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## ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

## PRIMARY NAME: CEDAR VALLEY MINES

## ALTERNATE NAMES:

ARNOLD
SILVER QUEEN EVANGELIST PRINCE
WIDE AWAKE
LITTLE MINISTER

## MOHAVE COUNTY MILS NUMBER: 478A

LOCATION: TOWNSHIP 16.5N RANGE 15 W SECTION 26 QUARTER NE LATITUDE: N 34DEG 47MIN 10SEC LONGITUDE: W 113DEG 47MIN 46SEC TOPO MAP NAME: DIAMOND JOE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER
COMMODITY:
SILVER
GOLD LODE
URANIUM
VANADIUM
BIBLIOGRAPHY:
ADMMR CEDAR VALLEY MINES FILEADMR MOHAVE CARD FILEADMR MOHAVE CUSTOM MILL PROJ. CARD FILEEVAL. OF MINERAL RES. OF HUAPALAI, 1964, VOL.I, P. 67-69
HINTON, R. "1000 OLD AZ MINES" P. 98ADMMR FILES

CEDAR VALLEY MINES
Cedar Valley District
MOHAVE CO.
See: Mohave County Place Names, by Roman Malach, Pg. 19, 1976, in Library office. See: Big Sandy Country, by Roman Malach, Pg. 18, 27, in Library Office.



Structural Control or Geological Association:

- See Cedar Group -

| Age of Mineralization: |  |  |
| :--- | :--- | :--- |
| Production History |  |  |
| Patented claims Book $\# 203$ |  |  |
| MS $\# 1218$ |  |  |
|  |  |  |


| Name of Mine or Prospect: <br> Cedar Group (Arnold/Silver Queen/Evangelist) | Township Range <br> $161 / 2 \mathrm{~N}$ 15 W | Section Priority <br> 26 A |
| :---: | :---: | :---: |
| Principal Minerals: Silver | 1:250,000 Quad <br> Prescott | $7.5^{\prime}-15^{\prime}$ Quad <br> Diamond Joe Peak |
| Associated Minerals: Quartz, Calcite | District Cedar Valley | Principal Product Silver |
| Type of Operation: <br> Underground: Shafts Tunnels | County State <br> Mohave Ar. | Type of Deposit Vein |

Ownership or Controlling Interest:
Consult tax assessment records
Access: From Wikieup, Ar. proceed west on light duty road for 6.0 miles. Turn right on unimproved road for 10 miles. Mines are shown (unnamed) on topographic quadrangle.

Structural Control or Geological Association:
"Older Precambrian
"Older Precambrian Age, Granite gneiss."2

Age of Mineralization:

| Production History | Geochemical Analyses |
| :--- | :--- |
| Production $1873^{1} \quad \$ 460,000$ | $\frac{\text { Assay }}{}{ }^{1}$ |
| $1875^{1} \quad \$ 175,000$ | " 50 zoz oz/ton silver to |
|  |  |

6815 feet of underground workings Patented claims Bk \#203

MS \#1219A
1218
465

## References

1) Mallach (1977) p. 16.
2) Wilson \& Moore (1959), Geologic map.


| Name of Mine or Prospl. . : <br> Silver Queen | Townsh Range <br> $161 / 2 \mathrm{~N}$ 15 W | Section Priority <br> 23 dcb B |
| :---: | :---: | :---: |
| Principal Minerals: Silver | $\begin{aligned} & 1: 250,000 \text { Quad } \\ & \text { Prescott } \end{aligned}$ | 7.5' - 15' Quad Diamond Joe Peak |
| Associated Minerals: <br> Quartz, Calcite | District Cedar Valley | Principal Product Silver |
| Type of Operation: <br> Underground | County State <br> Mohave Ar. | Type of Deposit Vein |

Ownership or Controlling Interest:
Consult tax assessment records
Access:

Structural Control or Geological Association:

- See Cedar Group -

Age of Mineralization:

| Production History | Geochemical Analyses |
| :--- | :--- |
| Patented claim Book \#203 |  |
| MS \#1219A |  |

MS \#1219A

Mr. Martin said his company, Charles Ward Corp., had cleaned out the old Cedar shaft 15 miles NW of Wickieup and had Miertz sample the old workings which extend to the 290 leve1. GW WR 10/2//75

Mrs. Flax (card) said that she and her brother, a Kansas City doctor, visited the Heath mill on Thanksgiving with the idea of buying it and processing Cedar Valley Mines Co. ore, but were unable to contact the principals. She went on to say that since then Cedar Valley Mines has bought a mill in Auburn, Calif., and moved it into Phoenix for some repairs and will fix the trail to the mine and truck it up there in the near future. GW WR 3/4/76

Accompanied Mr . Jett to the Cedar Mineral Co. properties about 16 miles NW of Wikieup where we were given the "cook's tour." GW WR 3/29/76

I talked to a Mr. Davidson at Cedar. A mill still is on the ground there. Apparently there is not enough ore at the Cedar mine to justify erection of the mill.

VBD WR 8/21/76

CH/WR 12/4/79-Will start mining on their 14 patented claims (silver) fifteen miles northwest of Wickiup in the Hualapai Mtns. The company is composed of a group of west coast doctors and one man is Musical Director of the Dinah Shore Television Show. Contact: Dr. Daniel Alexander (see yellow card).

CJH WR 9/16/80: Field interview with "Dusty" Denton in Wickieup. Will write separate report. He reported no activity at the Cedar Mine in the Hu?lapai Mountains.

NAME: $H \rightarrow \infty$
DIAMOND JOE PEAK $7!2$
Th $\frac{1}{2}$
R 15 W
SEC. 26
4500
DISTRICT:

## Mineralization:

Geology:

Type Operation:

Production:

References:

## Mineralization: Ag

## Geology:

Type Operation: $6 \sin$. Dewerivei.

Production: 175.j00 to 184. Total 4\%200


1. A. Comsat

Mohave Cty Card File

# Cifarles R. Ward Coirporation <br> Mining Development \& Mineral Recovery 

PARCEL 415

## LOCATION

The group of clains are located in the Cedar Valley Mining District, Mohave County, Arizona, on the Southwestern slope of the Wallapal Mountains, South of Kingman, 64 miles and East of Iucca, 28 miles. Both Df these pointis are stations of the inain line of the S. T. \& S. F. Kailroad. Kinginan being the County Seat and supply point. Both are connected by a good auto road with these mines.

## SIZE

The consolidated mineral claims and Mill Site cover an area of about 400 acres, 4 of the claims carry United States Patents, as does the Mill site, the remaining clains have all been firmly held by a company for a period of years under the United States laws governing mineral locations.

## TYPE OF ORE AND OPERATION

Underground operation. Principle ore, silver ranging from a low of 20 oz . per ton to a high of 500 oz . per ton. Gold averages 1 oz . for every 100 oz . of silver.

## HISTORY

This district and some of the mines embraced in the consolidation
was discovered in 1873, when the Cedar Valley Mining Distirict
was organized. From this period until 1883, the surface or chloride ores, yielding from 200 to 500 oz . of silver per ton, was arrastraed and amalgamated by the patio and barrell process, the bullion being about 930 fine in silver. This was shipped to San Francisco along with much of the sorted ore, this being packed to the Colorado River, a distance of 50 miles, then by boat and Ocean Steamer at a cost of $\$ 100$ per ton.

The operation of the Mill was intermittent, as at this time the metallurgy of these ores was not well understood. This fact, taken together with the reduced price of silver, excessive cost of hand mining, wagon haul, packing, railway and smelter charges; expenditures of a large amount of money in Mine purchase, erection of Mill, development of the mines, the building of two roads connecting with Iucca and Kingman, resulted in a cessation of all mining and milling by these operators.

After carefully examining and checking all available records, the proverty can safely be credited with a production of $\$ 460,000$.

Up to 1895 the production was $\$ 175,000$.
From April 1895 to January 1897 - a period of 20 months a production of shipping ore, bullion, and concentrates was made amounting to $\$ 275,000$.

It must be remembered that the average cost of landing ore In San Francisco was $\$ 100$ per ton, and later, when the ore was shipped to El Paso or Kingman, this cost was sonewhat reduced but still very high. The same ratio applied to the cost of mining, shipping and milling ores. Taling these features intio consideration, the ore shipped can be estimated at $\$ 150$ per ton, figuring sold at $\$ 20$ per oz. and silver at 60 cents per per oz. The mililing tonnage treated amounted to about 10,000 tons and from carefully checking all avallable sources of information, including present sampling, a gross value of $\$ 35$ per ton in gold and silver can be safely allowed with gold flcured at 20 . and silver at 60 cents per oz.

## DEVELOPMENT

ARNOLD CLAIM:

| Arnold Shaft: | $5 \frac{1}{2} X 7 \frac{1}{2}$ |
| :--- | ---: |
| Adit drift (S) | 297 feet |
| Adit drift (N) | 400 feet |
| 100 foot level (S) | 150 feet |
| 100 foot level (N) | 465 feet |
| 200 foot level (S) | 200 feet |
| 200 foot level (N) | 300 feet |
| 250 foot level (S) | 25 feet |
|  |  |
|  |  |
|  |  |
|  |  |

These developments were all made on what is known as the East Vein. which has been designated as the "Hangingwall of the contact fissure". The vein carries a width of two to five feet, with an average of four feet on the 200 foot level.

## GENERAL LEE: Shaft

Drift (S) on 50 foot level
Drift (N) on 50 foot level
Drift (S) on 75 foot level
Drift (N) on 75 foot level
Winze (N) on 75 foot level

125 feet
150 feet
150 feet
30 feet
120 feet
25 feet

250 feet from the N. end Ine, a short tunnel crosscuts the West of Footwall vein at a depth of from $30^{\prime}$ to $40^{\prime}$ this was
stoped to the surface for a length of 120 feet. This was known as the "Mexican Stope" it was on the East or Hangingwall vein.

Crosscut tunnel 555 feet $\overline{275 \text { feet }}$
This tunnel crosscuts both the West or Footwall Vein and the East or Hangingwall Vein - it is inaccessible at present on account of slight caves backing up the water. Drift (N) on Hangingwall

120 feet
$\frac{60 \mathrm{feet}}{60 \mathrm{feet}}$
EVANGELIST Crosscut tunnel to East or Hangingwall Vein
Drift (N)
Drift (S)
336 feet
15 feet
$\frac{15 \text { feet }}{366 \text { feet }}$
ALL IN ALI THERE IS A GRAND TOTAL OF 6185 FEET OF DEVELOPMENT IN THE "CEDAR" GROUP CLAIMS.

From examination of books and vouchers, we find there has been shipped $\$ 15,348.59$ worth of ore carrying an average value of 243.62 per ton. The lowest assay of any shipment being $\$ 161.40$ and the highest being $\$ 415.16$ and of the above valuation, about lo was in gold. There is a continuous orebody 100 feet in length, 160 feet in depth and 2 feet thick, malsing 320.000 cubic feet of ore this gives ore reserves of 27.000 tons. The value of all ore the mine has heretiofore produced has been over $\$ 80.00$ per tion. We would be safe in estinating the net value of the 27.000 tons in reserve to be $\$ 50.00$ per ton (OLD PRICES), which would malke ore in sight valued at \$1, 350,000 after deducting reasonable expense for mining and treating.

## GEOLOGY

The general geology of the Wallapai Range has been thoroughly covered by the United States Geological Surveys and other eminent Geologists, all agreeing as to its being a repository of a great variety of mineral bearing rocks, precious and rare metals.

Its mineralized fissures are located in the Pre-cambrian granitic rocics, this same complex covering a large area in this Country and extending beyond the Colorado River into Utiah and Nevada, embracing many of the large ore producers in Arizona. The United States Geological Survey describes the Wallapal Mountains as "porphyitic, schistosed, the mineral bearing fissures being locatied in the granite diorite schist and quartsite, of ten impregnated or intruded by pegmatite, porphry and diabase dyke". This defines perfectly the geology of the Southwestern slope in which the property is located.

## CONCLUSIONS

These consolidated
vein system for a lonown lenct carry a strong and continuous the east and west veins the of upwards of 12,000 feet on Sulphide" and 1500 feet on the "Peargth on the "Golden embraced in this property. the "Pearl" and other veins
Taking into account
when gold and silver fact that the figures shown were standards the property should deserve high low by today's investors looking for a very peserve high consideration for money.

## NOTE

Information
Billings M. \& M. E. compiling this report came from R. S. Mining Engineer's redort of dated 1923. R. C. Jacobson, report of 1929. who is also a Mining Engineer Thorniley's

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lune 21: 1976
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?. D. K. partin
Viog lesident.
Charles R. Ward Corporation
472 ort: 21:3 Avenue
Phoenix, Arizona 85015
Jear ar. Smetio:
Thank you ajain coi jour axcellont cosperation... wa apmociate
it. The reare will go thto our confitontial file wo visitad
the peartion in ondze to obtain lata to bass on to othar; be
hage jean zsked a muber of times as to the credibility and cabs-
bility of the comany concerned. we thought going and seeing for Jurselves was the only way to find out. You holped as seeing
Thanks again.

Very traly yours:

John H. Jett
Director
vid: Pp

# Richard 近. 解ieritz 

MINING CONSULTANT
ARIZONA REGISTERED MINING ENGINEER AND GEOLOGIST


Charles R. Ward Corp. 4728 N. 21st Avenue Phoenix, AZ 85015

Gentlemen:


At the request of and authorization by Messes. C. R. Ward and Douglas Martin of the above mentioned corporation, the writer visited the Cedar Mines Project, Mohave County, Arizona, on October 21, 1975, for the purpose of reviewing the Arnold Shaft clean-up work and to examine geologically and otherwise the south stope area made accessible by the shaft clean-up work.

After the brief visual examination, ten samples of the "vein" structure exposed in the stope were taken by the writer. Another sample was taken by the writer of the vein material gathered by the shaft workmen which could possibly be used as a metallurgical sample to determine the best mill flow sheet for the Arnold mineralize material.

## CONCLUSIONS and RECOMMENDATIONS:

The results of the examination, and more importantly, the assay results of the samples taken, indicate the following:
(1) Significant gold-silver mineralization exists within the sampled area to justify continued exploration and rejuvenation work to further the cause of development work,
(2) The mineralize material gathered as a sample for metallurgical testing is satisfactory for such testing, and
(3) The shaft clean-up work could possibly prove a potential water source most vital to a milling operation.
(4) The present work has aided to reduce the risk which could be present in future work had not this work been done.

These same results of the examination and the sampling suggest the following:
(1) Continue de-watering and de-mucking the shaft first below the 100 level and second below the 200 level.
(2) Rejuvenate the north and south portions of the 100 level to permit roof and floor sampling of the north drift, as well as floor sampling of the south drift.
(3) Send the metallurgical sample to the laboratory in long Beach, California, requesting the determination of the best flow sheet and equipment for the best - economical recovery rates, first for gold-silver, second for lead, zinc and copper.
(4) Be prepared to finance the cost of de-watering and de-mucking the shaft from the 100 level to below the 200 level, and to finance rejuvenation of the 200 level as well as a detailed sampling program on this level.
(5) Be prepared to finance planned underground exploration which could lead to a development stage and production if items 3 and 4 are successful result-wise.

