Report by
John H. Marks,
314 Bank Block,
Denver, Colorado.

THE NATIONAL MINES INC.
LA PAZ MINING DISTRICT,
QUARTZSITE,
YUMA COUNTY,
ARIZONA.
1942.
SUMMARY.

The property of the National Mines Inc. is in the northwest part of Yuma county, Arizona - contains 10 lode claims and two placer mining claims, having a combined area of 247 acres.

This mine shows a large body of free milling gold ore - values claimed $4.00 to $5.00 average - over 200 assays average more than twice that amount per ton.

Estimated cost of mining and milling $2.50 per ton.

$50,000 estimated cost of building 100 ton mill, construct water line and put the property in shape to make a big pay mine.
General Description.
This company, The National Mines Inc. was organized January 20, 1940 - under the laws of Arizona, owns and controls two groups of mining claims in the La Paz Mining District, in northwest Yuma County, Arizona. More definitely described this mining ground is located in Secs. 19, 23, 24, 25, 26 and 27, T.4 N.R. 21 W. Gila and Salt River Base and Meridian.

Blythe, California is the nearest railroad point - a town of some 2000 population, is 15 miles southwesterly and Quartzsite Arizona the same distance southeasterly. They are connected with the mine by good auto roads. The county seat of Yuma county is the city of Yuma about 100 miles southerly - population 25000.

This mining property is in the Dome Rock range of mountains. These mountains, or more properly hills, are badly broken and very rough to travel on foot - have an extreme altitude approximating 3000 feet - all elevations referred to sea level - the National Mines property being about 800 feet.

Average annual rainfall is light. Official precipitation records show Quartzsite 5.53 inches (800 feet elevation) - Salome 9.16 inches (some 40 miles east of Quartzsite elevation 1775 feet) - Yuma 3.10 inches rainfall, elevation 142 feet.

Temperatures, Quartzsite high 119° - low 9° - average 69.6° Salome, high 117° - low 7° - Yuma high 119° - low 22° above zero.

On this property there is no commercial timber and no streams of running water. The Colorado river, which forms the boundary line between the states of Arizona and California is 6 to 8 miles west. Water for domestic use is obtained from Quartzsite or Blythe.

Climatic conditions are such that mining work can be carried on continuously, modern methods of building construction and air conditioning provide against all weather extremes.
The National Mines Inc. are in the La Paz Mining District in the northwesterly part of Yuma County Arizona. Early mining history of this region began with the discovery of the La Paz placer mines about 1862, some 80 years ago. Descriptions of these early days operations are found in publications of the United States Geological Survey and Arizona records. U.S.G.S Bulletin No.451, Reconnaissance of the Ore Deposits in Northern Yuma County, Arizona - Newland Bancroft 1911, - also U.S.G.S Bulletin No.620 page 55, Gold Deposits near Quartzsite, Arizona, - W.L. Jones Jr. 1915. See also publications issued by the University of Arizona Tucson Arizona - Bulletin No.137 page 14, - Arizona Lode Mines and Lode Mining, and Bulletin No.132, page 14 - Arizona Gold Placers and Placering.

Quoting from Bulletin No.451, heretofore referred to, page 85 "Of the yield of these placers, anything like an approximation of the average daily amount of what was taken out per man would only be guesswork. Hundreds of dollars per day to the man and now and then a thousand or more per day."

From Bulletin No.451 page 86, "When the age of the rocks and the ore deposits contained therein is considered with the tremendous amount of erosion which has taken place in the area and the omnipresence of minute auriferous quartz veins, it does not seem unreasonable to suppose that the placers owe their origin to the veins located in the adjacent mountains."

After a careful study of the ground these placers seem to be a product of erosion only, as no indications of glacial action are noticable. The rocks are angular and rough, probably eroded from the hills to the east which may have been several thousand feet higher than their present elevation. The level of the Colorado river basin at La Paz is about 275 feet above sea level. The mineral content of this property is undoubtedly one of the sources of La Paz placer gold.
The town of La Paz is still shown on maps of the region, but with the exception of a nearby cemetery, now almost obliterated, there remain no visible signs of the former town which is now within the Colorado River Indian Reservation. Tourists very frequently visit the locality searching for the town of La Paz which at present is not even a ghost town. It was located about 5 miles west of the National Mines Inc.

DESCRIPTION OF THE PROPERTY.

