept ahead of erosion. In the present sulphide ores there is evidence of one time enrichment, and then of re-oxidization and re-migration downward. Vein and rock conditions have been unusually favorable for this movement. Original surface was without doubt from 1,500 to 2,000 feet above present surface. This indicates the probability of a very large and rich concentration of values in depth, especially when it is remembered that vein and wall rock conditions are especially favorable for the replacement of rock

minerals by metallic elements. With added depth and moisture these conditions favorable to replacement and redeposition of minerals should increase.

Equipment Equipment on the property consists of a 15 H.P. Fairbanks, Morse gasoline burning hoist: 40 ft. head frame; two mine cars; several ore buckets, and some rail and other small equipment; one good 3-room house suitable for three or four men; and one good warehouse. The hoist and head frame are now located on the upper or southerly vein.

Development Consists of one partially vertical and partially incline shaft down to about 175 feet on the southerly vein and one shallow tunnel of this vein.

On the northerly vein there is one vertical shaft, untimbered, about 100 feet in depth, and several shallower openings.

These shallow shafts on the southerly vein reached a residual lense of shipping ore. When these lenses were exhausted as to chipping ore, or in case of the 175 ft. shaft when the operator encountered unexpected financial reverses in his eastern home, work was discontinued.

Lateral work from these openings was of small extent, and from none of them was the ore-bearing formation completely cross cut.

None of the workings attained a depth at which the permanent ore bodies might even be expected.

Ore shipped from the property contained several dollars per ton gold; more than 100 oz. of silver per ton; some lead, and considerable copper.

The present dumps contain valuable evidences as to character of ores produced, and also have some ore which can be put through a mill should one be built on the property.

Milling Susceptibility of Ores Ores found in the property, where not of grade to be shipped directly to smelter, are particularly susceptible to the flotation method of concentration, and by selective concentration by the flotation process a considerable segregation of minerals may be made.

Recommendations Both of the main vein systems on this property, to be properly explored, should be opened to a depth of 500 feet before doing extensive lateral work.

One group of claims covers the northerly vein; one group covers the southerly vein. These two veins are but about 600 feet apart.

If a single interest should acquire both groups, then I would suggest the enlargement and timbering of the old shaft on the northerly vein; its continuation to a depth of 500 feet; and in addition to lateral work along the strike of the northerly vein, a crosscut to the southerly vein, whence it can be explored along its strike.

Summarization This property covers rock formations which have been proved to be the most favorable in this district for ore deposition.

It is traversed by two major fissure veins, which are the result of such young movement as to open the ground and to fracture the rocks so as to admit of the free movement of mineralized solutions, and of chemical changes

favorable to and requisite for the replacement of rock minerals by metallic elements.

It is cut by the Tertiary intrusives basically mineralized. These same Tertiary intrusives have been the cause of rick ore bodies of gold-silver-copper-lead-zinc ores, in a general northwesterly-southeasterly line traced from central southern Mexico northwesterly through Mexico, Arizona, Nevada, Idaho, California, Washington, British Columbia, and on up into Central Western Yukon territory. The writer of this report has personally traced them, during years of study, from the Mexico-Arizona boundary to Dawson, British territory, in the Yukon.

These Tertiary intrusives are the most dependable mineral bearers known the world around.

My opinion is found in the foreword of this report.

Respectfully submitted,

(signed) H. E. Davis
Consulting Engineer.

Patagonia, Arizona
November 21, 1926.

THE HARDTMAYER PROPERTY

(The Rhea and Lucky Horseshoe Groups)
Situated in Harshaw Mining District,
Santa Cruz County, Arizona.

BY HOWARD E. DAVIS, E. M.

ECONOMIC DETAIL

Location of property: This property is located about 2.5 miles southeast of the village of Patagonia, Santa Cruz County, some 23 miles northeast of Nogales, the county seat of Santa Cruz County.

Transportation facilities: Patagonia is located on the Nogales-Sonnon branch of the Southern Pacific railway, and very low haulage rates on ores and concentrates are given by the Southern Pacific to smelters in Arizona and Texas. The town is also located on the state highway between Nogales and Bisbee, this being part of the through highway from southern Arizona parts to El Paso.

The property is located on the county automobile highway from Patagonia to the mining camp of Harshaw, this highway crossing the easterly end of the property. Automobiles with rated capacity load may be driven in high gear to the property from Patagonia, in but a few minutes. With a few hundred dollars expense a road can be built from the highway to any feasible working point on the property, and after this is done haulage between Patagonia and the mine can be done by trucks at a cost of less than $1.00 per ton.

Comparatively shallow wells, sunk in gravel of Sonoita creek, the floor of which is less than 250 feet below the most practical working points on the property, will give abundance of potable water for domestic purposes and for milling. The gravel beds of Sonoita creek are very thick; form large storage reservoirs, and the creek and its tributaries above this point drain an immense area where average rainfall ranges from 10 to 15 inches.

Timber There is no timber on the property excepting scrub oak and mesquite, sufficient for fuel for domestic purposes. Timber for mining and construction purposes must be brought in. Purchased in carload lots direct from the Northwest or from Los Angeles dealers, mine timbers cost from $30.00 to $35.00 per thousand ft., and lumber for surface construction about $45.00 per thousand feet laid down in Patagonia. Local prices in small lots range from $45.00 to $70.00 per thousand feet, according to grade and character of lumber.

Power Power must be provided by internal combustion engines, preferably of the Diesel or semi-Diesel type, burning distillate or fuel oil.

If fule oil is used in carload, storage should be provided at Patagonia. On these fuels Patagonia enjoys prices comparable with those at Tucson and Nogales. Expense of conveying oil to property will be small.

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Intimate Geology On the Hardtmayer property the principal country rock is granite porphyry, intruded in a general easterly-westerly direction by rhyolite and andesite; the andesite being slightly younger than the rhyolite, and having been intruded through it in places, as well as through the granite-porphyry. There are also intrusions of what appear to be quartz-porphyry, but owing to extensive dynamo-regional amorphosis the apparent quartz-porphyry may be but a phase of the rhyolite, which in itself is inclined to be porphyritic.