## GEOLOGY and MINERALIZATION:

Examination of the mineralized structure in the south stope indicates very good strike length strength as well as dip length strength. The quartz filling of the fault structure does thin and thicken, producing a lensic effect strike-wise and the same could be true dip-wise but such is not known since no other dip-wise exposure of the structure is accessible at this time. The quartz vein usually favors the center of the structure or hugs the footwall with 4 to 6 inches of gouge underlying same. Occasionally the quartz splits with a portion of the quartz near the footwall and a portion near the hanging wall, and separated by a horst of granite, extremely altered, but mineralized almost as well as the quartz itself.

For the most part, the quartz is fractured which should make for easy drilling and blasting. It can, at times, be quite hard and solid, but not the rule, at least not so in the south stope length examined.

The quartz is quite well colored due to the presence of iron limonites of the yellow to brown and red varieties, exhibits white to yellow pyrite, weak to strong, also some chalcopyrite (CuFeS), galena (PbS) and sphalerite ( ZnS ). Argentite appears to be the mineral responsible for the silver content in the higher ranges. The pyrite could be responsible for a portion of the gold and silver content, as could the copper, lead and zinc minerals.

## SAMPLING:

Opening or making the south drift stope area accessible is the first big step of the Cedar Mines Project, and has provided the first "real" look at the structure at depth. The structure's strength and performance at this depth is good and justified the writer taking samples to provide some factual data for geologic analysis and physical metal content to be used as a basis for either moving forward on the project or to discontinue the exploration and possible development.

The writer took 10 samples of the mineralized zone in the "back" of the stope. For the most part, the samples were taken at 20 foot intervals commencing at a point 50 feet south of the shaft wall. The first 50 feet were most difficult from the standpoint of accessibility and sample taking, thus, no samples taken. Also, the area between 120 to 150 feet south of the shaft wall is quite "hairy", thus, best left undisturbed and no samples taken.

Samples were personally taken by the writer, geologically described and
delivered to the Iron King Assay Office, Humboldt, Arizona.
An eleventh sample was taken of the mineralized material gathered by the workmen, which is to be used for a metallurgical sample - mill test. The assay results indicate the material to contain gold and silver with the silver content close to what the writer would consider average for the Arnold ore body - at least to this day and date. The gold content is somewhat higher than the writer would expect - the expectation being between $\frac{1}{4}$ and $\frac{1}{2}$ an ounce per ton.

Sample locations are shown on the attached Longitudinal Projection Map of the Arnold Mine and the sample data and results are tabulated in the included Sample Schedule.




## PARCEL 15

REPORT
ON

CEDAR VALLEY HINES

Charles R. Whid Comporation

Mining Development \& Mineral Recovery

## PARCEL \# 15

June 1975

## LOCATIOH:

The property is located on the Southwestern slope of the Wallapai Mountains, South of Kingman, 64 miles, and East of Yucca, 28 miles. Both of these points are stations on the main line of the A.T.\& S.F. Railway. Kingman being the County Seat and supply point. Wikieup being the closest town connected by an excellent graded road, 12 miles to the East.

SIZE:
The mineral lode claims and mill site cover an area of about 675 acres, of which 5 claims and the lill Site are patented land.

EQUIPNENT: OHAED
2 - Self Contained House Trailers
1 - Case 580 Tractor/Backhoe \& Loader
1 - Ford $197216^{\prime}$ Flatbed Dump Truck
1 - Sandpiper $2^{\prime \prime}$ Pump
1 - Onan 5KVA gas Generator
"EQUIPFENT: RENTED
1 - Steel Headframe \& Hoist
1 - Worthington 160 cfm Compressor
1 - Ford 1975 4 MD 壑t Pickup
1 . Chevrolet 1975 参t Pickup
1 - Hobart 150 amp Helder
HISTORY AND PRODUCTIOR:
This district and some of the mines embraced in this property was discovered in 1373, when the Cedar !alley llining District was organized. From this period until 1883, the surface or chloride ores carrying from 200 to 500 ounces of silver per ton with a aold content of about one ounce to every 100 ounces of silver (bein? arastraed and amalganated by the patio and barrel process with the bullion being about 930 finc in silver) was packed 50 miles over the mountains to the Colorado River as was much of the sorted ore. Thence by river boat to the Port of Yuma and ocean steamer to San Francisco at a cost of about $\$ 100$ per ton.

The first mining sales were made in 1876 and 1878 when a small crushing and roasting plant of 1 tons capacity was erected on the site. In 1881 and 1882, the General Lee, Hubbard and Evangelist Claims were sold and patented, but very ittle development work prosecuted.

In 1894, these mines mentioned and other properties were purchased, consolidated and a 15 stamp amalcamating mill with concentrating tables, and cyanide tanks erected. This company increased the depth of the Arnold Shaft to 297 feet, partially stoping some of the levels
and further developed the feneral Lee, Silver queen and some other clains, operating the pronerty from Anril 1895 to Jandary 1897.

During this period, considerable crude ore was shimpod by mule and wanon to the El Faso Smelter and the Kinman Samplirg Worlis. The operation of the mill was internitent as, at that time, the metaiuroy of these ores was not well advanced which, tocether with the reduced price for silver, the excessive cost of hand mining, waron haul: packing $: i f t h$ mules, railway and spieter charges, resulted in a cessation of all mining and milling by thesc operators after the expenditure of a lapae amount of money for the purchaso of the properties, the erection of the mill, the develonment of the mines, the building of two fine roads connected with Yucca and kingman.

Since 1897 up to 1921, minor operations have been conducted by various lessees who operated in a small may.

After a careful examination and checking un of all available records, the property can be safely credited with a production of $\$ 460,00.00$. Of this amount $\$ 175,000.00$ was produced up to 1895 . From April 1895 to lanuary 1897 (a period of 20 months), a production of shipping ore, bullion, and concentrates was made amounting to $\$ 275,000.00$. and since that time small lessees have produced about $\$ 10,000.00$.
It will be remembered that the average cost of landing ore in san Francisco $:$ as $\$ 100$ per ton and later when the ore was shipped to El Paso or Kingman, this cost was reduced, but still remained very hioh. This same ratio applied to the cost of minino and shipping the millinc ores. Taking these features into consideration at todays prices, toonther with all the settlement end assay sheets that were available, the ore shipped can be estimated at $\$ 1.200$ per ton, figuring gold at $\$ 150$ and silver at $\$ 5.00$ per ounce. This average would not include small shipments of ore running up to several thousands.

The milling tonnage treated armounted to about 10,000 tons and from a careful checking of all available sources of information including present samples, a gross value of $\$ 200$ per ton in gold and silver can be safely allowed.

In 1929, on the site of the old Chlorination llill, a complete and self contained floatation : Mill ras erected, usina the "Krout" Flodt. ation Cells, fllis Chalmers Ball hill, etc, having a capacity of fifty tons per day. In addition to this, there were five stamos left in the old batterv alone with its autonatic feed. This irstaliation also had a Elake Crusher, one concentrating table, a 60 HP boiler, four water tanks, an oil tank, and a boiler pump. A large and very complete assay office and bucking room complete with cement floors.

## GEOLOGY AND VEIN STRUCTURE

The 40 mining claims of this group cover sevon mineralized fissures, all having a bold outcron and all carrying milling ore and a fair percentage of higher grade values. but as five of these veins are only developed in a superficial $:$ ay. little attention is paid to
themin this report and the two veins known as the Rueen, llest or Footwall Vein, and the Arnold or llanginavill Vein will be described and erphasized.

In describing these two lass mamed voins under this present heading of "Geolony and Vein System" and later on, under the headine of "Ore Devcloped and Available", it rust be borne in mind that this report and examination has been made after a careful inspoction of all the physical features of the property and all encineers, managers and superintendents reports avallable. This has laken considerable time on account of the inaccessibility of mary of the oneninos due to caved around and water in the shafts and tunriels. Unfortunately, these onsticals cannot be overcome at this present viriting, (but redevelopment work is presently occurino by the T. P. Ward corporation of Phoenix, Arizona, who are retimbering and opening up the Arnold Shaft and General L.ee Tunnel.)

FORMER REFORTS
In 1888, an eainent ongineer, officially vouched for by the largest California and lievada lining Operators, states in his report:
"A shaft has heen sunk on the Arnold claim on the llangingwall Vein to a depth of 110 feet or nearly 200 feet below the hinhest cropping of the apex each way form this shaft, and 110 feet atove the bottom of the same, there has been a level run over $600^{\prime}$ in the ledge, showing a continuous ore body so far as run. over 2 feet in thickness. In this tunne? ledue about 300' South of the Shaft, there is a vinze sunk to a depth of $40^{\prime}$ showing the ledge to be three feet thick."
"From examination of tooks and vouchers, I fird there has been shipped $\$ 15,348.59$ worth of ore carrying an averane value of $\$ 243.62$ per ton. The lowest assay of any shipment being $\$ 161.40$ and the highest being $\$ 415.16$ and of the arove valuation atout $10 \%$ was in gold." (Todays values vould be $\$ 122,788$ vorth of ore at a value of $\$ 1.948 .96$ rer ton, lowest at $\$ 1,291.20$, hithest at $\$ 3.321 .28$ per ton.)
"In addition to this ore shinped, there has been troated in Arastra, surface ores which produced a tullion value of $\$ 170.00$ per ton ( $\$ 1,360$ today). In making my estimate of the quantity and value of ore reserves or what is called ore in sioht'. I have chosen to be more conservative than anyone owning the property would he willing to adopt as the basis of sale."
"He have a continuous orebody 1,000 in length. 160' in depth, and $2^{\prime \prime}$ thick, making 320,000 Cu. Ft. of orc. This gives ore reserves of 27.000 tons."
"The vlaue of all ore the mine has heretofore produced has been over $\$ 80.00$ per ton ( $\$ 640$ at todays prices). I feel safe in estimating the net value of the 27,000 tons in reserve to be $\$ 50.00$ per ton ( $\$ 400.00$ today). This would nake ore in sight valued at $\$ 1,350.000 .00$ after deducting reasonable expense of mining and treating the ore (approximately $\$ 10,000,000.00$ today).
"It is highly inportant to state in this connection that we make no estimate of ore in the large or Footwall Ledae from the fact, that only a single shaft $40^{\prime}$ decp has been sunk on this ledge in this claim, but the ledge on the south of this clain and also on the Worth (in the Silver queen and Ceneral Lee clains) have yeilded
ore valued at over 250.00 per ton ( $\$ 2.000 .00$ woday). so while it is possible this other large ledge upor the firnold life may go to the same depth as the other is estimated to produce cven areater value than the one estimated yet as it has not been proven by pemetraticn. I have given no estirate of its value."

In 1894, another engineer temporarily directing the development of the property reports:
"The main Arnold Shaft is sunk 260'. The llortherly adit is 100' long, the vein is continuous. The southerly adit is 303', the vein is continucus."
"The South adit, $383^{\prime}$ long has been chlorided partiy in the richer stopes some of the stopes showing fully $6^{\prime}$ thickness removed. Fully one-half of the mineral in this drift has been stopod out with but a small proportion remaining in the stopes and on the dumps."
"In the North adit 100" long, the ore is continuous encountering some very rich ore chloro-bromide of silver in the roof near the shaft. The 60' level is short, but shows excellent ore. Below this level, the ore in the shaft is 28 " wide and averagos for $400^{\prime}$ with silver at 26 oz . gold 0.45 oz. . The Northvest drift is $48{ }^{\prime}$ long showing ore from $14^{\prime \prime}$ to $20^{\prime \prime}$ carrying a value of from $\$ 40: 00$ to $\$ 75.00$ per ton ( $\$ 320$ to $\$ 600$ today). The Southwest drift, $102^{\prime}$ long shows the ore seani in the roof continuous but varying."
"On the durap are heaps of ores extracted in developacnt lately, some of which have been assorted several times. From one heap of about (by measure) 400 tons, which has been assorted three or four times, gives an assay of silver of 46.37 oz , and çold 0.70 oz .. About 2/3. of all ore mined $\because$ as shipped or shippinct ore."
"The avorage value of the ore is sormat difficult to get at in the present condition of the workiros. but from samples taken on the second winze in the adit level from the llorth drift in the 100' level, the Southeast drift and winze, and from other drifts and winzes, an average of 12 assays gives (after eliminating two of the higher assays) an averaoc of $\$ 34.02$ in silver at $\$ 0.60$ per ounce, and $\$ 13.02$ in gold at $\$ 20.67$ per ounce, makina a total value per ton of $\$ 47.04$ (Todays prices would be $\$ 104.16$ in 901 d . $\$ 272.16 \mathrm{in}$ silver or a total value of $\$ 376.32$ per ton).

An enoineer employed by the purchasers in 1895, on the queen and Evanolist Claims reported in part as follows:
"All six samples, taken from the 90 level of the Queen iline where the vein was $5^{\circ}$ wide as showinct an average value of 561.77 per ton of silver ( $\$ 512.69$ today)... Seven samples taken from the 130' level with an averace width of $2^{\prime}$ gave an average value of $\$ 163.28(\$ 1,355.22$ today). Six other samples from the tunnel level for a $!$ idth of $2^{2 \prime}$ gave an averano of $\$ 13 \% .00$ ( $\$ 1.13 \% .10$ today)".
"From the North end of the tunnel drift to the South end of the drift on the 130' level, this ore shol:cd measures 400' long. Both heads of these drifts are in ore so the length of the ore is not deternined. Surface indications point to a longer oreshoot. I estimate that this oreshoot will produce 7,000 tons of ore. Reducing the high average value of the samples to $\$ 50$ per ton gives $\$ 350.000 .00$ in sight (loday would be approximately $\$ 400.00$ per ton giving approximately $\$ 2,800,000.00$ in site)."
"The ledse in the shaft and drifts is from 4' to b' in wicith but i only considered $2^{\prime}$ which is the rich part of the vein. The other part of the vein from $2^{\prime}$ to $4^{\prime}$ assays from $\$ 15$ to $\$ 20$ per ton (today $\$ 120$ to $\$ 180$ per ton)".

This same engineer in renorting on the Fvanolist Claini states:
"A tunnel vas started on the llost ledre and has boen run a dis. tanco of $336^{\circ}$ at which point it enters the kast Vein or ledoe $200^{\circ}$ belo the surface on the pitch of the ledae. The East ledae, at this point is $20^{\prime}$ hetween walls. On the rootwall thore is $4^{\prime \prime}$ to 5" of ore that assays l6a ounces silver. per ton. Then there is 16' of ledge matter and on the Hanging or East hall there is "' of ore that assays $\$ 42.50$ per ton in gold and silver, ( $\$ 340$ per tori today) einhty percent of this value is in gold. This is the result of a three ton sample taken from the $15^{\prime}$ drift that was run on the ledece at this point. Thero is 200 of backs at this point and I estimate that, if one-half of the vein above this tunnel is as cood as the tunnel. there is a gross value of $\$ 050.000 .00$ in sight at this place." (\$5,200,000.00 today).