The mining claims held by the National Mines Inc. are as follows;—a group of 4 lodes known as the Goodman or Scott claims viz:—The Gold Belt 1-2-3-4 lode mining claims containing an area of 82½ acres—also the Gold Belt No.1 millsite, containing 5 acres, located 5 miles west of the lode claims. More than the required amount of work necessary to get United States patent on this group of claims has been done and amended surveys have been made for patent application.

Adjoining the Gold Belts on the south and west National Mines purchased a group of 5 lode claims, known as Bullion 1-2-3-4-5 lodes—also two placer claims called the Oro Grande and Lucky Lou. Both placers are located by legal subdivisions and with a small amount of additional work on the Lucky Lou, sufficient work has been done to meet patent requirements. On the Bullion 1 to 5 lodes, containing an area approximating 98 acres improvements for patenting are completed with exception of a small amount of work on Bullion No.2 and No.5 lodes. Amended surveys have been made preparatory to making application for patent.

In addition to herein mentioned mining claims the National Mines Inc. holds by location a lode claim, the La Paz, 1.1 acres, also a mill site known as the La Paz, containing 1.1 acres. The total holdings of the company are approximately 247 acres.

See map herewith for relative positions of the claims.

IMPROVEMENTS.

On the Gold Belt there are about 1600 feet of tunnels and drifts—numerous cuts and shafts. A small experimental mill is on the Gold Belt Millsite. The improvements on the Bullion group of claims consists mainly of open cuts and shafts. On the Oro Grande placer is the main camp building, 30 x 40 feet in size—concrete floors—double walls and roof. The greater part of the mine workings are connected by fairly...
A part of the ground covered by the claims of National Mines Inc. was formerly known as the Goodman Mine and is so called in bulletin herein referred to. The original location of this mine goes back for an unknown number of years. It may date back to the time of the Spanish occupation as one of the workings on this mine are referred to by old timers as the Spanish shaft. Walls of an old stone cabin, said to be over 100 years old, are near by. Examining old mounds on the ground we found and have in camp an old rusty baking powder can containing a location certificate, still legible, dated Jan.1,1889, over 53 years ago. The claim was called "The New Year's Gift Gold Mine" and signed "TOMAS J. GOODMAN". This man was no doubt the original Goodman from whom the mine received its name as shown on Government maps. This Goodman location certificate recites that the location was a relocation of the Pioneer mine. This mining ground has evidently passed through many locations and relocations since it was first discovered.

From U.S.G.S.Bulletin No.620,page 55, referring to the Goodman mine we quote, "About $40,000 was obtained from the Goodman mine prior to 1900 and since that time Mr. W.E. Scott of Quartzsite has mined ore to the value of $8000, the average tenor of which was $65.00 per ton."

Since that time Mr. Scott passed away, leaving the mine to his widow, Mrs. Angela G. Scott from whom the property was bought by National Mines Inc. Mrs. Scott sold the mine, subject to payments at stated times including an agreement to patent the property - in the meantime holding a mortgage on the mine until payments are completed.
The geology of the La Paz district is described in U.S.G.S. Bulletin 451 and 620. Quoting from Arizona Bureau of Mines, Bulletin No.132, page 18, referring to the La Paz placers "He considers that the bench land deposits were formed by the Colorado river, but that the placer gravels were derived largely by the erosion of the gold bearing quartz veins and stringers contained in the pre cambrian schists of the Dome Rock mountains."

From University of Arizona Bulletin No.137, page 136, "Gold mining quartz veins were discovered in this district in the sixties. "Goodman mine."

The Goodman Vein strikes east-southeastward - dips from 30° to almost 90° North - and occupies a shear zone that is traceable for more than 2 miles across the range between the La Paz placers on the west and Middle Camp placers on the east. It consists of epidote schist. In width the vein ranges from less than an inch up to 40 feet and averages about 10 feet. Its filling consists of massive quartz with numerous cavities. In the oxidized zone these cavities are more or less filled with iron oxide that contains visible free gold. Where oxidation has not been complete, gold bearing pyrite is relatively abundant, particularly near the walls of the vein."