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This condition is especially favorable for (and really necessary for) the replacement of rock elements by metallic elements; and for the downward movement of minerals in the form of sulphate, carbonate and oxide solutions ahead of erosion, in order that they may be re-deposited and concentrated in greater depth to form large bodies of commercial value.

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The most northerly system is approximately 100 feet in width, in several parallel bands between which are blocks of shattered country rock. The vein channels proper each are from two to 20 feet wide, and the vein filling as shown at surface consists of iron and manganese stained quartz, banded and showing crustification.

The northerly vein system has an average strike of about North 85 degrees west, and it appears to stand almost vertical. It is a true fissure with definite walls.

The southerly vein ranges from 20 to 75 feet in width, and practically parallels the first named vein, at a distance of about 600 feet. Its strike ranges from North 65 degrees west to North 85 degrees west, and its dip is toward the north at an angle of from five to fifteen degrees from the vertical. This is also a true fissure, although in local zones it takes the nature of a contact fissure between granite-porphyry and andesite, or between granite-porphyry and rhyolite.

Vein Filling Consists of quartz, some barium, brecciated and sericitized and kaolinized wall rock, and ore minerals which will be discussed under "Mineralization". The vein filling is of a nature peculiar to Tertiary rocks, and on the dumps of various openings are found quartz in large and small pieces which, if thrown upon dumps at Tonapah or Goldfield in the Tertiary gold-silver belt would not be recognized as having come from a zone some 1,000 miles removed from Tonopah or Goldfield.

Mineralization Along the two main vein systems no development has gone below the zone of oxidization nor into the zone of stable redeposition and enrichment. Yet, along these veins sampling shows very general existent mineralization in silver, lead, gold and copper.

Oxidization and leaching have been so intense that it is surprising that ANY surface values remain, and the metallic remnants at surface represent zones where silicification was so intense and complete that mineral bearing quartz was unusually resistant to oxidizing influences.

Vein filling shows aside from gangue minerals named under "Vein Filling" the following minerals:

IRON in the form of limonite, hemitite and pyrite, the pyrite

usually being gold bearing and somewhat cupiferous.

MANGANESE in the form of its oxide (pyrolusite), as a black coating on surface rocks, and in the form of either black coatings underground, or of the dendritic (fern like) crystals or tracings of this oxide on planes within what appear to be solid masses of quartz or wall rock breccia.

GOLD, associated with pyrite, or left as free gold in cavities where pyrite has broken down into hematite, limonite, and finally migrated.

SILVER in the form of argentite, or associated with ores of lead and copper.

LEAD principally at the shallow depths attained in the form of carbonates and oxides, but showing in some residual galena and in some lead bearing tetrahedrite, in the form of sulphides.

COPPER in the form of carbonate and silicate incrustations on the walls of old shallow workings and in outcrops; and in the form of Chalcopyrite, cupariferous pyrite not rich enough in copper to be called chalcopyrite; massive chalcocite, bearing silver, and tetrahedrite carrying lead and silver.

ZINC traces, but not important.

Depth of Oxidized Zone. The property lies along and paralleling the northerly flank of a rather high mountain range. At the eastern end of the property, on the Sonoita creek floor the elevation is about 4,800 feet. The extreme or southerly edge elevation of the property is about 4,800 feet, and thence southerly the mountain lifts to elevation of about 6,000 feet.

Present workings and sites of eventual working shafts, represent an elevation of about 4,300 to 4,400 feet.

Assuming that 100 feet below the level of the Sonoita creek floor represents the true water level, permanent then the oxidized zone on this property should be limited to 300 or 400 feet below the collar of a properly placed working shaft. This would be about 300 feet in depth on the northerly vein and about 400 feet on the southerly vein.

The fact that primary sulphide ores are found at less depth than this in this property (although these ores have been attacked by oxidization and partially leached) lends strength as to my estimate as to water level and as to distance to the bottom of the highly oxidized zone.

Zone of Enrichment. The zone of enrichment due to the deposition of ores leached from upper parts of the vein, should begin about the water level, and continue downward for some considerable depth.

Vein and rock conditions, and evidences of chemical action are such as to indicate that downward migration of metallic values in solution has been very general and has largely kept ahead of erosion. In the present sulphide ores there is evidence of one time enrichment, and then of re-oxidization and re-migration downward. Vein and rock conditions have been unusually favorable for this movement. Original surface was without doubt from 1,500 to 2,000 feet above present surface. This indicates the probability of a very large and rich concentration of values in depth, especially when it is remembered that vein and wall rock conditions are especially favorable for the replacement of rock

minerals by metallic elements. With added depth and moisture these conditions favorable to replacement and redeposition of minerals should increase.

Equipment Equipment on the property consists of a 15 H.P. Fairbanks, Morse gasoline burning hoist; 40 ft. head frame; two mine cars; several ore buckets, and some rail and other small equipment; one good 3-room house suitable for three or four men; and one good warehouse. The hoist and head frame are now located on the upper or southerly vein.

Development Consists of one partially vertical and partially incline shaft down to about 175 feet on the southerly vein and one shallow tunnel of this vein.

On the northerly vein there is one vertical shaft, untimbered, about 100 feet in depth, and several shallower openings.

These shallow shafts on the southerly vein reached a residual lense of shipping ore. When these lenses were exhausted as to shipping ore, or in case of the 175 ft. shaft when the operator encountered unexpected financial reverses in his eastern home, work was discontinued.

Lateral work from these openings was of small extent, and from none of them was the ore-bearing formation completely cross cut.

None of the workings attained a depth at which the permanent ore bodies might even be expected.

Ore shipped from the property contained several dollars per ton gold; more than 100 oz. of silver per ton; some lead, and considerable copper.

The present dumps contain valuable evidences as to character of ores produced, and also have some ore which can be put through a mill should one be built on the property.

Milling Susceptibility of Ores Ores found in the property, where not of grade to be shipped directly to smelter, are particularly susceptible to the flotation method of concentration, and by selective concentration by the flotation process a considerable segregation of minerals may be made.

Recommendations Both of the main vein systems on this property, to be properly explored, should be opened to a depth of 500 feet before doing extensive lateral work.

One group of claims covers the northerly vein; one group covers the southerly vein. These two veins are but about 600 feet apart.

