



## **CONTACT INFORMATION**

Mining Records Curator  
Arizona Geological Survey  
1520 West Adams St.  
Phoenix, AZ 85007  
602-771-1601  
<http://www.azgs.az.gov>  
[inquiries@azgs.az.gov](mailto:inquiries@azgs.az.gov)

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12/11/90

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: PILGRIM

ALTERNATE NAMES:

PIONEER GOLD MINING CO.  
KATHERINE TREASURE VAULT  
AL SMITH  
PRODUCER MILL

MOHAVE COUNTY MILS NUMBER: 345A

LOCATION: TOWNSHIP 23 N RANGE 20 W SECTION 12 QUARTER --  
LATITUDE: N 35DEG 23MIN 18SEC LONGITUDE: W 114DEG 21MIN 32SEC  
TOPO MAP NAME: GRASSHOPPER JUNCTION - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

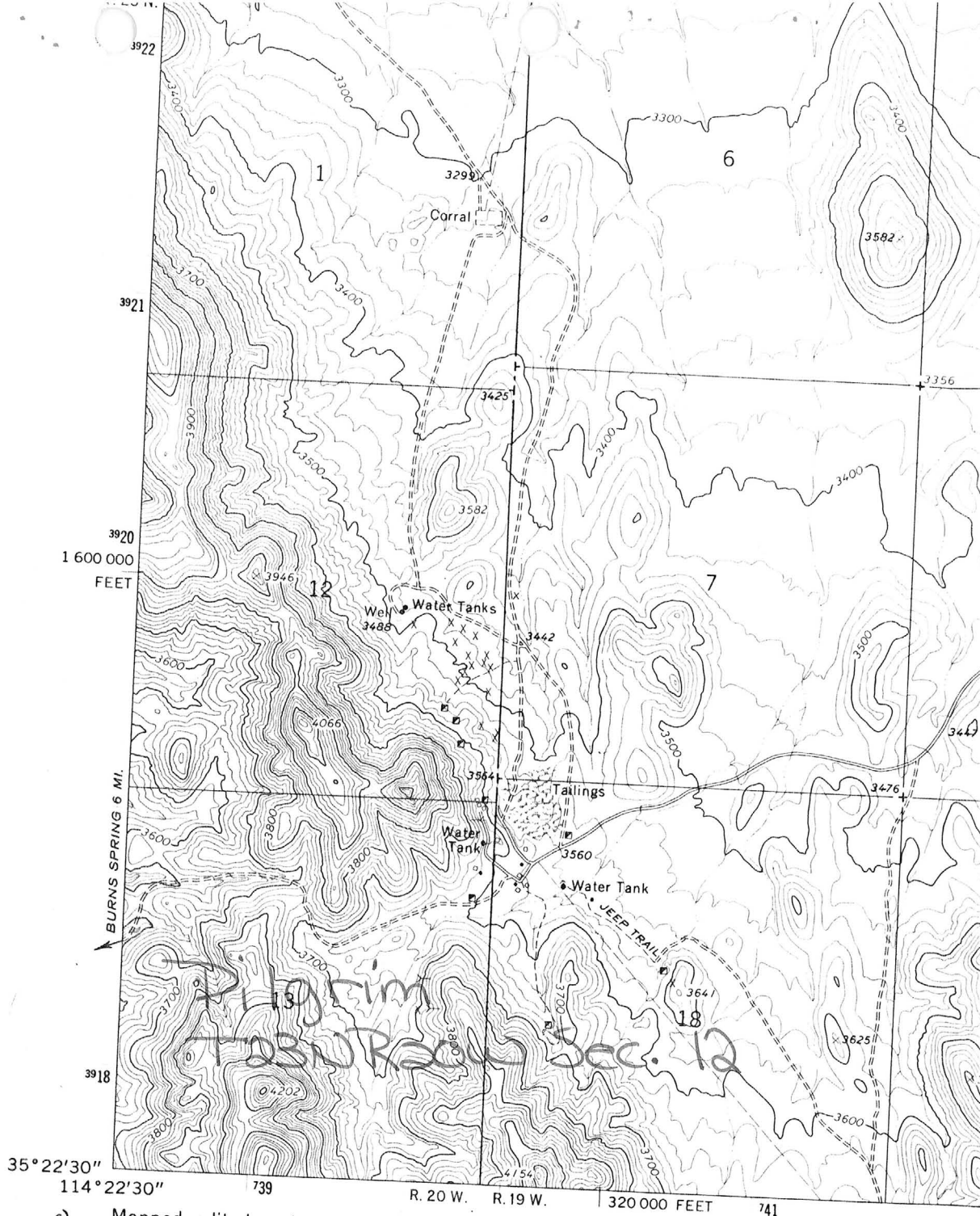
COMMODITY:

GOLD  
SILVER  
LEAD  
IRON  
COPPER SULFIDE

BIBLIOGRAPHY:

ADMMR PILGRIM MINE FILE & COLVO FILE  
HASTINGS, E.F., "MINING AND MILLING METHODS AT  
THE PILGRIM MINE" USBM IC 6945, 1937  
TENNEY, J.B., "SECOND RPT ON MIN. IND. OF AZ"  
AZBM BULL 129, P. 84; 1930  
SCHRADER, F.C. "MIN. DPSTS OF CRBT RNG, BLCK  
MTN, GRND WSH CLFS, AZ" USGS BULL 397, P 214  
ADMMR SOUTH PILGRIM MINE FILE





(BURNS SPRING)  
31° 54' 14" SW

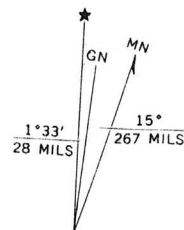
Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial  
photographs taken 1965. Field checked 1967

Polyconic projection. 1927 North American datum  
10,000-foot grid based on Arizona coordinate system, west zone  
1000-meter Universal Transverse Mercator grid ticks,  
zone 11, shown in blue

Fine red dashed lines indicate selected fence lines



UTM GRID AND 1967 MAGNETIC NORTH  
DECLINATION AT CENTER OF SHEET

Grasshopper Jct., 7.5'

Name of Mine or Prospect:	Township	Range	Section	Priority
Pilgrim Mine (Al Smith Mine)	23N	19W	18b	A
Principal Minerals:	1:250,000 Quad	7.5' - 15' Quad		
Gold	Kingman	Grasshopper Junction		
Associated Minerals:	District	Principal Product		
Lead, Zinc, Quartz, Adularia, Calcite	Pilgrim	Gold, Lead, Zinc		
Type of Operation:	County	State	Type of Deposit	
Underground: Shaft	Mohave	Ar.	Vein	
Ownership or Controlling Interest:				
Producers Mine Co. (1909) <sup>3</sup>				
Access: From Kingman, Ar., proceed north on U.S. 93 for 20.5 miles. Turn left on light duty road for 5 miles. Shaft is shown (unnamed) on topographic quadrangle.				
Structural Control or Geological Association:				
<p>"The country rock is principally rhyolite and granite porphyry. This mine is situated on a contact vein between rhyolite breccia, with trachytic rhyolite, forming the hanging wall and granite porphyry in the foot wall. The vein is about 20 feet thick and is about a half a mile in length. It dips about 30°W. The gangue consists of quartz, with a little adularia and calcite."<sup>3</sup></p>				
Age of Mineralization: Miocene				
Production History		Geochemical Analyses		
Discovered 1903; flotation mill 1936 <sup>2</sup> 12 tons of \$100.00 gold/ton shipped 1000 tons of \$6-7 gold/ton dumps		Ore Average: (1909) <sup>3</sup> \$8.00 gold/ton		
References				
1) CETA map file Rack #12A, underground assay, and claim maps. 2) Mallach (1977) p. 27 3) Schrader (1909) p. 214 4) Gardner (1936) p. 51-54. 5) Exploration Research Associates Incorporated, 1980-1981, Photogeological mapping of Grasshopper Junction SE 7.5' Quadrangle.				

Name of Mine or Prospect:	Township	Range	Section	Priority
Pioneer Gold Group (Al Smith Mine)	23N	20W	12d	A
Principal Minerals:	1:250,000 Quad	7.5' - 15' Quad		
Gold	Kingman	Grasshopper Junction		
Associated Minerals:	District	Principal Product		
Quartz, Calcite, Adularia	Pilgrim	Gold		
Type of Operation:	County	State	Type of Deposit	
Surface, Underground	Mohave	Ar.	Vein	
Ownership or Controlling Interest:				
Pioneer Gold Mines Co. (1909) <sup>2</sup>				
Access: From Kingman, Ar., proceed north on U.S. 93 for 20.5 miles. Turn left on light duty road for 5 miles. Prospects are shown (unnamed) on topographic quadrangle.				
Structural Control or Geological Association:				
"The country rock is principally rhyolite and granite porphyry." <sup>2</sup> (see Schrader (1909) p. 214 on Pilgrim Mine)				
Age of Mineralization: Miocene				
Production History		Geochemical Analyses		
References				
1) CETA map file Rack #12A, claim map. 2) Schrader (1909) p. 214, Pilgrim Mine. 3) Exploration Research Associates Incorporated, 1980-1981, Photogeological mapping of Grasshopper Junction and Grasshopper Junction SE 7.5' Quadrangles; field maps only.				

PILGRIM MINE

MOHAVE COUNTY

RRB WR 11/11/83: Bob Nakaota, Geologist, Albuquerque, New Mexico, called for information on the Pilgrim Mine, Mohave County. He has done some work for NM & AZ Land Company and Santa Fe. He will be working in Mohave County for Santa Fe and will come into the office when he gets to Arizona.

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MG WR 7/18/86: In addition to the five patented claims comprising the Pilgrim mine (Mohave Co), Galli Exploration, Reno, Nevada (c), has apparently controlled the area with the Pil group of claims.

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GALLI EXPLORATIONS

7/86

P O Box 12307

Reno, Nevada 89510

- Mohave Gold Inc. & Galli Explorations, a private company out of Reno, NV are coordinating a drill program this month on the property, located in Mohave Co. The jt. venture conducted a drill program in December 1985 with encouraging results, including one stem of more than 25 feet of 0.167 ounces of gold per ton. (north american gold mining industry news, 7-4-86)

See: Pilgrim Mine (file) mohave Co.

NJN WR 7/10/87: Fred Johnson (card) reported that Galli Exploration (card) has put in new drill pads at the Pilgrim (file) Mohave County in preparation for more drilling.

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NJN WR 11/27/87: Wayne Girard, Mohave Gold (card) reported that they plan a new drilling program to begin shortly at the Pilgrim (file) Mohave County. On November 19 they issued a new release which raised \$240,000 for the Pilgrim. They are hopeful that this drilling phase will confirm a half million tons of material grading between .05 to .1 oz/ton Au.