Surface appearance of Goodman mine disclose iron stained intrusions or veins of quartz cutting schist - strike somewhat west and southeasterly - dip 30° to 60° to north east - width of quartz outcrop varies greatly - from a few inches to 10 or more feet. On the westerly part of the Gold Belt No.1 lode, where the greater part of the development has been done, many parallel veins of quartz strike northwesterly. A measurement made at right angles to the strike, or northeasterly across the vein croppings, in a distance of 250 feet up slope of hill disclosed 15 outcroppings of quartz in schist. Many ribbons of quartz crosscut the formation, giving the appearance of a stockwork and it is thought the entire body, dumps included, carries sufficient value to make the entire hillside a low grade, steam shovel proposition, having years of work in sight. Quartz croppings are found on surface for practically all of the 6000 feet of the Gold Belt claims.
ASSAYS.

Following are partial records of assays from this property. They were taken at various times and by different men who examined, reported on or worked in this mine. This partial list includes more than 200 assays.

The average of 163 assays, taken by 3 engineers who examined and reported on this mine was $11.02 per ton.

A report made in May, 1940, by Fred H. Perkins, Consulting Engineer, Phoenix, Arizona, gives details of his sampling and testing. 21 samples, (discarding two high grade samples) gave high $42.00 - low trace - average $10.53. Most of these samples were taken on surface. 24 samples, taken by Perkins, mostly underground, gave high $179.90 - low $2.45 - average $31.00.

A report made July 29, 1940, by W. H. Crago, M. E., Duluth, Minnesota, shows that 44 assays gave high $46.90 - low $0.35 - average $8.31.

A report made in the summer of 1940 by A. J. Knight, M. E., of Chicago, Illinois, gave for 74 assays, high $36.05 - low trace - average $4.00.

Mr. A. B. Middleswarth, mine Superintendent, reported results of test shipments and sampling as follows, July 31, 1940, a test lot from incline shaft on Gold Belt No. 1 lode - weight 4611 pounds - gold 1.60 oz per ton - silver 1 oz per ton - fine gold settlement value $32.20 per oz. - gold value per ton $51.52 or a total for this shipment of $105.70.

Another test shipment was made Sept. 6, 1940, from No. 3 tunnel on Gold Belt No. 1 lode. Weight of sample 473 pounds - gold 2.45 oz per ton - silver 1.50 oz per ton - fine gold settlement value $32.20 per oz. - or $78.89 per ton. Both of above described test lots were sampled, assayed and bought by Wickenburg Ore Co. at Wickenburg, Arizona.
ASSAYS.

Smith Emery Co. of Los Angeles, California, March 4, 1940 assayed 6 samples from this mine - high $13.30 - low $0.70 - average $3.73 gold.

Smith Emery Co. March 9, 1940 12 samples, - high $92.05 - low $2.50 - average $14.64.

At John Herman Laboratories, Los Angeles, Nov. 22, 1939 6 samples from this property gave high $79.10 - low $8.75 - average $33.10 gold. Most of these samples were from tunnel No. 3 on Gold Belt No. 1 lode.

John Herman Laboratories, March 16, 1940 5 samples gave high $17.15 - low $2.10 - average $7.07 gold.

The following list of assays from this mine are taken from a miscellaneous lot of records.

W.E. Burlingame, 2040 Broadway, Denver Colorado

6 samples gave high $26.00 - low $0.70 - average $12.31

6 samples from Gold Belt No. 1 lode, assayed at Kingman, Arizona Nov. 17, 1939, gave high $179.90 - low Trace - average $67.20.

4 samples from Gold Belt No. 1 lode assayed at Kingman March 19, 1940 gave high $70.27 - low 3.88 - average $27.28.

Arizona Assay Office, Phoenix, Arizona, July 31, 1940, sample assayed from open cut at new ore bin, gold .20 oz. equal $7.00 silver .4 oz. equal $0.28 total $7.28 per ton.

Arizona Assay Office, August 6, 1940, sample from portal No. 3 tunnel on Gold Belt No. 1 lode, gold 1.63 oz. - silver .20 oz. gold value at $35.00 per oz/ equals $57.05 per ton.
A Spectrographic Qualitative Analysis was made by John Herman Laboratories of Los Angeles, of a sample composed of three samples having an assay value of $35.47 per ton. This spectrographic analysis gave the following approximations — viz —

- Silicon over 10%
- Iron 10% or over
- Aluminum 1 to 10%
- Potassium 1 to 10%
- Chromium 0.1 to 1%
- Manganese 0.1%
- Magnesium 0.1%
- Calcium 0.1%
- Sodium 0.1%
- Molybdenum 0.1%
- Lead 0.01%
- Silver 0.01%
- Copper 0.01%
- Vanadium 0.01%
- Strontium 0.01%
- Gold 0.001% to 0.01%
- Barium 0.001%

During the winter of 1940-41 Mr. Dick Hodges, a successful mine operator of more than 40 years mining experience in the mines of Cripple Creek, Colorado, examined and sampled this property while spending his winter vacation with us in camp at the mine. 7 assays taken by Mr. Hodges at Cripple Creek from Gold Belt No.1 and Gold Belt No.2 claims assayed at Cripple Creek gave high $59.62 — low $8.52 — average $26.02.
ASSAYS.