Another encinecr's report in 1901, when the Arnold shaft was sunk to a depth of 200 foet states:
"On account of water, I could not get to the bottom of the main shaft. The orehody in the $100^{\prime}$ level shous strong from $2^{\prime}$ to $5^{\prime}$ wide. The ore showed is over 400' long on this level arid holds very reqular in width and high values."
"Hearly 300 ' from the mouth of the shaft on the adit level which discloses a strona orebody from top to bottom of an average width of two and one-half feet. The ore has been stopped on the adit level about 80' to the surface."
"The veins have been prospected in many places by shallow openings. liy sampes, except from the hrmold, liere taken from those surface workings."
"From East Vein Lee Shaft Tunnel:
"Lee Hest Vein showing Iron South End:

$$
9.8 \mathrm{oz}, \text { Silver, } 0.09 \text { oz. Fiold } 11.70 \quad 93.60
$$

"Lee liexican Stope Ledoc $2^{\frac{y}{2}}$
52.3 oz. Silver. 0.17 oz . fold
55.70
445.60

In 1004, another engineer reports as follovs:
"The Arnold Shaft has been sunk to a dopth of 250'. On the
100' level. the oreshoot extends for a distance of $320^{\prime}$ to the Southeast and $80^{\prime}$ to the llorthwest. This shoot has an averane width of 18 " of first class ore, beside the milling ore lying alongside wich has a width of from $2^{\prime}$ to $3^{\prime}$ additional."
"Samples taken along this oreshoot on the 100 level gave the
following results:
"ifo. 1-32.2 oz. Silver.
$\begin{array}{ccccc}2-51.1 & " 1 & " 1 & 0.40 & \text { " } \\ 2-247.0 & " 1 & " 1 & " 1.64 & " 1\end{array}$

| 1904 | 1975 |
| ---: | ---: |
| $\$ 37.00$ | $\$ 290.00$ |
| 60.30 | 482.40 |
| 279.80 | 2.238 .40 |

"flumber 1 , was taken along the length of the ore shoot, an average of 40\%'.
"Humber 2, was a part of the pay streak from tho liorthost of the shaft."
"iluniber 3, was a rich pert of the pay strark mixed with quartz from both sides of the shaft."

I could only explore about $30^{\prime}$ on each side of the shaft on the 200' level on account of the drift being filled with dobris, but the oreshoot shows the same characteristics as in the 100 levei and the veins showed much wider."
"This vein is exceedingly strong and can be aasily traced for a distance of two miles on the surface. The llanoingwall being especia-ly finc and very hard. This fact is fortunale as it will enable you to mine the ore at a coriparatively small expense for mine timberina."
"The Oueen runs parallel to the Arnold vein and at a distance of from $100^{\prime}$ to $150^{\prime}$ to the West of the Armoid Shaft. On the surface, these two veins seen to come together on the Hubbard claim about $3000^{\prime \prime}$ to the Southeast."
"The Queen seems to be a stronger vein than the Arnold, but with less develonment. One shaft has been sunk to a depth of $140^{\circ}$ but is caved and could only be examined to a depth of about 60'. I am informed that the full width of the hottom of the shaft is in good grade ore. The ore in sight and on the dump is certainly of a very gond grade as the assay value of several samples shows:
145.2 oz. Silver, 0.82 oz . Gold \$101.co \$1.288.00
"This ore shows a very heavy sulphide. There has been a laroce amount of surface work done on hoth veins of this claim by chloriders who shipped a large amount of very rich ore vihich the working would indicate."
"Samiles taken from the ledge several hundred feet northoest of the Shaft gave:

| 72.0 oz. Silver | 0.16 | oz. rold | $\$ 75.20$ | $\$ 601.60$ |
| ---: | :--- | :--- | ---: | ---: |
| 31.4 | 0.15 |  | 34.40 | 275.20 |
| 47.2 | 0.06 |  | 38.40 | 387.20 |
| 30.4 |  | 0.36 |  | 37.60 |
| 57.4 |  | 0.03 |  | 300.80 |
|  |  |  |  |  |

In all previous reports, the Arnold or East Hangingwall, and the Queen or Nest footwall have been considered and treated as tyio separate veins. This due to the fact of the difference in the ore, their discovery, and in the character and difference in the time of their develomment. As a matter of fact, they constitute one large, strong contact fissure exposed for practically 7,500 feet in length in this consolidation, carrying a diorite hangincuall and a aranite footwall ranqing from $50^{\prime}$ to $200^{\prime}$ apart, carryinc independent of the hangingwall and footwall ore bodies a contact mineralization of porphyry, quartz, and the softer aranites. In the report of one eminent engineer, intervening material is designated as being a 'horse' or intrusion betveen the two veins, but a am entirely convinced to the contrary, and this is clearly proven at the Arnold Shaft and dump where in grading across for $100^{\prime}$ between these two

Walls, a number of shaller strinoers of ore rere disclosed and the hioher arade was shipped with other ores. It is also proven in the Evamonlist crosscut tunnci (from which ve are now draming our doncetic $\because$ ater) where the formation between the Foctuall and Hanninguali is shown to te a porphyry with oxidized feecers of iron and cuartz. Unfortundtely at this period, no undorground workinos ifforded an opportunity for sampling between these tao mineralizations but it will te found with the resesont devolopment and later worke that the west or Footwall Voin of aranite, which nowhas a dip to the l!est and alway from the Hanginamallof diorite which has a slight dip to the East that the granite Footwall in changirg its dip to the fast will concentrate this laree mineralization and I filly oxpect to find lith depth, a large proportion of this contact filling. carrying milling values with higher grade shipping and milling ores on the Foot and Hanging Halls.

I recognize that in using excernts from eneincering reports dated back to 1883. 1895, 1901, 1929, thot I am quoting "Ancient llistory" and under ordinary circumstances. such information or data would be of little use in a report that is intended to cover the prosent condition of these mines, but as will be shown later on in this report under the head of "Ore Developed and Available", a very minirum arount of these ores in the several propertios have been mined, shipped, or milled and although, only a small part of these develorments can, at this date, be exarined or sampled, vet the fact romains that under mater or covered by caved around the physical conditions coverinc the values previously reported upon remain practically intact and reaciy for exploitation.
ore developeo a!d available:
As alrcady stated, the present physical condition of the firnold Silver Queen, Gereral Lee, Evanole ist and Hubhard lines which carrv the princinal developments of this cons-lidation makos it difficult to calculate the ore tonnaces and values availatile But by care. fully checking up on all of tho rocords of production together with the known developments on these claims last moritioned, it is safe to figure that there is 15,000 tons of ore exposed in the sovoral levels of the limold shaft. This ore will carwa strong average value of $\$ 150$ to $\$ 250$ per ton. The Silver quoden pronerty can be credited with available ore that will require re-openine the shaft for further exposure, of what $I$ calculate to be 8,000 tons of at least equal value.

The develoment in detail of this property toocther with the Evangelist, Little Minister, and reneral Lee are correctly shovn on the attached plates, but it has not reen possible co mate an assay chart or map, and this reduced value of $\$ 150$ to $\$ 250$ per ton is established after a neneral sampling and after cutting down all previous assay reports.

Futher, with a small amount of work in draining and muckino the Lec crosscut tunnel and its levels, sufficient drifting can be uncovered on the Hanainawall and Footwall Veins to show a virgin tonnace. and by drifting on these two veins from the rancelist crosscut, an cqual amount of ore can be exposed. The records indicate the ore
in the reneral lee as been develoned and it i very sofe to estrate that. these develonments will quickiy and cheaply put ir sight, a tonnaçe equal in value and extent to that of the Arnold and Quere.

## OEVELOPOENT ADVISED

For sunerficial develoninent the will put in sight. a large ore ton-
 cut Tunnel should be extended "rth and South. This sane characior of bork will apply to the samr voins in thevancelist Tunnel. Ile $200^{\prime}$ and $250^{\prime}$ levels in the rroold shaft shodid be exterided. as should be the 100' level and extended forth undei tio Evancolist.

For permanent work, the Arnold Shaft should he deenened and levels driven on the tho veins, drifted on at varying depths in the Silver Queen Claim to the North and the Evangelist Ciaim to tho South; these vorkinas to be connected up with the levels fron the lirnold Shaft and in the lattor, the levels south should be extended into the General Lee and Hubbard Claims beion the level of the lee Crosscut Tummel. The superficial devolopmentes montioned can be coverod with a comparatively small outlay which would result in equippinc the property for a production of at loast 100 tons per day and a safe fioure can bo establishod of not to exceed $\$ 35.00$ per ton for minins, millincs and all overhead and underaround expense, lt is my estimate a 100 ton per day plant will allow approyimately over 25 years of operation.

SUBMARY A:ID CONCLUSIOMS
These properties carry a strong vein systen for a length of over 7. 500 feet on the liast and best Veins. the same lemath on the nolden Sulphide lein, and 2,500 feet on the poart and other veins embraced in thess some 675 acres. Sufficient work has been done on the main vein system to demonstrate their continuity in lenoth and depth. with a good mining sidth and assured values that will afford a large profit. Acomparatively smal! amount of capital will be required to cquip the property for mining and milline 100 tons per day and the rata-lurgy of these ores; practicayly requires litile experimenting or study, and there need be no mistates made in the economical dovelopm rent of the known ore bodies. In short, there are no physical nor motallurgical obsticles to nrevent an intelligent management from making a large and legitimate manufacturing profit at fractically no risk for the investment, as the ore bodies together with thoir values are positively proven and assured, and thoy can to mined and milled at a reasonable cost, making a desireable concentrate for which there is almays a ready market affording a oood profit. pe.. search is presently occuring using the most recent inforriation available for the inclusion of a chemical recovery which will afford an end product of bullion, bars or whatever.

PREVIDUS ASSAYS
The following were taken hy an engineer. H. ll. Russell of Los Anceles, California, April 26,1901 . Values have been calculated using the figures of Gold, $\$ 140.00$ per ounce, and Silvor at 54.00 per ounce.

## Arnold ciaim:

$100^{\prime}$ winze, average of $2 \frac{1}{2}$ ledẹe $0.19 \quad 28.7 \quad \$ 278.80$
Main 100' level, 2' to 5' ledae 0.12
$243.0 \quad 988.80$

Shaft fiz, 2' ledere, $40^{\prime}$ wide, $200^{\prime}$ south of shaft Arnold : 6

|  | 0.61 | 122.0 | 573.40 |
| :--- | :--- | :--- | :--- |
| nverages | 0.27 | 104.17 | $\$ 455.00$ |

Silver Queen Clajm:
West Enc of bo' Shaft
Silver Oueon \# 2

|  | -0.25 | 71.00 | 319.00 |
| ---: | ---: | ---: | ---: |
| Averages | 0.57 | 54.6 | $\$ 298.20$ |

General Lee Claim:
East Vein, Shaft Tunnel
Lone Stope. Across $24^{\prime}$ Ledne
$4.60 \quad 340.0 \quad 2,004.00$
$0.15 \quad 5.0 \quad$ A1.00

West Vein, liexican Prospect Hold showing iron near south and
$0.09 \quad 9.8 \quad 51.80$

Stope Vorked Out by Mexicans, ledoo ahout $2 \frac{1}{2}$ : but continues with ore and porphyry for $28^{\prime}$

|  | 0.17 | 52.3 | 236.40 |
| :---: | :---: | :---: | ---: |
| Averages | 1.25 | 101.78 | $\$ 582.10$ |

Hubbard ciam:
8' Lecige on Surface

$$
0.10 \quad 2.0 \quad \$ 22.00
$$

Silver Cucen Clair:
Sample:2

$$
0.25 \quad 71.0 \quad \$ 319.00
$$

Various Samples
Unknoun location ? ? 400.79

| Picked $\%$ | 5 | 1.36 | 94.0 |
| :--- | :--- | :--- | :--- |

$\begin{array}{llll}\text { :10. 2. Larae Cropping } & 0.05 & 19.0 \quad 83.00\end{array}$

## J. GRANT HOWARD

## TELEPHONE

(802) 268.7819

## 29 WEST LAWRENCE ROAD

PHOENIX, ARIZONA BEOIB


CEDAR MINERAL, COMPANY Arizona Limited Partoership
1975

CEDAR MINERAL COMP AVE hereby offers subseriptions for twenty-ive (25) units in a Limited Partnership pursuant to which Cedar Mineral Company (the "fimited Parmerehip") will he formed. Aha Management Corporation, at Arizona Corporation, will serve as General

 THIS OFFERING HAS NOT BEEN AND WILL NOT BE REGISTERED OR QUALIFIED BY ANY FEDERAL, STATE, OR LOCAL GOVERNMENTAL AGENCY OR COMMISSION INCLUDING WITHOUT LHMTATHON, THE UNITED STATES SECURITIES AND EXCHANGE COMNTSSON, AND THE ARIZONA DEPARTMENT OF CORPORATIONS, NOR HAS THE OFFFRINC BEEN APPROVED, ENDORSED OR KECOMSMEFDHO BY ANY SUCH GOVERNMENTAL AGENCY OR COMMISSION.

Investment in units of the Partnership involves a high degree of rit and is suitable only for persons of substantial financial means whirs have no need for a liquidity in their investments.

Purchase price per unit will be $\$ 30,000$, with minimum e $50 b s+$ man on beng one-quarter (1/4) unit. No underwriting conmasione are being pad on the maximum total subscription of 5250,000 . Units are not abject 10 assessment. Subscriptions are payable not less than ten per cent (los) at the time of subscription and the remainder within sixty ( 60 ) days thereafter. USE OF PROCEEDS - While it is not possible to predict at this time the exact allocation of the net proceeds of tho Offering ty the ship, it is estimated that the initial $\$ 50000$ will bey the limited Partner. critical path schedule for 1975 , who dispensed as shown in cash-flow projection and tar Eix-month estimate of costa and six-month BUSINESS . The leasing, owning, and mining of minerals engage in exploring, marketing, The Company has gold and
for $\$ 35,000$ on 675 acres up, Arizona. Mining will immediate d mill site are patented land near Wikiegram) with contract milling by local firm begin in the Old Arnold Shaft (see diangram) with contract milling by local firm. It is expected that this operation
will produce income from the outset. After detailed engineering studies on the best recovery techniques are proven, a mill will be constructed (seecashflow projection). Also, several gold properties are being explored for possible purchase in the future.

To further reduce Partner risk, the Company has a six-month option on 2,500 acres of uranium ( $1.5 \%$ ore sample) property south of wikieup, Arizona ( $\$ 108,000$ cost with $2.7 \%$ of gross). It is estimated that these claims will produce a minimum of 500,000 pounds of yellow-cake (U3O8). In order to market this $U_{3} \mathrm{O}_{8}$, it will be necessary to block off the reserves by immediately drilling two $500^{\prime}$ holes $(\$ 8,000)$; further drilling may be necessary.

The Company anticipates purchasing, mining, and marketing other proven and unproven uranium reserves for the immediate and future energy needs of our country.

RISK AND OTHER FACTORS - The principal objective in making investments will be to obtain for the Limited Partners current tax-sheltered income and capital appreciation. No assurance can be given that this will be attained or that the Partnership capital will not depreciate. It is intended to cease re-investing Partnership capital commencing five (5) to six (6) years after formation of the Partnership. The Partnership has no operating history, and it does not presently own any properties or options other than those listed above.

The General Partner will be generally liable for the Limited Partnership debts, to the extent not paid by the Partnership.