If a single interest should acquire both groups, then I would suggest the enlargement and timbering of the old shaft on the northerly vein; its continuation to a depth of 500 feet; and in addition to lateral work along the strike of the northerly vein, a crosscut to the southerly vein, whence it can be explored along its strike.

Summarization This property covers rock formations which have been proved to be the most favorable in this district for ore deposition.

It is traversed by two major fissure veins, which are the result of such young movement as to open the ground and to fracture the rocks so as to admit of the free movement of mineralized solutions, and of chemical changes

favorable to and requisite for the replacement of rock minerals by metallic elements.

It is cut by the Tertiary intrusives basically mineralized. These same Tertiary intrusives have been the cause of rich ore bodies of gold-silver-copper-lead-zinc ores, in a general northwesterly-southeasterly line traced from central southern Mexico northwesterly through Mexico, Arizona, Nevada, Idaho, California, Washington, British Columbia, and on up into Central Western Yukon territory. The writer of this report has personally traced them, during years of study, from the Mexico-Arizona boundary to Dawson, British territory, in the Yukon.

These Tertiary intrusives are the most dependable mineral bearers known the world around.

My opinion is found in the foreword of this report.

Respectfully submitted,

(signed) H. E. Davis
Consulting Engineer.

Patagonia, Arizona
November 21, 1926.

CHRISTMAS GIFT MINE OR GYPSY MINE (File) SANTA CRUZ

MG/WR 3/8/79 - Visited the Christmas Gift Mine and there was no apparent activity.
4/18/79 a.p.

MG WR 3/14/80: Visited Christmas Gift (Gypsy ?), Elevation Group, Great Silver, Alta, Blue Nose and New York mines in Santa Cruz County. There is no obvious activity at these properties.

---

* GENERAL REFERENCES

REFERENCE 1 F1 < ABGMT-USBM FIL DATA >

REFERENCE 2 F2 < ARIZONA DEPARTMENT OF MINERAL RESOURCES FILE DATA, GYPSY MINE >

REFERENCE 3 F3 < SCHRADER, FRANK C. 1915, MINERAL DEPOSITS OF THE SANTA RITA AND PATAGONIA MOUNTAINS, ARIZONA; USGS BULL. 582 p. 265 >

REFERENCE 4 F4 < KEITH, STANTON B. 1975, INDEX OF MINING PROPERTIES IN SANTA CRUZ COUNTY, ARIZONA; ARIZONA BUREAU OF MINES BULLETIN 191, p. 57 >

C30< TETRAHEDRITE; CHALCOPYRITE; CHALCOCITE >
C50< CARBONATE AND IRON OXIDE >

L110 < CLAIMS; CLAIMS RELOCATED BY A.S. HENDERSON IN 1929 >

M110< ABOUT 100 FT WIDE; SOUTHERLY VEIN SYSTEM IS ABOUT 75 FT WIDE; VEIN CHANNELS WITHIN SYSTEM AVERAGE 10-20 FT WIDE >

K4< KAOLINIZED WALL ROCK >

N80< LEACHING >
N85< BLACK COATING ON SURFACE ROCKS, AND AS COATINGS AND DENDRITIC CRYSTALS IN WALL ROCK BRECCIA >
F5< ABGMT FILES, STANTON B. KEITH >
F6< SIMONS, FRANK S. 1972, MESOZOIC STRATIGRAPHY OF THE PATAGONIA MOUNTAINS AND ADJOINING AREAS, SANTA CRUZ COUNTY, ARIZONA; USGS PROFESSIONAL PAPER 658-E, p. 22 >
F7< MOORES, RICHARD C. 1972, THE GEOLOGY AND ORE DEPOSITS OF A PORTION OF THE HARSHAW DISTRICT, SANTA CRUZ COUNTY, ARIZONA; M.S. THESIS, UNIVERSITY OF ARIZONA >
F8< USBM FILES, CHRISTMAS GIFT MINE >
F9< ABGMT CLIPPINGS FILE, BLAND MINE >

MLo #81B

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

RECORD NUMBER B10 < >
*RECORD TYPE B20 < X, 1, M >
DEPOSIT NUMBER B40 < >
REPORT DATE G1 < 82, ✓, 03 > (YR. MO.)
*INFORMATION SOURCE B30 < 1, 2 >
*FILE LINK IDENT. B50 < USBM-004023 0047 >

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

REPORTER AFFILIATION G5 < ABGMT >
*SITE NAME A10 < CHRISTMAS GIFT MINE >
SYNONYMS A11 < LUCKY HORSESHOE GROUP; RHEA GROUP; HARDTMAYER PROPERTY; BLAND PROPERTY; GYPSY MINE >

LOCATION

MINING DISTRICT/AREA A30 < HARSHAW DISTRICT >
COUNTY A60 < SANTA CRUZ >
*STATE A50 < A, Z >
*COUNTRY A40 < U, S >
PHYSIOGRAPHIC PROV A63 < 1, 2, ✓ >
DRAINAGE AREA A62 < 1, 5, 0, 5, 0, 3, 0, 1, ✓, LOWER COLORADO >
*LAND STATUS A64 < 4, 1, ✓, , ✓, 1, 9, 7, 9, 1 >
QUADRANGLE NAME A90 < ELGIN , 1 >
*QUADRANGLE SCALE A100 < 6, 2, 5, 0, 0 >
SECOND QUAD NAME A92 < MT. HUGHES , 1, 9, 4, 8 >
SECOND QUAD SCALE A91 < 2, 4, 0, 0, 0 >
*ELEVATION A107 < 4, 5, 0, 0, ✓, F, T >

UTM
*NORTHING A120 < 3, 4, 8, 7, 6, 3, 6 >
*EASTING A130 < 5, 2, 6, 8, 4, 7 >
*ZONE NUMBER A110 < +, 1, 2 >

*ACCURACY
ACCURATE ACC (circle)
ESTIMATED EST < >

GEODETIC
*LATITUDE A70 < 3, 1, -, 3, 1, -, 3, 0, N >
*LONGITUDE A80 < 1, 1, 0, -, 4, 3, -, 0, 2, W >

CADASTRAL
*TOWNSHIP(S) A77 < 0, 2, 2, S, : ✓, : ✓, : ✓ >
*RANGE(S) A78 < 0, 1, 6, E, : ✓, : ✓, : ✓ >
*SECTION(S) A79 < 16 , : ✓, : ✓, : ✓ >
*SECTION FRACTION(S) A76 < CENTER OF N >
*MERIDIAN(S) A81 < >

