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Arizona Department of Mines and Mineral Resources Mining Collection

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LOCATION NOTICE
Lode Mining Claim

This mining claim, the name of which is the ________
mining claim, was located by the undersigned Richard L and Helen Jones

on the ______ day of December, 1979.

This claim is ______ feet long and ______ feet wide, and the point of discovery
is ______ feet from the North end and ______ feet from the South end of this claim.

The general course of this claim is from North ______ to South ______

This claim is situated and located in the ______ County, State of Arizona, about ______ one half mile
in a ______ direction from ______
in the East center ______ of section 9, Township 13 South, Range 12 East abutting
the boundary (east side) of the Saguaro National monument ______

ON CLAIM

SAGUARO NATIONAL MONUMENT BOUNDARY

Dated and posted on the ground the day and year first above written.

Richard L Jones
Helen M Jones

COPY
NOTICE OF MINING CLAIM LOCATION

1. Location [X] Amendment AMC94793 [X] Relocation
2. [X] Placer [X] Lode [ ] Millsite [ ] Tunnelsite
   Recorded to better locate the position of the claim.
3. The name and address of the Locator is
   Richard L. Jones or Helen M. Jones
   117 West 10th Street
   Casa Grande, Arizona 85222

4. The name of the claim is Comet, formerly Yuma Mine AMC # 94793
5. The date of the location is December 27, 1979
6. The claim is 1500 feet long and 600 feet wide. The distance from the Location monument to each end of the claim is 350 feet in a North direction and 1150 feet in a South direction.
7. The general course of the claim is from the North to the South
8. The location of the claim is in Section 9, Township 13 South, Range 12 East
   G&SRB&M, Amole Mining District, Pima County, Arizona.
9. If amending or relocating, the previous claim name was same as above, Comet, formerly Yuma Mine AMC # 94793 recorded in Docket 959 Book 6183, Amole Mining District, Pima County, Arizona.
10. The location of the claim with reference to a natural object or permanent monument is south 3800 feet to the northeast corner of claim from Benchmark # 2361 located on the north side of picture rocks road. The claim is further located in the Northwest 1/4 of the Southeast 1/4 of Section 9 and the Southwest 1/4 of the Southeast 1/4 of Section 9, Township 13 South, Range 12 East, G&SRB&M, Claim is also aligned with its west side against the East Side boundary of the Saguaro National Monument. Old workings on claim, two inclines, one stoped out pit, numerous levels and small openings.

Date August 25, 1980

Richard L. Jones
Helen M. Jones

Witness:

Signature

© Forms, Inc., 31 West Madison Street, Phoenix, Arizona 85003 / (602) 335 6612 / Form 39
1. The name of the claim is Comet, Formerly the Yuma Mine AM# 94793

2. The Northeast corner of the claim is 3800 feet in a South direction from a survey monument or permanent natural object described as Benchmark 2361 located on the north side of picture rocks road.

3. The type of location monument is 4" x 4" wood post and stone

4. The bearing and distance between the corners of the claim are beginning at the Northeast corner of the claim, 1500 feet in a South direction to the Southeast corner, then 600 feet in a West direction to the Southwest corner, then 1500 feet in a North direction to the Northwest corner, then 600 feet in an East direction to the point of beginning.

MAP

One inch = One thousand feet

North Arrow

Section 9 Range 12 East Township 13 South G&SRB&M

Date August 25, 1980

COPY

6353 PAGE 1161
July 1, 1980

Mr. Richard L. Jones
117 W. 10th Street
Casa Grande, Arizona  85222

Dear Mr. Jones:

This letter is to identify the serial number we have assigned to your mining claim location notice filed in this office on February 1, 1980.

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Name of Claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>A MC 94793</td>
<td>Comet</td>
</tr>
</tbody>
</table>

Please refer to the claim name and the serial number in any future correspondence.

A photocopy of your recorded Affidavit of Labor Performed or Notice of Intent to Hold for the 1979-1980 assessment year should be filed in this office on or before December 30, 1980. To be acceptable, the affidavit must show the work done during the period noon September 1, 1979 to noon September 1, 1980. No fee is required.

Sincerely,

Robert L. Peterson
Chief, Branch of Records and Data Management

Enclosure:
Regulations 43 CFR 3833

COPY
MAP SHOWING PRIVATE PROPERTY
AS OF SEPT 1, 1980
AMOLE PEAK

Elevation 4683 feet
Spanish for "soap root"

This peak first appeared on the Roskruge map (1893) as Wasson Peak, named for John A. Wasson Born 1833 Died January 16, 1909 a newspaper man, who arrived in California in 1852, coming to Arizona at a later date which is not known. During the establishment of the Arizona public school system, Wasson was right hand man to Governor A. P. K. Safford. Wasson started the Arizona Citizen newspaper and was its editor and publisher for many years. Despite the fact that there are no more yucca plants (from which soap is occasionally made) at this peak than elsewhere, the name was changed from Wasson Peak by Eldred D. Wilson and his partner Jenkins when a prospector told them the name was Amole Peak.

This reference is printed under Pima County, Arizona in the 1960 edition of Arizona Place Names. AMOLE PEAK.

CONTZEN PASS
Elevation 3200 Feet
This pass located just northwest of the Old Yuma Mine was probably named for Fritz Contzen born in Germany
February 27, 1831 Died May 2, 1909 who came to Arizona with the Boundary Survey party in 1856.


Cortaro, Arizona
Nearest Town to the Old Yuma Mine.
This name is Spanish which is Cortar, to cut as the trees, mesquite and ironwood were all cut off the original Cortaro Farms land which originally occupied this area. Post Office established July 16, 1920. Richard C. Hunter, Postmaster at the time of establishment.
THE OLD YUMA MINE.

LOCATION:—14 miles northnortheast from Tucson. The route is over the Silverbell, a fine level, graded road for 11 miles along the west bank of the Santa Cruz river, thence 2 3/4 miles to the mine. This last 3/4 mile is in the sandy bed of the river, all the last mile being first-class for either heavy teaming or fast auto travel.

There is an abundance of rock for fuel—pale vayten and iron wood, between the river and the mine. Water for early use is now brought from a spring, 3/4 mile away but indications are good for the development of a good supply near the mine.

FORMATION:—Of this whole region, as given in government reports, intercalary volcanoes, the Old Yuma ore bodies occur in the contact of the diorite and lime—the lime being so altered as to be scarcely recognizable. The Old Yuma has been twice visited by Frederic W. Horton, of the U. S. laboratory at Denver, who has made some very interesting and successful tests with the ore—by wet and dry concentration.

The mineralization has evidently occurred at several periods, the characteristic minerals—magnetite, realgar and galena are often found separately, filling fracture planes or replacing the diorite. At one place in the stopes considerable copper appears but the bulk of the ore shows no copper whatever. Some 900 feet to the east of the main incline two shafts on parallel veins show some copper ore assaying over 2%. East of the incline the stopes exposed by the grading for the road show quite a percent of galena.

The working east and west of the claim of mines, of which it forms the backbone, are stained black with the oxides of iron and manganese.

DEVELOPMENT:—The main incline has a depth of over 300 feet, following the ore at a dip of about 90 degrees to the south. There is a good showing of ore to the 200 level, where the grade of the incline was intersected and the ore was probably passed over. A second dip, having the appearance of a wall, was left as a roof, but at one place where several feet of it were left it is seen to be vein matter carrying the usual minerals.

Levels are run on the 100, 200 and the 300, that on the 200 extending for several hundred feet to the east and having raises and stopes connected by a vertical shaft with the surface, furnishing perfect ventilation and an easy outlet for ore. The incline is well timbered with railroad ties and fitted with track, skip and hoisting machinery, bucket and gasoline hoist.

The width and character of ore varies—in place, it appears as pure crystals filling seams several inches wide, the entire workings are in vein matter the richest yielding from 8 to 20 percent of the rare mineral concentrates.

There are a number of other shafts, the principal being about 500 feet to the east of the incline, having a level extending about 100 feet in the direction of the incline and lacking but little of connecting with the stopes. This level shows galena and copper, although in quantity and quality, as it approached the incline. A number of other prospect shafts are sunk on the vein to the east, all showing ore. The last exposure of ore to the east is some 3,000 feet away, the stopes being continuous for that distance, and also to the west to the limits of the three full claims which are taken on the vein.

The property consists of five full claims, three on the vein and two adjoining on the side of the dip. A mill site is located on the spring, 3/4 mile away, of which a half interest is included with the property.