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PILGRIM MINE

MOHAVE COUNTY

MG WR 12/4/87: Mr. Pete Galli reports that he won a lawsuit against Mohave Gold Pilgrim - file) Mohave County. He plans to drill 42 - 45 holes soon at the Pilgrim property; he drilled 17 holes two years ago and was encouraged by the results.

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NJN WR 12/11/87: Wayne Girard of Mohave Gold called and reported that a recent court decision gives Gexa Gold a 75% interest in the Pilgrim (file) Mohave County. Gexa Gold was formerly Galli Resources. Their drill program reported earlier is to start December 15.

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MG WR 1/29/88: Learned from Pete Galli that he has almost completed a recent drilling program at the Pilgrim property (file) Mohave County. The results are discouraging.

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NJN WR 12/29/87: Peter Galli of Gexa (card) reported that they have completed their drilling program at the Pilgrim (file) Mohave County. With partial results available, they have been categorized as not too favorable, as the mineralized areas were too thin at the 700' level and, although much better at the 300' level, much of that has been mined. Also generally discouraging is that they have not found much disseminated value between the 3 vein systems as had been hoped.

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*George Rick*

Rick, George and I drove to the old Producer's mill site (Pilgrim mine) where we augered three preliminary samples from the tailing pond estimated to contain about 400,000 tons. VBD WR 8/25/76

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9-3-42

Thorne, Hallett W.  
Box 10  
Chloride, Arizona

See Producers Mines, Inc.

Re - converting Producers mill into a custom copper, lead,  
and zinc concentrator

See Producers Mines - Re Treatment Schedule on ores 10-24-40

See SOUTH PILGRIM MINE - Re Field Engineers Report 5-8-41  
(Owner-PRODUCERS MINES, INC.)

See PRODUCERS MINES, INC. - re gas application 1-5-45

The mill at the Pilgrim mine at Chloride, Arizona, is being remodeled, it is stated, new screens being put in and the machinery overhauled. While this work is being done, development work is being continued along the drift from the lowest level, and additional exploration of the

*MIN 200 R 6741*

Arizona Department of Mines and Mineral Resources

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

MM-K165 Gold ore

Mohave County

River Range District.

*Algo*  
Producers Mine

MILS # 345 A

4-AKA's

Pilgrim mine (file)



silver extraction, with recovery of metals by carbon absorption in a carbon-in-pulp circuit. Recoveries are expected to be 90% for gold and 60% for silver.

Misima's mineable reserves, at a cut-off grade of 0.020 oz.gold/t and a waste-to-ore ratio of 1.28:1, are calculated at 62,000,000 tons of ore at an average grade of 0.040 oz.gold/t and 0.614 oz.silver/t. The total, mineable precious metal content of the deposit is estimated at 85 tons of gold and 1,292 tons of silver. Potential additional ore reserves may increase these values.

Evaluation of the Misima desposit has been underway for a number of years by Placer Pacific Limited, the 75.8%-owned Australian subsidiary of Placer Dome Inc. The Papua New Guinea government has elected to buy 20% interest and will contribute 20% of the total capital cost, estimated at \$261,000,000 (A\$286,000,000/175,500,000 kina). With the government's participation, Placer Dome's net interest in Misima Mines Pty. Limited will be 60.64%. Placer Pacific's 80% share of the capital cost will be funded by some A\$180,000,000 raised by a private placement of its shares in July 1987, by some US\$20,000,000 from an initial sale of gold warrants, and from funds borrowed through a bank multi-option credit facility or additional sales of gold warrants.

Misima Island is 120 miles east of the Papua New Guinea's mainland and 375 miles ESE of the capital of Port Moresby.

#### MOHAVE GOLD INC. (MVH-Alberta)

PILGRIM (P)  
DRILL PROGRAM STARTED ON - Robin W. Pearson, president GOLD PROJECT IN ARIZONA of Mohave Gold Inc., reports that a 38-hole drilling program was started 15Dec87 on the Pilgrim mine project in Mohave county, Arizona. Initial drilling in the vicinity of the old Pilgrim mine workings encountered ore grade gold mineralization in 6 of 12 holes drilled, starting a few feet from the surface. Based on these 6 holes, potential reserves of 500,000 to 1,000,000 tons containing from 0.05 to 0.10 oz.gold/t may be available for open pit mining.

Twenty five holes will be drilled to outline potential reserves and 13 more will be drilled on new targets developed through geochemical and geophysical reconnaissance.

In a dispute with Mohave's joint venture partner, Gexa Gold Corporation of Reno, Nevada, a court decision caused Mohave to be diluted to a 24.46% working interest. An appeal is being considered.

drilling a weak V.L.F. anomaly. The strike is to a main zone with a 45 degree northeast. The significance of a third mineralized area zone some 5,500 feet west of the main zone is determined. Located by surface exploration samples over a 350-meter strike length assayed oz.gold/t. The first hole there cut 3 feet 0.183 oz.gold/t.

The joint venture partners, Granges Ltd., 50/50, are planning to start an underground program on the main zone early next year and have budgeted \$1,000,000 more for drilling up to May, 1988. The program includes 20,000 feet of drilling on the Main zone, 20,000 feet on the Mishi West zone, 7,000 feet on the K.K. zone and further 7,500 feet elsewhere on the property. The budget to the end of May is \$4,500,000 including \$550,000 for metallurgical and engineering studies, road building and site preparation.

#### M.C BEVERAGES, LTD. (MCB-V)

FUNDING TO ACQUIRE CALIFORNIA - M.C. Beverages SOFT DRINKS DISTRIBUTOR APPROVED (formerly M.C. Beverages Ltd.)

Coins Ltd.) has Vancouver Stock Exchange approval of funds to finance the acquisition of Monte Carlo Beverages, Inc., a California company. Monte Carlo signed a distribution agreement with Sheya Distributing, Inc. to distribute Y J Smoot's metropolitan Denver, Colorado. Sheya, a wholly owned subsidiary of Great Eastern International, currently distributes such brands as: Hansen's, Nesbitts, Frosty Root Beer and Old San Francisco as well as other types of soft drinks. This expands Monte Carlo's distribution network to the Pacific Northwest.

Currently, Monte Carlo distributes Y J Smoot's through the A & W Bottling Company in Washington and surrounding markets.

#### FOR THE RECORD

PROGRESSIVE MINERALS LTD. (PVM-V) president announces drilling is in progress on the "John" of the company's crown grants and mineral claims at Trout Lake, in SE B.C.

Three holes have now been completed. The first and third holes intersected mineralized zones 10 and 15 feet wide, respectively. Assay results awaited. Drilling will continue throughout December and January.



to Bay Mines Ltd. reports that mineralization outlined to date in its Cove, Nevada, discovery contains an estimated 4 million oz of gold and 250 million oz of silver. The discovery of Cove, 1 mi from the company's McCoy mine in central Nevada, was announced on March 31, 1987.

John Zigarlick, president of Echo Bay, said, "After drilling 205 exploration holes, the extent of the deposit is yet defined to the north and northeast or at depth. So far, only five holes have been drilled down to 1,500 ft and five bottomed in mineralization."

Plans call for an open-pit, heap leach operation to be in production from the portion of the Cove ore body by the end of 1988. A 5,000-st/d mill is scheduled for completion in mid-1989 to process high-grade Cove ore and ore from nearby McCoy mine.

When the mill is fully operational, production from Cove should be about 1,000 oz/yr of gold and 2.5 million oz/yr of silver based on current plans. During the early stages of production, operating costs are tentatively estimated at \$150/oz of gold equivalent.

Neil K. Muncaster, vice president for exploration, commented, "We estimate Echo Bay's total proven and probable reserves at 12.5 million oz of gold equivalent for year-end 1987." The figure includes silver converted to gold at a current price ratio of 70:1.

Muncaster also said, "If we don't meet our 1987 target, it's because we've opted the rigs to step-out drilling to the limits of the Cove deposit, rather than to closely-spaced drilling to establish reserves for this year-end."

At the end of 1986, Echo Bay's company-wide proven and probable reserves were 5.6 million oz of gold. "Although we expect to add more reserves over time at our other mines, the fact is that we have found substantially more ounces of gold and silver mineralization at Cove so far this year than the total proven and probable reserves of Echo Bay at the start of the year," the report says.

For 1988, Echo Bay's exploration program at Cove includes: further step-out drilling to establish limits of the mineralization; drilling in the original discovery area to determine the extent of mineralization at depth;

fill drilling at Cove, in conjunction with a mine plan, to enable the company to categorize the mineralization as probable mineable reserves;

velopment of a mine plan; and

■ The search for new gold and silver deposits on the McCoy claim block.

By the end of 1988, Echo Bay expects to be mining the top portion of the Cove ore body, some areas of which have grades averaging as high as 0.185 oz/st gold and 1.8 oz/st silver. Studies are still under way to determine the best method of mining the lower zone.

The options are a large, open-pit mine, or a combination of an open-pit for the upper level and an underground mine for the lower level. More information is needed about the deposit, its size, depth, metallurgy, and ground conditions before all the key decisions can be made.

Currently, McCoy ore is processed by a simple heap leach process, the most cost efficient method for low-grade ores. However, milling increases the recovery rate, improving the return on high-grade ores.

Echo Bay believes that McCoy/Cove, operated as a single production unit, can profitably use both processes in the years ahead. If Cove mineralization is successfully upgraded to reserves, Echo Bay will need more mill capacity than 5,000 st/d. Facilities will be designed to enable a substantial increase in capacity during the years ahead, the company said.

### Geology at Cove

The Cove deposit is hosted by gently dipping sedimentary rocks that are Triassic in age and part of the same formations that host the McCoy deposit, 1 mi to the southwest. Two major zones of mineralization have been identified. The upper zone is in limestone and shale where gold and silver are associated with clay.

When the rock was altered by mineralizing fluids about 37 million years ago, the clay developed along fractures and permeable horizons. At that time, iron sulphide was probably fairly abundant.

dized.

Mineralization shows good continuity and occurs to depths of approximately 300 ft. The upper zone accounts for about 500,000 oz of gold and 15 million oz of silver included in the proven and probable reserves.

As drilling progresses, additional reserves are expected to come primarily from the lower zone, which is separated from the upper zone by 100 to 300 ft of barren rock. The lower zone is hosted in conglomerate and sandstone.

Free gold and silver sulphides (acanthite and tetrahedrite) are associated with abundant iron sulphides. The sulphides average about 5% of the rock, but can be as high as 90% in places.

Some horizons with a high carbonate content appear particularly susceptible to mineralization. Assays in these zones reach as high as 2.2 oz/st of gold and 36.3 oz/st of silver over thicknesses up to 20 ft.

Four reverse circulation drill rigs and one diamond core rig are now working 24 hr/d on the property. In addition, large diameter core drilling for metallurgical test samples and geological information has been started.

An induced polarization geophysical survey has indicated the general lateral distribution of iron sulphides with which the gold and silver are associated, but the results give no indication of precious metals content.