*POSITION FROM NEAREST PROMINENT LOCALITY A82 < 3 MILES SE OF PATAGONIA >
*LOCATION COMMENTS A83 < 1/4 MILE WEST OF HARSHAW CREEK, ON NORTHERN SLOPE OF RED MOUNTAIN >

* ESSENTIAL INFORMATION
+ ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

COMMODITY INFORMATION

TIES PRESENT C10 <Cu Ag Pb Au Zn Mn>
NERALS C30 <ARGENTIFEROUS LEAD CARBONATE; PYRITE; PYROLUSITE; ARGENTITE; GALENA;
MODITY SUBTYPES C41 <
N. ANALYTICAL DATA C43 <EARLY 1900'S ASSAY VALUES AVERAGED 40 OZ./TON Ag, 20% Pb MINOR Cu AND Au
COM. INFO. COMMENTS C50 <ORE FROM DUMP IS HIGHLY SILICEOUS AND IS COLORED LEMON-YELLOW FROM LEAD

SIGNIFICANCE

PRODUCER		NON-PRODUCER	
MAJOR PRODUCTS	MAJOR <Pb>	MAIN COMMODITIES PRESENT	C11 < >
MINOR PRODUCTS	MINOR <Ag Cu>	MINOR COMMODITIES PRESENT	C12 < >
POTENTIAL PRODUCTS	POTEN <Au>		
OCCURRENCES	OCCUR <Zn Mn>	OCCURRENCES	OCCUR < >

*PRODUCTION

PRODUCER	NON-PRODUCER
PRODUCTION (YES) (circle) PRODUCTION SIZE (SML) MED LGE (circle one)	PRODUCTION UND NO (circle one)

*STATUS — EXPLORATION OR DEVELOPMENT

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 <4>	STATUS AND ACTIVITY A20 < >

*DISCOVERER L20 <FRANK LA MONTE (?)>
*YEAR OF DISCOVERY L10 <1880's> *NATURE OF DISCOVERY L30 <B> *YEAR OF FIRST PRODUCTION L40 <1890> *YEAR OF LAST PRODUCTION L45 <1938>
*PRESENT/LAST OWNER A12 <EVA HENDERSON; PATAGONIA, AZ. (1949)>
*PRESENT/LAST OPERATOR A13 <>
EXPL./DEV.COMMENTS L110 <OWNERS AND OPERATORS INCLUDED BLAND MINING CO., A.S. HENDERSON, RHEA MINING CO.; PRODUCED INTERMITTENTLY FROM 1890 TO 1938; PROPERTY COMPRISES 9 UNPATENTED LODE
→ J.H. HERRICK, DOUGHERTY, A.W. HARDTMAYER (1892-1920)>

DESCRIPTION OF DEPOSIT

*DEPOSIT TYPE(S) C40 <VEIN/SHEAR ZONE; CONTACT METASOMATIC>
DEPOSIT FORM/SHAPE M10 <IRREGULAR; SPOTTY>
*DEPTH TO TOP M20 < > *UNITS M21 < > *MAXIMUM LENGTH M40 < > *UNITS M41 < >
*DEPTH TO BOTTOM M30 < > *UNITS M31 < > *MAXIMUM WIDTH M50 <20> *UNITS M51 <FT>
DEPOSIT SIZE M15 (SMALL) M15 <MEDIUM> M15 <LARGE> (circle one) *MAXIMUM THICKNESS M60 < > *UNITS M61 < >
STRIKE M70 <N65W> *DIP M80 <87 SW>
DIRECTION OF PLUNGE M100 < > *PLUNGE M90 < >
P. DESC. COMMENTS M110 <VEINS CONTAINED IN 50-75 FT. LEACHED ZONE; 2 PROMINENT MAIN VEIN SYSTEMS GENERALLY TRENDING E-W, EXPOSED SEVERAL 1000 FT ON SURFACE; NORTHERLY VEIN SYSTEM IS