The nearest railroad station is Jaynes, on the main S. P. line, six miles away, but there is a siding two miles nearer. The power wires of the Tucson company extend to near Jaynes, as also the telephone.
The development of the Old Yuma mine was under- 
way with the object of exploiting its gold, silver and lead values, 
the former being of particular importance as the present value or importance of 
the latter minerals have recently been raised by high 
prices. The main vein is a compound ore which has been 
worked over an area about 1000 feet by 100 feet. The gold and silver were 
removed from the concentrate, and while no doubt the gold and 
silver values were considered the most important, the determination devoted to the rare mineral 
values of molybdenum and vanadium was a matter of considerable interest. In this connection 
the vein ore contained several thousand tons of 
material, and the assay showed that about 80% of the 
rare ore in the stopes. 
A sample consisting of 60 pounds of 
this ore was used for a milling test over a Sutton & Steele dry jig. 
This sample assayed: 
Gold, 75 oz; Silver, 1 oz; Lead, 19.1%; 
Pentoxide Molybdenum, 11.3%; Vanadium, 1.7%. 

90 pounds of concentrates produced assayed and had the following 
approximate market value:

<table>
<thead>
<tr>
<th></th>
<th>Value per ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold, 99 oz</td>
<td>19.20</td>
</tr>
<tr>
<td>Silver, 3 oz</td>
<td>30</td>
</tr>
<tr>
<td>Molybdenum oxide, 24.9%, at 60 cents per lb</td>
<td>299.00</td>
</tr>
<tr>
<td>Vanadium oxide, 3.5%, at 50 cents</td>
<td>354.00</td>
</tr>
<tr>
<td>Lead, 46%, at 2 cents</td>
<td>27.60</td>
</tr>
</tbody>
</table>

Wile this showed an extraction of but 33% of the gold and 80% of the 
rare minerals a repassing of the pulp over the same dry jig gave 92% of 
a good middling product and the tailings now showed scarcely any free 
material in the tailings. The adaptability of this ore to dry 
concentration -- a medium-grade ore of any 10% mineral content would 
not make clean separation the first time over the jig. It was 
designed to use the dry process at the mine simply to concentrate the 
values for transportation to the river where a good wet table would be 
used to make the highest grade product possible.

A sample of the head treated in an amalgamated copper pan 
as assayed but .15 oz in gold, showing an extraction by this method of 
99% of the gold. Tailings tests were not made although it would seem that this 
process would be peculiarly adapted to recovering the gold and silver 
from the tailings from the treatment for the rare metals.

No systematic sampling has been done, but from the large size 
and presence of gangue, the results show that the head 
material contains at least 8.5% of concentrates, and the refuse 2.5% of 
concentrates. The tests, incomplete as they are, indicate the presence 
in sufficient quantities and also the practicability of a good extraction 
by simple means into a marketable product.

MICHAEL PETERS -- consists of a 16-inch Blake crus- 

er, 2 sets of 16 x 24 McCullough disc pulverizers, 1 Sutton & Steele 
dry dig or concentrator; ore bin below the crusher, starting, pulleys, 
etc., screen and an elevator to return the oversize is on hand also 
also. 

The new mill is to be operated by a 20 or 30 h.p. engine to run the plant. 

This mill is placed near the dam that can run and discharge on a platform 
across the river.

As before stated the main line is equipped with track, 

A concentration test in the pan of the above yielded 6.35% percent of the product—in round numbers 1 ton in 20—containing values of:

<table>
<thead>
<tr>
<th>Product</th>
<th>Value (per pound)</th>
<th>Value in common metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>$1.90</td>
<td>$19.00</td>
</tr>
<tr>
<td>Gold</td>
<td>39.5%</td>
<td>$31.70</td>
</tr>
<tr>
<td>Molybdenum oxide</td>
<td>22.6%</td>
<td>$271.20</td>
</tr>
</tbody>
</table>

Value in common metals, $79.40 Value in rare metals, $502.90

All above values, per ton: $360.50
Less hauling and freight: $20.00
Molybdenum contents alone: $21.20
Less hauling and freight: $20.00
Extraction of gold, $32.00
Less expense: $20.00

Assuming the net value of a ton of concentrates to be $300.00 and 20 tons of ore to enter into one of concentrates, the recovery would be $15.00 per ton of ore, allowing an expense of $5.00, the net product is $10.00.

The ground ore or tailings still retain $5.20 in gold per ton, and assuming a recovery of 2%, at an expense of $1.50, or $2.00, this makes a total net recovery of $12.70 per ton, for the 1000 tons—$12,700

The northern end of the dump apparently contains a larger tonnage of fully as good an average grade, an estimated total net value of $26,000.

The main incline has a depth of 300 feet, with levels on the 65, 100, 200 and 300. These levels have a length of from 100 to 500 feet, and the 100 both to east and west are connected with the surface by vertical shafts. All these workings down to the 200 are in ore of varying grades, no systematic sampling has been done but a careful examination seems to warrant an estimate of $48.00 in terms of a grade yielding 10 percent of concentrates:

<table>
<thead>
<tr>
<th>Tons from the surface down to the 100 level</th>
<th>Total recovery from tailings</th>
<th>Total recovery from dump</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>$150,000</td>
<td>$187,500</td>
</tr>
<tr>
<td>2000</td>
<td>$150,000</td>
<td>$187,500</td>
</tr>
</tbody>
</table>

Purchase price of mine, $50,000; 15% of product for two years, then a payment of $20,000 less royalties; $10,000 each year for 3 years.
OLD YUMA PUMP.

Sampling by Elmer H. Sanders and A. L. Pellegrin of southern end of dump, 1,000 tons:

<table>
<thead>
<tr>
<th>Metal</th>
<th>Grade</th>
<th>Value per ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>1 oz</td>
<td>$0.80</td>
</tr>
<tr>
<td>Gold</td>
<td>1.00</td>
<td>$22.72</td>
</tr>
<tr>
<td>Lead</td>
<td>4.5%</td>
<td>$1.10</td>
</tr>
<tr>
<td>Molybdenum oxide</td>
<td>1.87%</td>
<td>$22.72</td>
</tr>
<tr>
<td>Vanadium oxide</td>
<td>1.80%</td>
<td>$21.70</td>
</tr>
</tbody>
</table>

Value in common metals, $10.00. Value in rare metals, $24.42.

The above concentrates in the pan yielded 93.3% $ in round numbers, 20 into one, these concentrates having a value of:

- Silver, 1 oz, $0.80
- Gold, 1.00 oz, $22.72
- Lead, 4.5%, $1.10
- Molybdenum oxide, 1.87%, $22.72
- Vanadium oxide, 1.80%, $21.70

Value common metals, $7.50. Value rare metals, $30.20.

All values, per ton, $30.20, less freight $5.00, $25.00. Molybdenum contents alone, $30.20.

Assuming the recoverable values in a ton of concentrates to be $700, it would represent 3.1% to the ton of dump ore. Allowing an expense of $5.00, per ton, the net recovery would be $650 per ton. The ground ore after concentration retains $5.20 per ton in gold, assuming a recovery of 4.1% at an expense of $1.90, or $4.10 net, added to the $650 from concentrates makes $12.50 net recovery per ton. For the 1000 tons, $12,500.

The northern end of the same dump contains full as large a tonnage of an apparently equally good grade, which should yield equal returns.

No sampling of the underground workings have been made but a careful preliminary examination seems to warrant an estimate of:

- 2000 tons from the surface down to the 100 level of a grade yielding 10% of concentrates.
- 1000 tons from the 100 level to the 200 level.
- 2000 tons between the above workings and the east shaft, on the 200 level.

1000 tons, 30% of concentrates, $300.00 = $90,000.

Gold recovery from 2000 tons, $12,000.

Total recovery from 1000 tons dump, sampled, $12,000.

Estimated yield of north end of dump, $24,000.

Estimated returns from dump and developed ore in mine, $187,000.

The purchase price of the mine is $20,000, first payment of $20,000 in two years. From the shipments $10,000 is to be paid, to apply as a credit on purchase price.

No estimate is made of ore below the 200 level. On the 200 level, there is a good showing of ore but from that point down the incline was driven at a less grade and has lost the ore body.

Machinery now partly installed at the dump consists of 14" Blake crusher, two 14" rolls, Sutton & Steele dry concentrator, etc. To complete this plant, having a capacity of about 30 tons per 24 hours, including a second-hand Wilflley for reclaiming the concentrates, would require $1,000 in cash—one third being paid on engines—and the labor and other expense of operation for six weeks, ample to produce one carload of concentrates $100.

2 payments on interest in lease, $300. surplus, $200. Total, $2,000.


A. L. Pellegrin.
There is apparently some error in Table 1. The original ore must have assayed:

1A. 4-1/2 cm, 10.66% Cu, 1.5445 units Mo, x 1.87 Pb, 10.4943
1B. 1/2 cm, 10.66% Cu, 1.4877 units Mo, x 2.06 Pb, 261.0532

From which the assay of the ore according to the above is:

Mo, 1.5445; Cu, 10.66; Pb, 10.4943

Is the series of tests the material thru 3/4 and on 1/2 (11) was rejected. Yes. It assayed 1.5% Cu, 1.87% Mo, and being already mixed, crushed thru 3/4 and higher grade than 1D for example, it should be treated with balance.

