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08/07/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: RAY SOUTHERN GROUP

ALTERNATE NAMES:

BOBTAIL
COLORADO

PINAL COUNTY MILS NUMBER: 149D

LOCATION: TOWNSHIP 3 S RANGE 13 E SECTION 24 QUARTER N2
LATITUDE: N 33DEG 09MIN 38SEC LONGITUDE: W 110DEG 58MIN 13SEC
TOPO MAP NAME: HOT TAMAPE PEAK - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD
SILVER
ASBESTOS
LEAD
MOLYBDENUM

BIBLIOGRAPHY:

ADMMR RAY SOUTHERN GROUP FILE
ADMMR FILES-ADOT HIWAY MAP 1949, P. 3
ADMMR U FILES
STEWART, L.A., CHRYSOTILE-ASBESTOS DEPOSITS
OF AZ. IC 7706, 1955, P. 119
WEED, W. THE MINES HANDBOOK 1918, P. 520

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U. S. GOVERNMENT PRINTING OFFICE

c5-6852



Mr. Leo Wall,
Box 144,
Ray, Arizona.

My dear Mr. Wall:

I am enclosing herewith a copy of mine owners report filed with this office covering the RAY SOUTHERN GROUP in the Mineral Creek Mining District, Pinal County.

I am also returning herewith Report covering the Ray Southern Group of Gold Claims by A. Macfarlane, Mining Engineer, which you left for filing. This report has been copied and attached to the mine owners report.

I shall be glad to submit a copy of these reports to anyone making inquiry for a property such as yours.

With best wishes, I am

Yours very truly,

J. S. Coupal

JSC-jrf
encls.

Registered Mail
Return Receipt Requested

24 September 1941

Mr. Leo Wall,
Box 144,
Ray, Arizona.

My dear Mr. Wall:

I am enclosing herewith a copy of mine owners report filed with this office covering the RAY SOUTHERN GROUP in the Mineral Creek Mining District, Pinal County.

I am also returning herewith Report covering the Ray Southern Group of Gold Claims by A. Macfarlane, Mining Engineer, which you left for filing. This report has been copied and attached to the mine owners report.

I shall be glad to submit a copy of these reports to anyone making inquiry for a property such as yours.

With best wishes, I am

Yours very truly,

J. S. Coupal

JSC-jrf
encls.

Registered Mail
Return Receipt Requested

XXXXXXXXXXXX

518 Title & Trust Building

17 September 1941

Mr. B. R. Ferrell,
Box 78,
Ray, Arizona.

My dear Mr. Ferrell:

I am enclosing herewith a copy of mine owners report covering the RAY SOUTHERN GROUP in the Mineral Creek Mining District, Pinal County, which now shows metallic quicksilver as one of the metals.

With best wishes, I am

Yours very truly,

Charles F. Willis,
Chairman, Board of Governors

CFW-jrf

encl.

Ray City Dec 3, 1939
Mr Sam Coupal:-

Dear Sir:-

When I was in Tucson I asked Mr Walcott if he could possibly run some lines for me for a tramway and offer me some suggestions on his next trip through and he said he would but he has not shown up and I am ready to start work on it as I have some extra good ore for the mill & plenty of it which I cannot get only by packing it across a canyon and that is slow and expensive. Now I have always tried to co operate with and do for others I feel that in this I am being slighted.

I feel that if he can spend the time to run lines so a man can hold a claim I am entitled to have a line run to work one and I am pretty well put out about it. I have no way

RAY SOUTHERN

Au, Hg, Asbestos, Pb, Ag, Mo

Pinal

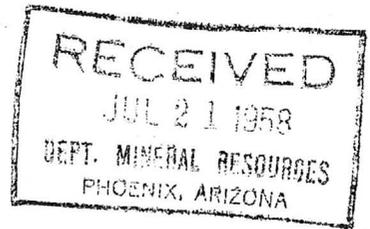
11 - 3

T 3 S, R 13 E

Leo Wall, Box 144, Ray

'41

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



July 11, 1958

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

Ray Southern Group (Pinal County) gold, metallic quicksilver, asbestos,
(Property) (ore) lead silver, molybdenum

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

Dear Mr. Knight,

The above-mentioned mining property now belongs to Kennecott Copper Corporation, Ray Mines Division, Ray, Arizona.

Lowall
Leo Wall

*Box 144 -
Ray, Ariz.*

Gold (mercury - lead - silver - molybdenum).

12 unpatented claims - developed by over
1000 feet of workings in shafts, crosscuts
and drifts - on runs of from 6 to 9 feet
wide - all workings accessible -

Average assay of \$450 in gold - with
30,000 tons on dump. Equipped with
25 ton ball mill. Good road - ample
water - For sale or lease.

Mercurial Creek District - Gila County -

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

MR-11

Date: June 11, 1941

Mine: Ray Southern Group

District: Mineral Creek District

Location: 2 miles south of Ray

Former name: Eobtail

Owner: Leo Wall

Address: Box 144, Ray, Arizona

Operator: B. R. Ferrell

Address: Box 78, Ray, Arizona

President: " "

Gen. Mgr. B. R. Ferrell

Mine Supt. " "

Mill Supt. " "

Principal Metals: Gold, metallic quick-silver, asbestos, lead, silver, molybdenum

Men Employed: None

Production Rate: From 1 to 100 in present openings.

Mill: Type & Cap. Ball mill 25 ton

Power: Amt. & Type: Each are separate bodies of ore - except gold and metallic quicksilver come together

Operations: Present Developing.

Operations Planned:

Number Claims, Title, etc. 12 claims - all held by assessment work 50-ft. shaft open - no drift on it but ore shows all way down about 12 feet wide - shows good percentage of metallic quicksilver and some gold runs around \$4.20 on gold assay.

Description: Topog. & Geog. The property lies in a highly metamorphosed iron stained schist intruded by granite masses with strong mineralization. There is evidence of a strong cut by diabase dikes with fault bringing the ore body against quartzite and limestone. Volcanic rocks consisting of rhyolite, andesite and dacite in the form of tufts and breccias predominate. It lies geologically on the Ray fault on government maps.

Mine Workings: Amt. & Condition: 1 drift 120 ft. on ore - 1 drift 250 ft. on ore crosscut 75 ft. off same drift cutting several small feeders - 1 shaft 50 ft. on ore - 1 shaft 75 feet on ore - 1 shaft 35 ft. on ore - 1 two-compartment shaft 65 ft. metallic quicksilver ore contacted - all workings in first class shape - head frames up and ready to be worked all drift timbered where necessary and ready to be worked - ore in all faces and overhead.

(over)

Geology & Mineralization: Asbestos occurs as a layer in sedimentary beds. Gold and metallic quicksilver occur along contact between andesite and blue lime. Lead and silver in vein as sulphides.

Ore: Positive & Probable, Ore Dumps, Tailings: No tailings but 30,000 tons on dumps, general assays show \$4.50/or/in place probable tonnage exposed 150,000 to 300,000 tons - depth not known as all workings are shallow/or/in place assays show from \$1.50 to \$84.00 - settlement sheets show from 9 to 30 dollars.

Mine, Mill Equipment & Flow Sheet: Not much mining equipment but mill ball and concentrating table - power crushers, dryers, mill house, blacksmith shop, forge, hoist and small tools.

Road conditions, Route: Good - 15 miles south from Superior maintained gravel road this far and trunk highway at that point.

Water Supply: Adequate well in creek bottom at present supplying milling water with no draw down - 2 springs for domestic use that can be piped 3,000 ft. with a 50 to 75. ft. head, never known to go dry.

Brief History: Mine was started in 1903 as the Bobtail but financial difficulties stopped work; then acquired by Ray Hercules and held till 1930 or 1931; given up by Ray Con and filed on by Leo Wall in 1932; spasmodically worked until June 1936 when I leased it and from then on have prospected; opened up and have the claims in workable shape.

Special Problems, Reports Filed

Remarks: What I am in need of now is finances to go ahead on the ore I have showing.

If property for sale: Price, terms and address to negotiate:
For sale or lease - reasonable terms.

Signed: B. R. Ferrell

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Dec. 2, 1939

Mine Ray Southern

District Dripping Springs

Location $1\frac{1}{2}$ miles south of Ray

Former name Bobtail

Owner Leo Wall

Address Box 78 Ray, Ariz.

Operator B. R. Ferrell

Address

President Ditto

Gen. Mgr. B. R. Ferrell

Mine Supt. "

Mill Supt. "

Principal Metals Gold

Men Employed None

Production Rate From 1 to 100 in present openings

Mill: Type & Cap. Ball mill 25 ton

Power: Amt. & Type High tension goes into Ray less than 1/2 mile from property

Operations: Present Drifting prospecting for high grade and shafts

Operations Planned On new ore just found to put in 1/4 mile tram to get ore to mill - have had no assays lower than \$4.20 and this was on the edge in center - have some pannings that may go to two or three ounces.