Once the limits of the ore body are known, in-fill drilling on 200-ft centers will be necessary to upgrade the mineralization to the probable reserve category. Currently, there is enough information on the Cove deposit to begin a feasibility study on the planned 5,000-st/d mill.

The sulphide mineralization at depth appears to be amenable to conventional milling processes, but a considerable amount of additional metallurgical testing is needed to confirm this assumption. ■

### PROJECTS

A 41-hole drilling program will start soon on the Pilgrim, North Pilgrim, and Harp properties in Arizona's Black Mountains, according to **Gexa Gold Corp.** president, Peter E. Galli. Initial drilling near the old Pilgrim underground gold mine cut ore-grade mineralization in six of 12 holes, beginning a few feet from the surface, Galli said, indicating a potential reserve of

500,000 to 1 million st of ore containing 0.05 to 0.10 oz/st gold for open-pit mining and heap leaching.

Gexa's interest in the Pilgrim property has been increased from 50% to 75.5% by a Nevada court decision, Galli indicated.

**Hecla Mining Co.** plans to resume exploration and feasibility studies on the

# MOHAVE GOLD INC.

## N E W S   R E L E A S E

Trading Symbol MVH

Trading on the Alberta Stock Exchange


April 27, 1988

### MOHAVE TO TEST EXTENT OF PILGRIM GOLD RESERVES

Robin W. Pearson, President, has announced the Company will begin three programs, recommended by MineStart Management Inc., to run concurrently. The first program calls for a cyanide leaching pilot test plant of 200 tons per day to process underground and open-pit ore. It also calls for the dewatering of the lower levels for sampling and the installation of hoisting facilities. The second program recommends infill drilling to upgrade drill-indicated reserves to proven and step out drilling from known mineralized ore reserves at the main shaft to develop further reserves. The third calls for geochemical, geophysical and geological reconnaissance to establish targets for future drilling and trenching.

Total current reserves of proven, estimated and drill-indicated ore from the previous two programs total 550,000 tons grading .06.

Metallurgical testing has produced recoveries of over 80% by cyanide leaching and it is expected that revenue will be immediately generated from the initial pilot test production.

  
\_\_\_\_\_  
Robin W. Pearson  
President

This News Release has neither been approved nor disapproved by the Alberta Stock Exchange.

MVH26- 30 -

ARIZONA DEPT. OF MINES & MINERAL RESOURCES  
STATE OFFICE BUILDING  
416 W. CONGRESS, ROOM 161  
TUCSON, ARIZONA 85701

Suite #600, 550 - 11th Avenue S.W., Calgary, Alberta T2R 1M7  
Telephone: (403) 237-5100 • Fax (403) 262-1127

PILGRIM FILE 15 APR 1988

# MOHAVE GOLD INC.

## N E W S   R E L E A S E

Trading Symbol MVH

Trading on the Alberta Stock Exchange

April 12, 1988

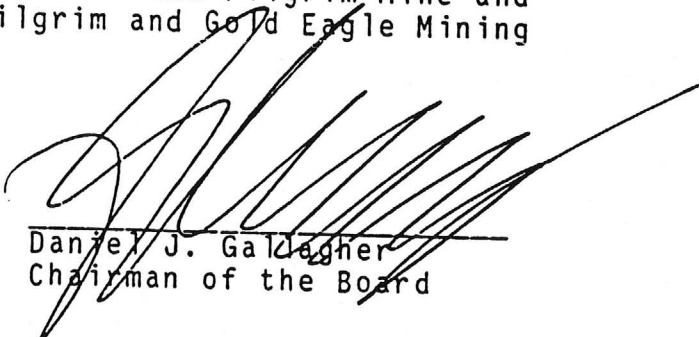
### MOHAVE REGAINS CONTROL OF PILGRIM MINE

Daniel J. Gallagher, Chairman of the Board is pleased to announce that Mohave Gold Inc. has agreed to a out-of-court settlement regarding the legal dispute with its joint-venture partner, Gexa Gold Corp. of Reno, Nevada.

Terms of the settlement would return to Mohave Gold 100% ownership of the mining leases covering the original patented claims along with 54 located claims adjoining the former producing Pilgrim Mine.

The Company will proceed immediately with its pilot plant production project as part of its feasibility program in making a production decision pending final tabulation of ore reserves.

Mr. Gallagher also announced that the Company has entered into negotiations for a \$2,000,000 Private Placement to fund development and production of the Pilgrim Mine and further exploration on the Pilgrim and Gold Eagle Mining projects.

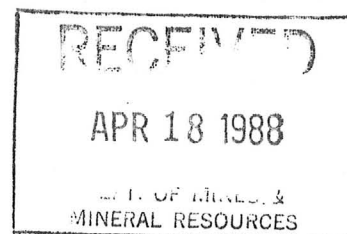


Daniel J. Gallagher  
Chairman of the Board

This News Release has neither been approved nor disapproved by the Alberta Stock Exchange.

MVH26- 30 -

Suite #600, 550 - 11th Avenue S.W., Calgary, Alberta T2R 1M7  
Telephone: (403) 237-5100 • Fax: (403) 262-1127



# Long-Term Investment

## Gexa Starts Drilling Program On Properties In Arizona

RENO, NV — Peter E. Galli, president of Gexa Gold Corporation reported that it has been awarded a 75.5% interest in the Pilgrim gold property as a result of a Nevada court decision. This increased their interest in the project from 50% and reflects the expenditures made by Gexa on this project.

Galli also announced that a 38 hole drilling program would commence shortly on the Pilgrim and North Pilgrim and a three hole program on the Harp property (100% Gexa).

All of these properties lie in the Black Mountains of Arizona, an old, overlooked but promising gold belt, Galli said. The Pilgrim produced approximately 48,000 ounces of gold and 72,000 of silver during the period from 1904 to 1942 as an underground

mine. The Portland Mine is currently in production some eight miles to the west.

Initial drilling in the vicinity of the old Pilgrim Mine workings encountered ore-grade mineralization in six of twelve holes drilled. Based on these six holes, a potential reserve of 500,000 to 1,000,000 tons containing from 0.05 to 0.10 ounces per ton gold may be available for open pit mining.

Findings from two preliminary metallurgical tests indicate the gold is recoverable by heap leaching processes after being crushed to minus 1/4 inch with a plus 70% recovery.

The company's address is 1015 Telegraph St., Suite B, P.O. Box 10877, Reno, Nevada 89510, (702) 786-7667.

There is  
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said many people had  
d into the gold market  
g the summer, but then

combine ADD SW 1/4  
HARP NORTH < 348A UNKNOWN 7  
348B UNKNOWN 8  
349A UNKNOWN 9  
ADD SW 1/4  
MAKE CARD FOR GEXA GOLD  
REFERENCE NORTH MOUNTAINS GALLI EXPL  
+ PUT COPY IN PILGRIM (P)

worry about mining under a  
rhubarb bush in the back  
yard."

## Appointment Of New Bureau Of Mines Director Applauded

OKANE — President  
an's nomination of T.S.  
to head the Bureau of  
es was received by the  
hwest Mining Associa-  
as an important move  
rd restoring the Bureau  
original mission, that of  
taining a viable mining  
stry.  
We're very pleased with  
appointment," said Karl  
Mote, executive director

of the NWMA. "Ary is highly  
regarded in the industry and  
he knows mining, its prob-  
lems, and the role the Bureau  
should play. Especially, we  
are encouraged by the Presi-  
dent's choice because Ary  
really understands our region;  
he has a good grasp of the  
problems and solutions re-  
lated to the Western mining  
industry," Mote said.

(Continued On Page 7)

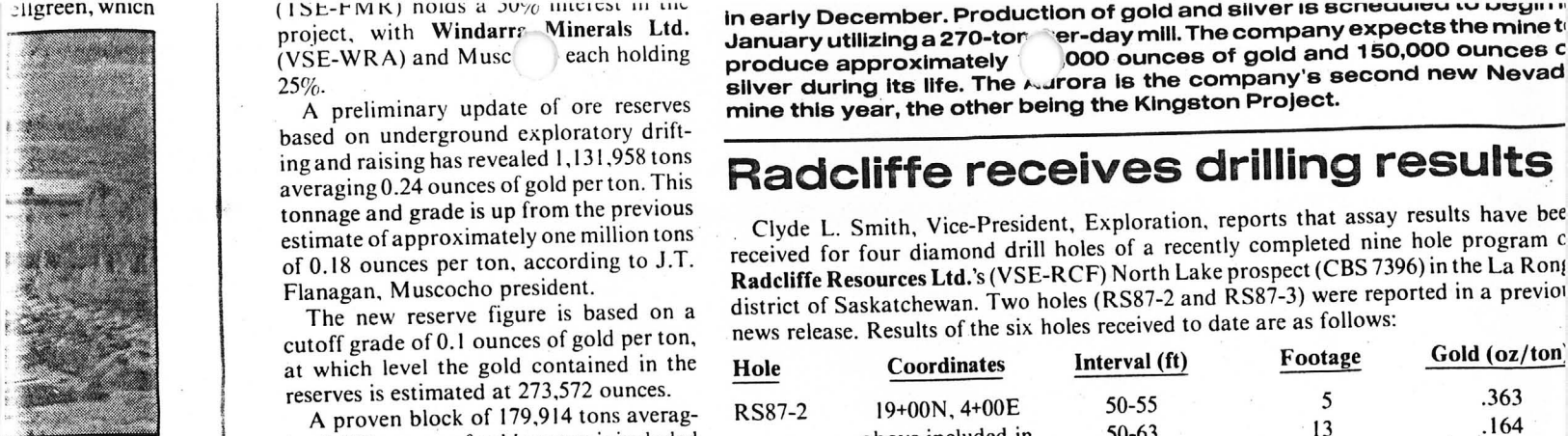


**MALLON  
MINERALS  
CORPORATION**

**A NASDAQ-LISTED  
GOLD PRODUCER**

**SEEKS U.S. PRECIOUS METALS  
PROPERTY EXPLORATION AND  
ACQUISITION OPPORTUNITIES  
CONTACT:**

**J. Scott Hazlitt**  
Vice-President Exploration  
1099 18th Street  
Suite 2750  
Denver, Colorado 80202  
(303) 293-2333



orth American  
are All-North  
(NH) (C\$4.65),  
(VSE-RIM)  
Resources Ltd.  
All-North being  
controlled by  
Kridge and Sil-  
who have an  
surrounding All-  
ty, a joint ven-  
is. Rockridge is

Mountain Gold  
DAQ-QZMGF)  
ines Ltd. (TSE-  
Westley has more  
oration projects  
oped in Nevada  
hottest areas in  
ed to go much  
agement concept  
porate partners'

Resources Ltd.  
ch is working on  
ttable deposit in  
e that is rapidly  
Brookstein says.  
thor and stock-  
onal Securities  
ngton, only had  
sting of his favor-  
d Rouyn Mining  
-ROU) (C\$4.95),  
TSE, ME-AUY)  
rces Ltd. (VSE-  
Resources Corp.  
ur Resources

(TSE-FMR) holds a 50% interest in the project, with Windarra Minerals Ltd. (VSE-WRA) and Muscocho each holding 25%.