If the ore contains large crystals, it should at the start all be crushed thru 1/2, passed over a 20 mesh screen; the coarse jigged and the talings recrushed thru 20 mesh and added to the first—no. 1. If there are no large crystals in the particular lot being treated, the ore should all be crushed through the coarse size screen that has been found to yield a considerable proportion of free crystals—say from 1" to 16 mesh. From this the treatment should be as given in the Engineering Co.'s test: all the material sized into two sizes, 1/2 the 50 re-crushed to pass the screen used and combined with the other tiny, and this separated into sands and slimes and treated on Wilflleys.

These tails, all—no. 1—should now be treated with cyanide for the recovery of the gold and silver after decantation or by filter-pressing.

According to the tests referred to there still remained some 60% of the lead, although the extraction of the molybdenum was practically perfect—a very strange condition. It should now be possible to recover the larger part of the remaining lead—1.87% in the low grade sample, under treatment—

according to the summary, on Page 2, there was saved 80.08% of Mo.

add to this that contained in the "reject" 1.82% a complete extraction, proved by tails being barren.

Of the lead there was saved
33.93% to which add similar proportion in "reject" 2.3

a very poor total saving of
36.33%

As in the flotation test the final tails still contained 1.87% out of the 2.87% it would indicate no advantage in employing flotation. I believe that some modification of the flotation would give result. Employing perhaps the gas, H2S, or direct roasting of roasted pyrites some alteration in the mechanical treatment.

In the tests the concentrates assayed:

Mo, 2.03% Pb, 24.84%
Insol. 29.41%

Figuring the Mo to lead molybdate and the balance of the lead to monate, etc, and we have:

Lead Molybdate, about
5,280 tons
Total reported, 3,287 tons
Balance not reported, 1,993 tons

The unreported contents are probably mostly iron and manganese oxides.

Should the selective flotation be a success the possible result would in each ton of above concentrates treated:

Flotted: 36% of iron oxides, 720 lbs per ton
27% of lead carb., 540 lbs per ton
and this product would assay about 90% in metallic lead. Balance mostly iron and marketable. We would deal with free or solvent.

The not floated would be:
Lead molybdate, 8 tons 300 lbs per ton
Insoluble, 20 tons 480 lbs per ton

and this reconciliation of pumping:
and this recalculated to percentage would give:

| Lead Molybdate, 21.6 % | Insoluble, 78.4 |

This would be marketable, but there should be no difficulty in removing a large part of this insoluble either by careful concentration or by flotation.

Should it not be feasible to make a separation of the lead molybdate from the carbonate, etc., in the finer sizes, by "selective flotation" the lead, well-known process of fusion in reverberatory furnaces with an alkali, the lead being reduced to metallic form by proper amount of carbonate, etc., a safe in the salt and silver, and the molybdenum and vanadium combining with the alkali at a slag, could be followed profitably. For an alkali the same basic sodium molybdate, a refuse of-posho coke and also of the desilted boro-silicates, a refuse of posho coke and also of the desilted boro-silicates, would be the cheapest. It would be used in its proper condition, in solid or in excess and reduced until saturated. This sodium molybdate would be dissolved in weak acid and precipitated at will by the addition of an iron oxide in a form suitable for the electric furnace—there are a number of methods for the treatment of the crude sodium molybdate. The silica, unless removed, would interfere with the recovery, but some methods have been devised for overcoming its bad effects.

As the molybdenum sulphide blende is much more in the market, it should be feasible to have the final product in this form at a cost giving a profit.

Returning to Table 1, the sample is given as containing a,.

| Lead, .775 % which would require of lead, to form the molybdate, about 2.9 %, and as the contents in lead are given as 2.81 %, of which but 60 % is saved, or .1 % of the figures do not agree, as all the molybdenum is saved. However calculating the recovery to be 2 % of lead molybdate, 1.5 % of lead, .5 oz in silver and 1 oz gold per ton of average ore treated, the values would be about as follows:------

<table>
<thead>
<tr>
<th>Lead, molybdate, 2 %, or 40 lbs, $50 cts,</th>
<th>$20.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead, 1.5 % = 30 &quot;</td>
<td>$1.20</td>
</tr>
<tr>
<td>Gold, .5 oz,</td>
<td>$2.00</td>
</tr>
<tr>
<td>Silver, 1 oz,</td>
<td>$3.00</td>
</tr>
</tbody>
</table>

Per ton. $35.50

These figures serve, at least, for comparison; average ore yielding 1 % molybdate and $1. in gold, would figure back to $16, per ton, and average ore yielding .3 of one percent molybdate and $.85 in gold would return about $6.60 per ton, or still a small profit above proper working costs.

According to the summary on Page 2, 100 tons of the sample yielded 3.77 tons of concentrates assaying:------

<table>
<thead>
<tr>
<th>No. 2.02 %</th>
<th>Pb 24.84 %</th>
</tr>
</thead>
</table>

transposing these to minerals we have:------

<table>
<thead>
<tr>
<th>No. 2.02 %, or 2 % molybdate to which add 1.3 % due to useless rejects and we have 9.8 units of molybdate, or 186 lbs, $50 cts</th>
<th>$99.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead, 400 lbs, $4</td>
<td>$15.</td>
</tr>
</tbody>
</table>

Total recovery, $109.00 per ton for the 3.77 tons, $411, or per ton of original ore, $411.

Such a recovery from the present royalties should yield a profit of at least one-half, and on ore from the mine of one-third, or $2, per ton net. The saving of the values in the form of concentrates requires but capable mill men; the turning of the concentrates into products commanding ready sales is the problem requiring careful working out of procedure, cost and returns.
The following figures have been compiled after careful study and examination of this property during the author's association with the lessee now operating the mine. No attempt is made to give a detailed report at this time. The author has sufficient evidence that the claims made for tonnages present and values indicated are there, from past records, his own studies and measurements and smelter returns, are substantial.

There are at present 5000 tons of ore on the dumps of the mine and 15000 tons of ore actually blocked out in the mine. From figures available all of this ore will run at least 5% lead and 0.25% in gold. Actually the average is closer to 7% lead, 0.30% gold, 0.05% silver and 5.00 in combined miscellaneous. However, the ensuing calculations have been made on the basis of 5% lead and 0.20% gold to assure the minimum operating limit.

It is possible to concentrate this ore by gravity methods. With careful operation it should be possible to effect a recovery of 70% of the values. It is estimated that a concentration ratio of 6 to 1 could be maintained. The concentrate produced would run about 21% lead and 0.24 oz. gold. The following figures were compiled by the American Smelting and Refining representative and can be taken as what the smelter will pay for concentrates of this nature.

<table>
<thead>
<tr>
<th>Lead Concentrate</th>
<th>Assay</th>
<th>Au</th>
<th>Pb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gold</td>
<td>0.24</td>
<td>32.31825</td>
<td>7.76</td>
</tr>
<tr>
<td>Lead</td>
<td>21.0</td>
<td>21.0</td>
<td></td>
</tr>
<tr>
<td>Less 10%</td>
<td>1.5</td>
<td>19.5</td>
<td></td>
</tr>
<tr>
<td>Payable lead</td>
<td>390 lbs Pb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>351</td>
<td>351</td>
<td></td>
</tr>
</tbody>
</table>

Subtractions:
- Base on $15.00----- $3.50
- Additional $1.01
- Total $4.51
- F.O.B. Smelter $20.59

Freight, Tucson --- 3.10
- 10% H.C. 0.31
- Switching 0.03
- TotalIRR 3.49

Net before premium

Premium:
- 351 lbs @ 0.0275
- Net return after smelting and freight/ton concentrate $26.75
TEST ON OLD YUMA MINE O.K.

Sampling by Frederick J. Snyder & A. L. Pelletin of southern end of mine camp—1000 tons

Silver, 1 oz., 1.50 Molyb. Ozt., 1.36
Gold, 36.82 3.20 a $100 at 1 lb, 18.60
Lead, 5.96% at 2.240 Value. 0.39% 2.10

Value in common metals. 10.10 Rare metals. 20.70

The above by poor concentration gave 5.355 percent of product—in round numbers 20 into 1, these concentrates having a value of:

<p>| | | | |</p>
<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.6 oz</td>
<td>1.39</td>
<td>Molyb.</td>
</tr>
<tr>
<td>Gold</td>
<td>1.93</td>
<td>39.9</td>
<td>Vanadium</td>
</tr>
<tr>
<td>Lead</td>
<td>39.9</td>
<td>18.4</td>
<td></td>
</tr>
</tbody>
</table>

Value common metals 57.40 Rare metals ... 257.70
Total market value per ton 315.10 less freight 15 net value $300

1 ton concentrates, $300.
from 20 tons, per ton, $15.

1000 tons, $18,000. from concentrates.
expense 5% per ton, $5,000, net $10,000

Ground ore after concentration retains .28 oz gold, value $5.30
recovery by cyanide, $4. at expense of $1.50, net, $2.50

Recovery from 1,000 tons in concentrates, $10,000
in cyanidng, $2,500

In northern end of the same ore dump contains as large tonnage of apparently as good a grade, and should produce as large returns.