MANAGEMENT - The General Partner will have general responsibility for supervising the Partnership operations, including the supervision of compliance with legal and regulatory requirements and preparing and transmitting of periodic and annual reports to the Limited Partners. The General Parner has the ultimate authority in all matters affecting the business and affairs of the Partnership and the formation of guidelines and limitations with respect to the Partnership invesiments. The General Partner will ovm $45 \%$ of the Partnership.

The General Manager and Vice President, Charles "Ray" Ward has had thirty-five years' experience in the mining business. He has superviged several very successful mining operations in ldaho. He has had experience in the recovery and development of uranium, tungsten, lead, silver, gold, copper, zinc, antimony, cinnabar, platinum, and tin.

Douglas K. Martin, with degrees in education and industrial arts, will serve as Staff Engineet and Secretary/Treasurer for the Partnership. He has had extensive experience in title searching, obtaining rights-of-way, drafting, surveying, and construction. For two years he was project engineer with Kitchell Contractors, Phoenix, where he assisted in the construction of the Phoenix Metro Centex, Goldwater's Store (100,000 square feet), Sears ( 250,000 square feet), etc.

Mr. Ward and Mr. Martin will receive a combined annual salary of $\$ 22,000$ (plus expense reimbursement) for six months; to be negotiated thereafter.

John D. Schnulo, Attorney at Law, has practiced law in Phoenix since 1971. He also has a degree in business administration and has received special training at Rocky Mountain Mineral Law Institute. He will serve as Company counsel in law and management and will serve on the Board of Directors.
W. Mel Alexander, President, will help manage, give financial counsel, and act as liasion for the Limited Partners. He is President of Executive Leasing Corporation and Executive Financial Asbociates in California and Texas; President of Evangelism, Incorporated; Executive Director of Christian Medical Missions, which does philanthropic Christian medical/dental work in developing countries on a volunteer basis for one- and two-week vacation periods (international, non-profit member Organization). He will not receive a salary initially but will receive expense reimbursement.

TAX ASPECTS OF THE OFFERING - It is the opinion of Dick Denen, who will serve as Certified Public Accountant for the Company, that under the current IRS code and regulations, the Limited Partrership will be regarded as a Partnership.

It is anticipated that the Partnership will have certain losses for 1975 which will be passed on to the Limited Partners (see cash-flow projection and tax effect).

The Limited Partnership will not itself be subject to any federal income taxes, and each Limited Partner will be taxed on his pro rata share of the Limited Partnership taxable income, whether or not distributed to him. Each Limited Partner will be entitled to deduct on his pergonal income tax return his pro rata share of the Limited Partnership net losses, if any, to the extent of the tax basis of his partnership interest at the end of the partnership year in which such losses occur. In computing income and loss. es, an aggregate of one-hundred per cent ( $100 \%$ ) of all allowable income tax deductions (including interest and depreciation) will be allocated among the Limited Partners in proportion to their relative investments in the Partnershin,

The Limited Partnership may make various elections for federal (ax reporting purposes which could result in various items of Limited partnership income, gain, loss, deduction and credit being treated differently for tax purposes than for accounting purposes. Tax reform may change this prospectus.

The Tax Reform Act of 1969, which amended the Internal Revenue Code of 1954, made various changes affecting the tax benefits traditionally associated with the ownership of real estate. (See your accountant for these changes.) Arizona.

GENERAL INFORMATION - The principal office will be located in Phoenix,
A Limited Partnership Agreement is attached and made a part hereof.

|  | Total Cash Required | Partners Source | Leasing | Tax Status |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 9/12/75 | \$ 1,760 | \$ 1,760 | \$ | \$ 1,760 | \$ |
| 9/19/75 |  |  |  |  |  |
| 9/26/75 |  |  |  |  |  |
| 10/ 3/75 | $\begin{aligned} & 1,298 \\ & 1,685 \end{aligned}$ | 1,2981,685 |  |  | $\begin{aligned} & 1,298 \\ & 1,685 \end{aligned}$ |  |
| 10/10/75 |  |  |  |  |  |  |
| 10/17/75 |  |  |  |  |  |  |
| $10 / 24 / 75$$10 / 31 / 75$ |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| $11 / 7 / 75$ |  |  |  |  |  |
| 11/14/75 | 2,600 | 2,600 |  |  |  |
| $11 / 21 / 75$ | 5,000 | 5,000. |  | 2,600 |  |
| $11 / 28 / 75$ $12 / 5 / 75$ | 129,990 | 9,000 | 65,000 | 5,0009,000 |  |
| 12/12/75 | 21,450 | 64,990 21,450 |  | 9,000 | 120,990 |
| 12/19/75 | 20,840 | 20,840 | 32,300 | 14,000 | 7,450 |
| 12/26/75 | 89,900 5,230 | 57,600 |  | 20,090 | 750 |
| 1/2/76 | 5,230 36,525 | 5,280 | 30,010 | 41,200 4,530 | 48,700 |
| 1/9/76 | 16,280 | 6,515 |  | 4,530 4,715 | 750 31.810 |
| $1 / 16 / 76$ $1 / 23 / 76$ | 6,350 | 16,280 |  | 1,350 | $31,810$ |
| 1/30/76 |  | 600 |  | 5,600 | 750 |
| 217176 | $600$ | 600 |  | 600 |  |
| 2/14/76 | , 600 | 600 |  | 600 |  |
| 2/21/76 | 5,600 | 5,600 |  | 5,600 |  |
| 2/28/76 | 600 | 600 |  | 5,600 |  |
| 3/7/76 | 600 | 600 |  | 600 |  |
| contingency | $\begin{array}{r} 600 \\ 31,092 \\ \hline \end{array}$ | . 600 |  |  |  |  |
|  |  | -20,152 |  | . 600 |  |
| Baretta | $\begin{array}{r} 388,250 \\ \quad 55,000 \\ \hline \end{array}$ | 250,000 | $\frac{138,250}{}$ |  |  |
|  |  |  | $\underline{1}$ | 55,000 | 226,130 |
| TOTAL | \$443,250 | \$250,000 | \$138,250 | ,00 | $\underline{\square}$ |
|  |  |  |  | \$217,120 | \$226,130 |
| 1975 totals 1976 totals | $\begin{array}{r} \$ 343,803 \\ -99,447 \\ \hline \end{array}$ | $\begin{array}{r} \$ 191,503 \\ 69,437 \\ \hline \end{array}$ | \$127,310 | $\$ 165,163$ |  |
|  |  |  |  |  |  |
| TOTAL | \$443,250 | \$260,940 | \$127,310 | $\begin{array}{r} 51,957 \\ \hline \end{array}$ | $\begin{array}{r} 18,640 \\ \quad 47,490 \\ \hline \end{array}$ |
|  |  |  |  | \$217.120 | \$226, 130 |
|  |  |  |  |  |  |

1975
1976.

TOTAL $\because \quad . \quad$| $\$ 17,864$ |
| ---: |
| 4,749 |



Mill production is based on processing 100 tons per each 24 -hour period. Assay averages for the two proposed mines to be worked are as follows:


Therefore:
100 tons per day
Seven days per week

$$
\begin{array}{r}
\$ 23,500 \\
164,500 \\
658,000
\end{array}
$$

Four weeks per month
Assumes 10 months of production in 1976
$\$ 6,580,000^{* *}$

* Based on gold at $\$ 140$ per troy ounce and silver $2 \mathbb{L} \$ 4$ per troy ounce
** Maximum estimated cost of production (G\&A. etc.) ie $85 \%$. $\$ 987,000$ net.






# Charles R. Ward Corporation <br> Mining Development <div class="inline-tabular"><table id="tabular" data-type="subtable">
<tbody>
<tr style="border-top: none !important; border-bottom: none !important;">
<td style="text-align: left; border-left-style: solid !important; border-left-width: 1px !important; border-bottom: none !important; border-top: none !important; width: auto; vertical-align: middle; ">Mineral Recovery</td>
</tr>
</tbody>
</table>
<table-markdown style="display: none">| Mineral Recovery |
| :--- |</table-markdown></div> 

June 17, 1976

Mr. John Jet Department of Mineral Resources Mineral Building, Fairgrounds Phoenix, Arizona 85007

Dear Mr. Jet:
Re: Flow Sheet and Smelting Research

Mr. Ken Phillips of your Department phoned us yesterday from the office of $J$ \& J Smelting, Hisperia, California concerning his research and our Cedar Mineral project.
Permission was granted Mr. Rego (Vice-President) to make available all information in his possession concerning the Cedar Project.

Please be aware the particular flow sheet and information granted to Mr. Phillips is confidential and not for publication but for your eyes only.

The ore Mr. Rego processed and of which the flow sheet constructed was of our combined surface random samples mixed with ore from the Arnold Shaft.

Our purpose for this was to obtain a basic beginning or idea of what and how the average low grade ore could be processed plus check the reliability of J \& J Smelting. At this time, we are satisfied as to the report submitted by J \& J Smelting.

Thank you for your cooperation.
Dear ne matin.
Honkyon azan foynu woclluet copperetuon, an apprecal it. Th repeal cued fo este avn confrelendid

D. K. Martin Vice President

We wen nestles the apeudeoin un ode ho aflame dieter h

che once way bo furs out ppi herren ald thant agon

$$
\approx J
$$

# Charles R. Ward Corporation <br> Mining Development © Mineral Recovery 

June 17, 1976

Mr. John Jet Department of Mineral Resources Mineral Building, Fairgrounds Phoenix, Arizona 85007

Dear Mr. Jet:
Re: Flow Sheet and Smelting Research

Mr. Ken Phillips of your Department phoned us yesterday from the office of $J$ \& $J$ Smelting, Hisperia, California concerning his research and our Cedar Mineral project.
Permission was granted Mr. Rego (Vice-President) to make available all information in his possession concerning the Cedar Project.

Please be aware the particular flow sheet and information granted to Mr. Phillips is confidential and not for publication but for your eyes only.

The ore Mr. Rego processed and of which the flow sheet constructed was of our combined surface random samples mixed with ore from the Arnold Shaft.
Our purpose for this was to obtain a basic beginning or idea of what and how the average low grade ore could be processed plus check the reliability of $\mathrm{J} \& \mathrm{~J}$ Smelting.
At this time, we are satisfied as to the report submitted by J \& J Smelting.

Thank you for your cooperation.
ilea bu e master.
Thonkyon again for you secellent cooperation an apprucal it. Th repel well fo ext avn confullendised We were verily the apenderin un ode bo qatari dace th



File: CedawMineral Project
X-Ref: Charles R. WArd Corp. Alpha: "W"
Pink REading Copy

## June 21, 1976

Mr.D. K. Martin
Vice President
Charles R. Hard Corporation
4723 Porth 21st Avenue
Phoenix, Arizona 85015
Dear Mr. Martin:
Thank you again for your excellent cooperation - - we appreciate it. The report will go into our confidential file. We visited the operation in order to obtain data to pass on to others. We have been asked a number of times as to the credibility and capability of the company concerned. We thought going and seeing for ourselves was the only way to find out. You helped us a lot. Thanks again.

Very truly yours,

John H. Jett Director

February 3, 1976

MEMORANDUM FOR THE RECORD.

Telephone call from Mr. Grant Howard of Phoenix, telephone number
 Corporation as Generips - will be managed by Alpha Management General Partner.
President: D. Mel Alexander
V.P. \& Gen. Mgr. - Charles Ray Ward

Staff Engineer - Doug. Martin
Attorney - Schunerlow (?)
The partnerships not registered or qualified anywhere. Will lease Au and Ag claims with option to purchase 675 acres, some patented work will start at 01d Arnold Shaft. Milling will be contracted with local firm, Have six months option on $1.45 \% V_{3} 0_{8}$ property South of Wikieup. /n WiKi, emp
Note: See Cedar Valley Mines file.



PHONE (602) 274N. 483
March 30, 1976

Mr. Doug Martin Cedar Mineral Company 4728 North 21st Avenue Phoenix, Arizona 85015

Dear Mr. Martin:
On Monday, March 29, 1976, I toured the property of Cedar Mineral Company at/or near the old mining camp of Cedar in Mohave County. I was accompanied by Mr. Glen Walker, Field Engineer for the Department, and Mr. Ray Ward, General Manager of Cedar Mineral Company. Mr. Lloyd Dixon was at the mine. I want to list the equipment and recent work that I saw.

It is obvious that roadwork has been done. In addition, a trailer camp area mill site and office site have been established.

The trailer camp area that had been leveled appeared large enough for ten to twelve large trailers. One large trailer, ( $12 \times 50$ est.) was set up. A large water tank was in place on a hill above the camp. A water well had been recently drilled below camp. I was told the well was a 6 inch hole, 80 feet deep, with 4 inch electric submersible pump installed. An outlet pipe, electric cable and starter switch was noted.