A preliminary update of ore reserves based on underground exploratory drifting and raising has revealed 1,131,958 tons averaging 0.24 ounces of gold per ton. This tonnage and grade is up from the previous estimate of approximately one million tons of 0.18 ounces per ton, according to J.T. Flanagan, Muscocho president.

The new reserve figure is based on a cutoff grade of 0.1 ounces of gold per ton, at which level the gold contained in the reserves is estimated at 273,572 ounces.

A proven block of 179,914 tons averaging 0.403 ounces of gold per ton is included in the new figure. Previously, the estimate for this block was 156,914 tons averaging 0.245 ounces per ton.

Flanagan said there are substantial areas that have not yet seen underground work, and these areas are therefore not influenced by the high values found by drifting and raising. He stated this suggests a further gain in grade could be expected once these areas are subjected to exploratory drifting and raising.

**PILGRIM**  
**Mohave Gold developing Arizona claims**

Mohave Gold Inc. (ASE-MVH) has recently completed a private placement financing to net the company C\$245,000. The funds will be used to further explore and develop its Arizona gold property, located 21 miles northwest of Kingman. Upon exercising the warrants, Mohave Gold will net a further C\$350,000.

Last August the company made a production decision on the property where reserves now stand at one million tons grading 0.05 to 0.10 ounces of gold per ton. Mohave Gold plans a pilot program to bring 50 to 100 tons per day into production. A September drill program was initiated to expand and further delineate reserves.

This property had a profitable producing gold and silver mine that was closed down in 1942 by World War II. The mine was first discovered in 1904 and was worked intermittently until 1934 when a cyanide mill was constructed.

in early December. Production of gold and silver is scheduled to begin in January utilizing a 270-ton-per-day mill. The company expects the mine to produce approximately 100,000 ounces of gold and 150,000 ounces of silver during its life. The Aurora is the company's second new Nevada mine this year, the other being the Kingston Project.

**Radcliffe receives drilling results**

Clyde L. Smith, Vice-President, Exploration, reports that assay results have been received for four diamond drill holes of a recently completed nine hole program of Radcliffe Resources Ltd.'s (VSE-RCF) North Lake prospect (CBS 7396) in the La Ronge district of Saskatchewan. Two holes (RS87-2 and RS87-3) were reported in a previous news release. Results of the six holes received to date are as follows:

Hole	Coordinates	Interval (ft)	Footage	Gold (oz/ton)
RS87-2	19+00N, 4+00E above included in	50-55	5	.363
		50-63	13	.164
		83-92	9	.174
		77-92	15	.120
		102-107	5	.177
RS87-3	19+50N, 4+10E above included in	8-14	6	.133
		6-14	8	.108
		55-61	6	.438
		52-61	9	.317
		52-79	27	.136
		52-127	75	.075
RS87-4	above included in	85-91	6	.136
		83-91	8	.115
		74-100	26	.056
		221-224	3	1.16
RS87-5		105-117	12	.109
RS87-7		48-60	12	.055
		66-84	12	.067
RS87-8	above included in	87-92	5	.334
		84-92	8	.220
		176-188	12	.052

All holes are drilled on azimuth of 120 degrees at -45 degrees and are located at spacing of approximately 160 feet. Hole RS87-1 was a 45-foot hole drilled in February.

The holes are located within a 1,377-foot long zone which crops out along the west side of North Lake. Previously reported samples taken from outcrop assayed as high as 0.5 ounces of gold per ton. Gold occurs with pyrite in numerous quartz vein zones which are hosted by quartzite host rock. Results of the remaining three holes will be reported as received.

**Free shares for employees**

The two largest South African mining houses have offered free shares of stock to a total of 270,000 employees, including black miners. Anglo American Corp. of South Africa (ANGL-Johannesburg) said it will offer each of approximately 250,000 employees five free shares over the next five years. Each share was worth R60 or about US\$30.50. Anglo American's affiliate, De Beers Consolidated Mines Ltd. (DBRS-Johannesburg) announced it plans to offer 10 shares to each of its 20,000 employees, also over five years. Its shares were worth about R30 or US\$15.25 each.

The plan was denounced by the head of the 300,000-member black mineworkers union, who called it "a maneuver to entrench that free enterprise is entrenched in a apartheid society."



MOHAVE GOLD INC.

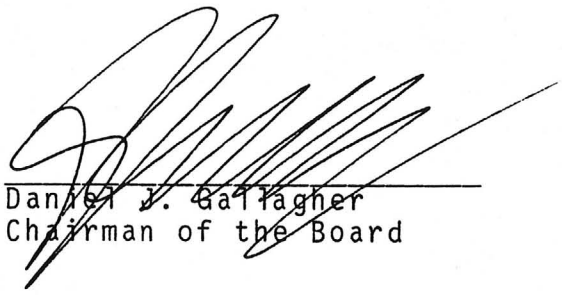
N E W S   R E L E A S E

Trading Symbol MVH  
Trading on the Alberta Stock Exchange

November 19, 1987

Daniel J. Gallagher, Chairman of the Board, is pleased to announce the Company has completed a Private Placement of 700,000 Units consisting of one (1) share at 35 cents with an attached warrant exercisable within one (1) year at 50 cents. This financing netted the treasury \$245,000. The proceeds will be used to further explore and develop the Pilgrim Mine in Mohave County, Arizona. Upon exercising of the warrants, the Company will net a further \$350,000. No commissions were paid as the financing was arranged by the Company's management.

Company president, Robin W. Pearson, has entered into negotiations on behalf of Mohave Gold Inc. with two major Canadian mining companies for joint-venture programs for precious and other minerals in Canada. The Company has also entered into negotiations to obtain flow-through funds to provide financing for exploration of the Canadian property acquisitions.



Daniel J. Gallagher  
Chairman of the Board

This News Release has neither been approved nor disapproved by the Alberta Stock Exchange.

- 30 -

## Alberta Stock Exchange

# Gold volumes climb

Wednesday close, July 29

Production decisions combined with an increase in the gold bullion price brought trading out of its summer doldrums and sent volumes shooting to levels not seen in recent months.

For the second week in succession, **Mohave Gold** was just pipped by **American Ore** for the most active stock tag. Trading on a volume of 841,200, the Mohave issue was up 16¢ to close at 65¢. According to President Daniel Gallagher, the issue was responding to a production decision at Mohave's Pilgrim property in Arizona.

To produce cash flow from existing high-grade reserves, the company will begin a pilot program to bring 50 to 100 tonnes per day into production.

Next month, the company will also drill 25 holes on the property to test indicated reserves of one million tonnes of 0.05 to 0.10 oz gold per ton.

While **Suffolk Resources** traded on a comparatively modest 210,400 shares, the issue was up 20¢ to close at \$3.10. The company attributed this jump to a production decision at its placer gold property at Toulepleu in the Ivory Coast of West Africa.

Torrential rainfall has prevented Suffolk from flying essential equipment into the area, but a production rate of 1,000 cu. m per day is expected to add \$100,000 monthly to the company's treasury.

Also active with a volume of 589,500 shares, was **McSev Exploration** which recently acquired 49% working interest in Blue River Mines' calcite deposit at Blue River, B.C. The issue was up 8¢ to close at 40¢.

After a number of quiet trading sessions, **Jilbey Industries** was active once again. The issue was up 45¢ to close at \$2.85 on a volume of 132,100. One of last month's most

### MOST ACTIVE MINES

Amer Ore	859,000	60 +	8
Mohave Gold	841,200	65 +	16
McSev	589,500	40 +	8
Penncan Res	354,000	6	
Cdn Platinum	270,700	40 -	169

notable performers, Jilbey has a 25% interest in the 16-claim Fontana property located in Duvernay Twp. near Amos, Que.

News of an intensive exploration program on **Sunmist Energy 86's** 50,000-acre Eric Lake gold property at Rankin Inlet added 4¢ to the share price. It closed at 42¢ on a volume of 80,700.

After completing a 13,000 ft-diamond drilling program, Sunmist is shifting its emphasis to surface exploration.

While **Vista Mines** recently awarded a contract to start the Phase 2 decline development on its Rio gold project southwest of Creighton, Sask., the issue remained steady to close at \$2.25.

Probable and geologically inferred reserves on the property currently stand at 600,000 tons grading 0.2 oz gold.

**Golconda Resources** remained steady after signing an agreement with Manville Sales Corporation to earn an interest in the Record Mine property in Baker Cty., Ore. The issue closed at \$1.40 on a volume of 26,200 shares traded.

## Glen Auden busy with several plays

**Glen Auden Resources** has completed a geophysical survey on over 100 claims in the La Peltrie area, Que. The ground protects the eastward extension of a gold discovery made by Rambo Exploration. Glen Auden notes that in addition to gold targets, a 400-m-long massive sulphide anomaly will also be examined.

## Alberta Stock Exchange

# Heavy Trading

Wednesday close, Aug 26

While fears for the U.S. dollar sparked caution in Toronto and New York, a recent increase in the price of gold bullion prompted heavy trading in some of Alberta's most active gold stocks.

Trading on a volume of 662,500 **Mohave Gold** was up 22¢ to close at 75¢. A mover of recent weeks, the Mohave issue is responding to a production decision at the company's Pilgrim mine in Arizona where known reserves stand at 1 million tons grading 0.05 to 0.10 oz gold per ton.

The **Sweany Gold** issue which has also traded heavily in recent weeks, was active once again. Following the release of drill results from a joint venture property in the Beardmore gold camp, Sweany Gold remained steady on 506,800 to close at 12¢.

While **American Ore** was one of Alberta's most active stocks last month, it remained relatively quiet this week with only 118,700 shares changing hands. American Ore has released results of an exploration program on its Iskut River joint venture property in B.C. In conjunction with Golden Band Resources and Delaware Resources, the company shares a 33 1/3% interest in the 12,000 acre gold property. The issue remained steady to close at 50¢.

Some encouraging drill results

### MOST ACTIVE MINES

ConGld Std	880,500	160	-	154
McSev	691,000	45	+	5
Mohave	662,500	75	+	22
Sweany Gld	506,800	12	-	
Ethicorp	475,200	115	+	10

from **Twin Gold's** Lingman Lake property in northwestern Ontario, has sparked investor interest in the issue. It was up 25¢ this week on 700 shares to close at \$2.25. Proven and probable reserves of 596,000 tons grading 0.28 oz gold are supplemented by an additional 643,000 possible tons of 0.25 oz.