No sampling of the mine workings have yet been made but a careful preliminary examination seems to warrant an estimate of 3,000 tons from surface down to the 100 level, yielding 10% concentrates 1,000 100 level to the 200,

2,600 between above workings and east shaft, down to 200 level,

5,000 tons giving returns in concentrates at $500 tons, $150,000

In cyanide products at $200,000

royalty of 15% is due

Returns from dump, $10,000 $1,500

$11,500
Recommendations.

While the Engineering company making the test is in high standing, there are some statements or results in their report that should be verified—as the complete recovery of molybdenum while the other identical (physically) lead minerals show a low recovery.

Another general sample of the tailings dump should be taken, and also one from the higher grade ore in the various workings in the mine of which there is a quantity available. Of each of these the sample should consist of a ton, be crushed to 1/2 mesh and samples of 25 pounds cut out for laboratory tests. These tests should be on lines mentioned in comment on the Salt Lake report—first of all determining if jig treatment of 1/4, or 8 mesh would not give results, as this coarse product would be best for selective sulphidizing separation. Then besides the ordinary concentration on tables comparative flotation and cyanide tests should be made to determine the best mode of recovery of the gold and silver.

These tests being successful, they should be repeated with the ton lots over carefully adjusted Willsleys, etc, and if properly conducted should give identical results with the laboratory ones. The cyaniding or flotation should also be conducted—in fact a complete mill run on each sample.

This part of the problem should present no difficulty, the present mill equipment is of the proper kind, lacking a fine re-grinding roll, or Ball mill, or a grinding pan would answer. Tanks for the cyaniding would have to be provided but this would be a separate unit and not necessarily expensive.

The really difficult part of the problem is the recovery of the values from the concentrates. The mixing of all the ores from the mine has been inexcusable—the vanadium and molybdenum occurs generally separate and can be mined so, and there should be two bins at the top of the mill—a partition in the present bin would answer probably a short picking belt at the top of the bins would pay.

The various concentrating must necessarily make a product containing all of the lead minerals in the feed as the specific gravity is the same; some of the iron and manganese minerals will also be found in the coarser concentrates. It has been found that the molybdenum contents of these concentrates is very low and two methods can be employed. One is the chemical, fusion in reverberatory furnace with sodium or other alkali and carbon, which will reduce the lead to metal, collecting gold and silver in a lead bullion.

The rare metals will be in a slag with the soda and are recovered by leaching and precipitation as oxides, and are marketable in that form or in a variety of other products.

The other method is by selective sulphidizing flotation and will probably only be practicable on the coarser sizes of product. This part of the problem requires careful study and experiments—different sizing, choice of reagent, strength of solution, time, mechanical means of agitation, etc, then the designing of an apparatus that will carry on the treatment continuously—say a belt in a tank, admitting water or air current from below the canvas with partitions at intervals to catch the different products as they raise, the final vanadium being discharged at lower end of belt.

Probably the best result would be secured by using several flotation machines so that strength of reagent and time could be adjusted in each step of operation, which could still be continuous and automatic.
Mr. Horton, of the U. S. Laboratory, at Denver, informed the writer that a ton of choice, hand-sorted molybdenite was recently sold to an eastern chemical works for $3,000. Molybdenite contains 80% of the element molybdenum as against 26% in wulfenite, but its other component, sulphur, is more difficult to eliminate than the lead in the wulfenite.

In the Advance Chapters on the production of metals in 1913, the government bulletin mentions a price of $1536 per long ton as paid in Queensland, and $12 per unit for 95% ore—$1040 per ton for molybdenite by a French firm. For wulfenite an eastern firm states that about 1.1 per pound of contained molybdenum would be paid, with smelters' price for the lead also, this for a 25% ore. Actual sales of a carload of low grade mixed wulfenite has been made to an eastern firm at about 80 cents per pound for contained molybdenic trioxide.

American firms do not usually pay for the vanadium contained in a molybdenum product, but European buyers do, and at the Yuma mine much of the vanadium mineral occurs by itself and can be mined and then milled separately.

The separation of the molybdenum and vanadium as salts of ammonium or sodium, or of their oxides in a commercially pure form, or their reduction in an electric furnace into ferro alloys, offers no great difficulty nor expense, and would result in a much more extended market and increased price.
The ore being processed is from the iron ore strip, and the process requires at least 5 days to achieve the desired grade. The rest of the dumps of several thousand tons—all from the main grade—can be lowered to waste rock. At least one carload of 20 tons of concentrate can be made from these high-grade ore on the dumps, when the richer parts would be selected, as long as it was more profitable than to mine and treat new ore from the stopes—where one or two good miners could be kept stoping ore as a test of value and cost.

The first carload can be produced with the present dry shaking tables by separating product until up to grade. Further operation would then cost to install an additional dry separator table beside this one or alongside with a belt elevator to give an added treatment, continuously. This car can then be increased in size, and rather than the table, with one elevator, one separator, and so forth, the plant could be fitted with a second table with double capacity of the first. It can then produce the highest grade of product at least expected, and the tail would be sold—its location depending on whether in conjunction with it or separate plant its use, or if it is found profitable after analysis and plate over the main table.
Upper roll should be moved, or the bin moved so a self feeder could supply the 1st roll. The 2nd roll should be moved as close under the 1st as practicable.

Below 2nd roll a shaking or revolving screen should make 2 sizes—through 20 x 24, and 20 x 24 to 24 x 10—oversize (+10) being elevated to roll No.2. The 2 sizes of pulp should fall into separate bins and below should be two dry tables—the one handling coarse should have elevator to a bin above 2nd roll (for regrounding by itself or with the regular ore.

Dry tables floor should be ample for storing quantity

Below dry floor, two agitators over 2 Wifleys, from which tailings could flow to cyanide tanks (over amalgamated plates if desired). Amalgamation would also be practicable in the agitator.
<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating cost</td>
<td></td>
<td></td>
<td>65.00</td>
</tr>
<tr>
<td>Amortization of property equipment</td>
<td></td>
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<td>15.00</td>
</tr>
<tr>
<td>Planit on an acre</td>
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<td></td>
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</tr>
<tr>
<td>Machine purchase</td>
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<td>Fuel</td>
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<td>Loading equipment</td>
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<td>50.00</td>
</tr>
<tr>
<td>Instrumentation</td>
<td></td>
<td></td>
<td>10.00</td>
</tr>
<tr>
<td>10 ton gageale plant</td>
<td></td>
<td></td>
<td>250.00</td>
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<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 ton. Gagesale, #1 - 300.6 @ $60.00</td>
<td></td>
<td></td>
<td>240.00</td>
</tr>
<tr>
<td>#2 - 60.0 @ 35.00</td>
<td></td>
<td></td>
<td>21.00</td>
</tr>
<tr>
<td>#3 - 100.0 @ 22.00</td>
<td></td>
<td></td>
<td>23.00</td>
</tr>
<tr>
<td>#4 - 50.0 @ 30.00</td>
<td></td>
<td></td>
<td>15.00</td>
</tr>
<tr>
<td>Total</td>
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<td></td>
<td>243.00</td>
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<tr>
<td>Material for fence and road work</td>
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<td></td>
<td>85.00</td>
</tr>
<tr>
<td>2.0 ton</td>
<td></td>
<td></td>
<td>250.00</td>
</tr>
<tr>
<td>15% Royalty</td>
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<td></td>
<td>762.00</td>
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<tr>
<td>Contamination</td>
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<td></td>
<td>730.00</td>
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<tr>
<td>Cost of plane</td>
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</tr>
<tr>
<td>Source</td>
<td>Gold</td>
<td>Lead</td>
<td>MoO₃</td>
</tr>
<tr>
<td>------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Slag, After</td>
<td>.45</td>
<td>2.</td>
<td>17.</td>
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<tr>
<td>Slag, Slipped</td>
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<td>1.5</td>
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<td>Ores, another</td>
<td>.03</td>
<td>.8</td>
<td></td>
</tr>
<tr>
<td>Ores</td>
<td>Pb</td>
<td></td>
<td>.5</td>
</tr>
<tr>
<td>Copper, Slipped</td>
<td>.02</td>
<td>.8</td>
<td></td>
</tr>
<tr>
<td>Ores, Slip in another</td>
<td>260 °F</td>
<td>10</td>
<td>1.2</td>
</tr>
</tbody>
</table>

**Mill Test, 500 lbs.**

- Heads: 15°
- Concentrate: 46°
- Amalgamated over plate: Heads 15°

**Tests:**
- Ore Stale Dump: .04
- Waste: .03
- 6th Drift to East (3rd dump): .04

**Percent of Concentrate:**
- 8%
Department of Mineral Resources
State of Arizona
Owners Mine Report

Date: October 16, 1940

Mine: Old Yuma Mine
District: Amole, Pima Co.
Former name: Same
Owner: Yuma Mining Co.
Lessee: Grady Wilson
President: No Corp.
Mine Supt.: 
Principal Metals: Molyb., Van., Pb., Gold
Production Rate: Not established
Power: Amt. & Type: None


Location: 17 miles W from Tucson
Address: G. D. Tucson, Ariz.
Gen. Mgr.: 
Mill Supt.: 
Men Employed: 
Mill: Type & Cap.: 

Number Claims, Title, etc.: Seven unpatented lode claims on public domain.