Number Claims, Title, etc. 12 claims - all held by assessment work and enough has been done to patent them.

Description: Topog. & Geog. The property lies in a highly metamorphosed iron stained schist intruded by granite masses with strong mineralization. There is evidence of a strong cut by diabase dikes with fault bringing the ore body against quartzite and limestone. Volcanic rocks consisting of rhyolite, andesite and dacite in the form of tufts and breccias predominate. It lies geologically on the Ray fault on government maps.

Mine Workings: Amt. & Condition 1 drift 120 ft. on ore - 1 drift 250 ft. on ore crosscut 75 ft. off same drift cutting several small feeders - 1 shaft 50 ft. on ore - 1 shaft 75 feet on ore - 1 shaft 35 ft. on ore - 1 two compartment shaft 65 ft. ore not contacted as yet - all workings in first class shape - head frames up and ready to be worked - all drift timbered where necessary and ready to be worked - ore in all faces and overhead.

(over)

Geology & Mineralization This property lies on the Ray fault, one side carrying gold values with very little silver on the other. There is copper, gold & silver in milling. I have found on the north side native copper; in my amalgam box on the other I have found native quicksilver.

Ore: Positive & Probable, Ore Dumps, Tailings No tailings but 30,000 tons on dumps, general assays show \$4.50 or in place probable tonnage exposed 60 or 70 thousand tons - depth not known as all workings are shallow or in place assays show from \$1.50 to \$84 - settlement sheets show from 9 to 30 dollars.

Mine, Mill Equipment & Flow Sheet Not much mining equipment but mill ball and concentrating table - power crushers, dryers, mill house, blacksmith shop, forge, hoist and small tools.

Road Conditions, Route Good - 15 miles south from Superior maintained gravel road this far and trunk highway at that point

Water Supply Adequate well in creek bottom at present supplying milling water with no draw down - 2 springs for domestic use that can be piped 3,000 ft. with a 50 to 75 ft. head, never known to go dry.

Brief History Mine was started in 1903 as the Bobtail but financial difficulties stopped work; then acquired by Ray Hurcaljes and held till 1930 or 1931; given up by Ray Con and filed on by Leo Wall in 1932; spasmodically worked until June 1936 when I leased it and from then on have prospected; opened up and have the claims in workable shape.

Special Problems, Reports Filed

Remarks What I am in need of now is finances to go ahead on the ore I have showing.

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

The property is for sale, part or all, not claims but an interest in the claims \$25,000 for 1/3 interest or \$75,000 for all of it. I would rather retain some interest in it or have some one financially able to assist me as I am better acquainted with where the ore is that would warrant the investment. A 50-ton modern mill on the property would pay from the start.

Signed..... B. R. Ferrell

Use additional sheets if necessary.

DEPARTMENT OF MINERAL SOURCES.

News Items

Date July 17, 1939.

Mine Ray Southern Group

Location 2 Miles South of Ray

Owner Leo Wall

Address Ray, Arizona.

Leased to

Operating Co. G.L. Morton & Walter Fields

Address Ray, Arizona.

Pres.

Genl. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold

Men Employed 2

Production Rate Just starting

Mill, Type & Capacity

Power, Amt. & Type

Signed *Newton Wolcott*

(Over)

Present Operatio

Have been putting the workings in shape
and are now ready to start actual ore
production.

New Work Planned

Will sink shaft and then cross-cut the
vein.

Misc. Notes

This work is being done on the vein which
was recently discovered, and which the
owner says will average better than \$30
per ton over a width of four feet.

DEPARTMENT OF MINERAL SOURCES

News Items

Date 6/20/39

Mine Ray-Southern Group

Location 2 Miles South of Ray

Owner Lep Wall

Address Box 144, Ray, Arizona.

Operating Co. Expects to lease portion of

Address property shortly to local men.

Pres.

Genl. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold, asbestos, lead, silver,
Men Employed (cinnabar)??

Production Rate None at present

Mill, Type & Capacity Small home-made layout

about 5 tons cap. Not successful to date.

Power, Amt. & Type

Signed

Herbert Wood

(Over)

Present Operation

New Work Planned

Misc. Notes Recent development work done for assessment has disclosed a new vein on the property which Wall states will average over \$35.00 in gold values for a width of about four feet. Has also opened on the surface a stringer of very high-grade lead-silver ore which he plans to develop at depth.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date 6/19/39

Mine Ray Southern Group

District Ray Mining District

Location 2 miles south of Ray

Former name

Owner Leo Wall

Address Box 144, Ray, Arizona

Operator

Address

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold, cinnabar, asbestos, lead,
~~silver~~ silver + molybdenum

Men Employed None

Production Rate

Mill: Type & Cap.

Power: Amt. & Type

each on separate trails for - start gold road work soon

Operations: Present ~~active work at present, but leasers will start work in near future~~

Developing

Operations Planned

Number Claims, Title, etc. 12 unpatented claims

Description: Topog. & Geog. Mountainous, rough country

Mine Workings: Amt. & Condition

Approx. 250 ft. of shafts (4 in number)

" 300 " " tunnels

All workings accessible

(over)

mlt
Geology & Mineralization Asbestos occurs as a layer in sedimentary beds. Gold and cinnabar occur along contact between andesite and quartzite. Lead and silver in vein as sulphides.

Ore: Positive & Probable, Ore Dumps, Tailings Ore tonnage undetermined, but several veins on ground will average from \$20.00 to \$40.00 per ton with widths of from 4 to 12 feet.

Mine, Mill Equipment & Flow Sheet Small crusher, ball mill and table.

Road Conditions, Route Road good - take Ray-Kelvin road south 2 miles from Ray, then turn left. Mine buildings in sight from highway.

Water Supply ~~Undeveloped~~ *partly developed*

Brief History Property has produced ore at various times. Amount of development comparatively small

Special Problems, Reports Filed

Remarks

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

For sale or lease - reasonable terms.

Signed.....Leo Wall.....

Use additional sheets if necessary.

A S S A Y S

INTERNATIONAL SMELTING CO., MIAMI PLANT

4/6/36	copper	0.14)	
	silver	0.35)	Lot #8400
	gold	0.23)	

SUPERIOR ASSAY OFFICE

1/24/40	gold	1.38	
1/24/40	gold	1.38	Lot #348
1/25/40	gold	2.80	Lot #349
2/14/40	gold	0.74	Lot #357
2/27/40	gold	0.34	Lot #359
3/13/40	gold	3.00	Lot #368

R E P O R T

covering

RAY SOUTHERN GROUP OF GOLD CLAIMS

by

A. MACFARLANE, Mining Engineer

Tucson, Arizona
November 12, 1935

PROPERTY LOCATION:

The claims are situated and in part contiguous to the patented claims Colorado #2 and #3, property of the Ray Consolidated Copper Company, Mineral Creek mining district, Pinal County, Arizona.

The center of the important copper mining town of Ray is distant about two miles almost due north from the main workings of the Ray Southern Group.

This entire belt extends along both banks of Mineral Creek, the Ray Southern property forming the southern and of the known mineralization, and the extensive holdings of the Ray Consolidated Copper Co., claiming the main developed mineralized area with the northern and eastern extensions thereof; the towns of Ray and Sonora are embraced within the limits of this belt.

The Ray and Gila Valley Railroad tracks traverse the western end of Ray Southern Claims #2, 3 and 4. This line operates between Ray and Kelvin, a distance of about seven miles, thence joining the Southern Pacific Railroad running from Phoenix, the State capitol, to the mining and smelting plants at Superior, Hayden, Winkelman, and to all other cities served by the Southern Pacific System. The Ray Southern Mine is very accessible and in addition to rail transportation, standard highways leading to all smelting plants of the state and the cities wherein are readily obtainable all supplies.

THE RAY SOUTHERN GROUP:

Consists of ten full claims 600 feet by 1500 feet each and two fractions, the claims #1 and #3 are slightly reduced by overlapping the two patented claims of the Ray Consolidated Group named Colorado #2 and #3.

The limits of the 12 claims amply protect the ore and mineralization so far opened and visible to the Ray Southern property. It is possible, however, that the wide mineralization striking eastward from cuts in Mill Gulch and from which some high grade gold ore has been won from the croppings of same recently might extend westward into the patented claim Colorado #3 by dipping under the railroad and gravel bed of Mineral Creek.