Equipment noted at the mill site was as follows:

```
1. Ball mill 100 HP (est. 5 x 6)
2. Jaw crusher, E1 Paso Foundry ( }6\times18\mathrm{ )est.)
3. Two storage bins (concentrate)
4. Dliver Drum Filter ( }3\times4\mathrm{ est.)
5. Wenco spiral classifier
6. Deco float cell
7. Small crucible furnace
8. DFC blower (Lab).
9. Miscellaneous electric motors, switch gear, starters
        and resistors.
10. Stack of pipe, from }\frac{1}{2
11. Conveyer belt parts
12. Stack of core boxes
13. Bucket elevator parts
14. Conveyor stand
15. Assorted pumps and valves
16. Apron feeder
17. Galvanized iron for bullding
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Mr. Stanley George
May 6, }197
Page Two
down with a watchman on the property to maintain the
pumps and prevent vandalism.
Our assays are averaging approximately 25 oz. of
silver per ton with a quarter ounce of gold.
We are very encouraged with all we have discovered,
proven, and justified.
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Vice-President
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DKM/jer
cc: State of Arizona Department of Mineral Resources

## DEPARTMENT OF MINERAL PESO $\begin{aligned} \text { RES }\end{aligned}$

 MINERAL BUILDING. FAIRGROUNDS PHOENIX, ARIZONA 85007May 11, 1976

Mr. Douglas K. Martin
Charles R. Ward Corporation
4728 North 21 Avenue
Phoenix, Arizona 85015

## Dear Doug:

Thank you for sending the Department a copy of your letter on the Cedar mine. Your courtesy is apprecrated.

I hope you get your partners' problems solved rather quickly and can proceed with your develop-
 mont work.

Very truly yours,

John H. Jot Director

May 6, 1976

Mr. Stanley George
5001 Duverney
Laguna Hills, California
92653
Dear Mr. George:
Re: Cedar Mine
Hoping you have received oup payment for May on the Cedars' Property.

To date we have sunk the Arnold Shaft to the 200 foot level and re-established a 435 foot drift to the south on the one hundred (100) foot level and are now working on the drift to the south on the two hundred (200) foot level.

A 4" producing well has been drilled at the old mill site; a camp site leveled off for approximately 10 trailers; have a 150 ton per day floatation mill in pieces sitting on the partially completed new mill site situated on the east side of the new road; the General Lee tunnel has been run approximately 580 feet with rails, portal, etc., ready for mining.

At present, due to our partners having tax and malpractice insurance problems, we are temporarily closed

June 21, 1976

Mr. D. K. Martin
Vice President
Charles R. Hard Corporation
4723 North 21st Avenue
Phoenix, Arizona 85015
Dear Mr. Martin:

Thank you again for your excellent cooperation - we appreciate it. The report will go into our confidential file. We visited the operation in order to obtain data to pass on to others. We have been asked a number of times as to the credibility and capability of the company concerned. We thought going and seeing for ourselves was the only way to find out. You helped us a lot. Thanks again.

Very truly yours.

John H. Jett
Director

JHJ:PP

February 3, 1976

## MEMORANDUM FOR THE RECORD.

Telephone call from Mr. Grant Howard of Phoenix, telephone number 265-7819 - asked about Ceda火Mineral Company, Kingman - selling 25year $/ 1$ limited Partnerships - will be managed by Alpha Management Corporation as a General Partner.
President: D. Mel Alexander
V.P. \& Gen. Mgr. - Charles Ray Ward

Staff Engineer - Doug. Martin
Attorney - Schunerlow (?)
The partnerships not registered or qualified anywhere. Will lease Au and Ag claims with option to purchase 675 acres, some patented work will start at 01d Arnold Shaft. Milling will be contracted with local firm, Have six months option on $1.45 \% \mathrm{~V}_{3} \mathrm{O}_{8}$ property South of Wikieup. $n$ WiKi, emp
Note: See Cedar Valley Mines file.

John H. Jet Director

18. Three barrels of grinding balls
19. Miscellaneous assortment of gears, bolts, iron, etc. Equipment noted at the mine includes:

1. Combination back-hoe, front end loader - Case
2. H\&B Hoist, no motor, 42" diameter drum
3. 125 KW Onan diesel generator
4. 400 Amp electric welder
5. Two self contained house
. Diesel fuel storage tank
6. Miscellaneous electric 1 ire and switch gear
7. Two Jack limbers
8. Two Jack legs
9. A torch, lights, tool shed at the saft, containing exting
10. Small blower with plastic tubing for viscellaneous supplies.
11. Coppus vent blower
12. Miscellaneous tools, including double jacks

The shaft, which I was advised was the Arnold Shatt, had new timbers the first 20 feet or so. As far as could be seen, the other old timbering looked in good shape -- new ladelers had been installed.

A small pipe headframe (sinking), with a small two drum contractor hoist A large compressor nearby was also leased.

As we toured the property, a number of cuts across the strike of the veins (when visible) were noted. These cuts were made by a bulldozer were visible.

Two late model pick-ups, one a four-wheel drive and a flat bed truck were The four-wheel drive unit was used to fransportation from Wikieup to the mine. property.

The surface tour was quite complete. One adit was entered and a drift was folliowed and cros-cuts noted. Much surface geology was noted. No attempt was made at any evaluation of any kind. No engineering data was studied. This letter is to merely note equipment personally observed. I want to thank you for the most excellent tour. Mr. Walker and I both appreciated your generosity.

Very truly yours,

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John H. Jett
Director

Mr. Martin said his company, Charles Ward Corp., had cleaned out the old Cedar shaft 15 miles NW of Wickieup and had Miertz sample the old workings which extend to the 290 level. GN WR 10/2//75

Mrs. Flax (card) said that she and her brother, a Kansas City doctor, visited the Heath mill on Thanksgiving with the idea of buying it and processing Cedar Valley Mines Co. ore, but were unable to contact the principals. She went on to say that since then Cedar Valley Mines has bought a mill in Auburn, Calif., and moved it into Phoenix for some repairs and will fix the trail to the mine and truck it up there in the near future. GW WR 3/4/76

Accompanied Mr. Jett to the Cedar Mineral Co. properties about 16 miles NW of Wikieup where we were given the "cook's tour." GW WR 3/29/76

I talked to a Mr. Davidson at Cedar. A mill still is on the ground there. Apparently there is not enough ore at the Cedar mine to justify erection of the mill. VBD WR 8/21/76

CH/WR 12/4/79 - Will start mining on their 14 patented claims (silver) fifteen miles northwest of Wickiup in the Hualapai Mtns. The company is composed of a group of west coast doctors and one man is Musical Director of the Dinah Shore Television Show. Contact: Dr. Daniel Alexander (see yellow card).

CJH WR 9/16/80: Field interview with "Dusty" Denton in Wickieup. Will write separate report. He reported no activity at the Cedar Mine in the Huglapai Mountains.

NAME:

\section*{Mineralization:}

Geology:

Type Operation:

Production:

References:

\section*{NAME:}

Anole - Jilin Imam, Evanpert. Wince thide Awake
COUNTY: MOHAVE
\(T \quad N \quad R \quad W \quad\) SEC.

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?
Mineralization: \(A_{q} A\),

Geology:

Type Operation: 6 is \(\sigma\). Deworgmort.

Production: 9175,000 to \(184 \%\) Total 460200


Mohave Cty Card File

\title{
Charles R. Ward Cobporation \\ Mining Development \& Mineral Recovery
}

PARCEL \(/ 715\)

\section*{LOCATION}

The group of clains are located in the Cedar Valley Mining District, Mohave County, Arizona, on the Southwestern slope of the Wallapai Mountains, South of Kingman, 64 miles and East of rucca, 28 miles. Both of these points are stations of the nain ine of the \(S\). T. \& S. F. Hailroad. Kingnan being the County geat and supply point. Both are connected by a good auto road with these mines.

SIZE
The consolidated mineral claims and Mill Site cover an area of about 400 acres, 4 of the claims carry United States Patents, as does the M1ll site, the remaining clains have all been firmly held by a company for a period of years under the United States laws governing mineral locations.

\section*{TYPE OF ORE AND OPERATION}

Underground operation. Principle ore, silver ranging from a low of 20 oz . per ton to a high of 500 oz . per ton. Gold averages 1 oz . for every 100 oz . of silver.

\section*{HISTORY}

This district and some of the mines embraced in the consolidation
was discovered in 1873, when the Cedar Valley Mining District was organized. From this period until 1883. the surface or chloride ores, yielding froin 200 to 500 oz . of silver per ton. was arrastraed and amalgamated by the patio and barreli process, the bullion being about 930 fine in silver. This was shipped to San Francisco along with much of the sorted ore, this being apacked to the Colorado River, a distance of 50 miles, then by boat and Ocean Steamer at a cost of \$100 per ton.

The operation of the M111 was intermittent, as at this time the metallurgy of these ores was not well understood. This fact, taken together with the reduced price of silver, excessive cost of hand mining, wagon haul, packing, railway and smelter charges; expenditures of a large amount of money in Mine purchase, erection of Mill, development of the mines, the building of two roads connecting with Yucca and Kingman. resulted in a cessation of all mining and milling by these operators.

After carefully examining and checking all available of \(\$ 460,000\).

Up to 1895 the production was \(\$ 175.000\).
From April 1895 to January 1897 - a period of 20 months a production of shipping ore, bullion, and concentrates was made amounting to \(\$ 275,000\).

It must be remembered that the average cost of landing ore In San Francisco was \(\$ 100\) per ton, and later, when the ore was shipped to El Paso or Kingman, this cost was sonewhat reduced but still very high. The same ratio applied to the cost of mining, shipping and milling ores. Talking these reatures intio consideration, the ore shipped can be estimated at \(\$ 150\) per ton, figuring gold at 120 per oz. and silver at 60 cents per per oz. The milling tonnage treated amounted to about 10,000 tons and from carefully checking all avallable sources of information, including present sampling, a gross value of \(\$ 35\) per ton in gold and silver can be safely allowed with gold figured at 20. and silver at 60 centis per oz.

\section*{DEVELOPMENT}

ARNOLD CLAIM:
\begin{tabular}{lr} 
Arnold Shaft: \(5 \frac{1}{2} X 7 \frac{1}{2}\) & 297 feet \\
Adit drift (S) & 400 feet \\
Adit drift (N) & 150 feet \\
100 foot level (S) & 465 feet \\
100 foot level (N) & 200 feet \\
200 foot level (S) & 300 feet \\
200 foot level (N) & 25 feet \\
250 foot level (S) & 35 feet
\end{tabular}

These developments were all made on what is known as the East Vein, which has been designated as the "Hangingwall of the contact fissure". The veln carries a width of two to five feet. with an average of four feet on the 200 foot level.
GENERAL LEE: Shaft
Drift (S) on 50 foot level
Drift (N) on 50 foot level
Drift (S) on 75 foot level
Drift (N) on 75 foot level
Winze (N) on 75 foot level

125 reet
150 feet
150 feet
30 feet
120 feet
25 feet
250 feet from the \(N\). end IIne, a short tunnel crosscuts the West of Footwall vein at a depth of from \(30^{\prime}\) to \(40^{\prime}\) this was
stoped to the surface for a length of 120 feet. This was lnown as the
"Mexican Stope" it was on the East or Hangingwall vein.

Crosscut tunnel 555 feet
This tunnel crosscuts both the West or Footuall Vein and the East or Hangingwall Vein - it is inaccessible at present on account of slight caves baciling up the water. Drift (N) on Hangingwall

\section*{120 feet}
\(\longdiv { 2 7 5 \mathrm { feet } }\)
\[
\frac{60 \mathrm{feet}}{60 \mathrm{feet}}
\]

336 feet
15 feet
\(\frac{15 \mathrm{feet}}{366 \text { feet }}\)

ALL IN ALL THERE IS A GRAND TOTAL OF 6185 FEET OF DEVELOPMENT IN TIE "CEDAR" GROUP CLAIMS.

From examination of books and vouchers, we find there has been shipped \(\$ 15.348 .59\) worth of ore carrying an average value of 243.62 per ton. The lowest assay of any shipment being 161.40 and the highest being \(\$ 415.16\) and of the above valuation, about \(10 \%\) was in gold.
There is a continuous orebody 100 feet in length, 160 feet in depth and 2 feet thick, malking 320,000 cubic feet of ore this gives ore reserves of 27,000 tons. The value of all ore the mine has heretofore produced has been over \(\$ 80.00\) per ton. We would be safe in estinating the net value of the 27.000 tons in reserve to be \(\$ 50.00\) per ton (OLD PRICES), which would malse ore in sight valued at \(\$ 1.350,000\) after deducting reasonable expense for mining and treating.

\section*{GEOLOGY}

The general geology of the Wallapal Range has been thoroughly covered by the United States Geological Surveys and other eminent Geologists, all agreeing as to its being a repository of a great variety of mineral bearing rocks, precious and rare metals.

Its mineralized fissures are located in the Pre-cambrian granitic rocks, this same complex covering a large area in this Country and extending beyond the Colorado River into Utah and Nevada, embracing many of the large ore producers in Arizona. The United States Geological Survey describes the Wallapal Mountains as "porphyitic, schistosed, the mineral bearing fissures being located in the granite diorite schist and quartsite, often impregnated or intruded by pegmatite, porphry and diabase dylke". This defines perfectiy the geology of the Southwestern slope in which the property is located.

\section*{CONCLUSIONS}

These consolidated properties carry a strong and continuous vein system for a lenown length of upwards of 12,000 feet on the east and west veins the same length on the "Golden Sulphide" and 1500 feet on the "Pearl" and other veins embraced in this property.

Talcing into account the fact that the ficures shown were when gold and silver prices were extremely low by today's standards the property should deserve high consideration for investors looking for a very profitable return on their

NOTE
Information used in compiling this report came from R. S. Billings M. \& M. E. report, dated 1923. R. C. Jacobson, Mining Engineer's revort of 192 pand E. Martin Thorniley's report of 1929. who is also a Mining Engineer.
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June 21. }197

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S. O. K. partin

Wice Pestumat
Charles R. Hard Corporation
4723 arth 21st Avenue
Phoenix. Arizona 80015
Dear Mr. Hartin:
Thatk you ajain or your excellont coneration... We anprociate
the The report will go thto our confitential file, ve visiated
Gave been asked a muber of times as to pass on to othar; We
bility of the comany concerned. We thoumt couing and and caprourselves was the only way to find out. You holng and seeing for Thanks again.
Very truly yours.

John H. Jett Director

\section*{}

MINING CONSULTANT
ARIZONA REGISTERED
MINING ENGINEER AND GEOLOGIST

Charles R. Ward Corp.
4728 N. 21st Avenue
Phoenix, AZ 85015

Gentlemen:


At the request of and authorization by Messes. C. R. Ward and Douglas Martin of the above mentioned corporation, the writer visited the Cedar Mines Project, Mohave County, Arizona, on October 21, 1975, for the purpose of reviewing the Arnold Shaft clean-up work and to examine geologically and otherwise the south stope area made accessible by the shaft clean-up work.

After the brief visual examination, ten samples of the "vein" structure exposed in the stope were taken by the writer. Another sample was taken by the writer of the vein material gathered by the shaft workmen which could possibly be used as a metallurgical sample to determine the best mill flow sheet for the Arnold mineralize material.

CONCLUSIONS and RECOMMENDATIONS:
The results of the examination, and more importantly, the assay results of the samples taken, indicate the following:
(1) Significant gold-silver mineralization exists within the sampled area to justify continued exploration and rejuvenation work to further the cause of development work,
(2) The mineralize material gathered as a sample for metallurgical testing is satisfactory for such testing, and
(3) The shaft clean-up work could possibly prove a potential water source most vital to a milling operation.
(4) The present work has aided to reduce the risk which could be present in future work had not this work been done.

These same results of the examination and the sampling suggest the following:
(1) Continue de-watering and de-mucking the shaft first below the 100 level and second below the 200 level.
(2) Rejuvenate the north and south portions of the 100 level to permit roof and floor sampling of the north drift, as well as floor sampling of the south drift.
(3) Send the metallurgical sample to the laboratory in Long Beach, California, requesting the determination of the best flow sheet and equipment for the best - economical recovery rates, first for gold-silver, second for lead, zinc and copper.
(4) Be prepared to finance the cost of de-watering and de-mucking the shaft from the 100 level to below the 200 level, and to finance rejuvenation of the 200 level as well as a detailed sampling program on this level.
(5) Be prepared to finance planned underground exploration which could lead to a development stage and production if items 3 and 4 are successful result-wise.

\section*{GEOLOGY and MINERALIZATION:}

Examination of the mineralized structure in the south stope indicates very good strike length strength as well as dip length strength. The quartz filling of the fault structure does thin and thicken, producing a lensic effect strike-wise and the same could be true dip-wise but such is not known since no other dip-wise exposure of the structure is accessible at this time. The quartz vein usually favors the center of the structure or hugs the footwall with 4 to 6 inches of gouge underlying same. Occasionally the quartz splits with a portion of the quartz near the footwall and a portion near the hanging wall, and separated by a horst of granite, extremely altered, but mineralized almost as well as the quartz itself.

For the most part, the quartz is fractured which should make for easy drilling and blasting. It can, at times, be quite hard and solid, but not the rule, at least not so in the south stope length examined.

The quartz is quite well colored due to the presence of iron limonites of the yellow to brown and red varieties, exhibits white to yellow pyrite, weak to strong, also some chalcopyrite (CuFeS), galena (PbS) and sphalerite (ZnS). Argentite appears to be the mineral responsible for the silver content in the higher ranges. The pyrite could be responsible for a portion of the gold and silver content, as could the copper, lead and zinc minerals.

\section*{SAMPLING:}

Opening or making the south drift stope area accessible is the first big step of the Cedar Mines Project, and has provided the first "real" look at the structure at depth. The structure's strength and performance at this depth is good and justified the writer taking samples to provide some factual data for geologic analysis and physical metal content to be used as a basis for either moving forward on the project or to discontinue the exploration and possible development.