Description: Topog. & Geog.: On foothills, north slope Tucson Mts. 3 mi W. E. from Amole (Wasson) Peak.

Workings: Amt. & Condition: 1 shaft (incline) 1/3 compartment 300 ft depth. Drifting on 100' level 250' E, 200' W. One 200' level 250' E, 200' W, on 300' level 30' E. Many shallow workings 20'-30' on outcrop.
23. Geology & Mineralization
Country rock, andesitic fissure vein, strike NE-SW. Both replacement rich fissure filling. Lead minerals predominate with gold and minor silver.

24. Ore: Positive & Probable, Ore Dumps, Tailings 17,000 Tons on dumps Av. 1% MoO$_3$
75,000 * showing in mine Av. 0.7% MoO$_3$
and 0.7% V$_2$O$_5$ - $4.00 per ton gold.

24-A Vein Width, Length, Value, etc.

25. Mine, Mill Equipment & Flow Sheet
Proposed mill, crusher, rolls, screws, and tables.

26. Road Conditions, Route
5 miles off State h'way 84 at Cortaro. 4 miles graded, 1 mile fair for trucks and automobiles.

27. Water Supply
Water on property limited. Abundant in valley of Santa Cruz. Three miles to drilled well 500 g.p.m. 200' vertical below mine.

28. Brief History
Located about 1885- operated intermittently. Produced considerable molybdenum during World War.

29. Special Problems, Reports Filed
Will file Engineers Reports.

30. Remarks
Values given for ore in mine based on 200 samples and other data. Many carloads shipped to smelter as lead gold ore.

31. If property for sale: Price, terms and address to negotiate. Financed to put in plant. Would consider sale.

32. Signed
Grady Wilson.

33. Use additional sheets if necessary.
DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date October 16, 1940
Location 17 miles S from Tucson

Address

Address G.O. D. Tucson, Ariz.

Gen. Mgr.

Mill Supt.

Men Employed

OLD YUMA MINE

Mo, V, Pb, Au

Pima 10 - 1

Operations Planned Install once

Yuma Mining Co., Gen. Del, Tucson

Lessors: Grady Wilson, 102 W. Lincoln St., Tucson

Number Claims, Title, etc. Seven unpatented lode claims on public domain.

Description: Topog. & Geog. On foothills, north slope Tucson south 5 mi W. E. from Amole (Wasson) Peak.

Mine Olde Yuma Mine

District Amole, Pima Co.

Former name Same

Owner Yuma Mining Co.

Lessee: Grady Wilson

President No Corp.

Mine Supt.

Principal Metals Mo, V, Pb, Au

Production Rate Not established

Power: Amt. & Type None

Operations: Present Property idle.

Operations Planned Install once

Yuma Mining Co., Gen. Del, Tucson

Lessors: Grady Wilson, 102 W. Lincoln St., Tucson

1 shaft (inclined) 1/2 compartment 300 ft depth. Drifting
on 100' level 250' E, 200' W. One 200' level 250' E, 200' W,
on 300' level 50' N. Many shallow workings 20'-30' on out-
crop.
Country rock, andesitic fissure vein, strike NE-SW. Both replacement rich fissure filling. Lead minerals predominate with gold and minor silver.

Ore: Positive & Probable, Ore Dumps, Tailings 17,000 Tons on dumps Av. 1% MoO₃
75,000 " showing in mine Av. 0.7% MoO₃ and 0.7% V₂O₅ - $4.00 per ton gold.

Dimensions and Value of Ore body

Ore, Mill Equipment & Flow-Sheet Proposed mill, crusher, rolls, screws, and tables.

Road Conditions, Route 5 miles off State H'way 84, at Cortaro. 4 miles graded, 1 mile fair for trucks and automobiles.

Water Supply Water on property limited. Abundant in valley of Santa Cruz. Three miles to drilled well 500 g.p. m. 200' vertical below mine.

Brief History Located about 1885--operated intermittently. Produced considerable molybdenum during World War.

Special Problems, Reports Filed Will file Engineers Reports.

Remarks Values given for ore in mine based on 200 samples and other data. Many carloads shipped to smelter as lead gold ore.

Property for sale: Price, terms and address to negotiate. Financed to put in plant. Would consider sale.

32. Signature: (Signed) Grady Wilson
Department of Mineral Resources
State of Arizona
Owners Mine Report

Mine: Old Yuma Mine
District: Amole, Pima Co.
Former name: Same
Owner: Yuma Mining Co.
Lessee: Grady Wilson

Date: October 16, 1940
Location: 17 miles W from Tucson

Address: G. D., Tucson, Ariz.

Gen. Mgr.:
Mill Supt.
Men Employed
Mill: Type & Cap.

President: No Corp.
Mine Supt.

Principal Metals: Molyb., Van., b. Gold

Production Rate: Not established

Power: Amt. & Type: None


Number Claims, Title, etc.: Seven unpatented lode claims on public domain.

Description: Topog. & Geog.: On foothills, north slope Tucson Mts., 3 mi W. E. from Amole (Wasson) Peak.

Mine Workings: Amt. & Condition: 1 shaft (incline) 1½ compartments 300 ft depth. Drifting on 100' level 250' E, 200' W. One 200' level 250' E, 200' W. on 300' level 30' E. Many shallow workings 20'-30' on outcrop.

(over)
3. Geology & Mineralization  
Country Rock: clay, tuff, andesite v. m., shales, lode. Both red and green with iron ores. Lead minerals include copper and zinc with silver.

4. Ore: Positive & Probable, Ore Dumps, Tailings  
17,000 tons of dumps v. m. 15% PbO
75,000' of mining 16% PbO v. m. 7% ZnO and 0.7% CuO - $4,600 for 5% PbO.

4A: Dimensions and Value of Ore body

5. Mine, Mill Equipment & Flow-Sheet  
Proposed mill, cruser, rolls, screens, and tables.

6. Road Conditions, Route  
5 miles of State High Way 8, 4 miles gravel, 1 mile fair for trucks and automobiles.

7. Water Supply  
Water on property limited. Spring in valley of Santa Cruz. There are 3 drilled wells 500 ft. each 200' vertical below mine.

8. Brief History  
Located about 1885-90 rated intermittently. Produced considerable sales during World War.

9. Special Problems, Reports Filed  
Mill file Engineer's Reports.

10. Remarks  
Values given for ore in mine based on 300 samples and other data. Many surface samples to smelt as lead and gold ore.

Property for sale: Price, terms and address to negotiate.

Financed to put in plant. Would consider sale.

32. Signature (Signed) Grady Wilson
1. Mine        Qld Yuma Mine
2. Mining District & County  A mole, Pima Co.
3. Former name    Same
4. Location  17 miles W from Tucson
5. Owner        Yuma Mining Co.
6. Address (Owner)     
7. Lessee: Grady Wilson  
9. President No. Corp.
13. Principal Metals  Molyb, Van, Pb, Gold
14. Men Employed
15. Production Rate  Not established
17. Power: Amt. & Type None
20. Number Claims, Title, etc. Seven unpatented lode claims on public domain.
21. Description: Topography & Geography On foothills, north slope Tucson Mt., 3 mi W E.
   from Amola (Wasson) Peak.
22. Mine Workings: Amt. & Condition 1 shaft (incline) 1 compartment 300 ft depth. Drifting
   on 100' level 250' E, 200' W. One 200' level 250' E, 200' W,
   on 300' level 30' E. Many shallow workings 20'-30' on outcrop.

(over)
Geology & Mineralization  Country rock, andesitic fissure vein, strike N85E. Both replacement and rich fissure filling. Lead minerals predominate with gold and minor silver.

Ore: Positive & Probable, Ore Dumps, Tailings 17,000 Tons on Dumps Avg. 1.6% MoO₃
75,000 " showing in mine, Avg. 0.7% MoO₃ and 0.7% V₂O₅ = $4.00 per ton gold.

Mine, Mill Equipment & Flow Sheet  Proposed mill, crusher, rolls, screens, and tables.

Road Conditions, Route  5 miles off State Hwy. 84 at Ocotillo, 4 miles graded, 1 mile fair for trucks and automobiles.

Water Supply  Water on property limited. Abundant in valley of Santa Cruz. Three miles to drilled well 500 g.p.m. 200' vertical below mine.

Brief History  Located about 1886- operated intermittently. Produced considerable molybdenum during World War.

Special Problems, Reports Filed  Will file Engineer Reports.

Remarks  Values given for ore in mine based on 500 samples and other data. Many samples shipped to smelter as lead gold ore.

If property for sale: Price, terms and address to negotiate.  Please to put in plant. Will consider sale.

Signed.................................................