**Jascan Resources** was up a modest 5¢ on 71,100 to close at \$4.65 following news that it has formed the Montana Silver Venture with Pacific Coast Mines. An affiliate of U.S. Borax and Chemical Corp., Pacific Coast will explore its silver/copper property near Noxon, Montana in a joint venture with Jascan.

While it closed down 12¢ on 111,500 shares traded to finish the week at \$5.38, **Monte Carlo Gold Mines** seems to have found the necessary financing for exploration at its Aruba Island gold bet. At the second attempt, Monte Carlo will raise \$2 million from a subscription agreement with a European investment house. A similar agreement fell through earlier this month.



MOHAVE GOLD INC.

N E W S   R E L E A S E

Trading Symbol MVH  
Trading on the Alberta Stock Exchange

July 27, 1987

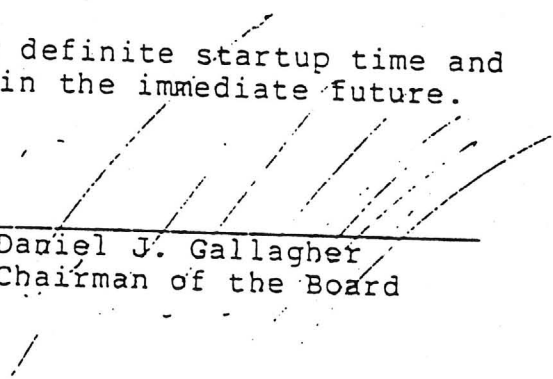
Daniel J. Gallagher, Chairman of the Board, is pleased to announce that the program announced in the July 13, 1987 News Release for the drilling of 25 holes on the Pilgrim Mine will be initiated within 45 - 60 days. This program will test indicated potential reserves for 1,000,000 tonnes of .05 to .10 Au.

Robin W. Pearson, President, will also be instituting a pilot production program to bring 50 to 100 tonnes per day into production on present known reserves.

This program will be part of a feasibility study for the larger tonnage potential and to produce cash flow from the existing high-grade reserves insitu.

Funding for both programs has been arranged through a private placement.

Further announcements concerning definite startup time and letting of contracts will be made in the immediate future.

  
\_\_\_\_\_  
Daniel J. Gallagher  
Chairman of the Board

- 30 -

*Pilgrim(f)*

# MOHAVE GOLD INC.

## NEWS RELEASE

Trading Symbol MVH  
Trading on the Alberta Stock Exchange

July 13, 1987

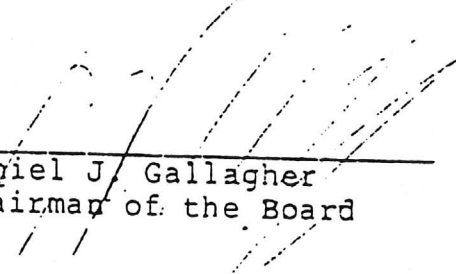
Subsequent to the company's Notice of Default to Galli Explorations on the Pilgrim Mine Joint Venture, Galli Explorations has filed and served a Complaint for Declaratory Relief in the Nevada Second Judicial Court.

Mohave Gold Inc. has responded by filing a counter claim for Breach of Contract, Fraud and Termination of the agreement.

As previous drill and test results indicate considerable potential for a large, open-pit, heap-leach mine, the directors have retained Mr. James L. Wadsworth of Mushkin, Samuels and Associates of Las Vegas, as litigation counsel. Mr. Wadsworth, former counsel to the Suma Corporation, with over 25 years experience in mining law, is internationally recognized as an expert in this field.

Corporate counsel advise that the company has an excellent chance of regaining 100% of the property and at worst will maintain the 50% presently held.

The 1985 program of 17 holes drilled indicated potential reserves of 1,000,000 tons of .05 to .10 AU. Twenty-five holes are planned for the next stage on 200' x 70' centres to test this potential reserve. This test is of a small portion of the overall structure which hosts favourable zones for gold mineralization. A second objective for this program is to test new areas outside the immediate Pilgrim mine for further potential reserves. 13 - 15 drill holes are planned in five separate areas.

  
\_\_\_\_\_  
Daniel J. Gallagher  
Chairman of the Board

pilgrim (f)

**MOHAVE GOLD INC.**

November 30, 1987

Nyal J. Niemuth  
Dept. of Mines & Mineral Resources  
Mineral Building Fairground  
Phoenix, Arizona  
85007

Re: Mohave Gold Inc.

Dear Nyal:


It was nice talking with you on the phone the other day and I enjoyed your comments regarding the Pilgrim Mine.

As promised, I have enclosed an information package on Mohave Gold Inc. It is my opinion, Nyal, that we will have a small or large mine, depending of course, upon the amount of reserves and grade that is proven up.

Our trading symbol is "MVH" listed on the Alberta Stock Exchange, with our current trading range at 25 to 30 cents (Cdn. funds).

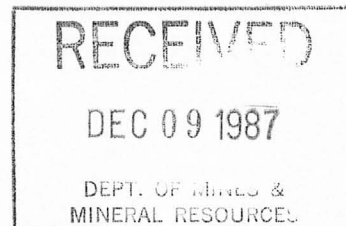
If I can be of any further assistance, please feel free to contact me at any time.

Yours very truly,

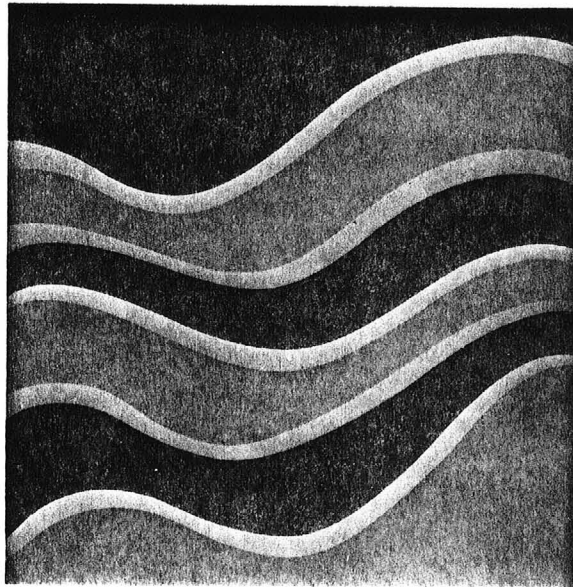


N. Wayne Garrod  
Investor Relations

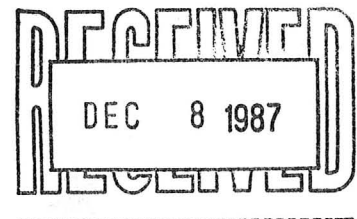
NWG:kab  
Enclosure



pelgrim(f)



# MOHAVE GOLD INC.



ARIZONA DEPT. OF MINES & MINERAL RESOURCES  
STATE OFFICE BUILDING  
416 W. CONGRESS, ROOM 161  
TUCSON, ARIZONA 85701

# MOHAVE GOLD INC.

#802 - 550 - 11th Ave. S.W. Calgary, Alberta, T2R 1M7, (403)237-5100, FAX (403)262-1127  
Listed on The Alberta Stock Exchange, symbol "MVH".

## Pilgrim Mine Project

Located 21 miles northwest of Kingman, Arizona, the Pilgrim Mine project consists of five patented and additional claims staked along the exposed length of a structure 1.5 miles long and 400 feet wide. The mine was a profitable producer of gold and silver until 1942 when production ceased permanently because of World War II.

The mine was first discovered in March 1904 and was worked intermittently until 1934, at which time a cyanide mill was constructed that operated until the war. At the time of the government-ordered shutdown of U.S. mining operations, the Pilgrim Mine was operational but no mining has been done since.

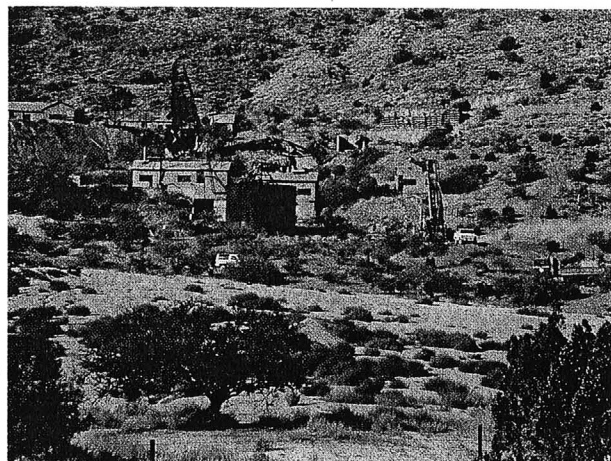
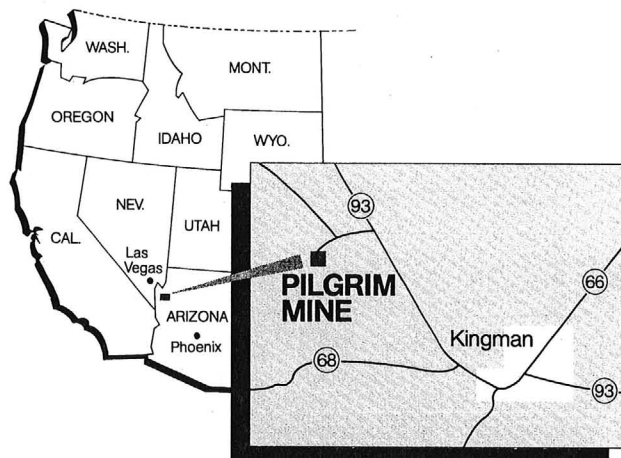
Exploration has provided encouraging results on the extent and grade of ore body. Preliminary work uncovered a series of parallel veins over a 200 foot width, with fractures and shears in between, some of which exhibit high grades. Underground samples from the old workings indicate gold values as high as 5.67 oz/ton gold and silver up to 1.74 ounces per ton of ore. A ten-foot section in a cross-cut between the upper and middle veins on the third level contained 0.25 oz/ton gold over a fifty-foot area, indicating open-pit ore can be developed and suggesting that this possibility was not recognized during the early-day mining activity.

Three additional anomalous zones have been uncovered through geochemical and geophysical reconnaissance surveys. The first zone extends from the old workings on the Pilgrim ore body indicating a strong continuance of mineralization favorable to both underground and open-pit mining. Three new parallel structures have been located on the project. Geochemical results are high enough for expression in ounces per ton rather than the customary parts per million.

These results range from .001 to .048 ounces per ton of gold and .005 to .428 ounces per ton of silver on surface. Correlated geophysical data from the

electromagnetic survey suggests these anomalous zones are thirty to forty feet wide on each of the separate parallel mineralized structures. A wide spread reconnaissance drilling program was carried out in the fall of 1985 with very encouraging results. Every hole encountered favorable mineralization with one grading .167 oz/ton over 25 feet. Because the ore is heap leachable, the Company feels it can profitably mine grades as low as .02 oz/ton.