The Ray Southern claims were located during 1931 by Leo Wall of Ray, Arizona, and all assessment work and exemptions since then recorded at the county seat, Florence without opposition, per information I received from Mr. Harry Herrick, who obtained an option to purchase the mining property from Wall.

The group of claims evidently have changed ownership perhaps several times during the past 30 years, or since the discovery of gold bearing croppings within their limits. They were never patented therefore the locators of the past three or four years in possession and doing the work required by law without opposition, have now a valid title.

GOLD MINING:

The fixed price of \$35 per troy ounce for fine gold has awakened an industry, which all but languished in the United States under the old standard of \$20.67 per ounce.

The recurrent high price of copper over long periods from the beginning of this century until the collapse of the red metal about April 1930, made the mining, concentrating, smelting and refining of copper the leading mining industry.

A short time ago gold mining took the lead as a result of the pegged price of \$35 per ounce.

The above shifting price factors have entirely changed the psychology of mining both in the field and in the financial centers.

During the high priced copper era, but feeble efforts and expenditures were made to discover, develop, and produce gold. This was particularly true of the great copper mineral belts of Arizona and is certainly the principal reason why the gold claims located and named the Ray Southern lay almost dormant for the past 20 years since the discovery of gold within the claims.

Millions were spent on the exploration of the Ray Con. Mines with the result one of the big producing copper mines of the world earned large profits for its investors for years, while the adjoining Ray Southern Group with its gold-bearing ores lay almost untouched.

HISTORY OF THE RAY SOUTHERN GROUP:

The earliest locators evidently were men without means as the few shallow shafts and openings on the gold bearing shoots discovered at and near grass roots would indicate. These workings were more in the nature of assessment holes, and no doubt the ownership of the claims changed hands several times during the 20 years or more since first located.

GEOLOGY OF RAY SOUTHERN GROUP:

Driving northward from Kelvin to Ray, the first solid rock formations reached are seen to be Gila conglomerate sandstones, seemingly barren of vein forming agencies, until you reach within $2\frac{1}{2}$ miles of Ray.

At this point a major contact is reached, the bald hills forming the southwestern toe of the Dripping Springs Mountains are capped by a chert mescal limestone, this reaching nearly down to the east bank of Mineral Creek, while the conglomerates extend yet northwards along the west bank of the creek.

The creek bed itself seems to be the line of contact, and on closer inspection I found the underlying formations in which mineralization of the Ray Southern claims is found to be schist, grano-diorite and other differentiations of igneous origin.

The granitic schist is fractured by stocks of diabase and in a large diabase stock the fissure filled with quartz diorite, altered schist and selvage which is herein called vein #3, is found.

This stock or formation reached upwards to a point about 50 feet above Tunnel #1, and here at Tunnel #2 back the mescal lime overlaps the schist.

Immediately north of #1 Tunnel the capping chert dips steeply downward towards the north and I noted that shaft #3 was sunk in the capping rock for a depth of 30 feet before penetrating the underlying schists, wherein are to be found the veins of mineral bodies of this group of claims.

From Tunnel #3 the floor of Mill Gulch is mostly in schists while the steep wall of the north bank of the gulch is formed by the cherty lime capping.

The lesson to be learned by this geology is: look for ore in the underlying formations, keep the mine openings low as convenient for dump disposal.

A glance at the adjoining Ray Con. shaft head frames studding the little hills just above the creek banks and our knowing these shafts have attained depths of over 1,000 feet penetrating large bodies of copper containing gold are sufficient evidence pointing towards the orebearing horizon of this belt.

The hills rise rapidly for several thousand feet in an easterly direction, and all the mining claims of the group are stratigraphically a few hundred feet higher than these contiguous to the creek bank. I walked over a considerable portion of these bedded lime cherts, without noting evidence of ore making agencies, except near the center of claim #2 where is found a cut and prospect shaft started on a wide vein which traverses from west to east through claim #2 and extending into claim #5.

This mineralization is important and should be more fully prospected.

RAY SOUTHERN MINERAL OCCURENCE AND WORKINGS:

The underground development and surface mineral bearing structures, at present visible, prove that two veins or lodes striking from east to west and dipping about 70 degrees towards the north form the principal mining considerations.

These veins hereafter will be named in this report as follows: Beginning towards the southern part of claim #3 is found an apparently well defined fissure vein, the development of which by a tunnel 313 feet driven on the vein and two shafts sunk 70 feet and 90 feet respectively following the vein downwards from the floor of the tunnel portal. This vein and workings will be referred to as #3 workings.

Vein #3 striking generally east from #1 shaft the tunnel and shafts have exposed a fissure varying in width from 2 feet to 6 feet, but the well mineralized part which forms the ore shoots is from 9 inches to 3 feet. This 3 feet width of ore body is opened by a 35 foot drift connecting shafts #1 and #2 on the 75 foot level; #2 is the main shaft.

It is encouraging that the milling values and greater width of this vein are exposed in this 75 foot level drift below the #1 tunnel, indicative of large and more profitable ore shoots to be found by carrying the development to lower levels.

Mill Gulch Vein: At the north side and floor of this gulch a lode, mineralization fully 30 feet wide, is exposed by erosion and some recent picking and ore sorting from a small cut just started on the footwall side of this mineralization.

This vein of mineralization extends eastward visible in places in the canyon floor, but as no underground workings have been made I cannot make an estimate of the probable extent and value of this mineralized body, other than that a few tons of gold ore of fair grade have been recovered from the cut on the cropping near the mouth of the gulch, and just east of the railroad tracks about 200 feet. It is possible to quickly develop a large tonnage here.

Evidently this Mill Gulch vein will join with another fissure which crops boldly into the south bank of the gulch and on which there has been driven a tunnel 136 feet in length. This tunnel #3 is driven on this vein and shows a mineralization 2 feet to 5 feet in width.

On the table topped hill about 200 feet south of the portal of Tunnel #3 a shaft has been sunk in the footwall casing of Mill Gulch lode, but as no crosscutting has

been done, no ore or mineral of any kind was developed by this shaft.

However, shaft #3 was designed by previous operators as a main shaft; evidently their intentions were to crosscut north to cut Mill Gulch veins and perhaps to crosscut south to cut #3 vein; this work has never been finished.

No. 4 Tunnel driven in a northerly direction into a body of cherty lime was evidently intended to prospect for a body of copper, this tunnel being to the north of Mill Gulch vein has no present value.

No. 4 shaft sunk to a depth of about 40 feet on a mineralized fracture or sheer which will junction with Mill Gulch vein within 30 feet of the south end of the shaft; development here at and near the intersecting point of the two mineralizations may uncover an important orebody.

ESTIMATED FOOTAGE OF PRESENT DEVELOPMENT WORK:

Main workings claim #3 in Tunnels 1 and 2	
crosscuts drifts and shafts 1 and 2	558 lineal feet
Shaft #3	70 lineal feet
Tunnel #3.	136 lineal feet
Shaft #4	40 lineal feet
Various other shafts made to prospect the ground, these	
shafts now being mostly caved	<u>250</u> lineal feet
Estimated total of present development footage	1054 lineal feet

North vein should be developed by sinking a prospect shaft to a depth of 100 feet and drifting a few hundred feet on the lode. This vein is from 6 feet to 9 feet in width; a tonnage of importance can be quickly developed, providing the gold content of the vein filling proves to be commercial grade.

MINE DEVELOPMENT RECOMMENDED:

No. 3 Workings: The main shaft #2 is now equipped with a 6 H.P. gasoline hoist complete in operating condition, with head frame trackage to ore bin and dump, the shaft (one compartment) is well timbered, good ladders all extending to a depth of 90 feet below the Tunnel #1 level.

A continuous narrow vein of quartz andesite and mineralized selvage extends from the tunnel portal to its face a distance of more than 150 feet along its eastern course.

I therefore recommend a heading to the east be driven for 300 feet or more from the bottom of the #2 shaft in order to prospect this very important part of the property.

Also drive a heading westward for 300 feet or more raising up 20 feet to connect with the bottom of shaft #1 on the 75-foot level for air and to establish a dual opening and egress from this part of the mine.

At some point further west if the ore discoveries in this east and west drift are encouraging a double compartment raise should be made to connect with a like shaft adequate to carry the development to further depths.

This will require a much larger hoist head frame and general mining equipment. In all about 600 lineal feet of work is desired only as a first step in the development of the #3 vein.

Mill Gulch Vein: Here a one compartment prospect shaft should be sunk to a depth of about 75 feet when a water table may be encountered and at or near the water level, drifting both east and west will be in order, together with short cross-cuts to both walls. I recommend fully 500 lineal feet of underground work for the first development of the mineralization of this zone.