Cormy Wilson
1. Mine: Yuma Mine

3. Mining District & County: Yuma, Yuma Co.

4. Former name: Yuma Mine

5. Owner: Yuma Mining Co.

7. Operator: Stanley Mines

9. President, Owning Co.: No Co.


3. Men Employed: No Men Employed

18. Operations: Present: No operations


20. Number Claims, Title, etc.: Seven unpatented lode claims on public domain


Date: Oct. 10, 1940

Location: 17 miles E. of Yuma

6. Address (Owner): No Address

8. Address (Operator): J. D. Hensley, Arizona

9A. President, Operating Co.: No President

14. Principal Minerals: Silver, zinc, tellurium, etc.

15. Production Rate: Not estimated

16. Mill: Type & Cap.: No Mill

17. Power: Amt. & Type: None
Geology & Mineralization  
Country rock, andesitic fissure vein, strike NE-SW. Both replacement rich fissure filling. Lead minerals predominate with gold and minor silver.

Ore: Positive & Probable, Ore Dumps, Tailings  
17,000 Tons on dumps Av. 1% MoO₃  
75,000 " showing in mine Av. 0.7% MoO₃ and 0.7% V₂O₅ - $4.00 per ton gold.

Mine, Mill Equipment & Flow Sheet  
Proposed mill, crusher, rolls, screws, and tables.

Road Conditions, Route  
5 miles off State h'way 84 at Cortaro. 4 miles graded, 1 mile fair for trucks and automobiles.

Water Supply  
Water on property limited. Abundant in valley of Santa Cruz. Three miles to drilled well 500 g.p.m. 200' vertical below mine.

Brief History  
Located about 1885- operated intermittently. Produced considerable molybdenum during World War.

Special Problems, Reports Filed  
Will file Engineers Reports.

Remarks  
Values given for ore in mine based on 200 samples and other data. Many carloads shipped to smelter as lead gold ore.

If property for sale: Price, terms and address to negotiate.  
Financed to put in plant. Would consider sale.

Signed..........................Grady Wilson.
DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date Oct. 16, 1940

1. Mine Old Yuma Mine
2. Location 17 miles W from Tucson

3. Mining District & County Amole, Pima Co.
4. Former name Same

5. Owner Yuma Mining Co.
6. Address (Owner) Grady Wilson

7. LESSEE: G. D. Tucson, Arizona
8. Address (Operator) No Corp.

9. President, Owning Co. No Corp.
9A. President, Operating Co. No Corp.

11. Mine Supt. No Corp.
12. Mill Supt. No Corp.

13. Men Employed 0
15. Production Rate Not established

16. Mill: Type & Cap. None
17. Power: Amt. & Type None


19. Operations: Planned Install concentrating mill

20. Number Claims, Title, etc. Seven unpatented lode claims on public domain


22. Mine Workings: Amt. & Condition 1 shaft (incline) 1½ compartment 300 ft. depth. Drifting on 100' level 250' E, 200' level 250' E, 200' W, on 300' level 30' E. Many shallow workings 20'-30' on outcrop.
Geology & Mineralization  Country rock, andesitic fissure vein, strike NE-3W. Both replacement rich fissure filling. Lead minerals predominate with gold and minor silver.

Ore: Positive & Probable. Ore Dumps, Tailings  17,000 Tons on dumps Av. 1% MoO₃
75,000 " showing in mine Av. 0.7% MoO₃ and 0.7% V₂O₅ - $4.00 per ton gold.

Mine, Mill Equipment & Flow Sheet  Proposed mill, crus her, rolls, screws, and tables.

Road Conditions, Route 5 miles off State h'way 84 at Cortaro. 4 miles graded, 1 mile fair for trucks and automobiles.

Water Supply  Water on property limited. Abundant in valley of Santa Cruz. Three miles to drilled well 500 g.p.m. 200' vertical below mine.

Brief History  Located about 1885- operated intermittently. Produced considerable molybdenum during World War.

Special Problems, Reports Filed  Will file Engineers Reports.

Remarks  Values given for ore in mine based on 200 samples and other data. Many carloads shipped to smelter as lead gold ore.

If property for sale: Price, terms and address to negotiate.  Financed to put in plant. Would consider sale.

Signed......................................................... Grady Wilson.

Use additional sheets if necessary.
DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date Oct. 10, 1940

1. Mine Old Yuma Mine

2. Location 17 mi. N. from Tucson

Mining District & County Yuma, Ariz.

3. Former name Old Yuma Mine

Owner Yuma Mining Co.

4. Address (Owner) 222 E. Weller St., Yuma, Ariz.

Operator Harry Wilson

5. Address (Operator) P.O. Box 340, Yuma, Ariz.

President, Owning Co. E. E. E. R.


7. Mine Supt. A. W. Allen

8. Mill Supt. Harry Wilson

9. Men Employed 5

9A. President, Operating Co. E. E. E. R.


11. Operations: Planned Install concentration mill

12. Number Claims, Title, etc. Seven unpatented lode claims on public domain

13. Description: Topography & Geography On foothills, north slope Tucson Mts. 3 mi. N. E. from Apache (Yuma) Peak.


15. Production Rate Not Determined


17. Power: Amt. & Type

18. Mine Workings: Amt. & Condition 1 shaft (incline) 14 compartment 300 ft. south. Drifting on 100° level 250° E., 200° level 250° E., 200° S., on 300° level 30° E. Many shallow workings 30°-35° on outcrop.
Geology & Mineralization

Ore: Positive & Probable, Ore Dumps, Tailings

Dimensions and Value of Ore body

Mine, Mill Equipment & Flow-Sheet

Road Conditions, Route

Water Supply

Brief History

Special Problems, Reports Filed

Remarks

Property for sale: Price, terms and address to negotiate.

(Signed) Rudy Wilson

32. Signature.
The following figures have been compiled for the comparison of royalties received by the owner of the Old Terra Mine from concentrated ore and from the direct shipment of mine ore. The calculations are made on two types of ore. The high grade ore has been chosen of that value because it is thought that by very careful and selective mining a limited tonnage of that grade could be produced. The lower grade ore is the minimum that could be mined and milled under the limited necessary capital expenditure warranted by the property. There is a considerable quantity of this type of ore available.

In calculating the head as ays the following values were used; gold -- $35.00/oz., silver -- $10.71/oz., lead -- $0.0325/lb. (this value includes the recently established premium)

<table>
<thead>
<tr>
<th>Metals:</th>
<th>Au, oz</th>
<th>Ag, oz</th>
<th>Pb %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>13.50</td>
<td>1.57</td>
<td>14.03 Total, 19.60</td>
</tr>
</tbody>
</table>

Payable values according to A. C. R.

<table>
<thead>
<tr>
<th>Gold -- 100%</th>
<th>32.3125</th>
<th>6.3% payable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver -- 1.5%</td>
<td>3.50 oz</td>
<td>0.59</td>
</tr>
<tr>
<td>Lead -- 3.5%</td>
<td>7.5% less 10%</td>
<td>6.3% payable</td>
</tr>
<tr>
<td>Premium, 1.725%</td>
<td>2.75%</td>
<td></td>
</tr>
<tr>
<td>Total payable value/ton</td>
<td>17.17</td>
<td></td>
</tr>
</tbody>
</table>

Deductions:

| Smelter base rate | 3.50 |
| Smelter freight | 2.20 |
| Moisture | 0.37 |
| Switching | 0.08 |
| Empire | 0.15 |
| Total deduction | 6.00 |
| Net smelter return per ton of ore | 11.17 |
| Royalty per ton = 10% | 0.62 |

<table>
<thead>
<tr>
<th>Lead</th>
<th>Au, oz</th>
<th>Ag, oz</th>
<th>Pb, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>12.10</td>
<td>8.25 Total head $10.35</td>
<td></td>
</tr>
</tbody>
</table>

Payable values according to A. C. R.

<table>
<thead>
<tr>
<th>Gold -- 100%</th>
<th>32.3125</th>
<th>3.15% payable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead -- 5.0%</td>
<td>1.5%</td>
<td>3.5% less 10%</td>
</tr>
<tr>
<td>Premium, 63.1%</td>
<td>2.75%</td>
<td></td>
</tr>
<tr>
<td>Total payable value per ton</td>
<td>6.79</td>
<td></td>
</tr>
<tr>
<td>Deduction; same as for high grade ore</td>
<td>6.00</td>
<td></td>
</tr>
<tr>
<td>Net smelter return per ton of ore</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>Royalty per ton = 10%</td>
<td>0.08</td>
<td></td>
</tr>
</tbody>
</table>
Costs

The milling plant should not cost more than $7,500.00 installed. A crushing plant, a sizing unit, tabling unit, and a small storage bin are all that are needed. It is questionable if the plant would have to be housed to start with.