The mine is easily accessible and has sufficient water and power for a commercial operation. Three-phase power exists at the mine site one less hurdle to overcome when the mine achieves production once again. (Continued on page 3)



*Reverse circulation drilling on East Pilgrim vein.*

# Heap Leaching Process

Heap leaching or "solution mining" is a fairly new method of extracting gold. This method far surpasses conventional methods for low grade ores in the following ways:

- retrieves small concentrations of gold and silver (low grades)
- rate of retrieval provides cash flow and return on assets
- low capital costs

The following is a description of the heap leaching process:

1. Mining: ore is mined or gathered from previously loaded stock piles

2. Leaching pad: ore which may or may not have to be crushed is heaped onto a pad and is leveled. The leaching solution is applied to the top of the heap by a sprinkler system causing percolation throughout the heap which, dissolves the gold. The solution then flows to a pond

3. Pregnant pond: collection basin for metalladen solution

4. Filter

5. Vacuum Tower

6. Zinc and Lead Nitrate: solution is circulated through a recovery plant where metal values (gold and silver) are removed by zinc precipitation or through absorption by activated carbon

7. Filter: reduces the precipitate containing the gold to a powder

8. Dore Bullion: gold is fired (or converted into bullion containing gold and silver)

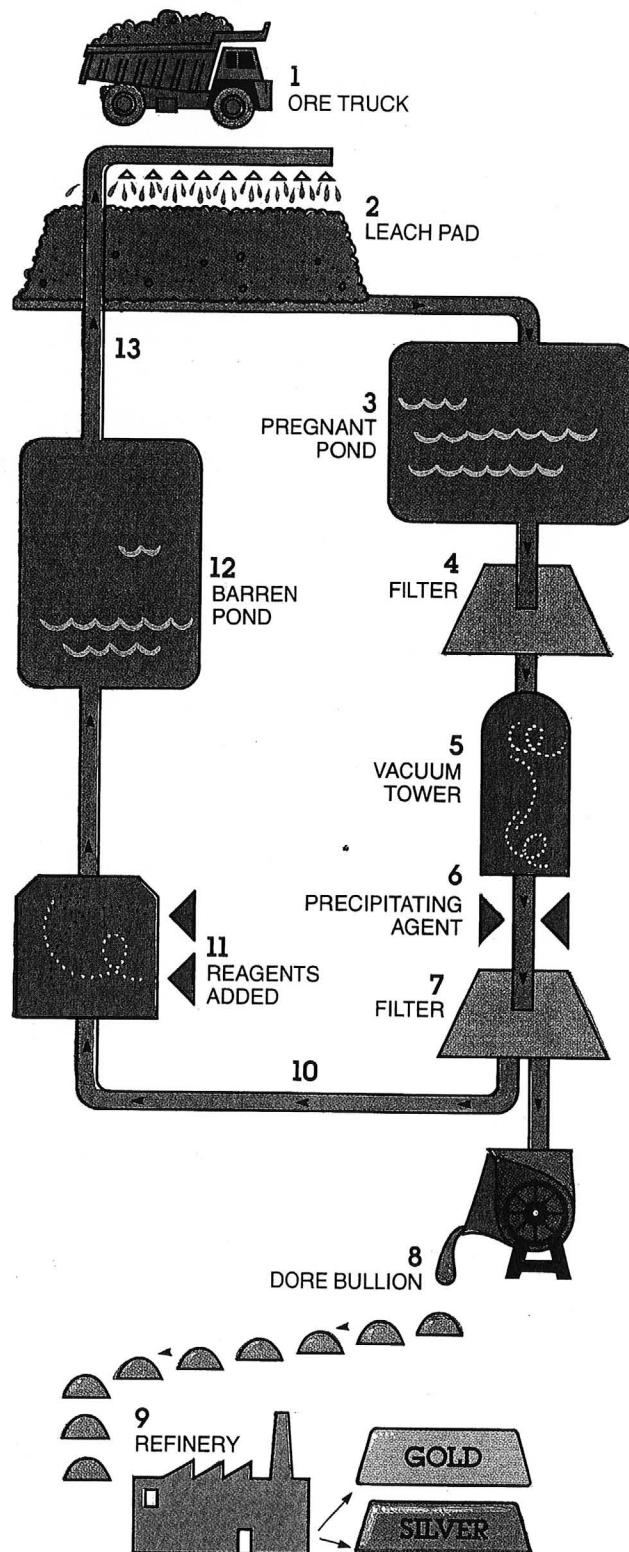
9. Refinement: purification

10. The solution is recycled

11. Re-agents added

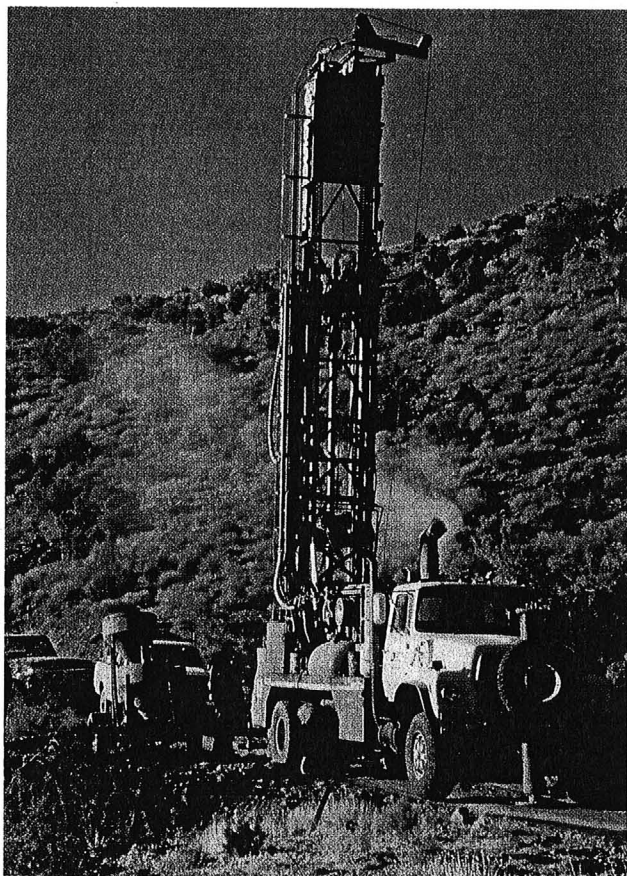
12. Barren Pond solution is stored until ready for reuse

13. Solution piped to heap for leaching process to begin again

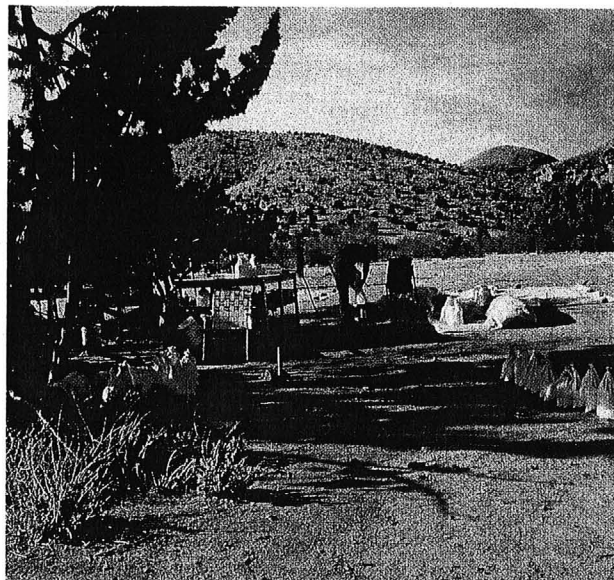




The property has both underground and open-pit potential, providing the operator with the ability to adjust mining methods to optimum economic recovery as dictated by the capricious nature of the precious metals and financial markets. The nature and size of the deposit will determine the amount of capital required for production.



*Drill rig on Main Pilgrim vein.*



*Sample preparation.*

## Property Evaluation

DAVID S. EVANS Ph.D., P.Geol., FGAC has completed an evaluation of the Pilgrim Mine property in Mohave County, Arizona. In his report, he has completed an extensive overview of physical features, history, geology, geochemistry and geophysics. Incorporating past data and current evaluations, Dr. Evans has concluded the following:

1. Estimated that upwards of 200,000 tons of material amenable to underground mining may still remain.

2. The Pilgrim property displays similar characteristics and features of the Oatman Mining District which has yielded 2.2 million oz., of gold and 1.4 million oz. of silver.

3. Underground and surface mapping, surface geochemical surveys, reconnaissance geophysical survey, and reconnaissance reverse circulation drilling suggest the presence of well developed structurally-controlled precious metals mineralization along a measured trend exceeding 2,000 feet in length and up to 800 feet in width.

Postage

# MOHAVE GOLD INC.

#802 - 550 - 11th Ave. S.W.  
Calgary, Alberta  
CANADA  
T2R 1M7

4. Additional work is justified, including "step-out" and "in-fill" reverse circulation drilling, recalculation of underground ore reserves and metallurgical testing to further delineate whether surface leaching or underground mining is best suited to this property.

Based on these conclusions, a two phase program of assessment is recommended.

A first stage calls for step out and infill reverse circulation drilling to estimate and classify the Pilgrim ore reserves into drill indicated probable, and proven categories. Phase two drilling will undertake to define in some detail individual ore blocks or panels for prefeasibility and feasibility evaluation needed for mine development and production planning.

Drilling results include zones assaying 0.167 oz/ton Au over a true thickness of 25 feet. Evaluation to date indicates both underground and open pit potential. Tests confirm the ore is amenable to the cost efficient heap leaching process and this method has been recommended.

The Previous program of 17 holes drilled indicated potential reserves of 1,000,000 tons of .05 to .10 AU. Twenty-five holes are planned for the next stage on 200' x 70' centres to test this potential reserve. This test is of a small portion of the overall structure which hosts favourable zones for gold mineralization. A second objective for this program is to test new areas outside the immediate Pilgrim Mine for further potential reserves. 13 - 15 drill holes are planned in five separate areas.