The writer took 10 samples of the mineralized zone in the "back" of the stope. For the most part, the samples were taken at 20 foot intervals commencing at a point 50 feet south of the shaft wall. The first 50 feet were most difficult from the standpoint of accessibility and sample taking, thus, no samples taken. Also, the area between 120 to 150 feet south of the shaft wall is quite "hairy", thus, best left undisturbed and no samples taken.

Samples were personally taken by the writer, geologically described and
delivered to the Iron King Assay Office, Humboldt, Arizona.
An eleventh sample was taken of the mineralized material gathered by the workmen, which is to be used for a metallurgical sample - mill test. The assay results indicate the material to contain gold and silver with the silver content close to what the writer would consider average for the Arnold ore body - at least to this day and date. The gold content is somewhat higher than the writer would expect - the expectation being between \(\frac{1}{4}\) and \(\frac{1}{2}\) an ounce per ton.

Sample locations are shown on the attached Longitudinal Projection Map of the Arnold Mine and the sample data and results are tabulated in the included Sample Schedule.



\title{
Chambers la. Ward Compohatmos
}

Mining Development \({ }^{2}\) Mineral Recovery
PHOENIX, A:H\%ONA 8.iO1:

PARCEL 15

REPORT
ON

CEDAR VAlley MINES

\title{
Cuarles R. Whmo Compohation
}

Mining Development \(\begin{gathered} \\ \text { B Mineral Recovery }\end{gathered}\)

PARCEL \# 15
June 1975

\section*{LOCATIOH:}

The property is located on the Southwestern slope of the Wallapai Mountains, South of Kingman, 64 miles, and East of Yucca, 28 miles. Both of these points are stations on the main line of the A.T.\& S.F. Railvay. Kingman being the County Seat and supply point. Wikieup being the closest toun connected by an excellent graded road, 12 miles to the East.

SIZE:
The mineral lode claims and mill site cover an area of about 675 acres, of which 5 claims and the lill Site are patented land.
EQUIPMENT: OHAED
2 - Self Contained House Trailers
1 - Case 580 Tractor/Backhoe \& Loader
1 - Ford 1972 16' Flatbed Dump Truck
1 - Sandpiper 2" Pump
1 - Onan 5KVA gas Generator
EQUIPMEIIT: RENTED
1 - Steel Headframe \& Hoist
1 - Worthington 160 cfm Compressor
1 - Ford 1975 4UD ! ! Pickup
1 . Chevrolet 1975 \%t Pickup
1 - Hobart 150 amp Welder
HISTORY AND PRODUCTION:
This district and some of the mines embraced in this property was discovered in 1373, when the Cedar Yalley llining District was organized. Fron this period until 1883, the surface or chloride ores carrying from 200 to 500 ounces of silver per ton with a aold content of about one ounce to every 100 ounces of silver (being arastraed and amalgamated by the patio and barrel process with the bullion being about 930 fine in silver) was packed 50 miles over the mountains to the Colorado River as was much of the sorted ore. Thence by river boat to the port of Yuma and ocean steamer to San francisco at a cost of about \(\$ 100\) per ton.

The first mining sales were made in 1876 and 1878 when a small crushing and roasting plant of 1 tons capacity was erected on the site. In 1881 and 1882, the General Lee, Hubbard and Evangelist Claims were sold and patented. but very little development work prosecuted.

In 1894, these mines mentioned and other properties were purchased, consolidated and a 15 stamp amalgamating mill with concentrating tables, and cyanide tanks erected. This company increased the depth of the Arnold Shaft to 297 feet, partially stoping some of the levels
and further developed the Ceneral Lee, Silver queen and some other clains, operating the pronerty from Anril 1895 to Janaary 1897.

During this period, considerable crude ore was shinped by mule and wanon to the El faso smelter and the Kingman Sampling Works. The operation of the mill vas intermittent as, at that time, the metaluroy of these ores was not well advanced which, toocther with the reduced price for silver, the excessive cost of hand mining, lacon haul, packing with mules, railway and smetter charges, resulted in a cessation of all mining and milling by theso operators after the expenditure of a laroe amount of money for the purchase of the properties, the erection of the mill, the develonment of the mines, the building of two fine roads connected with Yucca and kinoman.

Since 1897 up to 1921, minor onerations have been condurted by various lessees who operated in a small way.

After a careful examination and checking un of all available records, the property can be safely credited with a production of \(\$ 460,00.00\). Of this amount \(\$ 175,000.00\) was produced up to 1395 . From April 1895 to lanuary 1897 (a period of 20 months), a production of shipping ore, bullion, and concontrates was made amounting to \(\$ 275,000.00\). and since that time, small lessees have produced about \(\$ 10,000.00\).

It will be remembered that the average cost of landing ore in san Francisco vas \(\$ 100\) per ton and later when the ore was shipped to El Paso or Kinoman, this cost was reduced, but still remained very high. This same ratio applied to the cost of minine and shipping the milling ores. Taking these features into consideration at todays prices, toonther with all the settlement end assay sheets that were available, the ore shinped can be estimated at \(\$ 1,200\) per ton figuring gold at \(\$ 150\) and silver at \(\$ 5.00\) per ounce. This average would not include small shipments of ore running up to several thousands.
The milling tonnage treated armounted to about 10,000 tons and from a careful checking of all available sources of information including present sampes; a gross value of \(\$ 200\) per ton in gold and silver can be safely alloved.

In 1929, on the site of the old Chlorination Hill, a complete and self contained Floatation : 111 l:as erected, usina the "Krout" Float. ation Cells, Allis Chalmers Ball fill, etc, having a capacity of fifty tons per day. In addition to this, there were five stamps left in the old batery along with its autonatic feed. This instaliation also had a Blake crustier, one concentrating table, a 60 HP boiler, four water tanks, an oil tank, and a boiler pump. A large and very complete assay office and bucking room complete with cerient floors.

\section*{GEOLOGY AND VEIN STRUCTURE}

The 40 mining claims of this group cover seven mineralized fissures, all having a bold outcron and all carrying milling ore and a fair percentage of higher grade values. but as five of these veins are only developed in a superficial :ay. little attention is paid to
themin this report and the two veins known as the Rueen, lest or Footwali vein, and the Arnold or Hanginovall Vein will be described and emphasized.

In describing these two last mamed veins under this present heading of "Ceology and Vein System" and later on, under the hoading of "Ore Developed and Avoilable", it rust be borne in mind that this report and examination has been made after a careful inspoction of all the physical features of the property and all encineerse managers and superintendents reports available. This has laken considerable time on account of the inaccessibility of mary of the openinos due to caved around and water in the shafts and tunrols. Unfortunately, these obsticals cannot be overcome at this present vriting, (but redevelopment work is presently occuring by the T. R. Nard Corporation of Phoenix, Arizona, who are retimbering and opening up the Arnold Shaft and General Lee Tunnel.)

FORRER REPGRTS
In 1888, an erainent engincer, officially vouched for by the largest California and Mevada \({ }^{\text {Cining Operators, states in his report: }}\)
"A shaft has been sunk on the Mrnold Claim on the llanoingwall Vein to a depth of 110 feet or nearly 200 feet below the highest cropping of the apex each way form this shaft, and 110 feet above the bottom of the same there has been a level run over 600' in the ledge, showing a continuous ore body so far as run over 2 feet in thick. ness. In this tunne? Tedue about \(300^{\prime}\) South of the Shaft, there is a vinze sunk to a depth of \(40^{\prime}\) showing the ledge to be three feet thick."
"From examination of tooks and vouchers. I find there has been shipped \(\$ 15,343.59\) worth of ore carrying an average value of \(\$ 243,62\) per ton. The lowest assay of any shipment heing \(\$ 1.61 .40\) and the highest being \(\$ 45.16\) and of the ahove veluation atout \(10 \%\) vas in gold." (Todays values vould be \(\$ 122.788\) vorth of ore at a value of \(\$ 1,948.96\) per ton, lowest at \(\$ 1.291 .20\), hioliest at \(\$ 3.321 .28\) per ton.)
"In addition to this ore shinned, there has been treated in Arastra, surface ores which produced a bullion value of \(\$ 170.00\) per ton ( \(\$ 1.360\) today). In making my estimate of the quantity and value of ore reserves or that is called ore in sicht'. I have chosen to be more conservative.than anyone owning the property would be willing to adopt as the basis of sale."
"We have a continuous orebody 1,000 ' in length. 160 ' in depth, and \(2^{\prime \prime}\) thick, making 320,000 Cu.Ft. of orc. This gives ore reserves of 27.000 tons."
"The vlaue of all ore the mine has heretofore produced has been over \(\$ 80.00\) per ton ( \(\$ 640\) at todays prices). I feel safe in estimating the net value of the 27,000 tons in reserve to be \(\$ 50.00\) per ton ( \(\$ 400.00\) today). This would make ore in sight valued at \(\$ 1,350,000.00\) after deducting reasonable expense of mining and treating the ore (approximately \(\$ 10,000,000.00\) today).
"It is highly importont to state in this connection that we make no estimate of ore in the large or Footwall Ledge from the fact, that only a single shaft \(40^{\prime}\) deep has been sunk on this ledge in this claime but the ledge on the South of this claim and also on the Horth (in the Silver Queen and lieneral Lee claims) have yeilded
ore valued at over \(\$ 250.00\) per ton ( \(\$ 2.000 .00\) today) so while it is possible this other large ledge upor the Arnold line may go to the same depth as the other is estinated to produce cven areater value than the one estimated, yet as it has not been proven by penetration. I have given no estinate of its value."

In 1894, another engineer temporarily directing the development of the property reports:
"The main Arnold Shaft is sunk 260'. The llortherly adit is 100' long, the vein is continuous. The southerly adit is 3e3', the vein is continuous."
"The South adit, \(383^{\prime}\) long has heen chlorided partly in the richer stopes some of the stopes showing fully \(6^{\prime}\) thickness removed. Fully one-half of the mineral in this drift has been stoped out with but a small proportion remaining in the stopes and on the dumps."
"In the North adit \(100^{\prime}\) long, the ore is continuous encountering some very rich ore chloro-bromide of silver in the roof near the shaft. The 60' level is short, but shows excellent ore. Belowthis level, the ore in the shaft is \(28^{\prime \prime}\) wide and averages for 40 with silver at 26 oz . aold \(0.45 \mathrm{oz} .\). The Northeest drift is \(48{ }^{\prime}\) long showing ore from \(14^{\prime \prime}\) to \(20^{\prime \prime}\) carrying a value of from \(\$ 40,00\) to \(\$ 75.00\) per ton ( \(\$ 320\) to \(\$ 600\) today). The Southwest drift, 102' long shows the ore sean in the roof continuous but varying."
"On the dump are heaps of ores extracted in development lately, some of which have been assorted several times. From one heap of about (by measure) 400 tons, which has been assorted three or four times, gives an assay of silver of 46.37 oz . and gold 0.70 oz .. About 2/3 of all ore mined :us shipped or shippinct ore."
"The avorage value of the ore is sonewhat difficult to get at in the present condition of the workines, but from samples taken on the second winze in the adit level from the llorth drift in the 100' level, the southeast drift and winze, and from other drifts and winzes, an average of 12 assays gives (after eliminating two of the higher assays) an averade of \(\$ 34.02\) in silver at \(\$ 0.60\) per ounce, and \(\$ 13.02\) in gold at \(\$ 20.67\) per ounce. makine a total value per ton of \(\$ 47.04\) (Todays prices would be \(\$ 104.16\) in 101 d , \(\$ 272.16\) in silver or a total value of \(\$ 376.32\) per ton).

An enoineer employed by the purchasers in 1895, on the queen and Evanoclist Claims reported in nart as follows:
"All six samples taken from the \(90^{\prime}\) level of the Queen \({ }^{\prime}\) ine where the vein was \(5^{\circ}\) wide as showing an average value of \(\$ 61.77\) per ton of silver ( \(\$ 512.69\) today).... Seven samples taken from the 130' level with an average with of \(2^{\prime}\) gave an average value of \(\$ 163.28(\$ 1,355.22\) today). Six other samples from the tunnel level for a width of \(2^{\prime \prime}\) gave an averano of \(\$ 137.00\) ( \(\$ 1.13 \% .10\) today)".
"From the North end of the tunnel drift to the South end of the drift on the \(130^{\prime}\) level, this ore shoved measures \(400^{\prime}\) long. Both heads of these drifts are in ore so the length of the ore is not determined. Surface indications point to a longer oreshoot. I estimate that this oreshootwill produce 7,000 tons of ore. Reducing the high average value of the samples to \(\$ 50\) per ton gives \(\$ 350.000 .00\) in sight (loday would be approximately \(\$ 400.00\) per ton givino approximately \(\$ 2,800,000.00\) in site)."
"The ledae in the shaft and drifts is from 4' to 6' in width but i only considered \(2^{\prime}\) which is the rich part of the vein. The other part of the vein from \(2^{\prime}\) to \(4^{\prime}\) assays from \(\$ 15\) to \(\$ 20\) per ton (today \(\$ 120\) to \(\$ 180\) per ton)".

This same engineer in reporting on the Evangelist Claim states:
"A tunnel lias started on the lost ledge and has been run a distance of \(336^{\prime}\) at which point it enters the East Vein or ledae \(200^{\prime}\) below the surface on the pitch of the ledae. The East ledge, at this point is \(20^{\prime}\) hetween walls. On the rootwall there is \(4^{\prime \prime}\) to \(5^{\prime \prime}\) of ore that assays 164 ounces silver. per ton. Then there is 16' of ledoe matter and on the Hanging or East hall there is "' of ore that assays \(\$ 42.50\) per ton in gold and silver, ( \(\$ 340\) per ton today) einhty percent of this value is in gold. This is the result of a three ton sample taken from the \(15^{\prime}\) drift that was run on the ledge at this point. There is \(200^{\prime}\) of backs at this point and \(I\) estimate that, if one-half of the vein above this tunnel is as oood as the tunnel, there is a gross value of \(\$ 650.000 .00\) in sight at this place." (\$5,200,000.00 today).

Another encinecr's report in 1901, when the Arnold shaft was sunk to a depth of 200 f-et states:
"On account of water. I could not get to the bottom of the main shaft. The orehody in the 100' level shows strong from \(2^{\prime}\) to \(5^{\prime}\) wide. The ore shosed is over 400' long on this level arid holds very requiar in width and high values."
"Hearly \(300^{\prime}\) from the mouth of the shaft on the adit level which discloses a strona orebody from top to bottom of an average width of two and onewhalf feet. The ore has been stopped on the adit level about \(80^{\prime}\) to the surface."
"The veins have been prospected in many places by shallow openings. lly samples, except from the hrmold, bere taken from those surface workings."
"From East Vein Lee Shaft Tunnel:
\[
\begin{aligned}
& 340 \text { oz. Silver. } 4.60 \text { oz. Gold } \\
& \begin{array}{r}
1901 \\
\$ 432.00 \\
8.00
\end{array} \\
& \$ \frac{1975}{3.456 .00}
\end{aligned}
\]
"Lee Hest Vein showing Iron South End:
\[
\begin{array}{rrrrr}
9.8 \text { oz. Silver, } 0.09 \text { oz. Gold } & 11.70 & 93.60 \\
\text { "Lee rexican stope ledge } 2 \text { : } & & & \\
52.3 \text { oz. Silver, } 0.17 \mathrm{oz} . \text { Gold } & 55.70 & 445.60
\end{array}
\]

In 1904, another engineer reports as follows:
"The Arnold Shaft has been sunk to a dopth of 250'. On the
100' level, the oreshoot extends for a distance of \(320^{\prime}\) to the Southeast and \(80^{\prime}\) to the llortherest. This shoot has an averane width of \(18^{\prime \prime}\) of first class ore, beside the milling ore lying alongside wich has a width of from \(2^{\prime \prime}\) to \(3^{\prime}\) additional."
"Samples taken along this oreshoct on the 100 ' level gave the following results:

"fumber 1 , was taken along the length of the ore shoot, an average of 400'."
"Humber 2, was a part of the pay streak from the lorthoses of the shaft."
"Wumber 3, was a rich pert of the pay strak mixed with quartz from both sides of the shaft."

I could only explore about \(30^{\prime}\) on each side of the shaft on the 200' level on account of the drift being filled with debris, but the oreshoot shows the same characteristics as in the 100 level and the veins showed much wider."
"This vein is exceedingly strong and can be casily traced for a distance of two miles on the surface. The llanaingwall being especia-ly finc and very haru. This fact is fortunate as it will enable you to mine the ore at a coriparatively small expense for mine timberina."
"The nueen rums parallel to the Arnold vein and at a distance of from \(100^{\prime}\) to \(150^{\prime}\) to the Nest of the firnoid Shaft. On the surface, these two veins seen to come together on the Hubbard clam about 3000 to the Southeast."
"The Queen seems to be a stronger vein than the Arnold, but with less development. One shaft has been sunk to a depth of \(140^{\prime}\) but is caved and could only be examinod to a depth of about 60'. I am informed that the full width of the bothom of the shaft is in good grade ore. The ore in sight and on the dump is certainly of a very good grade as the assay value of several samples shows:
145.2 oz . Silver, 0.82 oz . rold \(\frac{1904}{\$ 161.60} \quad \$ 1.283 .00\)
"This ore shows a very heavy sulphide. There has been a large arount of surface work done on both veins of this claim by chloriders who shipped a large amount of very rich ore which the vorking vould indicate."
"Samiles taken from the ledge several hundred feet northwest of the Shaft gave: 72.0 oz. Silver
31.4
\begin{tabular}{lrr} 
& 1904 & 1975 \\
\(0.16 \mathrm{oz} . \operatorname{cold}\) & \(\$ 75.20\) & \(\$ 601.60\) \\
0.15 & & 34.40 \\
0.06 & & 275.20 \\
0.36 & & 37.40 \\
0.08 & & 387.20 \\
& & \\
\hline
\end{tabular}

In all previous reports, the Arnold or East Hangingwall, and the Queen or Hest footwall have been considered and treated as tyo separate veins. This due to the fact of the difference in the ore, their discovery, and in the character and difference in the time of their development. As a matter of fact, they constitute one large, strong contact fissure exposed for practically 7,500 feet in length in this consolidation, carrving a diorite hangincwall and a aranite footwall ranging from \(50^{\prime}\) to \(200^{\prime}\) apart, carryine independent of the hangingwall and footwall ore bodies, a contact mineralization of porphyry, quartz, and the softer granites. In the report of one eminent enaineer, intervening material is designated as being a 'horse' or intrusion between the two veins but 1 an entirely convinced to the contrary, and this is clearly proven at the Arnold Shaft and dump where in grading across for \(100^{\prime}\) between these two