With a 6 to 1 concentration ratio the following costs are reasonable:

<table>
<thead>
<tr>
<th></th>
<th>Cost</th>
<th>Cost/ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dump ore, load &amp; haul</td>
<td>$3.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Milling</td>
<td>$1.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>Total</td>
<td>$4.00</td>
<td>$5.90</td>
</tr>
<tr>
<td>Royalty</td>
<td>$1.50</td>
<td>$2.01</td>
</tr>
<tr>
<td>Total</td>
<td>$5.50</td>
<td>$7.91</td>
</tr>
<tr>
<td>Smelter return</td>
<td>$25.75</td>
<td></td>
</tr>
<tr>
<td>Cost/ton return</td>
<td>$14.91</td>
<td></td>
</tr>
<tr>
<td>Net return on 5 tons</td>
<td>$12.74</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/ ton dump ore</td>
<td>2.12</td>
</tr>
</tbody>
</table>

With 5,000 tons dump ore available there are $10,500.00 net available. Deducting the plant cost of $7,500.00 this would leave a net of $3,100.00.

The same costs would apply to mined ore, except that an additional $2.00/ton must be added. This would indicate that there was a $0.12 profit per ton mined.

It will cost about $7,500.00 to put the mine in shape to produce 25 tons of ore a day.

The Old Yuma Mine is 15 miles from Tucson. All except the last two miles are good road. The last two miles are poor but quite passable.

A mill site with a drilled well on it is available about three miles from the mine. The mill is about fourteen miles from Tucson.

A. Brodie Campbell
May 20, 1942

We have submitted your Mine Owner's Report to Mr. G. Donald Emigh, who is representing the U. S. Vanadium Corporation, with present headquarters at the Pioneer Hotel, Tucson, Arizona as being one of the properties from which vanadium production may be obtained.

The following item will explain our reason for so doing:

The U. S. Vanadium Corporation has been designated by the Metals Reserve Company to increase the production of lead vanadates and they are working in the southwest.

G. Donald Emigh, Pioneer Hotel, Tucson, is their representative, and Arthur L. Flagg, 29 W. Holly Street, Phoenix, is their field manager.

They are seeking small vanadium properties and are ready to handle them on almost any kind of a deal except actually buying properties. They will put money into development, they will lease, they will build small mills, they will work out processes, they will cooperate with the man to develop his own property. They will pay premium prices for that which they get. They will do almost anything and everything designed to bring out increased vanadium production.

An office is going to be established in Tucson and we will let you know the address as soon as we get it. Any occurrences of lead vanadates should be promptly reported to either Mr. Emigh or Mr. Flagg, or anyone who has vanadium properties should be referred to them.

We would suggest that you contact these parties at once and if you can furnish any information in addition to that which occurs in your Mine Owner's Report on file with us that you do so at once. Please advise us of your action.

With best wishes and hoping you get your property into early production, I am

Yours very truly,

[Signature]

J. S. Coufal, Director
Old Yuma Mine, Amole District, Pima County

Visited sometime in April 1944 - Lead Gold property.
No study of the property was made at this time due to the fact that it could give no immediate production and under present conditions required too much exploration. Under right conditions it justifies a detailed study with view to further exploration to determine if commercial sulphide orebodies may occur. (Messers. Stone and Hernon).
**DEPARTMENT OF MINERAL RESOURCES**

**REPORT TO OPA ON ACTIVE MINING PROJECT**

<table>
<thead>
<tr>
<th>Date</th>
<th>12-4-12</th>
</tr>
</thead>
</table>

**Filing Information**

<table>
<thead>
<tr>
<th>File System</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>File No.</th>
<th></th>
</tr>
</thead>
</table>

This chart to be used for gallons of gasoline required per month.

**Name of Mine:**

<table>
<thead>
<tr>
<th>Owner or Operator</th>
<th></th>
</tr>
</thead>
</table>

**Address:**

<table>
<thead>
<tr>
<th>Mine Location</th>
<th>Arizona, U.S.</th>
</tr>
</thead>
</table>

**PRESENT OPERATIONS:** (check X)

- Production
- Development
- Financing
- Sale of mine
- Experimental (sampling)
- Owner's occasional trip
- Other (specify)

**PRODUCTION:** Past and Future.

<table>
<thead>
<tr>
<th>Approx. tons last 3 months</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Approx. present rate per 3 months</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Anticipated rate next 3 months</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>If in distant future check (X) here</th>
<th></th>
</tr>
</thead>
</table>

**EQUIPMENT OPERATED:**

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity or Horse Power</th>
<th>Miles or Hours Per Month</th>
<th>Gallons Required Per Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Cars</td>
<td></td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Light or Service Trucks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ore Hauling Trucks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compressors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Mine or Mill Eqpt.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PRODUCT PRODUCED OR CONTEMPLATED:** Name metals or minerals.

<table>
<thead>
<tr>
<th>Name metals or minerals</th>
<th></th>
</tr>
</thead>
</table>

**REMARKS:**

<table>
<thead>
<tr>
<th>Remarks</th>
<th></th>
</tr>
</thead>
</table>

**ARIZONA DEPARTMENT OF MINERAL RESOURCES**

By: [Signature]
<table>
<thead>
<tr>
<th>CAR</th>
<th>INITIAL</th>
<th>GROSS</th>
<th>SACKS</th>
<th>WEIGHT IN AVOIRDUPOIS POUNDS</th>
<th>NET WEIGHT</th>
<th>NO. TONS</th>
<th>DRY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>21859</td>
<td>3P</td>
<td></td>
<td></td>
<td>25020</td>
<td>2.9</td>
<td></td>
<td>2844</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAYMENTS FOR METALS</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td></td>
</tr>
<tr>
<td>Silver</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL PAYMENTS FOR METALS</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>DEDUCTIONS</th>
<th>DEBIT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling Sacks</td>
<td>4.50</td>
<td>4.50</td>
</tr>
<tr>
<td>Copper Deficiency</td>
<td>6.15</td>
<td>6.15</td>
</tr>
<tr>
<td>Bullion Freight Tax</td>
<td>6.67</td>
<td>6.67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANALYSIS</th>
<th>DEDUCTION</th>
<th>NET</th>
<th>RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insoluble</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silica</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zn</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfur</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sb</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL DEDUCTIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NET VALUE PER TON</td>
<td></td>
</tr>
</tbody>
</table>

| Total Value on | 66.42  |
| Less Freight on| 57.51  |
| DRY TONS @   | 6.67   |
| WET TONS @    | 2.04   |
| Hauling Charge| 3.10 + .09 tax |
| Switching     | 2.37   |
| Umpire        | 12.93  |
| Amount withheld pending receipt of Silver Affidavit | 6.28 |

| BALANCE DUE SHIPPER |
|---------------------|------------------|
| 116.37              | 435.65           |
# ORE SETTLEMENT

**Bought Of:** Author W. Jacobs, Mar., Tucson Ore Mfg. Co.

**Address:** P. O. Box 2667, Tucson, Arizona

**Shipping Point:** Tucson, Arizona

**Name of Mine:** Old Yuma Dump

## Payments for Metals

<table>
<thead>
<tr>
<th>Metal</th>
<th>Initial</th>
<th>Gross</th>
<th>Sacks</th>
<th>Net Weight</th>
<th>Dry Weight</th>
<th>Rate</th>
<th>Amount per Ton</th>
<th>Amount Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>0.09</td>
<td>or</td>
<td>No Pay</td>
<td>75020</td>
<td>2.9</td>
<td>7284.4</td>
<td>.09</td>
<td>32,31825</td>
</tr>
<tr>
<td>Lead</td>
<td>.5</td>
<td>or</td>
<td>No Pay</td>
<td>121.2</td>
<td>90</td>
<td>109.08</td>
<td>11.29</td>
<td>12.32</td>
</tr>
</tbody>
</table>

## Deductions

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Charge</td>
<td>15.00</td>
</tr>
<tr>
<td>10% of $23</td>
<td>2.30</td>
</tr>
<tr>
<td>Lead in sacks</td>
<td>.03</td>
</tr>
<tr>
<td>Copper in sacks</td>
<td>.03</td>
</tr>
<tr>
<td>Copper Penalty</td>
<td>.03</td>
</tr>
<tr>
<td>Shipment Price Tax</td>
<td>.03</td>
</tr>
</tbody>
</table>

## Analysis

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Deduction</th>
<th>Net</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td>55.6</td>
<td>40.0</td>
<td>21.2</td>
</tr>
<tr>
<td>Mn</td>
<td>6.3</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Zn</td>
<td>6.9</td>
<td>5.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Cu</td>
<td>2.9</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Ag</td>
<td>1.7</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Au</td>
<td>1.8</td>
<td>.03</td>
<td></td>
</tr>
</tbody>
</table>

## Total Deductions

<table>
<thead>
<tr>
<th>Total Deductions</th>
<th>Net Value per Ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.18</td>
<td>6.18</td>
</tr>
</tbody>
</table>

## Total Value

<table>
<thead>
<tr>
<th>Total Value on</th>
<th>364.22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Freight on</td>
<td>37.51</td>
</tr>
</tbody>
</table>