## Corporate Directory

### Listing

Alberta Stock Exchange - MVH.A  
U.S. 12G Registration 82-940

### Head Office

#802 - 550 - 11th Ave. S.W.  
Calgary, Alberta  
T2R 1M7

### Directors and Officers

Daniel J. Gallagher, Chairman of the Board  
and Secretary Treasurer  
Robin W. Pearson, President  
Robert K. Howard, Director

### Transfer Agent and Registrar

Canada Trust  
505 - 3rd Street, S.W.  
Calgary, Alberta  
T2P 3Y8

### Auditors

Doupe Dick & Cook  
405 - 1333 - 8 Street S.W.  
Calgary Alberta  
T2R 1M6

### Solicitors

John G. Magnus  
Barrister, Solicitor and Notary  
Suite 301, 665 - 8th Street, S.W.  
Calgary, Alberta  
T2P 3K7

### Bankers

TORONTO DOMINION BANK  
Medical Arts Branch  
902 - 8th Ave. S.W.  
Calgary, Alberta  
T2P 1H8

**Please send me additional information  
and add me to your mailing list.**

NAME \_\_\_\_\_  
COMPANY \_\_\_\_\_ POSITION \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_  
STATE / PROVINCE \_\_\_\_\_  
ZIP / POSTAL CODE \_\_\_\_\_



# MOHAVE GOLD INC.

## Pilgrim Mine Project

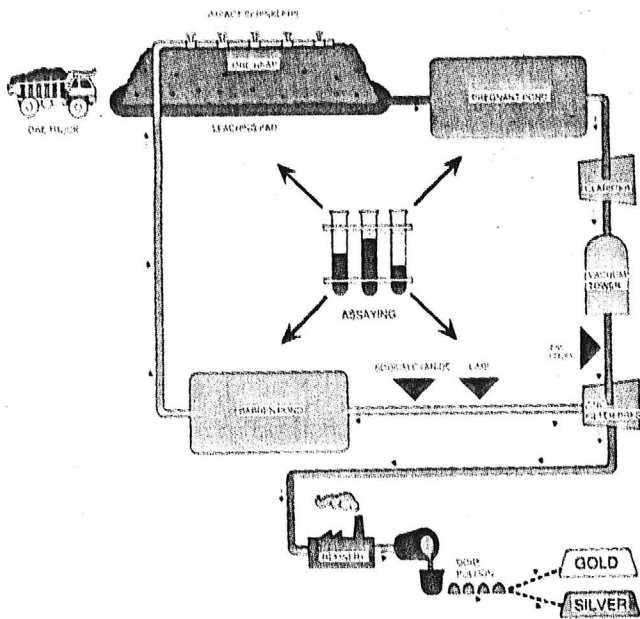
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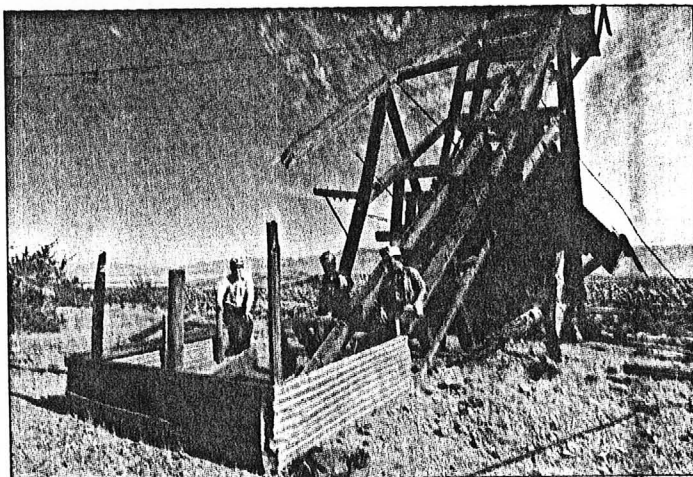
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3. Underground and surface mapping, surface geochemical surveys, reconnaissance geophysical survey, and reconnaissance reverse circulation drilling suggest the present of well developed structurally-controlled precious metals mineralization along a measured trend exceeding 2,000 feet in length and up to 800 feet in width.
4. Additional work is justified, including "step-out" and "in-fill" reverse circulation drilling, recalculation of underground ore reserves and metallurgical testing to further delineate whether surface leaching or underground mining is best suited to this property.

Based on these conclusions, a two phase program of assessment is recommended.

A first stage calls for step out and infill reverse circulation drilling to estimate and classify the Pilgrim ore reserves into drill indicated probable, and proven categories. Phase two drilling will undertake to define in some detail individual ore blocks or panels for prefeasibility and feasibility evaluation needed for mine development and production planning.

Drilling results include zones assaying 0.167 ounces of gold per ton over a true thickness of 25 feet. Evaluation to date indicates both underground and open pit potential. Tests confirm the ore is amenable to the cost efficient heap leaching process and this method has been recommended.

The 1985 program of 17 holes drilled indicated potential reserves of 1,000,000 tons of 0.05 of 0.10 gold. Twenty-five holes are planned for the next stage on 200' x 700' centers to test this potential reserve. This test is of a small portion of the overall structure which hosts favorable zones for gold mineralization. A second objective for this program is to test new areas outside the immediate Pilgrim mine for further potential reserves. 13-15 drill holes are planned in five separate areas.

**MOHAVE GOLD INC.**  
**ALBERTA STOCK EXCHANGE — MVH**  
**US 12G REGISTRATION 82940**

Suite 802 - 550 11th Ave. S.W.  
 Calgary, Alberta T2R 1M7

Phone (403) 237-5100 Fax (403) 262-1127

Please circle 39 on the reader service card, page 45.

**FOR FURTHER INFORMATION PLEASE CALL**  
**DAN GALLAGHER (403) 237-5100**  
**SUITE 802-550 11TH AVENUE S.W., CALGARY, ALBERTA T2R 1M7**

NAME \_\_\_\_\_ (PLEASE PRINT)  
 COMPANY \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE/PROV \_\_\_\_\_  
 PHONE \_\_\_\_\_

Bid & Ask Vol. 1 Issue 31 World investment news 7 10-9-87

# MOHAVE GOLD INC.

November 13, 1987

Michael N. Greeley  
4510 E. Glenn Street  
Tucson, AZ  
85712

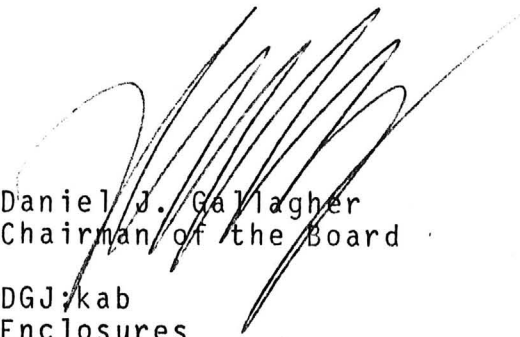
Re: Mohave Gold Inc.

Dear Sir:

Pursuant to your recent request for information, enclosed is the latest Mohave Gold Inc. brochure along with News Releases as well as information that explains the company's recent activities.

Should you require further information, please do not hesitate to call.

Yours truly,



Daniel J. Gallagher  
Chairman of the Board

DGJ:kab  
Enclosures

# MOHAVE GOLD INC.

## N E W S   R E L E A S E

Trading Symbol MVH  
Trading on the Alberta Stock Exchange

July 27, 1987

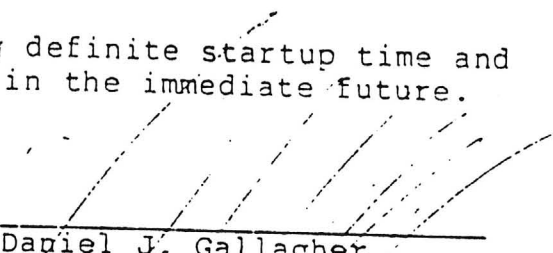
Daniel J. Gallagher, Chairman of the Board, is pleased to announce that the program announced in the July 13, 1987 News Release for the drilling of 25 holes on the Pilgrim Mine will be initiated within 45 - 60 days. This program will test indicated potential reserves for 1,000,000 tonnes of .05 to .10 Au.

Robin W. Pearson, President, will also be instituting a pilot production program to bring 50 to 100 tonnes per day into production on present known reserves.

This program will be part of a feasibility study for the larger tonnage potential and to produce cash flow from the existing high-grade reserves insitu.

Funding for both programs has been arranged through a private placement.

Further announcements concerning definite startup time and letting of contracts will be made in the immediate future.

  
\_\_\_\_\_  
Daniel J. Gallagher  
Chairman of the Board

- 30 -

# MOHAVE GOLD INC.

## N E W S   R E L E A S E

Trading Symbol MVH  
Trading on the Alberta Stock Exchange

July 13, 1987

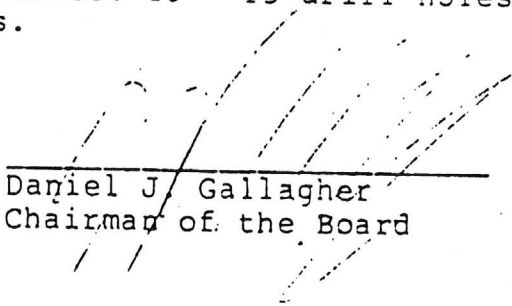
Subsequent to the company's Notice of Default to Galli Explorations on the Pilgrim Mine Joint Venture, Galli Explorations has filed and served a Complaint for Declaratory Relief in the Nevada Second Judicial Court.

Mohave Gold Inc. has responded by filing a counter claim for Breach of Contract, Fraud and Termination of the agreement.

As previous drill and test results indicate considerable potential for a large, open-pit, heap-leach mine, the directors have retained Mr. James L. Wadsworth of Mushkin, Samuels and Associates of Las Vegas, as litigation counsel. Mr. Wadsworth, former counsel to the Suma Corporation, with over 25 years experience in mining law, is internationally recognized as an expert in this field.

Corporate counsel advise that the company has an excellent chance of regaining 100% of the property and at worst will maintain the 50% presently held.

The 1985 program of 17 holes drilled indicated potential reserves of 1,000,000 tons of .05 to .10 AU. Twenty-five holes are planned for the next stage on 200' x 70' centres to test this potential reserve. This test is of a small portion of the overall structure which hosts favourable zones for gold mineralization. A second objective for this program is to test new areas outside the immediate Pilgrim mine for further potential reserves. 13 - 15 drill holes are planned in five separate areas.

  
\_\_\_\_\_  
Daniel J. Gallagher  
Chairman of the Board

## Alberta Stock Exchange

# Gold volumes climb

Wednesday close, July 29

Production decisions combined with an increase in the gold bullion price brought trading out of its summer doldrums and sent volumes shooting to levels not seen in recent months.

For the second week in succession, **Mohave Gold** was just pipped by **American Ore** for the most active stock tag. Trading on a volume of 841,200, the Mohave issue was up 16¢ to close at 65¢. According to President Daniel Gallagher, the issue was responding to a production decision at Mohave's Pilgrim property in Arizona.

To produce cash flow from existing high-grade reserves, the company will begin a pilot program to bring 50 to 100 tonnes per day into production.

Next month, the company will also drill 25 holes on the property to test indicated reserves of one million tonnes of 0.05 to 0.10 oz gold per ton.

While **Suffolk Resources** traded on a comparatively modest 210,400 shares, the issue was up 20¢ to close at \$3.10. The company attributed this jump to a production decision at its placer gold property at Toulepleu in the Ivory Coast of West Africa.

Torrential rainfall has prevented Suffolk from flying essential equipment into the area, but a production rate of 1,000 cu. m per day is expected to add \$100,000 monthly to the company's treasury.