DESCRIPTION OF WORKINGS

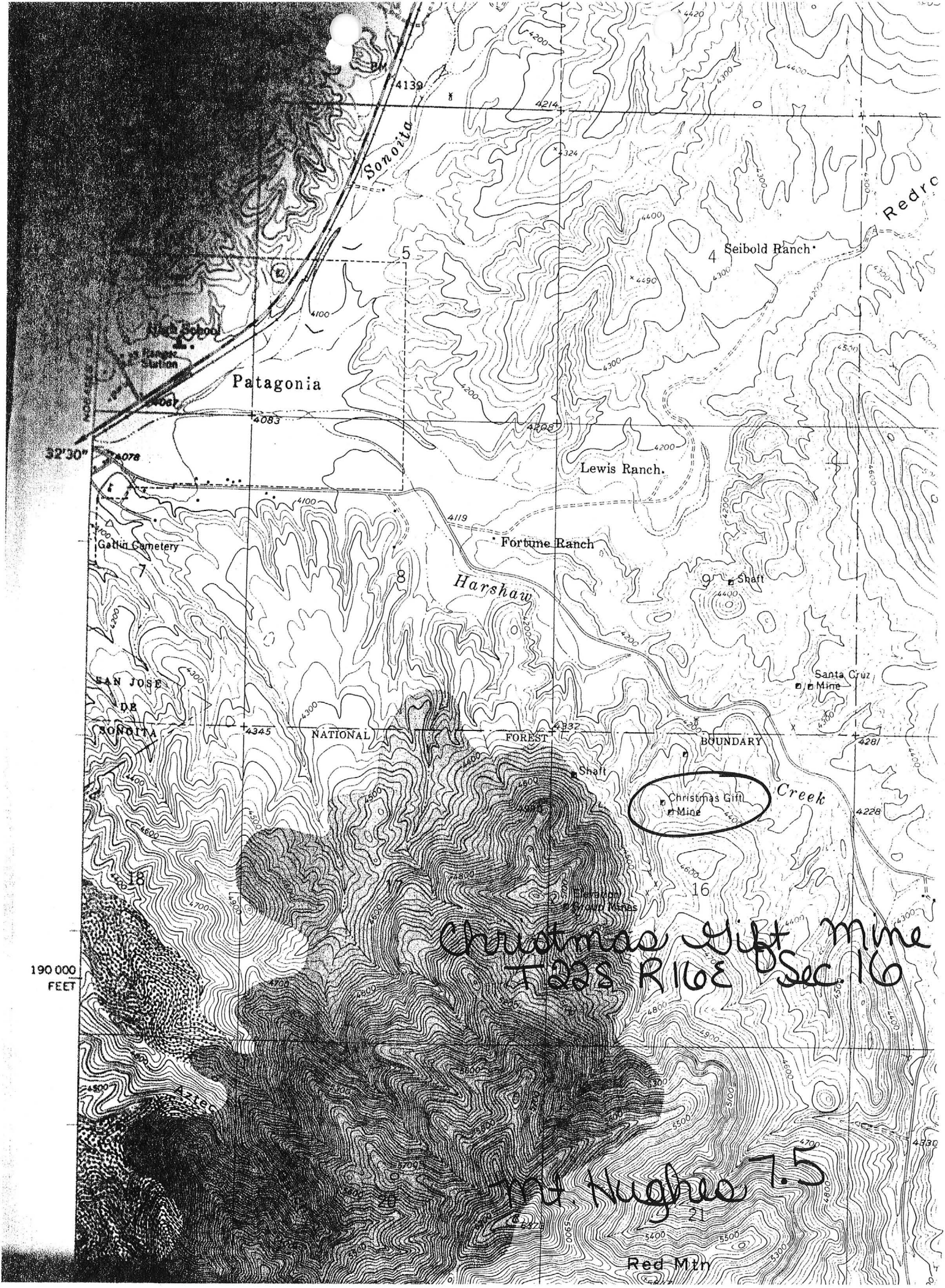
Workings are: SURFACE M120 UNDERGROUND (M130) BOTH M140 (circle one) *OVERALL LENGTH M190 < > *UNITS M191 < >
DEPTH BELOW SURFACE M160 <240> *UNITS M161 <FT> *OVERALL WIDTH M200 < > *UNITS M201 < >
LENGTH OF WORKINGS M170 < > *UNITS M171 < > *OVERALL AREA M210 < > *UNITS M211 < >
DESC. OF WORK. COM. M220 <DEVELOPMENTS INCLUDED 3 SHAFTS WITH MAXIMUM DEPTH OF 240 FT; 4 CROSSCUTS TOTALLING 400 FT; 30 FT. OF WINZES; 70 FT TUNNEL.>

GEOLOGY

*AGE OF HOST ROCK(S) K1 <TERT.>
*HOST ROCK TYPE(S) K1A <DARK-RED TO BLACK PORPHYRITIC ANDESITE>
*AGE OF IGNEOUS ROCK(S) K2 <CRET.-TERT.>
*IGNEOUS ROCK TYPE(S) K2A <FLOW-BANDED RED RHYOLITE PORPHYRY; GRANITE PORPHYRY>
*AGE OF MINERALIZATION K3 <CRET.-TERT.>
*PERT. MINERALS (NOT ORE) K4 <LIMONITE; MANGANESE-STAINED QUARTZ; BARITE IN BRECCIATED, SERICITIZED,>
*ORE CONTROL/LOCUS K5 <NW-TRENDING FISSURE VEINS IN 50-75 FT WIDE LEACHED ZONE>
*MAJ. REG. TRENDS/STRUCT. N5 <E-W AND N-S TRENDING FAULTS IN TERTIARY VOLCANICS>
*TECTONIC SETTING N15 <RED MOUNTAIN FAULT BLOCK; DOWNTHROW TO NORTH>
*SIGNIFICANT LOCAL STRUCT. N70 <THICK-BEDDED, VERY FINE-GRAINED VOLCANICS ASSOCIATED WITH RED MOUNTAIN>
*SIGNIFICANT ALTERATION N75 <ANDESITE AND RHYOLITE HIGHLY ALTERED; SURFACE OXIDATION TO DEPTHS OF 400 FT.>
*PROCESS OF CONC./ENRICH. N80 <SECONDARY ENRICHMENT ALONG FISSURE VEINS IN SHEAR ZONE; INTENSE SURFACE>
*FORMATION AGE N30 <>
*FORMATION NAME N30A <>
SECOND FM AGE N35 <>
SECOND FM NAME N35A <>
*IGNEOUS UNIT AGE N50 <>
*IGNEOUS UNIT NAME N50A <>
SECOND IG. UNIT AGE N55 <>
COND IG. UNIT NAME N55A <>
EOLOGY COMMENTS N85 <VOLCANIC ROCKS OF RED MOUNTAIN ARE HIGHLY ALTERED AND LOCALLY MINERALIZED; ANDESITE HOST ROCKS ARE HIGHLY SERICITIZED AND KAOLINIZED; MANGANESE OXIDE OCCURS AS

GENERAL COMMENTS

GENERAL COMMENTS GEN <NOT TO BE CONFUSED WITH BLAND PROPERTY IN ALTO GULCH, 8 MILES NW OF PATAGONIA, NEAR ALTO MINE>


Sonoita
Redro
Seibold Ranch
Patagonia
Lewis Ranch.
Fortune Ranch
Harshaw
Gallin Cemetery
Shaft
Santa Cruz Mine
SAN JOSE DE SONOITA
NATIONAL FOREST BOUNDARY
Shaft
Christmas Gift Mine
Creek
Tiburon Mines
Aztec
Red Mtn
32°30"
190 000 FEET
Christmas Gift mine
T22S R16E Sec 16
Mt Hughes 7.5

CC: George A. Ballam
G. J. Bible, Patagonia, Arizona

August 28, 1942

Mr. H. C. Herrick
P. O. Box 1817
Nogales, Arizona

Dear Mr. Herrick:

Subject: Gypsy Mine

We are reviewing your application for a $5,000 class "C" R.F.C. loan prior to action by the examining engineer of the R.F.C. Our object in these reviews is to help the applicant obtain his loan, if justified, and to attempt to make sure that all pertinent data is contained in the application so that the loan will not be refused by reason of lack of information.