Walls, a number of smaller strinciers of ore were disclosed and the hioher grade was shipped with other ores. It is also proven in the Evanoglist crosscut tunnel (fron which ve are nov drowing our donestic : ater) where the formation betwcen the Footwall and Hanoingwali is shown to be a porphyry with oxidized feeders of iron and quartz. Unfortunately at this period, no underground workinos afforded an opportunity for sampling between these two mineralizetions but it will be found with the present devolopnent and later vork, that the west or footwall Vain of aranite, which now has a dip to the lest and away from the Hancingwall of diorite which has a slight dip to the East, that the granite footvall in changing its dip to the fast will concentrate this larce mineralization and \(I\) fully expect to find vith depth, a large proportion of this contact filling, carrying milling values with higher grade shipping and milling ores on the Foot and Hanging Halls.

I recognize that in using cxcerpts from enoincering reports dated back to 1883, 1895. 1901, 1929, that I am quoting "Ancient llistory" and under ordinary circumstances. such information or data would be of little use in a report that is intended to cover the present condition of these mines, but as will be shown later on in this report under the head of "Ore Developed and Available". a very minimum arount of these ores in the scveral propertios have teen mined, shipped, or milled and although, only a small part of these developments can, at this date, be exarined or sampled, yet the fact remains that under water or covered by caved around, the physical conditions covering the values previously reported upen remain practically intact and ready for exploitation.
ore deyeloped a!d nvallable:
As already stated, the present physical condition of the firnold, Silver Queen, General Lee, Evanolist and Hubhard lines which carry the princinal developments of this cons-lidation makes it difficult to calculate the ore tonnacs and values availatle. But by carefully checking up on all of tho records of production together with the known developments on these claims last montioned, it is safe to figure that there is 15,000 tons of ore exposed in the sevoral levels of the firnold Shaft. This ore will carry a strono average value of \(\$ 150\) to \(\$ 250\) per ton. The Silver quéen pronerty can be credited with available ore that will require re-opening the shaft for further exposure, of what I calculate to be 8,000 tons of at least equal value.

The development in detail of this property tocether with the Evangelist, Little Minister, and reneral Lee are correctly shown on the attached plates, but it has not heen possible to mate an assay chart or nap, and this reduced value of \(\$ 150\) to \(\$ 250\) per ton is established after a general sampling and after cutting dovn all previous assay reports.

Futher, with a small amount of work in draining and muckino the Lee crosscut tunnel and its levels. sufficient drifting can be uncovered on the Hanginqwall and Footwall Veins to shov: a virgin tonnage, and by drifting on these two veins from the raancelist crosscut, an cqual amount of ore can be exposed. The records indicate the ore
in the General lee has been developed and it is very sofe to estinate that thesc develomments will quickiy and cheaply put in sight, a tonnace equal in value and extent to that of the Arnold and queen.
oEvELOP:ENT ADVISED
For sunerficial development thet will put in sight a large ore ton. nage, the drifts on the East an lle t Veins in the Genoral lee cross. cut Tunnel should be extended orth and South. This same character of bork will apply to the same voins in thevangelist Tumel. The 200' and 250' levels in the froold shaft should be extended, as should be the \(100{ }^{\prime}\) level and extended forth under tho Evancielist.

For permanent work, the Arnold Shaft should he deenened and levels driven on the two veins, drifted on at varying depths in the Silver Queen Claim to the North and the Evangelist Claim to the South; these vorkings to be connected un with the levels from the Arnold Shaft and in the latter, the levels south should be extended into the General Lee and Hubbard claims below the level of the lee Crosscut Tunnel. The superficial devolopments mentioned can be covered with a comparatively small outlay wich would result in equipping the property for a production of at least 100 tons per day and a safe figure can bo established of not to exceed \(\$ 35.00\) per ton for mining, millings and all overhead and underground experse. It is my estimate a 100 ton per day plant will allow approyimately over 25 years of operation.

SUMARY ARD COHClUSIOHS
These properties carry a strong vein system for a length of over 7,500 feet on the last and Hest Veins, the same lonoth on the folden Sulphide Vein, and 1,500 feet on the Pcarl and other veins embraced in these some 675 acres. Sufficient work has been done on the main vein system to demonstrate thoir continuity in lennth and depth. with a good mining sidth and assured values that will afford a large profit. R comparatively small amount of capital will be required to cquip the property for mining and milline 100 rons per day and the metamlurgy of these ores, practicayly requires little experimenting or study, and there need be no mistakes made in the economical doveloprent of the known ore bodies. In short, there are no physical nor metallurgical obsticles to orevent an intelligent manacment from making a large and legitimate manufacturing profit at practically no risk for the investment, as the ore bodies together with thoir values are positively proven and assured, and they oan be mined and milled at a reasonable cost, making a desireable concentrate for which there is almays a ready market affording a oood profit. Research is presently occuring using the most recent information available for the inclusion of a chemical recovery which will afford an end product of bullion, bars or whatever.

PREVIOUS ASSAYS
The following were taken hy an engineer. H. ll. Russell of Los Angeles, California, April 26, 1901. Values have been calculated using the figures of Gold, \(\$ 140.00\) per ounce, and Silver at \(\$ 4.00\) per ounce.

Arnold Claim:
100' winze, average of \(2 \frac{1}{2}\) ledge
\[
\begin{array}{lll}
0.19 & 28.7 & \$ 278.80
\end{array}
\]

Main \(100^{\prime}\) level, \(2^{\prime}\) to \(5^{\prime}\) ledae
\(\begin{array}{lll}0.12 & 243.0 & 988.80\end{array}\)

Shaft \(\# 2,2^{\prime}\) ledge, \(40^{\prime}\) wide, \(200^{\prime}\) South of Shaft
Arnold \#6 0.16 \(23.0 \quad 114.40\)
\begin{tabular}{llll} 
& 0.61 & 122.0 & 573.40 \\
Averages & 0.27 & 104.17 & \(\$ 455.00\)
\end{tabular}

Silver Queen Claim:
West End or bo' Shaft.
\(\begin{array}{rrrr}\text { Silver Queen \#2 } & 0.90 & 38.20 & 278.80 \\ & 0.25 & 71.00 & 319.00 \\ \text { Averages } & 0.57 & 54.6 & \$ 298.20\end{array}\)

\section*{General Lee Claim:}

East Vein, Shaft Tunnel
Lone Stope, Across 24' Ledge \(4.60 \quad 340.0 \quad\) 2,004.00
Hest Vein, liexican prospect 0.1501 chowinc 5.0 A1.00
Stope wHorled \(\quad 0.09\) showing iron near south end Stope Worked out by Mexicans, ledge about \(2 \frac{9}{2}\) but continues
with ore and porphyry for 28 .
\begin{tabular}{cccc} 
& 0.17 & 52.3 & 236.40 \\
Averages & 1.25 & 101.78 & \(\$ 582.10\)
\end{tabular}

Hubbard Claim:
\&' Ledge on Surface
\[
0.10 \quad 2.0
\]
\[
\$ 22.00
\]

\section*{Silver liven chain: \\ Silver lien Claim:
Sample 2}
\[
0.25
\]
\[
71.0
\]

Various Samples
 Unknown location
 Picked \# 5

\footnotetext{
\(\qquad\)
}

-
\[
\$ 319.00
\]
?


\section*{J. GRANT HOWARD}

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529 WEST LAWRENCE ROAD PHOENIX, ARIZONA BBOIB


\author{
CEDAR MINERAL, COMPANY Arizona Limited Partnership 1975
}

CEDAR MINERAL COMPAINY hereby offers subscriptions for twenty-five (25) units in a Limited Partnership pursuant to which Cedar Mineral Company (the "Limited Parmerehip") will he formed. Alpha Management Corporation, an Arizona Corporation, will serve as General Father and will chafer in the business of inverting in and managing of the miming and aching of minerals from operations described herein. THIS OFFERING HAS NOT BEEN AND WILL NOT BE REGISTERED OR QUALIFIED BY ANY FEDERAL, STATE, OR LOCAL GOVERNMENTAL AGENCY OR COMMISSION, INCLUDING WITHOUT LIMITATION, THE UNITED STATES SECURITIES AND EXCHANGE COMAISSON, AND THE ARIZONA DEPARTMEIVT OF CORPORATIONS, NOR HAS THIS OEFFRRNG BEEN APPROVED, ENDORSED OR RECOMMENDED BY AN "X SUCH GOVERNMENTAI AGENCY OR COMMISSION.

Investment in units of the Partnership involves a high degree of risk and is suitable only for persons of substantial financial nears who have no need for a liquidity in their investments.

Purchase price per unit will be \(\$ 10,000\), with minimum subs upton being one-quaxter \((1 / 4)\) unit. No underwriting commissions are being pard on the maximum total subscription of 5250,000 . Units are not subject to assessment. Subscriptions are payable not less than ten per cent ( \(10 \%\) ) at the time of subscription and the remainder within sixty ( 60 ) days thereafter. USE OF PROCEEDS - While it ia not possible to predict at this time the exact allocation of the net proceeds of this Offering by the Limited Partner. ship, it is estimated that the initial \(\$ 250,000\) will be dispensed as shown in critical path schedule for 1975, eix-month estimate of costa and six-monti cash-flow projection and tax effect. Some of the equipment will be leased. BUSINESS - The Partnership will engage in exploring, marketing, leasing, owning, and mining of minerals.

The Company has gold and silver claims leased, with option to purchase for \(\$ 35,000\) on 675 acres ( 5 claims and mill site are patented land) near Willie. up. Arizona. Mining will immediately begin in the Old Arnold Shaft (see ciagram) with contract milling by local firm. It is expected that this operation
will produce income from the outset. After detailed engineering studies on the best recovery techniques are proven, a mill will be constructed (seecashflow projection). Also, several gold properties are being explored for possible purchase in the future.

To further reduce Partner risk, the Company has a six-month option on 2,500 acres of uranium ( \(1.5 \%\) ore sample) property south of Wikieup, Arizona ( \(\$ 108,000\) cost with \(2.7 \%\) of gross). It is estimated that these claims will produce a minimum of 500,000 pounds of yellow-cake (U3O8). In order to market this \(\mathrm{U}_{3} \mathrm{O}_{8}\), it will be necessary to block off the reserves by immediately drilling two \(500^{\prime}\) holes \((\$ 8,000)\); further drilling may be necessary.

The Company anticipates purchasing, mining, and marketing other proven and unproven uranium reserves for the immediate and future energy needs of our country.

RISK AND OTHER FACTORS - The principal objective in making investments will be to obtain for the Limited Partners current tax-sheltered income and capital appreciation. No assurance can be given that this will be attained or that the Partnership capital will not depreciate. It is intended to cease re-investing Partnership capital commencing five (5) to six (6) years after formation of the Partnership. The Partnership has no opexating history. and it does not presently own any properties or options other than those listed above.

The General Partner will be generally liable for the Limited Partnership debts, to the extent not paid by the Partnership.

MANAGEMENT-- The General Partner will have general responsibility for supervising the Partnership operations, including the supervision of compliance with legal and regulatory requirements and preparing and transmitting of periodic and annual reports to the Limited Partners. The General Parmer has the ultimate authority in all matters affecting the business and affairs of the Partnership and the formation of guidelines and limitations with respect to the Partnership investments. The General Partner will own \(45 \%\) of the Partnership.

The General Manager and Vice President, Charles "Ray" Ward has had thirty-five years' experience in the mining business. He has superviged several very successful mining operations in Idaho. He has had experience in the recovery and development of uranium, tungsten, lead, silver, gold, copper, zinc, antimony, cinnabar, platinum, and tin.

Douglas K. Martin, with degrees in education and industrial arts, will serve as Staff Engineex and Secretary/Treasurer for the Partnership. He has had extensive experience in title searching, obtaining rights-of-way, drafting, surveying, and construction. For two years he was project engineer with Kitchell Contractors, Phoenix, where he assisted in the construction of the Phoenix Metro Center, Goldwater's Store (100,000 square feet), Sears (250, 000 square feet), etc.

Mr. Ward and Mr. Martin will receive a combined annual salary of \(\$ 22,000\) (plus expense reimbursement) for six months; to be negotiated thereafter.

John D. Schnulo, Attorney at Law, has practiced law in Phoenix since 1971. He also has a degree in business administration and has received special training at Rocky Mountain Mineral Law Institute. He will serve as Company counsel in law and management and will serve on the Board of Directors.
W. Mel Alexander, President, will help manage, give financial counsel, and act as liasion for the Limited Partners. He is President of Executive Leasing Corporation and Executive Financial Agsociates in California and Texas; President of Evangelism, Incorporated; Executive Director of Christian Medical Missions, which does philanthropic Christiai medical/dental work in developing countries on a volunteer basis for one- and two-week vacation periods (international, non-profit member Organization). He will not receive a salary initially but will receive expense reimbursement.

TAX ASPECTS OF THE OFFERING - It is the opinion of Dick Denen, who will serve as Certified Public Accountant for the Company, that under the current IRS code and regulations, the Limited Partnership will be regarded as a Partnership.

It is anticipated that the Partnership will have certain losses for 1975 which will be passed on to the Limited Partners (see cash-flow projection and tax effect).

The Limited Partnership will not itself be subject to any federal income taxes, and each Limited Partner will be taxed on his pro rata share of the Limited Partnership taxable income, whether or not distributed to him. Each Limited Partner will be entitled to deduct on his pergonal inçome tax return his pro rata share of the Limited Partnership net losses, if any, to the extent of the tax basis of his partnership interest at the end of the partnership year in which such losses occur. In computing income and loss. es, an aggregate of one-hundred per cent ( \(100 \%\) ) of all allowable income tax deductions (including interest and depreciation) will be allocated among the Limited Partners in proportion to their relative investments in the Partnership.

The Limited Partnership may make various elections for federal (ax reporting purposes which could result in various items of Limited partnership income, gain, loss, deduction and credit being treated differently for tax purposes than for accounting purposes. Tax reform may change this prospectus. The Tax Reform Act of 1969, which amended the Internal Revenue Code of 1954, made various changes affecting the tax benefits traditionally associated with the ownership of real estate. (See your accountant for these changes.)

GENERAL INFORMATION - The principal office will be located in Phoenix. Arizona.

A Limited Partnership Agreement is attached and madela part hereof.

CEDAR MINES PROJECT
SCHEDULE OF CASH FLOW PROJECTION


Investment Credit
1975
1976. \$ 17,864

TOTAL


\section*{PRODUCTION ESTIMATE}

Mill production is based on processing 100 tons per each 24 -hour period. Assay averages for the two proposed mines to be worked are as follows:
\begin{tabular}{rrrrr} 
Arnold & Gold* & Silver* & Value \\
Average & 0.27 & 104.17 & \(\$ 454.48\) \\
A General Lee & 1.25 & 101.78 & 582.12
\end{tabular}

Therefore:
\begin{tabular}{lr}
100 tons per day & \(\$ 23,500\) \\
Seven days per week & 164,500 \\
Four weeks per month & 658,000
\end{tabular}
\(\$ 6,580,000^{* *}\)
* Based on gold at \(\$ 140\) per troy ounce and silver art \(\$ 4\) per troy ounce ** Maximum estimated cost of production (G\&A, etc.) ie \(85 \%\) 。 \(\$ 987,000\) net.




CEDAR MINES PROJECT SCHEDULE OF CRITICAL PATH COST
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline & Total & Contingency & Salary & Assay Office & Trucking & Mine Production & Mine Development & Site Work & Plant Cost & Water System \\
\hline 9/12/75 & \$ 1,760 & \$ & \$ & \$ & \$ & \$ & & & & \\
\hline 9/19/75 & & & & S & \$ & \(\$\) & \$1,760 & \$ & \$ & \$ \\
\hline 9/26/75 & 1,298 & & & & & & & & & \\
\hline 10/3/75 & 1,685 & & & & & & 1,298 & & & \\
\hline 10/10/75 & & & 1 & & & & \(\cdot 1,685\) & & & \\
\hline 10/17/75 & & & & & & & & & & \\
\hline 10/24/75 & & & & & & & & & & \\
\hline 10/31/75 & & & & & & & & & & \\
\hline \(11 / 7 / 75\) & 2,600 & & & & & , & & & & \\
\hline 11/14/75 & 5,000 & & 5,000 & & & & 2,600 & & & , \\
\hline \(11 / 21 / 75\) & 9,000 & & & & & & & & & \\
\hline 11/28/75 & 129,990 & & & & & & 5,000 & 4,000 & & \\
\hline \(12 / 5 / 75\) & 21,450 & & - & & & & 5,000 & 4,000 & 114,990 & 6,000 \\
\hline 12/12/75 & 20,840 & & 5,000 & & & & 5,000 & 9,000 & 750 & 6,700 \\
\hline 12/19/75 & 89,900 & & 5,000 & & & 36,200 & 5,000 & 10,090 & , 750 & \\
\hline 12/26/75 & 5,280 & & & & & & 5,000 & & 48,700 & \\
\hline 1/2/76 & 36,525 & & & & & 3,900
4,115 & 630 & & 750 & \\
\hline 1/9/76 & 16,280 & & & 14,930 & 31,600 600 & 4,115 & & & 750 & \\
\hline 1/16/76 & 6,350 & & 5,000 & 14,930 & 600 & & & & 750
750 & \\
\hline 1/23/76 & 600 & & & & 600 & & & & 750 & \\
\hline \(1 / 31 / 76\)
\(2 / 7 / 76\) & 600 & & & & 600 & & & & & \\
\hline \(2 / 7 / 76\)
\(2 / 14 / 76\) & 600 & & & & 600 & & & & & \\
\hline \(2 / 14 / 76\)
\(2 / 21 / 76\) & 5,600 & & 5,000 & & 600 & & & & & \\
\hline \(2 / 21 / 76\)
\(2 / 28 / 76\) & 600 & & & & 600 & & & & & \\
\hline \(2 / 28 / 76\)
\(3 / 7 / 76\) & 600 & & & & 600 & & & & & \\
\hline & 31.092 & 31,09? & - & & & & & & & \\
\hline TOTAL & \$388,250 & \$31,092 & \$20,000 & \$14,930 & \(\$ 370\) & & & & & \\
\hline & & & & \(\underline{ }\) & \(\underline{\square}\) & \$44.215 & \$32,973 & \$27,090 & \$168,190 & \$12,700 \\
\hline
\end{tabular}


Cedar Mineral Company 4728 North 21st Avenue Phoenix，Arizona 85015

Dear Mr．Martin：
On Monday，March 29，1976，I toured the property of Cedar Mineral Company at／or near the old mining camp of Cedar in Mohave County．I was accompanied by Mr．Glen Walker，Field Engineer for the Department，and Mr．Ray Ward， General Manager of Cedar Mineral Company．Mr．Lloyd Dixon was at the mine． I want to list the equipment and recent work that I saw．

It is obvious that roadwork has been done．In addition，a trailer camp area mill site and office site have been established．

The trailer camp area that had been leveled appeared large enough for ten to twelve large trailers．One large trailer，（ \(12 \times 50\) est．）was set up． A large water tank was in place on a hill above the camp．A water well had been recently drilled below camp．I was told the well was a 6 inch hole， 80 feet deep，with 4 inch electric submersible pump installed．An outlet pipe，electric cable and starter switch was noted．

Equipment noted at the mill site was as follows：
```