A small tonnage of gold ore assaying about 0.5 oz. per ton have been won out of a very small cut on the cropping of this lode, and the possibilities of a large tonnage of profitable ore here are excellent. The new work should be done within this mineralization which here at and near the cropping cut is 30 feet wide.

This work will require a hoist, timbers, headframe, etc. after a depth of 50 feet has been attained by windlass. North vein striking from west to east through claim #2 is a lead of importance, a cut made on this vein exposes a lead of 6 feet to 9 feet in width, prospecting by a 100 foot shaft and drift therefrom should develop a large tonnage.

The three areas of the mine I have above designated in my opinion are the logical points where a tonnage of commercial ore can be most quickly and cheaply made available. These oxidized ores can be mined cheaply and are likely quite amenable to cyanidation by agitation.

COST OF PROPOSED MINE DEVELOPMENT:

The vein filling as now seen is of a soft texture just sufficiently firm to make light air drills efficient equipment. Also good advance should be made by hand steel.

By footage contracts I would expect to advance the drifts and chute upraises for \$6 per foot for mining and mucking.

The one compartment shaft to the 75 foot or 100 foot level will cost about \$20 per foot timbers installed.

Gold (mercury - lead - silver - rudybenium).

12 unpatented claims - developed by over
1000 feet of workings in shafts, crosscuts
and drifts - on veins of from 6 to 9 feet
wide - all workings accessible -

Arrage assay of \$450 in gold - with
30,000 tons on dump. Equipped with
25 ton ball mill. Good road - ample
water - For sale or lease.

Numeral Creek District - Gila County -

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

MR-11

Date: June 11, 1941

Mine: Ray Southern Group

District: Mineral Creek District

Location: 2 miles south of Ray

Former name: Eobtail

Owner: ✓ Leo Wall

Address: Box 144, Ray, Arizona

Operator: B. R. Ferrell

Address: Box 78, Ray, Arizona

President: " "

Gen. Mgr. B. R. Ferrell

Mine Supt. " "

Mill Supt. " "

Principal Metals: Gold, metallic quick-silver, asbestos, lead, silver, molybdenum

Men Employed: None

Production Rate: From 1 to 100 in present Mill: Type & Cap. Ball mill 25 ton openings.

Power: Amt. & Type: Each are separate bodies of ore - except gold and metallic quicksilver come together

Operations: Present Developing.

Operations Planned:

Number Claims, Title, etc. 12 claims - all held by assessment work 50-ft. shaft open - no drift on it but ore shows all way down about 12 feet wide - shows good percentage of metallic quicksilver and some gold runs around \$4.20 on gold assay.

Description: Topog. & Geog. The property lies in a highly metamorphosed iron stained schist intruded by granite masses with strong mineralization. There is evidence of a strong cut by diabase dikes with fault bringing the ore body against quartzite and limestone. Volcanic rocks consisting of rhyolite, andesite and dacite in the form of tufts and breccias predominate. It lies geologically on the Ray fault on government maps.

Mine Workings: Amt. & Condition: 1 drift 120 ft. on ore - 1 drift 250 ft. on ore crosscut 75 ft. off same drift cutting several small feeders - 1 shaft 50 ft. on ore - 1 shaft 75 feet on ore - 1 shaft 35 ft. on ore - 1 two-compartment shaft 65 ft. metallic quicksilver ore contacted - all workings in first class shape - head frames up and ready to be worked all drift timbered where necessary and ready to be worked - ore in all faces and overhead.

(over)

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STATE OF ARIZONA
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(over)

A S S A Y S

INTERNATIONAL SMELTING CO., MIAMI PLANT

4/6/36	copper	0.14)	
	silver	0.35)	Lot #8400
	gold	0.23)	

SUPERIOR ASSAY OFFICE

1/24/40	gold	1.38	
1/24/40	gold	1.38	Lot #348
1/25/40	gold	2.80	Lot #349
2/14/40	gold	0.74	Lot #357
2/27/40	gold	0.34	Lot #359
3/13/40	gold	3.00	Lot #368

R E P O R T

covering

RAY SOUTHERN GROUP OF GOLD CLAIMS

by

A. MACFARLANE, Mining Engineer

Tucson, Arizona
November 12, 1935

PROPERTY LOCATION:

The claims are situated and in part contiguous to the patented claims Colorado #2 and #3, property of the Ray Consolidated Copper Company, Mineral Creek mining district, Pinal County, Arizona.

The center of the important copper mining town of Ray is distant about two miles almost due north from the main workings of the Ray Southern Group.

This entire belt extends along both banks of Mineral Creek, the Ray Southern property forming the southern end of the known mineralization, and the extensive holdings of the Ray Consolidated Copper Co., claiming the main developed mineralized area with the northern and eastern extensions thereof; the towns of Ray and Sonora are embraced within the limits of this belt.

The Ray and Gila Valley Railroad tracks traverse the western end of Ray Southern Claims #2, 3 and 4. This line operates between Ray and Kelvin, a distance of about seven miles, thence joining the Southern Pacific Railroad running from Phoenix, the State capitol, to the mining and smelting plants at Superior, Hayden, Winkelman, and to all other cities served by the Southern Pacific System. The Ray Southern Mine is very accessible and in addition to rail transportation, standard highways leading to all smelting plants of the state and the cities wherein are readily obtainable all supplies.

THE RAY SOUTHERN GROUP:

Consists of ten full claims 600 feet by 1500 feet each and two fractions, the claims #1 and #3 are slightly reduced by overlapping the two patented claims of the Ray Consolidated Group named Colorado #2 and #3.

The limits of the 12 claims simply protect the ore and mineralization so far opened and visible to the Ray Southern property. It is possible, however, that the wide mineralization striking eastward from cuts in Mill Gulch and from which some high grade gold ore has been won from the croppings of same recently might extend westward into the patented claim Colorado #3 by dipping under the railroad and gravel bed of Mineral Creek.

The Ray Southern claims were located during 1931 by Leo Wall of Ray, Arizona, and all assessment work and exemptions since then recorded at the county seat, Florence without opposition, per information I received from Mr. Harry Herrick, who obtained an option to purchase the mining property from Wall.

The group of claims evidently have changed ownership perhaps several times during the past 30 years, or since the discovery of gold bearing croppings within their limits. They were never patented therefore the locators of the past three or four years in possession and doing the work required by law without opposition, have now a valid title.

GOLD MINING:

The fixed price of \$35 per troy ounce for fine gold has awakened an industry, which all but languished in the United States under the old standard of \$20.67 per ounce.

The recurrent high price of copper over long periods from the beginning of this century until the collapse of the red metal about April 1930, made the mining, concentrating, smelting and refining of copper the leading mining industry.

A short time ago gold mining took the lead as a result of the pegged price of \$35 per ounce.

The above shifting price factors have entirely changed the psychology of mining both in the field and in the financial centers.

During the high priced copper era, but feeble efforts and expenditures were made to discover, develop, and produce gold. This was particularly true of the great copper mineral belts of Arizona and is certainly the principal reason why the gold claims located and named the Ray Southern lay almost dormant for the past 20 years since the discovery of gold within the claims.

Millions were spent on the exploration of the Ray Con. Mines with the result one of the big producing copper mines of the world earned large profits for its investors for years, while the adjoining Ray Southern Group with its gold-bearing ores lay almost untouched.

HISTORY OF THE RAY SOUTHERN GROUP:

The earliest locators evidently were men without means as the few shallow shafts and openings on the gold bearing shoots discovered at and near grass roots would indicate. These workings were more in the nature of assessment holes, and no doubt the ownership of the claims changed hands several times during the 20 years or more since first located.

GEOLOGY OF RAY SOUTHERN GROUP:

Driving northward from Kelvin to Ray, the first solid rock formations reached are seen to be Gila conglomerate sandstones, seemingly barren of vein forming agencies, until you reach within $2\frac{1}{2}$ miles of Ray.

At this point a major contact is reached, the bald hills forming the southwestern toe of the Dripping Springs Mountains are capped by a chert mescal limestone, this reaching nearly down to the east bank of Mineral Creek, while the conglomerates extend yet northwards along the west bank of the creek.

The creek bed itself seems to be the line of contact, and on closer inspection I found the underlying formations in which mineralization of the Ray Southern claims is found to be schist, grano-diorite and other differentiations of igneous origin.

The granitic schist is fractured by stocks of diabase and in a large diabase stock the fissure filled with quartz diorite, altered schist and selvage which is herein called vein #3, is found.

This stock or formation reached upwards to a point about 50 feet above Tunnel #1, and here at Tunnel #2 back the mescal lime overlaps the schist.