In reviewing your application there are a few items which we think will come to the attention of any engineer before he would approve the loan. Primary among these items is the lack of information as to the nature of the underground development both in its extent and the values of the ores encountered. There is no map accompanying the application, although we are informed that a map does exist but is believed to be inaccurate. Our suggestion would be to include this map in the docket pointing out such points as were deemed to be inaccurate. A graphic presentation is far better than a descriptive one to an engineer.

In both reports accompanying your application for a loan there is reference to the kinds of minerals in the vein but no reference (except one on leached outcroppings) which refers to the quantity and ratio of minerals in the ore. In short, it is not just quite clear as to what will be gained in the unwatering of the shaft. Are you anticipating the exposure and making accessible ores which you believe to exist on the horizons opened by present development, or do you believe that further development will be required and such development you expect will be warranted by geological conditions found in existing workings. Our study of the docket leaves us to believe the latter the most probable as we would anticipate to find a leached out vein filling having probably not more value than that exposed on the surface. We note that the only shipment made, or at least referred to, was from the cross fracture in the main vein which would limit the continuity of that ore laterally.

We are most anxious to assist you in obtaining your loan and mention these points not because we are doubtful of the value of the property, but because they will be obvious to the engineer who must make final approval before the funds are forthcoming. Will you please add to the available information by clearing up the points mentioned?

Yours very truly,

Earl F. Hastings, Assistant Director
and Projects Engineer

DEPT. MINERAL RESOURCES
RECEIVED
AUG 22 1942
PHOENIX, ARIZONA

GD

August 19, 1942

MEMORANDUM

GYPSY MINE
also known as RHEA

To: Director, Dept. Mineral Resources
From: George A. Ballam

This is one of the Henderson properties located about 4 miles south of Patagonia just off to the right or west of the Harshaw highway. It is now being leased by Herrick who was doing some development work on a copper property belonging to G.J.Bible and situated about one mile east of the Rhea. Herrick quit work on the Bible claim recently, and last week decided to apply for a preliminary development loan on the RHEA.

This mine was known as the Christmas Gift between 1887 and 1915 during which time it was producing silver, assays running up to 90 ozs. with showings of copper. In 1915 it was owned by the Bland Mining Co., of Kansas City, and some ore was shipped. An old map of the property is in the hands of Judge Henderson, probably made by one Pearce who has reported on the property. However, the Judge informs me that the map is inaccurate, and should not be used in application for an RFC loan.

There is a shaft, variously reported to be from 100' and over. Water close to collar. Amount of underground work unknown, but Henderson believes there is work on two levels crosscutting to large ore body. Have informed Herrick, who also came up to Tucson with the Judge to get aid in making out application, to ask AS&R and others for information on property. The University was able to furnish him with fragmentary information from SCHRAEDER taken from his Santa Rita bulletin, and other information is being sought.

As soon as all available information is collected, will assist in preparing application for PD loan.

Geo A Ballam

Box 1817
Nogales, Arizona

August 28, 1942.

DEPT. MINERAL RESOURCES
RECEIVED
AUG 31 1942
PHOENIX, ARIZONA

Department of Mineral Resources,
413 Home Builders Building,
Phoenix, Arizona.

Subject: Gypsy Mine

Attention Mr. E.F. Hastings, Asst. Dir.

Gentlemen ; Your favor of the 28th inst received. I am mailing you herewith a tracing supposed to have been made by Pierce, which Mr. Henderson gave me. This tracing is no doubt some what of a showing of underground workings. It appears to me that he has faced the head frame opposite to its actual position. As to the underground working I cannot verify the map as you know. The cross fracture of the lead silver vein I think is correct. I think the shaft drawing is correct. The drifting seems to be indefinite as to maping.

As to values I am informed there is still some of the lead silver ore exposed below. Not very wide. I think the Davis report should be considered as to geology and natural conditions with debth.

It is my opinion that sufficient depth has been reached to justify an attempt to reach the enriched ore body below the leached zone. As evidence of grey copper is spoken of. Water level cannot be much lower. I think the world Fair mine can be considered within the same district. Some similarity. I think the cross cut shown will expose evidence warranting further development. Kindly use your best judgement and efforts. There certainly is good reason to believe there is a stong body of copper beneath the leached jone. Yours very truly

N. G. Hazzieff

Dr. A. D. Hardtmayer,
Patagonia, Arizona.

My dear Doctor:

Re-Rhea Report. I have mislaid a report I had made on this property at the time I examined it with a view to placing it among my friends in the East. The salient point as shown by surface conditions and by work already performed are very marked and I herein give a short synopsis of same.

The group consists of ten claims located along the strike of a very strong fissure vein. This strike is N 65 W. The vein dips to 87 SW and lies in the NE slope of the Red Mountains at an elevation of 4,500 feet.

A short surface tram will deliver ore to a point on the county road but two miles from railroad transportation. The fissure is exceptionally strong being from 75 to 1,008 feet in width and the country rocks are a dark andesite intruded into the rhyolite of Red Mountains.

There are three shafts on the property, the oldest shaft lying farther east on the property, and is now abandoned. Some very nice ore was taken from this shaft but not a large quantity. The present workings shaft is sunk vertically 140 feet and then on an incline a further distance of 100 feet showing on the bottom small streaks of gray copper ore, at a depth of 90 feet a drift being run westernly fro the shaft. It has cut a cross fracture in the vein from which several carloads of ore have been shipped running as high as 90 oz. in silver and carrying good lead values. This character of ore is still showing in this fracture. On the surface and running westerly from the shaft is an exceptionally strong showing of a leaching material 50 to 100 feet wide and extending many feet along the strike of the vein. This is heavily stained with copper and gives continuously assays of from one to two per cent copper. The ground so far exploited by shaft and drift demonstrates a leaching zone extending to 250 feet below the surface. The character of the ore found in the fracture in this zone and which has not been leached and precipitated to a farther depth is of the character that has proved to form the large bodies of secondarily enriched ore. So far uncovered secondary enrichment is not a theory but a proved fact, therefore conditions at the Rhea very strongly warrant the existence of large bodies of secondary enrichment ore in depth the value of which will be in copper carrying good silver with a little gold.