6 samples in and near tunnel No.2 gave high, $13.20 - low $0.70 average $3.73.

Sample from face of tunnel No.1: Gold Belt No.1 lode gave gold .34 oz value at $35.00 per oz. $11.90 per ton.

Sample from open cut below incline shaft, near saddle on trail (black quartz) gave gold 2.05 oz. Value at $35.00 per oz. $72.05 per ton.

MAPS.

Four maps accompany this report.

(1) A sketch map of the National Mines Inc. property.

(2) A U.S.G.S. map "Cunningham Mountain", which shows the Goodman Mine.

(3) A blue print from official Government map at Phoenix Arizona of Tp.4 N.R.21 W.

(4) A Conoco Road map of Arizona, shows location of this property.

NOTE.

Data at hand is not sufficient to make an assay map of this mine, but nearly all of the assay samples were taken from the Gold Belt Mol lode.
WATER.

An unlimited supply of water for mine and mill use can be obtained by pumping from the water level of the Colorado river.

The mine is one mile south and 5 to 6 miles east of water supply which can be secured by pumping from a sump or pond, excavated 25 feet below surface, or by pumping from a slough which was evidently a river bed before the Colorado river changed to its present course. The difference in elevation between the river and the mine is between 500 and 600 feet. The sump would be on Public Domain, at which point the water level is about 10 feet below the surface of the ground - the slough is about 1/2 mile within the Colorado River Indian Reservation.

The water line will be between 5 and 6 miles in length. It may be found advisable to put a second mill on the Bullion properties. A pipe line 6 inches in diameter should furnish an abundant supply of water. Alignment surveys and profile needed before close estimate can be made. Probable cost of pipe line, pumps, storage tanks etc $15000 to $20000.

MILL.

This mine has enough ore blocked out or in sight to warrant the building of a mill of 50 to 100 tons daily capacity, or it may be found advisable to construct a 50 ton mill planned for enlargement. Conditions at the mine are good for a gravity flow mill. Allow $15000 for cost of 100 ton mill. $50,000 should put this mine in production. Estimated cost of mining and milling $2.50 per ton.

It is believed this ore is of sufficient value to mine by steam shovel methods, immense bodies of low grade ore being in sight on surface. It is claimed to have an average value of from $4.00 to $5.00 per ton - this in order to be conservative, though assays average more than twice this amount.

MILL MACHINERY.

In my opinion the first thing that should be done, before planning mill or buying machinery, is to have a thorough test and analysis made of the ore in this mine. 200 to 500 pound representative samples should be taken and the work done in a fully equipped laboratory, supplemented by pilot mill test runs on a commercial
scale - after which a flow sheet would indicate the kind of machinery best suited
to mill this ore.

CONCLUSION.

After a very extended and careful study and examination of this project on the ground
I consider it one of the best I have seen to make a big pay mine.

Respectfully submitted,

514 Bank Block,
Denver, Colorado.
Oct. 9, 1942.
The subject of this report is the old Goodman mine—a free milling gold mine that has been worked in a small way at various times during the past 50 or more years. It is located near Quartzsite, Arizona. Many relocations have been made on this old mine which is now known as the Gold Belt group of claims—4 in number—having common end lines—total length 6000 feet by 500 feet in width—area 82.64 acres—unpatented. Parallel veins outcrop on surface and it is believed have so enriched the ground that the entire mass can be mined by steam shovel methods. Values claimed $5.00 per ton—over 200 assays show an average value of slightly over $10.00 per ton.

This mine is owned by Mrs. Angela G. Scott of Quartzsite. We have an option to purchase for $35000 subject to terms. We want a nonassessable override of 10% on net returns.

Having spent over two years on this property we have studied out definite plans for its development and operation all of which is outlined in the following report.

Respectfully submitted,

1026 - 17 St,
403 Bank Block,
Denver 2, Colorado.