Immediately north of #1 Tunnel the capping chart dips steeply downward towards the north and I noted that shaft #3 was sunk in the capping rock for a depth of 30 feet before penetrating the underlying schists, wherein are to be found the veins of mineral bodies of this group of claims.

From Tunnel #3 the floor of Mill Gulch is mostly in the schists while the steep wall of the north bank of the gulch is formed by the cherty lime capping.

The lesson to be learned by this geology is: look for ore in the underlying formations, keep the mine openings low as convenient for dump disposal.

A glance at the adjoining Ray Con. shaft head frames studding the little hills just above the creek banks and our knowing these shafts have attained depths of over 1,000 feet penetrating large bodies of copper containing gold are sufficient evidence pointing towards the orebearing horizon of this belt.

The hills rise rapidly for several thousand feet in an easterly direction, and all the mining claims of the group are stratigraphically a few hundred feet higher than these contiguous to the creek bank. I walked over a considerable portion of these bedded lime cherts, without noting evidence of ore making agencies, except near the center of claim #2 where is found a cut and prospect shaft started on a wide vein which traverses from west to east through claim #2 and extending into claim #5.

This mineralization is important and should be more fully prospected.

RAY SOUTHERN MINERAL OCCURENCE AND WORKINGS:

The underground development and surface mineral bearing structures, at present visible, prove that two veins or lodes striking from east to west and dipping about 70 degrees towards the north form the principal mining considerations.

These veins hereafter will be named in this report as follows: Beginning towards the southern part of claim #3 is found an apparently well defined fissure vein, the development of which by a tunnel 313 feet driven on the vein and two shafts sunk 70 feet and 90 feet respectively following the vein downwards from the floor of the tunnel portal. This vein and workings will be referred to as #3 workings.

Vein #3 striking generally east from #1 shaft the tunnel and shafts have exposed a fissure varying in width from 2 feet to 6 feet, but the well mineralized part which forms the ore shoots is from 9 inches to 3 feet. This 3 feet width of ore body is opened by a 35 foot drift connecting shafts #1 and #2 on the 75 foot level; #2 is the main shaft.

It is encouraging that the milling values and greater width of this vein are exposed in this 75 foot level drift below the #1 tunnel, indicative of large and more profitable ore shoots to be found by carrying the development to lower levels.

Mill Gulch Vein: At the north side and floor of this gulch a lode, mineralization fully 30 feet wide, is exposed by erosion and some recent picking and ore sorting from a small cut just started on the footwall side of this mineralization.

This vein of mineralization extends eastward visible in places in the canyon floor, but as no underground workings have been made I cannot make an estimate of the probable extent and value of this mineralized body, other than that a few tons of gold ore of fair grade have been recovered from the cut on the cropping near the mouth of the gulch, and just east of the railroad tracks about 200 feet. It is possible to quickly develop a large tonnage here.

Evidently this Mill Gulch vein will join with another fissure which crops boldly into the south bank of the gulch and on which there has been driven a tunnel 136 feet in length. This tunnel #3 is driven on this vein and shows a mineralization 2 feet to 5 feet in width.

On the table topped hill about 200 feet south of the portal of Tunnel #3 a shaft has been sunk in the footwall casing of Mill Gulch lode, but as no crosscutting has

been done, no ore or mineral of any kind was developed by this shaft.

However, shaft #3 was designed by previous operators as a main shaft; evidently their intentions were to crosscut north to cut Mill Gulch veins and perhaps to crosscut south to cut #3 vein; this work has never been finished.

No. 4 Tunnel driven in a northerly direction into a body of cherty lime was evidently intended to prospect for a body of copper, this tunnel being to the north of Mill Gulch vein has no present value.

No. 4 shaft sunk to a depth of about 40 feet on a mineralized fracture or sheer which will junction with Mill Gulch vein within 30 feet of the south end of the shaft; development here at and near the intersecting point of the two mineralizations may uncover an important orebody.

ESTIMATED FOOTAGE OF PRESENT DEVELOPMENT WORK:

Main workings claim #3 in Tunnels 1 and 2 crosscuts drifts and shafts 1 and 2	558 lineal feet
Shaft #3	70 lineal feet
Tunnel #3.	136 lineal feet
Shaft #4	40 lineal feet
Various other shafts made to prospect the ground, these shafts now being mostly caved	<u>250</u> lineal feet
Estimated total of present development footage	1054 lineal feet

North vein should be developed by sinking a prospect shaft to a depth of 100 feet and drifting a few hundred feet on the lode. This vein is from 6 feet to 9 feet in width; a tonnage of importance can be quickly developed, providing the gold content of the vein filling proves to be commercial grade.

MINE DEVELOPMENT RECOMMENDED:

No. 3 Workings: The main shaft #2 is now equipped with a 6 H.P. gasoline hoist complete in operating condition, with head frame trackage to ore bin and dump, the shaft (one compartment) is well timbered, good ladders all extending to a depth of 90 feet below the Tunnel #1 level.

A continuous narrow vein of quartz andesite and mineralized selvage extends from the tunnel portal to its face a distance of more than 150 feet along its eastern course.

I therefore recommend a heading to the east be driven for 300 feet or more from the bottom of the #2 shaft in order to prospect this very important part of the property.

Also drive a heading westward for 300 feet or more raising up 20 feet to connect with the bottom of shaft #1 on the 75-foot level for air and to establish a dual opening and egress from this part of the mine.

At some point further west if the ore discoveries in this east and west drift are encouraging a double compartment raise should be made to connect with a like shaft adequate to carry the development to further depths.

This will require a much larger hoist head frame and general mining equipment. In all about 600 lineal feet of work is desired only as a first step in the development of the #3 vein.

Mill Gulch Vein: Here a one compartment prospect shaft should be sunk to a depth of about 75 feet when a water table may be encountered and at or near the water level, drifting both east and west will be in order, together with short cross-cuts to both walls. I recommend fully 500 lineal feet of underground work for the first development of the mineralization of this zone.

A small tonnage of gold ore assaying about 0.5 oz. per ton have been won out of a very small cut on the cropping of this lode, and the possibilities of a large tonnage of profitable ore here are excellent. The new work should be done within this mineralization which here at and near the cropping cut is 30 feet wide.

This work will require a hoist, timbers, headframe, etc. after a depth of 50 feet has been attained by windlass. North vein striking from west to east through claim #2 is a lead of importance, a cut made on this vein exposes a lead of 6 feet to 9 feet in width, prospecting by a 100 foot shaft and drift therefrom should develop a large tonnage.

The three areas of the mine I have above designated in my opinion are the logical points where a tonnage of commercial ore can be most quickly and cheaply made available. These oxidized ores can be mined cheaply and are likely quite amenable to cyanidation by agitation.

COST OF PROPOSED MINE DEVELOPMENT:

The vein filling as now seen is of a soft texture just sufficiently firm to make light air drills efficient equipment. Also good advance should be made by hand steel.

By footage contracts I would expect to advance the drifts and chute upraises for \$6 per foot for mining and mucking.

The one compartment shaft to the 75 foot or 100 foot level will cost about \$20 per foot timbers installed.

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

MR-11

Date: June 11, 1941

Mine: Ray Southern Group

District: Mineral Creek District

Location: 2 miles south of Ray

Former name: Eobtail

Owner: Leo Wall

Address: Box 144, Ray, Arizona

Operator: B. R. Ferrell

Address: Box 78, Ray, Arizona

President: " "

Gen. Mgr. B. R. Ferrell

Mine Supt. " "

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Principal Metals: Gold, metallic quick- Men Employed: None
silver, asbestos, lead, silver, molybdenum

Production Rate: From 1 to 100 in present Mill: Type & Cap. Ball mill 25 ton
openings.

Power: Amt. & Type: Each are separate bodies of ore - except gold and metallic
quicksilver come together

Operations: Present Developing.

Operations Planned:

Number Claims, Title, etc. 12 claims - all held by assessment work 50-ft. shaft
open - no drift on it but ore shows all way down about 12 feet wide - shows good
percentage of metallic quicksilver and some gold runs around \$4.20 on gold assay.

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stained schist intruded by granite masses with strong mineralization. There is
evidence of a strong cut by diabase dikes with fault bringing the ore body against
quartzite and limestone. Volcanic rocks consisting of rhyolite, andesite and
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ft. metallic quicksilver ore contacted - all workings in first class shape -
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(over)

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INTERNATIONAL SMELTING CO., MIAMI PLANT

4/6/36	copper	0.14)	
	silver	0.35)	Lot #8400
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SUPERIOR ASSAY OFFICE

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1/24/40	gold	1.38	Lot #348
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3/13/40	gold	3.00	Lot #368

R E P O R T

covering

RAY SOUTHERN GROUP OF GOLD CLAIMS

by

A. MACFARLANE, Mining Engineer

Tucson, Arizona
November 12, 1935

PROPERTY LOCATION:

The claims are situated and in part contiguous to the patented claims Colorado #2 and #3, property of the Ray Consolidated Copper Company, Mineral Creek mining district, Pinal County, Arizona.