## Bald Price

| Dry Tons | 9.05 |
| Wet Tons | 2.64 |
| Hauling Charge | 3.10 + .09 Tax |
| Switching | 2.20 + .07 Tax |

## Amount withheld pending receipt of Silver Affidavit

<table>
<thead>
<tr>
<th>Royalty</th>
<th>10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.22</td>
<td></td>
</tr>
</tbody>
</table>

## Valuation for freight per wet ton

| 8.79 |

## Balance Due Shipper

| 2.26.17 |
| 115.37 |
| 329.62 |
ORE SETTLEMENT

# PLANT
American Smelting and Refining Company

## EXPORT ORDER

### TERMS OF SALE
- F.O.B. El Paso, for Metal Payments, not exceeding $15.00 per ton.

###規模
- Old Yuma Dump

### SHIPPER B LOT
- 351

### DATE
- 3-6-47

### MINE
- P.O. Box 2667, Tucson, Arizona

### CLASSIFICATION
- Ore

### SHIPMENT
- 2-11-47
- 2-17-47

### METAL QUOTATIONS

<table>
<thead>
<tr>
<th>Metal</th>
<th>Rate per ton</th>
<th>Amount per ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>$90.00</td>
<td>$15.00</td>
</tr>
<tr>
<td>Py Silv</td>
<td>$70.75</td>
<td>$11.62</td>
</tr>
<tr>
<td>Lead</td>
<td>$38.00</td>
<td>$117.89</td>
</tr>
<tr>
<td>B &amp; M J</td>
<td>$9.00</td>
<td>$12.23</td>
</tr>
</tbody>
</table>

### PREMIUM METAL CONTENT

- 52.39 lbs.

### DEDUCTION DUILLI;

- 5.78 lbs.

### TOTAL PAYMENTS FOR METALS

### VALUE

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>VALUE</th>
<th>CENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>28.31</td>
<td>25.25</td>
</tr>
<tr>
<td>Silver</td>
<td>117.89</td>
<td>0.00</td>
</tr>
<tr>
<td>Lead</td>
<td>121.2</td>
<td>0.00</td>
</tr>
<tr>
<td>Copper</td>
<td>12.33</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### TOTAL DEDUCTIONS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AMOUNT</th>
<th>CENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deductions</td>
<td>15.23</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### TOTAL NET VALUE PER TON

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AMOUNT</th>
<th>CENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Value</td>
<td>24.48</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### RAISING AND REDUCING FACTORS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AMOUNT</th>
<th>CENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry Tons at</td>
<td>11.11</td>
<td>0.00</td>
</tr>
<tr>
<td>Wet Tons at</td>
<td>2.64</td>
<td>0.00</td>
</tr>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Switching</td>
<td>3.10</td>
<td>0.09</td>
</tr>
<tr>
<td>Umpires</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Demurrage</td>
<td>2.80</td>
<td>0.07</td>
</tr>
</tbody>
</table>

### TOTAL DEDUCTIONS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AMOUNT</th>
<th>CENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Value</td>
<td>4.12</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### SURPLUS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AMOUNT</th>
<th>CENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surplus</td>
<td>4.12</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### BALANCE DUE SHIPPER

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AMOUNT</th>
<th>CENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surplus</td>
<td>404.65</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### NOTES:
- At withheld pending receipt of Silver Affidavit.
## ORE SETTLEMENT

**Address:** Tucson Ore Milling Co.  
1187 East Speedway, Tucson, Arizona  
Tucson, Arizona

### Final Settlement

**PAYMENTS FOR METAL**

<table>
<thead>
<tr>
<th></th>
<th>NET PAID FOR</th>
<th>RATE</th>
<th>AMOUNT</th>
<th>AMOUNT TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>.945 oz.</td>
<td>32.31829</td>
<td>30.54</td>
<td></td>
</tr>
<tr>
<td>Pgm Silver</td>
<td>1.735 oz.</td>
<td>66.125</td>
<td>1.20</td>
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<tr>
<td>Lead</td>
<td>376.1 lbs.</td>
<td>.049</td>
<td>16.99</td>
<td></td>
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<tr>
<td>Copper</td>
<td></td>
<td></td>
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</tbody>
</table>

**DEDUCTIONS**

- 10% of $39.33
- Non dump car

**ANALYSIS**

<table>
<thead>
<tr>
<th></th>
<th>DISSOLUTION</th>
<th>NET</th>
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</thead>
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<tr>
<td>Silver</td>
<td>30.4</td>
<td>40.0</td>
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<tr>
<td>Iron</td>
<td>8.6</td>
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<tr>
<td>Copper</td>
<td>1.4</td>
<td>1.4</td>
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<tr>
<td>Zinc</td>
<td>6.2</td>
<td>7.0</td>
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<tr>
<td>Antimony</td>
<td>4.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Van</td>
<td>4.1</td>
<td>2.1</td>
</tr>
<tr>
<td>As</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Bi</td>
<td>1.1</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL DEDUCTIONS**

- 6.21

**NET VALUE PER TON**

- 42.12

**DEBITS**

- 24.1725
- 27.900
- 2.48 x .07
- 22.90
- 3.48

**CREDITS**

- 111.00 + 3.33
- 114.33
- 1018.13
- 1018.13

**Valuation for freight per wet ton**

- 37.02
July 8, 1958

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

Old Yuma Mine (Pima County) lead, molybdenum, vanadium

above property which we would like to have

the Owner's Report form with as complete detail
of reports, maps, assay returns, shipment returns
ot sent us before and which might interest a

Mr. Grady Wilson
102 W Lincoln St.
Tucson, Arizona

Enc: Mine Owner's Report

see - Book V-VII - A.L. Flag vanadium reports
Tucson, Apr. 2—The Old Yuma mine fourteen miles west of Tucson in the Tucson mountains has been bonded by Col. Epes Randolph and associates and development work has been started in order to determine definitely the possibilities of the property.

The ore is andesite feebly mineralized and carries small values in gold, little copper and molybdenum and vanadium. It is expected that on account of the large bodies of low grade gold ore that the latter metal will prove most profitable to be extracted. The market for both molybdenum and vanadium has been injured on account of the war but may improve later.

SKAT—advertised in national magazines. Best known Hand Soap on the market. Agents wanted, write for special offer. SKAT, HARTFORD, CONN.

April 11—Adva.

Best Domestic Lamp Coal. Advertisement Tombstone Transfer Company.
OLD YUMA MILL TO BE COMPLETED WITHIN A MONTH

Colonel Randolph Regards Molybdenum As Good Business Risk.

The mill of the Old Yuma mine, which is no 'wunder', according to Colonel Epes Randolph. This is a molybdenum mine, 13 miles west of the city in the Tucson mountains. It was originally a gold property and was bonded by Colonel Randolph and associates from Colonel John H. Martin and Mrs. W. H. Barnes of Tucson. "We are preparing to take advantage of the market when the demand for molybdenum comes," said Col. Randolph.

The mill will be capable of handling 100 tons a day. Courtenay DeKalb, the mining engineer, is associated with Colonel Randolph in the development of this property and has patented a process for refining the concentrates. The market for molybdenum ore will increase steadily in years to come. It could be used in the manufacture of cannon and armor plate, but mills in this country are built for using tungsten. The production of tungsten is very uncertain. It can be mined profitably when the price is high, but it is subject to be closed down, Colonel Randolph thinks, when the price falls. He regards molybdenum, on the contrary, as a good business risk, for the reason that its production on a large scale is assured. It will find a very extensive use in the arts of peace and in the making of automobile axles and for hardening steel.
of Arizona and more particularly described as follows to wit:
Comencing at this monument of stones being the center of the easterly end of the claim and upon which this notice is posted, thence Northerly 300 feet to a monument of stones; thence Westerly 1500 feet to a monument of stones; thence Southerly 300 feet to a monument of stones being the center of westerly end of claim; thence Southerly 300 feet to Monument of stones thence Easterly 1500 feet to a monument of stones; thence Northerly 300 feet to the place of beginning. This claim is more particularly described as situated about 13 miles northwesterly from the City of Tucson about four miles northwesterly from the "Nine-Mile water-hole" of the Santa Cruz River, and about 100 yards south of the Silver Bell Road and shall be known as the Old Arizona Mine. Located on the ground August 1st, 1885.
Witness: P. J. Garcia
M. Garcia

C. C. Stephens
Locator

Filed and recorded at request of C. C. Stephens 3rd Aug 1885 at 9:30 Am

W. B. Sampson
County Recorder
E. E. Randolph   President  Aug 16 1885
Southern Pacific R.R. Co  of Mexico
Born - Lunenburg Co. Va Aug 16, 1856
Died 10:30 A.M. on Monday Aug 17, 1921
in apt. in Santa Rita Hotel
Father, native Virginian  William Esten Randolph
Clarke Co. Va
Mother Sarah Louisa Epps Lunenburg
Co. Started with 3 day R.R. in 1876
to 1885
Married Jan 1881 to Miss Eleanor
Taylor of Winchester Ky.,
1875 was made Chief of 5 P.