It thoroughly warrants the sinking of the shaft to a further depth of 400 feet and then exploiting the ground by levels run westerly at the three and four hundred levels.

I will further add that several of my engineer friends, notably Mr. Ben J. B. Lawrence, since deceased, agree with me or my conclusion and but for the slump in mining in 1920 immediately following the Lawton Silver fiasco, the Rhea would be in operation today.

Yours very truly,

Signed Geo. W. Peirce, M. E.

OPINION

Patagonia, Arizona, Nov. 21/26.

Dr. A. W. Hardtmayer,
Patagonia, Arizona.

My dear Sir:

Upon your authorization I entered upon and studied your mining property near Patagonia, in the Harshaw Mining District, Santa Cruz County. The man you sent with me showed me boundaries of property, consisting of two adjoining groups, the Lucky Horseshoe and the Rhea.

Sampling done by me was only for the purpose of determining the character and general persistence of mineralization. As the bottoms of the principal workings could not be reached no mine-sampling from a tonnage basis could be done. My bill for work, expenses, and assayer's charges is enclosed.

Herewith is my opinion which you wished for your own guidance:

OPINION

The Hardtmayer property, consisting of the Rhea and Lucky Horseshoe groups, is regarded by me with unusual favor as a mining prospect. It is my belief that the property merits extensive and intensive exploration to a depth of 500 feet below the collar of the old vertical shaft on the northerly, or lower, vein.

Oxidation, downward movement, and solution and re-migration, from a surface probably 2,000 feet above the present surface apparently has kept ahead of erosion. Mineralization has been intense, as has oxidation, leaching, etc. Conditions have greatly favored downward migration.

At or about the present water level (according to geologic changes in water level) should be encountered the top of an enriched zone in which the leachings of immense area of original vein matter should be concentrated. I recommend the work requisite to find such concentrations; such work should meet with rich reward. The attached report shows my reasons for such belief.

Yours very truly,
(signed) H. E. Davis
Examining Engineer.

Dr. A. D. Hardtmayer,
Patagonia, Arizona.

My dear Doctor:

Re-Rhea Report. I have mislaid a report I had made on this property at the time I examined it with a view to placing it among my friends in the East. The salient point as shown by surface conditions and by work already performed are very marked and I herein give a short synopsis of same.

The group consists of ten claims located along the strike of a very strong fissure vein. This strike is N 65 W. The vein dips to 87 SW and lies in the NE slope of the Red Mountains at an elevation of 4,500 feet.

A short surface tram will deliver ore to a point on the county road but two miles from railroad transportation. The fissure is exceptionally strong being from 75 to 1,008 feet in width and the country rocks are a dark andesite intruded into the rhyolite of Red Mountains.

There are three shafts on the property, the oldest shaft lying farther east on the property, and is now abandoned. Some very nice ore was taken from this shaft but not a large quantity. The present working shaft is sunk vertically 140 feet and then on an incline a further distance of 100 feet showing on the bottom small streaks of gray copper ore, at a depth of 90 feet a drift being run westerly fro the shaft. It has cut a cross fracture in the vein from which several carloads of ore have been shipped running as high as 90 oz. in silver and carrying good lead values. This character of ore is still showing in this fracture. On the surface and running westerly from the shaft is an exceptionally strong showing of a leaching material 50 to 100 feet wide and extending many feet along the strike of the vein. This is heavily stained with copper and gives continuously assays of from one to two per cent copper. The ground so far exploited by shaft and drift demonstrates a leaching zone extending to 250 feet below the surface. The character of the ore found in the fracture in this zone and which has not been leached and precipitated to a further depth is of the character that has proved to form the large bodies of secondarily enriched ore. So far uncovered secondary enrichment is not a theory but a proved fact, therefore conditions at the Rhea very strongly warrant the existence of large bodies of secondary enrichment ore in depth the value of which will be in copper carrying good silver with a little gold.

It thoroughly warrants the sinking of the shaft to a further depth of 400 feet and then exploiting the ground by levels run westerly at the three and four hundred levels.

I will further add that several of my engineer friends, notably Mr. Ben J. B. Lawrence, since deceased, agree with me or my conclusion and but for the slump in mining in 1920 immediately following the Lawton Silver fiasco, the Rhea would be in operation today.

Yours very truly,

Signed Geo. W. Peirce, M. E.

OPINION

Patagonia, Arizona, Nov. 21/26.

Dr. A. W. Hardtmayer,
Patagonia, Arizona.

My dear Sir:

Upon your authorization I entered upon and studied your mining property near Patagonia, in the Harshaw Mining District, Santa Cruz County. The man you sent with me showed me boundaries of property, consisting of two adjoining groups, the Lucky Horseshoe and the Rhea.

Sampling done by me was only for the purpose of determining the character and general persistence of mineralization. As the bottoms of the principal workings could not be reached no mine-sampling from a tonnage basis could be done. My bill for work, expenses, and assayer's charges is enclosed.

Herewith is my opinion which you wished for your own guidance:

OPINION

The Hardtmayer property, consisting of the Rhea and Lucky Horseshoe groups, is regarded by me with unusual favor as a mining prospect. It is my belief that the property merits extensive and intensive exploration to a depth of 500 feet below the collar of the old vertical shaft on the northerly, or lower, vein.

Oxidation, downward movement, and solution and re-migration, from a surface probably 2,000 feet above the present surface apparently has kept ahead of erosion. Mineralization has been intense, as has oxidation, leaching, etc. Conditions have greatly favored downward migration.

At or about the present water level (according to geologic changes in water level) should be encountered the top of an enriched zone in which the leachings of immense area of original vein matter should be concentrated. I recommend the work requisite to find such concentrations; such work should meet with rich reward. The attached report shows my reasons for such belief.

Yours very truly,
(signed) H. E. Davis
Examining Engineer.

6 February 1940

Mr. A. S. Henderson,
Patagonia,
Arizona.