The center of the important copper mining town of Ray is distant about two miles almost due north from the main workings of the Ray Southern Group.

This entire belt extends along both banks of Mineral Creek, the Ray Southern property forming the southern end of the known mineralization, and the extensive holdings of the Ray Consolidated Copper Co., claiming the main developed mineralized area with the northern and eastern extensions thereof; the towns of Ray and Sonora are embraced within the limits of this belt.

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Consists of ten full claims 600 feet by 1500 feet each and two fractions, the claims #1 and #3 are slightly reduced by overlapping the two patented claims of the Ray Consolidated Group named Colorado #2 and #3.

The limits of the 12 claims amply protect the ore and mineralization so far opened and visible to the Ray Southern property. It is possible, however, that the wide mineralization striking eastward from cuts in Mill Gulch and from which some high grade gold ore has been won from the croppings of same recently might extend westward into the patented claim Colorado #3 by dipping under the railroad and gravel bed of Mineral Creek.

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These veins hereafter will be named in this report as follows: Beginning towards the southern part of claim #3 is found an apparently well defined fissure vein, the development of which by a tunnel 313 feet driven on the vein and two shafts sunk 70 feet and 90 feet respectively following the vein downwards from the floor of the tunnel portal. This vein and workings will be referred to as #3 workings.

Vein #3 striking generally east from #1 shaft the tunnel and shafts have exposed a fissure varying in width from 2 feet to 6 feet, but the well mineralized part which forms the ore shoots is from 9 inches to 3 feet. This 3 feet width of ore body is opened by a 35 foot drift connecting shafts #1 and #2 on the 75 foot level; #2 is the main shaft.

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shafts now being mostly caved	<u>250</u> lineal feet
Estimated total of present development footage	1054 lineal feet

North vein should be developed by sinking a prospect shaft to a depth of 100 feet and drifting a few hundred feet on the lode. This vein is from 6 feet to 9 feet in width; a tonnage of importance can be quickly developed, providing the gold content of the vein filling proves to be commercial grade.

MINE DEVELOPMENT RECOMMENDED:

No. 3 Workings: The main shaft #2 is now equipped with a 6 H.P. gasoline hoist complete in operating condition, with head frame trackage to ore bin and dump, the shaft (one compartment) is well timbered, good ladders all extending to a depth of 90 feet below the Tunnel #1 level.

A continuous narrow vein of quartz andesite and mineralized selvage extends from the tunnel portal to its face a distance of more than 150 feet along its eastern course.

I therefore recommend a heading to the east be driven for 300 feet or more from the bottom of the #2 shaft in order to prospect this very important part of the property.

Also drive a heading westward for 300 feet or more raising up 20 feet to connect with the bottom of shaft #1 on the 75-foot level for air and to establish a dual opening and egress from this part of the mine.

At some point further west if the ore discoveries in this east and west drift are encouraging a double compartment raise should be made to connect with a like shaft adequate to carry the development to further depths.

This will require a much larger hoist head frame and general mining equipment. In all about 600 lineal feet of work is desired only as a first step in the development of the #3 vein.

Mill Gulch Vein: Here a one compartment prospect shaft should be sunk to a depth of about 75 feet when a water table may be encountered and at or near the water level, drifting both east and west will be in order, together with short cross-cuts to both walls. I recommend fully 500 lineal feet of underground work for the first development of the mineralization of this zone.

A small tonnage of gold ore assaying about 0.5 oz. per ton have been won out of a very small cut on the cropping of this lode, and the possibilities of a large tonnage of profitable ore here are excellent. The new work should be done within this mineralization which here at and near the cropping cut is 30 feet wide.

This work will require a hoist, timbers, headframe, etc. after a depth of 50 feet has been attained by windlass. North vein striking from west to east through claim #2 is a lead of importance, a cut made on this vein exposes a lead of 6 feet to 9 feet in width, prospecting by a 100 foot shaft and drift therefrom should develop a large tonnage.

The three areas of the mine I have above designated in my opinion are the logical points where a tonnage of commercial ore can be most quickly and cheaply made available. These oxidized ores can be mined cheaply and are likely quite amenable to cyanidation by agitation.

COST OF PROPOSED MINE DEVELOPMENT:

The vein filling as now seen is of a soft texture just sufficiently firm to make light air drills efficient equipment. Also good advance should be made by hand steel.

By footage contracts I would expect to advance the drifts and chute upraises for \$6 per foot for mining and mucking.

The one compartment shaft to the 75 foot or 100 foot level will cost about \$20 per foot timbers installed.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

MR-11

MINE OWNER'S REPORT

Date: June 11, 1941

Mine: Ray Southern Group

District: Mineral Creek District Location: 2 miles south of Ray

Former name: Eobtall

Owner: Leo Wall Address: Box 144, Ray, Arizona

Operator: B. R. Ferrell Address: Box 78, Ray, Arizona

President: " " Gen. Mgr. B. R. Ferrell

Mine Supt. " " Mill Supt. " "

Principal Metals: Gold, metallic quicksilver, silver, asbestos, lead, silver, molybdenum Men Employed: None

Production Rate: From 1 to 100 in present openings. Mill: Type & Cap. Ball mill 25 ton

Power: Amt. & Type: Each are separate bodies of ore - except gold and metallic quicksilver come together

Operations: Present Developing.

Operations Planned:

Number Claims, Title, etc. 12 claims - all held by assessment work 50-ft. shaft open - no drift on it but ore shows all way down about 12 feet wide - shows good percentage of metallic quicksilver and some gold runs around \$4.20 on gold assay.

Description: Topog. & Geog. The property lies in a highly metamorphosed iron stained schist intruded by granite masses with strong mineralization. There is evidence of a strong cut by diabase dikes with fault bringing the ore body against quartzite and limestone. Volcanic rocks consisting of rhyolite, andesite and dacite in the form of tufts and breccias predominate. It lies geologically on the Ray fault on government maps.

Mine Workings: Amt. & Condition: 1 drift 120 ft. on ore - 1 drift 250 ft. on ore crosscut 75 ft. off same drift cutting several small feeders - 1 shaft 50 ft. on ore - 1 shaft 75 feet on ore - 1 shaft 35 ft. on ore - 1 two-compartment shaft 65 ft. metallic quicksilver ore contacted - all workings in first class shape - head frames up and ready to be worked all drift timbered where necessary and ready to be worked - ore in all faces and overhead.

(over)

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Dec. 2, 1939

Mine Ray Southern

District Dripping Springs

Location $1\frac{1}{2}$ miles south of Ray

Former name Bobtail

Owner Leo Wall

Address Box 78 Ray, Ariz.

Operator B. R. Ferrell

Address

President Ditto

Gen. Mgr. B. R. Ferrell

Mine Supt. "

Mill Supt. "

Principal Metals Gold

Men Employed None

Production Rate From 1 to 100 in present openings

Mill: Type & Cap. Ball mill 25 ton

Power: Amt. & Type High tension goes into Ray less than $1/8$ mile from property

Operations: Present Drifting prospecting for high grade and shafts

Operations Planned On new ore just found to put in $1/4$ mile tram to get ore to mill - have had no assays lower than \$4.80 and this was on the edge in center - have some pinnings that may go to two or three ounces.

Number Claims, Title, etc. 18 claims - all held by assessment work and enough has been done to patent them.

Description: Topog. & Geog. The property lies in a highly metamorphosed iron stained schist intruded by granite masses with strong mineralization. There is evidence of a strong cut by diabase dikes with fault bringing the ore body against quartzite and limestone. Volcanic rocks consisting of rhyolite, andesite and dacite in the form of tufts and breccias predominate. It lies geologically on the Ray fault on government maps.

Mine Workings: Amt. & Condition 1 drift 120 ft. on ore - 1 drift 250 ft. on ore crosscut 75 ft. off same drift cutting several small feeders - 1 shaft 50 ft. on ore - 1 shaft 75 feet on ore - 1 shaft 38 ft. on ore - 1 two compartment shaft 65 ft. ore not contacted as yet - all workings in first class shape - head frames up and ready to be worked - all drift timbered where necessary and ready to be worked - ore in all faces and overhead.