    1. Ball mill 100 HP (est. 5 x 6)
    2. Jaw crusher, El Paso Foundry (6 x 18)est.)
    3. Two storage bins (concentrate)
    4. Oliver Drum Filter ( }3\times4\mathrm{ est.)
    5. Wemco spiral classifier
    6. Deco float cell
    7. Small crucible furmace
    8. DFC blower (Lab).
    9. Miscellaneous electric motors, switch gear, starters
        and resistors.
    10. Stack of pipe, from }\mp@subsup{|}{}{\prime\prime}\mathrm{ thru 4" size
    11. Conveyer belt parts
    12. Stack of core boxes
    13. Bucket elevator parts
    14. Conveyor stand
    15. Assorted pumps and valves
    16. Apron feeder
17. Galvanized fron for building
```


\title{
Charles R. Ward Corporation \\ Mining Development \& Mineral Recovery
}

June 17, 1976

Mr. John Jet
Department of Mineral Resources


Mineral Building, Fairgrounds
Phoenix, Arizona 85007
Dear Mr. Jet:
Re: Flow Sheet and Smelting Research

Mr. Ken Phillips of your Department phoned us yesterday from the office of \(J\) \& \(J\) Smelting, Hisperia, California concerning his research and our Cedar Mineral project.

Permission was granted Mr. Rego (Vice-President) to make available all information in his possession concerning the Cedar Project.

Please be aware the particular flow sheet and information granted to Mr. Phillips is confidential and not for publication but for your eyes only.

The ore Mr. Rego processed and of which the flow sheet constructed was of our combined surface random samples mixed with ore from the Arnold Shaft.

Our purpose for this was to obtain a basic beginning or idea of what and how the average low grade ore could be processed plus check the reliability of J \& J Smelting.

At this time, we are satisfied as to the report submitted by J \& J Smelting.

Thank you for your cooperation.

Drear the master.
thank your again pegu excellent

D. K. Martin corpenetió, an apprecal it. Th. Vice President repent cull go este aus confudersed fils.
We wen resides ike opevelesios be ode bo dotani deities h DKM/jer pans on others onus ham been asked a number bennes


\section*{Mr. Stanley George}

May 6, 1976
Page Two
down with a watchman on the property to maintain the pumps and prevent vandalism.

Our assays are averaging approximately 25 oz 。 of silver per ton with a quarter ounce of gold.

We are very encouraged with all we have discovered, proven, and justified.

D. K. Martin

Vice-President

DKM/jer
cc: State of Arizona
Department of Mineral Resources

May 11, 1976

Mr. Douglas K. Martin Charles R. Ward Corporation 4728 North 21 Avenue Phoenix, Arizona 85015

\section*{Dear Doug:}

Thank you for sending the Department a copy of your Letter on the Cedar mine. Your courtesy is apprem crated.

I hope you get your partners' problems solved rather quickly and can proceed with your developament work.

Very truly yours,

John H. Jot
Director

\author{
Charles R. Ward Corporation \\ Mining Development \& Mineral Recovery
}

May 6, 1976

Mr. Stanley George
5001 Duverney
Laguna Hills, California
92653
Dear Mr. George:

> Re:


Hoping you have received our payment for May on the Cedars' Property.

To date we have sunk the Arnold Shaft to the 200 foot level and re-established a 435 foot drift to the south on the one hundred (100) foot level and are now working on the drift to the south on the two hundred (200) foot level.

A \(4^{\prime \prime}\) producing well has been drilled at the old mill site; a camp site leveled off for approximately 10 trailers; have a 150 ton per day floatation mill in pieces sitting on the partially completed new mill site situated on the east side of the new road; the General Lee tunnel has been run approximately 580 feet with rails, portal, etc., ready for mining.

At present, due to our partners having tax and malpractice insurance problems, we are temporarily closed

\title{
DEPARTMENTT OF MINERAL RESOURCES
}

MINERAL RUILDING. FAIRGROUNDS PHOENIX, ARIZONA 85007

File: Cedammineral Project X-Ref: Charies R. WArd Corp. Alpha: "W"
Pink REading Copy

June 21, 1976

\author{
Mr. D. K. Martin \\ Vice President \\ Charles R. Ward Corporation \\ 4723 North 21st Avenue \\ Phoenix, Arizona 85015 \\ Dear Mr. Martin:
}

Thank you again for your excellent cooperation -- we appreciate
it. The report will go into our confidential file. We visited the operation in order to obtain data to pass on to others. We have been asked a number of times as to the credibility and capability of the company concerned. We thought going and seeing for ourselves was the only way to find out. You helped us a lot. Thanks again.

Very truly yours.

John H. Jett
Director

JHJ:PP

February 3, 1976

MEMORANDUM FOR THE RECORD.

Telephone call from Mr. Grant Howard of Phoenix, telephone number \({ }^{7}\) 265-7819 - asked about CedaאMineral Company, Kingman - selling 25year>limited Partnerships - will be managed by Alpha Management Corporation as a General Partner.
President: D. Mel Alexander
V.P. \& Gen.Mgr. - Charles Ray Ward

Staff Engineer - Doug. Martin
Attorney - Schunerlow (?)
The partnerships not registered or qualified anywhere. Will lease Au and Ag claims with optdinn to purchase 675 acres, some patented work will start at old Arnold Shaft. Milling will be contracted With local firm, Have six months option on \(1.45 \% \mathrm{~V}_{3} \mathrm{O}_{8}\) property South of Wikieup. in Wiki, emp
Note: See Cedar Valley Mines file.

18. Three barrels of grinding balls
19. Miscellaneous assortment of gears, bolts, iron, etc.

Equipment noted at the mine includes:
1. Combination back-hoe, front end loader - Case
2. H\&B Hoist, no motor, \(42^{\prime \prime}\) diameter drum
3. 125 KW Onan diesel generator
4. 400 Amp electric welder
5. Two self contained house trailers (est. 24 and 28 feet)
6. Diesel fuel storage tank
7. Miscellaneous electric yire and switch gear
8. Mine timbers
9. Two Jack legs
10. Several miscellaneous pumps
11. A \(10 \times 10\) (est.) tool shed at the saft, containing getting torch, lights, lubricants and other miscellaneous supplies.
12. Small blower with plastic tubing for ventllation
13. Coppus vent blower
14. Miscellaneous tools, including double jacks

The shaft, which I was advised was the Arnold Shatt, had new timbers the first 20 feet or so. As far as could be seen, the other old timbering looked in good shape -- new ladders had been installed.

A small pipe headframe (sinking), with a small two drum contractor hoist was erected on the Arnold Shaft. I was told this was leased equipment. A large compressor nearby was also leased.

As we toured the property, a number of cuts across the strike of the veins (when visible) were noted. These cuts were made by a bulldozer. Some back hoe work had been done in clearing access to adits. Several were visible.

Two late model pick-ups, one a four-wheel drive and a flat bed truck were observed. One pick-up was used for transportation from Wikieup to the mine. The four-wheel drive unit was used to get to various sections of the property.

The surface tour was quite complete. One adit was entered and a drift was followed and cross-cuts noted. Much surface geology was noted. No attempt was made at any evaluation of any kind. No engineering data was studied. This letter is to merely note equipment personally observed.

I want to thank you for the most excellent tour. Mr. Walker and I both appreciated your generosity.

Very truly yours,```