Dear Mr. Henderson:

I am enclosing herewith the stamps which you so kindly sent to cover postage on the report on the Gypsy Mine which we returned to you on January 18.

I appreciate your sending the stamps, but wish to assure you that we are glad to be of service.

With kindest regards, I am

Yours very truly,

J. S. Coupal
Director

JSC-jrf

encls.

18 January 1940

Mr. A. S. Henderson,
Box 27,
Patagonia, Arizona.

My dear Mr. Henderson:

I am returning herewith copy of Opinion of Mr. H. E. Davis, Examining Engineer, and also a report by Mr. Geo. W. Pierce, M. E.

I am also enclosing herewith a copy of the Mine Owners Report which has been filed in this office.

I am sorry that I have been delayed in returning these papers to you, and trust that you will pardon me.

With best wishes, I am

Yours very truly,

J. S. Coupal
Director

JSC-jrf

encls.

REG. MAIL.

26 December 1939

Mr. A. S. Henderson,
Box 27,
Patagonia, Arizona.

My dear Mr. Henderson:

Mr. Miles M. Carpenter has advised me of your desire to have the copy of the report on the Gypsy Mine returned to you.

This report is being copies for our files, and within a few days, the copy you sent in with your report will be returned.

I am sorry for the delay, but in the rush of work, it has been impossible to get it copied until now.

With best wishes, I am

Yours very truly,

J. S. Coupal
Director

jrf

Sept 27 1912

Phoenix Ariz

Gentlemen

I thank you for Returning my Report of the Gypes Thanks.

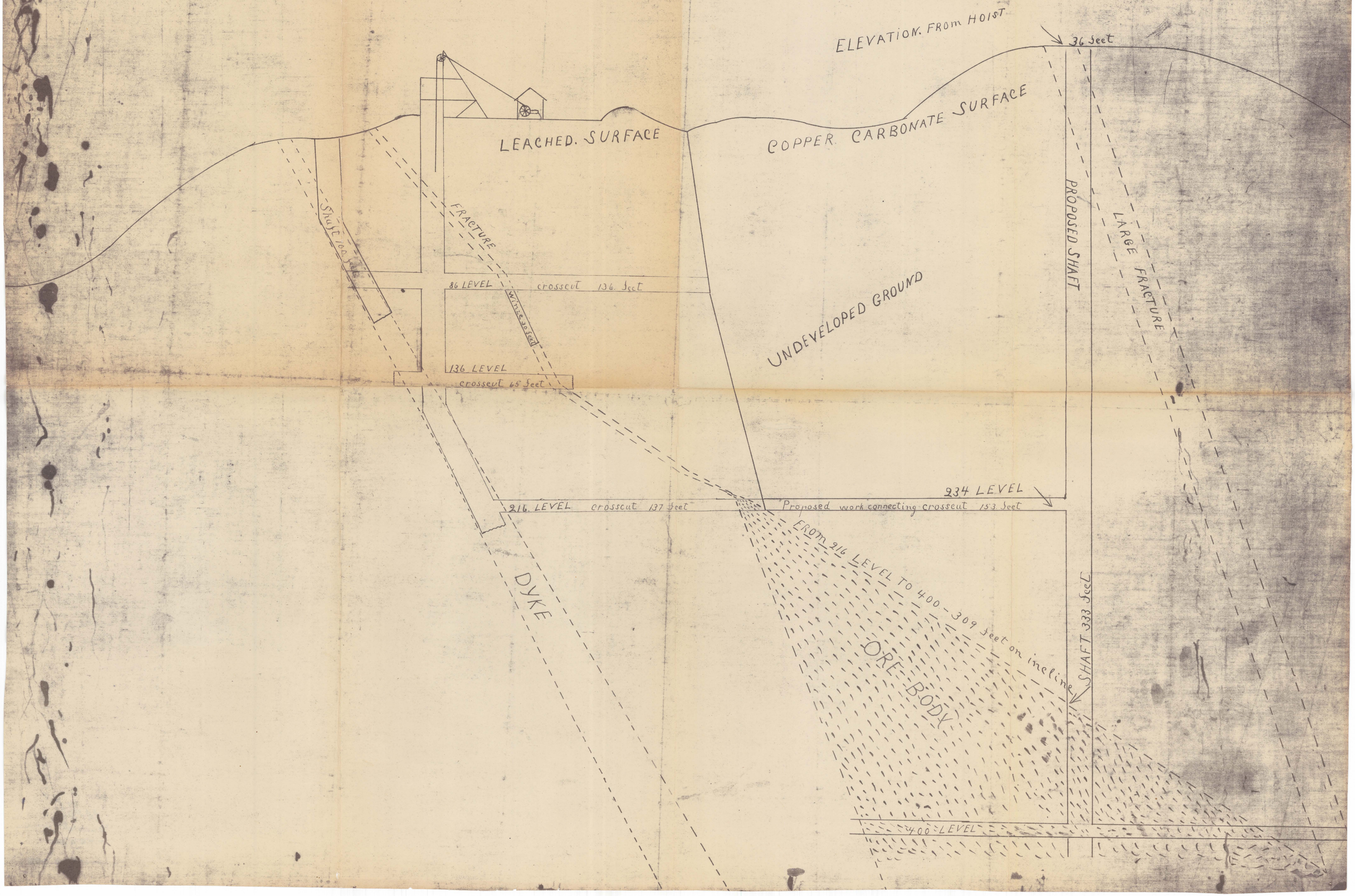
I am enclosing the amount of stamps on same -

Yours truly

A B Henderson

Patagonia Ariz

RHEA MINE


ELEVATION FROM HOIST
36 feet
LEACHED SURFACE
COPPER CARBONATE SURFACE
Shaft 100 feet
FRACTURE
86 LEVEL
crosscut 136 feet
Winze 30 feet
136 LEVEL
crosscut 65 feet
UNDEVELOPED GROUND
PROPOSED SHAFT
LARGE FRACTURE
234 LEVEL
216 LEVEL
crosscut 137 feet
Proposed work connecting crosscut 153 feet
DYKE
FROM 216 LEVEL TO 400 - 309 feet on incline
ORE BODY
SHAFT 333 feet
400 LEVEL