(over)

DEPARTMENT OF MINERAL RESOURCES
Geology & Mineralization This property lies on the Ray fault, one side carrying gold values with very little silver on the other. There is copper, gold & silver in milling. I have found on the north side native copper; in my amalgam box on the other I have found native quicksilver.

Ore: Positive & Probable, Ore Dumps, Tailings No tailings but 30,000 tons on dumps, general assays show \$4.50 or in place probable tonnage exposed 60 or 70 thousand tons - depth not known as all workings are shallow or in place assays show from \$1.50 to \$84 - settlement sheets show from 9 to 30 dollars.

Mine, Mill Equipment & Flow Sheet Not much mining equipment but mill ball and concentrating table - power crushers, dryers, mill house, blacksmith shop, forge, hoist and small tools.

Road Conditions, Route Good - 15 miles south from Superior maintained gravel road this far and trunk highway at that point

Water Supply Adequate well in creek bottom at present supplying milling water with no draw down - 2 springs for domestic use that can be piped 3,000 ft. with a 50 to 75 ft. head, never known to go dry.

Brief History Mine was started in 1903 as the Bobtail but financial difficulties stopped work; then acquired by Ray Murealjes and held till 1930 or 1931; given up by Ray Con and filed on by Leo Wall in 1932; spasmodically worked until June 1936 when I leased it and from then on have prospected; opened up and have the claims in workable shape.

Special Problems, Reports Filed

Remarks What I am in need of now is finances to go ahead on the ore I have showing.

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

The property is for sale, part or all, not claims but an interest in the claims \$25,000 for 1/3 interest or \$75,000 for all of it. I would rather retain some interest in it or have some one financially able to assist me as I am better acquainted with where the ore is that would warrant the investment. A 50-ton modern mill on the property would pay from the start.

Signed..... B. R. Ferrall

Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Dec. 2, 1939

Mine Ray Southern

District Dripping Springs

Location $1\frac{1}{2}$ miles south of Ray

Former name Bobtail

Owner Leo Wall

Address Box 78 Ray, Ariz.

Operator B. R. Ferrell

Address

President Ditto

Gen. Mgr. B. R. Ferrell

Mine Supt. "

Mill Supt. "

Principal Metals Gold

Men Employed None

Production Rate From 1 to 100 in present openings

Mill: Type & Cap. Ball mill 25 ton

Power: Amt. & Type High tension goes into Ray less than 1/2 mile from property

Operations: Present Drifting prospecting for high grade and shafts

Operations Planned On new ore just found to put in 1/4 mile tram to get ore to mill - have had no assays lower than \$4.20 and this was on the edge in center - have some pannings that may go to two or three ounces.

Number Claims, Title, etc. 12 claims - all held by assessment work and enough has been done to patent them.

Description: Topog. & Geog. The property lies in a highly metamorphosed iron stained schist intruded by granite masses with strong mineralization. There is evidence of a strong cut by diabase dikes with fault bringing the ore body against quartzite and limestone. Volcanic rocks consisting of rhyolite, andesite and dacite in the form of tufts and breccias predominate. It lies geologically on the Ray fault on government maps.

Mine Workings: Amt. & Condition 1 drift 120 ft. on ore - 1 drift 250 ft. on ore crosscut 75 ft. off same drift cutting several small feeders - 1 shaft 50 ft. on ore - 1 shaft 75 feet on ore - 1 shaft 35 ft. on ore - 1 two compartment shaft 65 ft. ore not contacted as yet - all workings in first class shape - head frames up and ready to be worked - all drift timbered where necessary and ready to be worked - ore in all faces and overhead.

(over)

Geology & Mineralization This property lies on the Ray fault, one side carrying gold values with very little silver on the other. There is copper, gold & silver in milling. I have found on the north side native copper; in my amalgam box on the other I have found native quicksilver.

Ore: Positive & Probable, Ore Dumps, Tailings No tailings but 30,000 tons on dumps, general assays show \$4.50 or in place probable tonnage exposed 60 or 70 thousand tons - depth not known as all workings are shallow or in place assays show from \$1.50 to \$84 - settlement sheets show from 9 to 30 dollars.

Mine, Mill Equipment & Flow Sheet Not much mining equipment but mill ball and concentrating table - power crushers, dryers, mill house, blacksmith shop, forge, hoist and small tools.

Road Conditions, Route Good - 15 miles south from Superior maintained gravel road this far and trunk highway at that point

Water Supply Adequate well in creek bottom at present supplying milling water with no draw down - 2 springs for domestic use that can be piped 3,000 ft. with a 50 to 75 ft. head, never known to go dry.

Brief History Mine was started in 1903 as the Bobtail but financial difficulties stopped work; then acquired by Ray Hurcajles and held till 1930 or 1931; given up by Ray Con and filed on by Leo Wall in 1932; spasmodically worked until June 1936 when I leased it and from then on have prospected; opened up and have the claims in workable shape.

Special Problems, Reports Filed

Remarks What I am in need of now is finances to go ahead on the ore I have showing.

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

The property is for sale, part or all, not claims but an interest in the claims \$25,000 for 1/3 interest or \$75,000 for all of it. I would rather retain some interest in it or have some one financially able to assist me as I am better acquainted with where the ore is that would warrant the investment. A 50-ton modern mill on the property would pay from the start.

Signed..... B. R. Ferrell

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Dec 2, 1939

Mine Ray Southern

District Dripping Springs

Former name Bob tail

Owner Leo Wall

Operator B.R. Ferrell

President Ditto

Mine Supt. "

Principal Metals Gold

Production Rate from 1 to 100 in present opening

Power: Amt. & Type High Tension goes into ray less than 1/2 mile from property

Operations: Present Drifting prospecting for bygrade and shafts

Location 1 1/2 miles South of Ray

Address Box 78 Ray Ariz.

Address

Gen. Mgr., B.R. Ferrell

Mill Supt. "

Men Employed none

Mill: Type & Cap. Ball mill 25 ton

Operations Planned On new ore just found to put in 1/4 mile tram to get ore to mill have had no assays lower than \$4.20 and this was on the edge in center have some pannings that may go to two or three ounces

Number Claims, Title, etc. 12 claims all held by assessment work and enough has been done to patent them

Description: Topog. & Geog. The property lies in a highly metamorphosed iron stained shist intruded by granite masses with strong mineralization. There is evidence of a strong cut by diabase dikes with fault bringing the ore body against quartzite and limestone. Volcanic rocks consisting of rhyolite and dacite in the form of tufts and breccias predominate. It lies geologically on the Ray fault on government maps

Mine Workings: Amt. & Condition

1 drift 120 ft on ore 1 drift 250 ft on ore crosscut 75 ft off same drift cutting several small feeders 1 shaft 50 ft on ore 1 shaft 70 feet on ore 1 shaft 35 ft on ore 1 two compartment shaft 65 ft ore not contacted as yet all workings in first class shape head frames up and ready to be worked all drift timbered where necessary and ready to be worked ore in all faces and overhead.

Geology & Mineralization

The property lies on the Ray fault one side carrying gold values with very little silver on the other there is copper gold & silver in milling I have found on the north side native copper in vuggy almagam box on the other I have found native quicksilver

Ore: Positive & Probable, Ore Dumps, Tailings

no tailings but 30,000 tons on dumps general assays show \$4.50 or in place probable tonage exposed 60 or 70 thousand tons depth not know as all workings are shallow or in place assays show from \$1.50 to \$4 dollars settlement sheets show from 9 to 30 dollars.

Mine, Mill Equipment & Flow Sheet

not much mining equipment but mill ball & concentrating table power crushers crushers mill house blacksmith shop forge hoist and small tools

Road Conditions, Route

Good 15 miles south from Superior maintained gravel road this far and trunk highway at that point

Water Supply

adequate Well in creek bottom at present supplying mill water with no drawdown 2 springs for domestic use that can be piped 3000 ft with a 50 to 75 ft head never know to go dry

Brief History

Mine was started in 1903 as the best but financial diffult culties stopped work then acquired by Rayburcaljes and held till 1930 or 1931 given up by Ray Con and filed on by Leo Wall in 1932 spasmodically worked until June of 1936 when I leased it and from then on have prospected opened up and have the claims in workable shape

Special Problems, Reports Filed

Remarks

What I am in need of now is finances to go ahead on the ore I have showing

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The property is for sale part or all not claims but an interest in the claims \$25,000 for 1/3 interest or 75,000 for all of it. I would rather retain some interest in it or have some one financially able to assist me as I am better acquainted with where the ore is that would warrant the investment. A 50 ton modern mill on the property would pay from the start

Signed.....

B. P. Ferrell

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Compare with MR 11

Date Dec. 2, 1939

Mine Ray Southern

District Dripping Springs

Location 1 1/2 miles south of Ray

Former name Bobtail

Owner Leo Wall

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Operator B. R. Ferrell

Address

President Ditto

Gen. Mgr. B. R. Ferrell

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Mill Supt. "

Principal Metals Gold

Men Employed None

Production Rate From 1 to 100 in present openings

Mill: Type & Cap. Ball mill 25 ton

Power: Amt. & Type High tension goes into Ray less than 1/2 mile from property

Operations: Present Drifting prospecting for high grade and shafts

Operations Planned On new ore just found to put in 1/4 mile tram to get ore to mill - have had no assays lower than \$4.20 and this was on the edge in center - have some pannings that may go to two or three ounces.

work 50 ft shaft open - no drift - all but ore shows all away down about 12 ft under shows good percentage of ore from gold assays \$20 on gold assay

Number Claims, Title, etc. 12 claims - all held by assessment work and enough has been done to patent them.

Description: Topog. & Geog. The property lies in a highly metamorphosed iron stained schist intruded by granite masses with strong mineralization. There is evidence of a strong cut by diabase dikes with fault bringing the ore body against quartzite and limestone. Volcanic rocks consisting of rhyolite, andesite and dacite in the form of tufts and breccias predominate. It lies geologically on the Ray fault on government maps.

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Geology & Mineralization This property lies on the Ray fault, one side carrying gold values with very little silver on the other. There is copper, gold & silver in milling. I have found on the north side native copper; in my amalgam box on the other I have found native quicksilver.

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Signed..... B. R. Ferrell.....

Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date Dec. 2, 1939

Mine Ray Southern

District Dripping Springs

Location $1\frac{1}{2}$ miles south of Ray

Former name Bobtail

Owner Leo Wall

Address Box 78 Ray, Ariz.

Operator B. R. Ferrell

Address

President Ditto

Gen. Mgr. B. R. Ferrell

Mine Supt. "

Mill Supt. "

Principal Metals Gold

Men Employed None

Production Rate From 1 to 100 in present openings

Mill: Type & Cap. Ball mill 25 ton

Power: Amt. & Type High tension goes into Ray less than 1/2 mile from property

Operations: Present Drifting prospecting for high grade and shafts

Operations Planned On new ore just found to put in 1/4 mile tram to get ore to mill - have had no assays lower than \$4.20 and this was on the edge in center - have some pannings that may go to two or three ounces.

Number Claims, Title, etc. 12 claims - all held by assessment work and enough has been done to patent them.

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(over)

Geology & Mineralization This property lies on the Ray fault, one side carrying gold values with very little silver on the other. There is copper, gold & silver in milling. I have found on the north side native copper; in my amalgam box on the other I have found native quicksilver.

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Mine, Mill Equipment & Flow Sheet Not much mining equipment but mill ball and concentrating table - power crushers, dryers, mill house, blacksmith shop, forge, hoist and small tools.

Road Conditions, Route Good - 15 miles south from Superior maintained gravel road this far and trunk highway at that point.

Water Supply Adequate well in creek bottom at present supplying milling water with no draw down - 2 springs for domestic use that can be piped 3,000 ft. with a 50 to 75 ft. head, never known to go dry.

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Special Problems, Reports Filed

Remarks What I am in need of now is finances to go ahead on the ore I have showing.

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

The property is for sale, part or all, not claims but an interest in the claims \$25,000 for 1/3 interest or \$75,000 for all of it. I would rather retain some interest in it or have some one financially able to assist me as I am better acquainted with where the ore is that would warrant the investment. A 50-ton modern mill on the property would pay from the start.

Signed..... B. R. Ferrell

Use additional sheets if necessary.

MR
50

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date 6/19/39

Mine Ray Southern Group

District Ray Mining District

Location 2 miles south of Ray

Former name

Owner Leo Wall

Address Box 144, Ray, Arizona

Operator

Address

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold, cinnabar, asbestos, lead,
~~silver~~ silver + molybdenum

Men Employed None

Production Rate

Mill: Type & Cap.

Power: Amt. & Type

Each are separate trais of ore - ~~next~~ gold & ant quartz

Operations: Present ~~No active work at present, but leasers will start work in near future~~

Developing

Operations Planned

Number Claims, Title, etc. 12 unpatented claims

Description: Topog. & Geog. Mountainous, rough country

Mine Workings: Amt. & Condition

Approx. 250 ft. of shafts (4 in number)

" 300 " " tunnels

All workings accessible

mt go
Geology & Mineralization Asbestos occurs as a layer in sedimentary beds. Gold and cinnabar occur along contact between andesite and quartzite. Lead and silver in vein as sulphides.

Ore: Positive & Probable, Ore Dumps, Tailings Ore tonnage undetermined, but several veins on ground will average from \$20.00 to \$40.00 per ton with widths of from 4 to 12 feet.

Mine, Mill Equipment & Flow Sheet Small crusher, ball mill and table.

Road Conditions, Route Road good - take Ray-Kelvin road south 2 miles from Ray, then turn left. Mine buildings in sight from highway.

Water Supply ~~Undeveloped~~ *partly developed*

Brief History Property has produced ore at various times. Amount of development comparatively small

Special Problems, Reports Filed

Remarks

If property for sale: Price, terms and address to negotiate.
For sale or lease - reasonable terms.

Signed.....Leo Wall.....

Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date 6/19/39

Mine Ray Southern Group

District Ray Mining District

Former name Bobtail

Owner Leo Wall

Operator

President

Mine Supt.

Principal Metals Gold, cinnabar, asbestos, lead,
silver

Production Rate

Power: Amt. & Type

Operations: Present

No active work at present, but leasers will start work
in near future.

Operations Planned

+

Number Claims, Title, etc.

12 Unpatented Claims

Description: Topog. & Geog.

Mountainous, rough country

Mine Workings: Amt. & Condition

Approx. 250 ft. of shafts (4 in number)

✓ 300 ✓ - tunnels

All workings accessible

(over)

Geology & Mineralization

Asbestos occurs as a layer in sedimentary beds. Gold and cinnabar occur along contact between andesite and quartzite. Lead & silver in vein as sulphides.

Ore: Positive & Probable, Ore Dumps, Tailings

Ore tonnage undetermined, but several veins on ground will average from \$20⁰⁰ to \$40⁰⁰ per ton with widths of from 4 to 12 feet.

Mine, Mill Equipment & Flow Sheet

Small crusher, ball mill & table.

Road Conditions, Route

Road good. Take Ray-Kelvin road south 2 miles from Ray, then turn left. Mine buildings in sight from highway.

Water Supply

Underdoped

Brief History

Property has produced ore at various times. Amount of development comparatively small.

Special Problems, Reports Filed

Remarks

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

For sale or lease - Reasonable Terms.

Signed..... Leo Wall

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date 6/19/39

Mine Ray Southern Group

District Ray Mining District

Location 2 miles south of Ray

Former name

Owner Leo Wall

Address Box 144, Ray, Arizona

Operator

Address

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold, cinnabar, asbestos, lead,
and silver

Men Employed None

Production Rate

Mill: Type & Cap.

Power: Amt. & Type

Operations: Present No active work at present, but leasers will start work in near future

Operations Planned

Number Claims, Title, etc. 12 unpatented claims

Description: Topog. & Geog. Mountainous, rough country

Mine Workings: Amt. & Condition

Approx. 250 ft. of shafts (4 in number)

" 300 " " tunnels

All workings accessible

(over)

DEPARTMENT OF MINERAL RESOURCES
Geology & Mineralization Asbestos occurs as a layer in sedimentary beds. Gold and cinnabar occur along contact between andesite and quartzite. Lead and silver in vein as sulphides.

Ore: Positive & Probable, Ore Dumps, Tailings Ore tonnage undetermined, but several veins on ground will average from \$20.00 to \$40.00 per ton with widths of from 4 to 12 feet.

Mine, Mill Equipment & Flow Sheet Small crusher, ball mill and table.

Road Conditions, Route Road good - take Ray-Kelvin road south 2 miles from Ray, then turn left. Mine buildings in sight from highway.

Water Supply Undeveloped

Brief History Property has produced ore at various times. Amount of development comparatively small

Special Problems, Reports Filed

Remarks

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

For sale or lease - reasonable terms

Signed..... Leo Wall

Use additional sheets if necessary.

RAY SOUTHERN GROUP OF MINES

PINAL COUNTY, ARIZONA.

SCALE - 200 FEET = 1 INCH.

SURVEYED BY H. V. WHEELER, U.S. DEPT. MIN. SURVEYOR,
JULY 1907.

NOTE - Nos 8 and 11 ADDED JAN. 1915.