Also active with a volume of 589,500 shares, was **McSev Exploration** which recently acquired 49% working interest in Blue River Mines' calcite deposit at Blue River, B.C. The issue was up 8¢ to close at 40¢.

After a number of quiet trading sessions, **Jilbey Industries** was active once again. The issue was up 45¢ to close at \$2.85 on a volume of 132,100. One of last month's most

### MOST ACTIVE MINES

Amer Ore	859,000	60	+	8
Mohave Gold	841,200	65	+	16
McSev	589,500	40	+	8
Penncan Res	354,000	6		
Cdn Platinum	270,700	40	-	169

notable performers, Jilbey has a 25% interest in the 16-claim Fontana property located in Duvernay Twp. near Amos, Que.

News of an intensive exploration program on **Sunnist Energy 86's** 50,000-acre Eric Lake gold property at Rankin Inlet added 4¢ to the share price. It closed at 42¢ on a volume of 80,700.

After completing a 13,000 ft-diamond drilling program, Sunmist is shifting its emphasis to surface exploration.

While **Vista Mines** recently awarded a contract to start the Phase 2 decline development on its Rio gold project southwest of Creighton, Sask., the issue remained steady to close at \$2.25.

Probable and geologically inferred reserves on the property currently stand at 600,000 tons grading 0.2 oz gold.

**Golconda Resources** remained steady after signing an agreement with Manville Sales Corporation to earn an interest in the Record Mine property in Baker Cty., Ore. The issue closed at \$1.40 on a volume of 26,200 shares traded.

## Glen Auden busy with several plays

**Glen Auden Resources** has completed a geophysical survey on over 100 claims in the La Peltrie area, Que. The ground protects the eastward extension of a gold discovery made by Rambo Exploration. Glen Auden notes that in addition to gold targets, a 400-m-long massive sulphide anomaly will also be examined.

## Alberta Stock Exchange

# Heavy Trading

Wednesday close, Aug 26

While fears for the U.S. dollar sparked caution in Toronto and New York, a recent increase in the price of gold bullion prompted heavy trading in some of Alberta's most active gold stocks.

Trading on a volume of 662,500 **Mohave Gold** was up 22¢ to close at 75¢. A mover of recent weeks, the Mohave issue is responding to a production decision at the company's Pilgrim mine in Arizona where known reserves stand at 1 million tons grading 0.05 to 0.10 oz gold per ton.

The **Sweany Gold** issue which has also traded heavily in recent weeks, was active once again. Following the release of drill results from a joint venture property in the Beardmore gold camp, Sweany Gold remained steady on 506,800 to close at 12¢.

While **American Ore** was one of Alberta's most active stocks last month, it remained relatively quiet this week with only 118,700 shares changing hands. American Ore has released results of an exploration program on its Iskut River joint venture property in B.C. In conjunction with Golden Band Resources and Delaware Resources, the company shares a 33 1/3% interest in the 12,000 acre gold property. The issue remained steady to close at 50¢.

Some encouraging drill results

### MOST ACTIVE MINES

ConGld Sid	880,500	160	-	154
McSev	691,000	45	+	5
Mohave	662,500	75	+	22
Sweany Gld	506,800	12	-	-
Ethicorp	475,200	115	+	10

from **Twin Gold's** Lingman Lake property in northwestern Ontario, has sparked investor interest in the issue. It was up 25¢ this week on 700 shares to close at \$2.25. Proven and probable reserves of 596,000 tons grading 0.28 oz gold are supplemented by an additional 643,000 possible tons of 0.25 oz.

**Jascan Resources** was up a modest 5¢ on 71,100 to close at \$4.65 following news that it has formed the Montana Silver Venture with Pacific Coast Mines. An affiliate of U.S. Borax and Chemical Corp., Pacific Coast will explore its silver/copper property near Noxon, Montana in a joint venture with Jascan.

While it closed down 12¢ on 111,500 shares traded to finish the week at \$5.38, **Monte Carlo Gold Mines** seems to have found the necessary financing for exploration at its Aruba Island gold bet. At the second attempt, Monte Carlo will raise \$2 million from a subscription agreement with a European investment house. A similar agreement fell through earlier this month.



was little Golden Terrace re  
**Alberta Stock Exchange**

**Platinum boosts issues**

northern miner  
8/10/87  
P 7

Wednesday close, August 5

While growing tensions in the Persian Gulf propelled gold prices to \$467(US) per oz, it was platinum which had investors racing to buy up shares of two Alberta issues.

Trading on a volume of 952,900, the **Canadian Platinum** issue was up 10¢ to close at 50¢. With a 100% interest in a 65 km platinum property in the Ungava region of Quebec, **Jascan Resources** also attracted investor interest. The issue was up 95¢ to close at \$4.50 on a volume of 865,800 shares traded.

Geologist Dino Titaro said Jascan is close to signing an agreement with U.S. Borax and Chemical Corp. which would give the former company an interest in a large silver/copper deposit located in Montana. According to Mr Titaro, reserves on the property are in excess of 70 million tons.

Rising silver prices boosted the share price of **Silver Century Explorations**. The issue was up 95¢ on a volume of 43,300 shares traded to close at \$2.60. The company has a number of silver properties in Peterson Lake, Ont., but according to the company, no major announcements are expected.

**McSev Exploration** which has oil and gas interests in Alberta, was also active. The issue was up 6¢ to close at 46¢ on a volume of 757,300.

After failing to raise \$1 million through a private placement for

**MOST ACTIVE MINES**

Cdn Platinum	952,900	50 +	10
Jascan Res	865,800	450 +	95
McSev Explor	757,300	46 +	6
Amer Ore Ltd	495,700	70 +	10
Mohave	334,000	60 -	4

exploration on its Aruba Island gold prospect, **Monte Carlo Gold Mines** must look at alternative financing sources.

However, investors seemed unconcerned by news that a major investment house will not act as Monte Carlo's exclusive agent for the offshore placement of a maximum 500,000 and minimum 250,000 class A common shares at \$4 per share. Trading on 20,000 shares, the issue was up 15¢ to close at 4.50.

While **Mohave Gold** recently announced a production decision at its **Pilgrim** property in Arizona, the issue lost some of its recent momentum.

Chairman Daniel Gallagher said drilling of 25 holes on the property will start within 60 days to test indicated potential reserves for 1 million tons grading 0.05 to 0.10 oz gold per ton. Nevertheless the issue was down 4¢ to close at 60¢ on a volume of 334,000 shares.

The **Marker Resource** issue also failed to respond to a recent agreement which will provide \$1.4 million for exploration at the company's Manitoba and Newfoundland properties.

(A) MOHAVE CO

*International Mining*  
*May 1986*

*Pilgrim mine*  
*Mohave Co.*

**Royal Apex Silver, Inc.** has acquired all of the outstanding shares of **Galli Exploration Associates, Inc.** Galli Exploration holds eleven properties in Nevada, Arizona, Idaho, and Washington that will form the basis for an expanded exploration programme for Royal Apex. Peter Galli, president of Galli Exploration, will remain with the company and be in charge of its ongoing exploration. He is a well-known geologist and has been

instrumental in finding several gold mines, including the Pinson, Preble, and Sterling mines in Nevada and the Gold Strike in California.

Royal Apex is the owner of the Rochester silver-gold property in Nevada which it has leased to **Coeur d'Alene Mines Corp.** Coeur will spend \$18 million to bring the property into production during 1986.

ARIZONA DEPT. OF MINES & MINERAL RESOURCES  
STATE OFFICE BUILDING  
16 W. CONGRESS, ROOM 161  
TUCSON, ARIZONA 85701



Electrolysis regeneration (CLEAN) hydrometallurgical plant and sold the unit along with its Esperanza/Sierrita and Mineral Park operations to Cyprus.

Phelps Dodge shut down its Ajo smelter, pulled the pumps at its Bisbee underground copper mines, idled its Morenci smelter, and agreed to sell a 15% interest in its Morenci/Metcalf open-pit mines and concentrators for \$75 million to a Japanese concern.

BIG DUG PLACER (#)

## Goldstar to start up mill at Homestead claims

SCOTTSDALE, AZ—In the northeastern portion of Arizona's Bradshaw Mountains, **Goldstar Inc.** is in the process of completing a 500-ton-per-day mill on its Homestead claims. The claims lie within the limits of Yavapai County.

The claims consist of approximately 200 acres of placer material (approximately three million yards) which rest on top of an extensive vein ore deposit that runs through

low-grade, bulk tonnage gold deposits. **Frisco**

**Land and Mining Co.** leaches ore from three different desert deposits in Mohave County and trucks it to the company's cyanide heap leaching site, where a two-pad operation processes the crushed ore to the tune of 150 to 200-plus tons per day. President Douglas Bonelli says this adds up to 16,000 tons per year.

Frisco, a private company, has been mining the deposits for three years, and

prospects. In addition, many state-owned and privately owned properties are under lease for mineral exploration and development.

An agreement was reached in 1985 between **Billiton Exploration** and the San Carlos Apache Indian Tribe. The five-year agreement provides \$2 million to the tribe and allows Billiton to explore the reservation for metallic minerals.

The 1.8-million-acre reservation occupies

the property underneath the placer material for approximately 2,000 linear feet. Where the placer overburden has been removed, the vein varies in width from 12 to 40 feet. Samples of head-grade ore have averaged 0.223 ounces of gold per ton and 0.5 ounces of silver per ton.

A decision was made by the company to set up a mill to produce concentrate from the placer material first. By processing the

placer ores, Goldstar expects to create immediate cash flow at a low capital equipment cost while exposing the richer vein material underneath to be open-pit mined at a later date.

The mill, which is scheduled to begin production in early July, will first screen the head ore to one-inch minus. It then will impact, trommel, and classify for final gravity concentrating through balanced jigs and hydrofuges. These concentrates (approximately 15 pounds per ton of head ore) will then be ball milled for further size reduction. As naturally occurring mercury amalgam contains most of the precious metal values in this process, a retort-roast procedure is designed to remove the mercury from the ore concentrates. The remaining pulp will then be chemically leached to further concentrate the precious elements so that the resulting precipitates are ready to be sold and shipped to the refiner.

Throughout the project, Dr. Alvin C. Johnson has served as consultant to Goldstar, and has evaluated the Homestead precious mineral elements.

The following are values presented in troy ounces per ton of head ore recovered from the Homestead placers using the mercury retort scrubber system:

Element	Oz Au/t
Gold	0.223
Silver	0.500
Platinum	0.368
Palladium	0.311
Osmium	0.580
Iridium	1.002
Ruthenium	0.645
Rhodium	0.587

Goldstar common stock is traded over-the-counter and quoted on the Pink Sheets.

## Mohave Gold has high hopes of production at Pilgrim mine (#)

KINGMAN, AZ—With plenty of water, ore grades amenable to heap leaching, and recommendations by several geologists to construct a heap leach operation, **Mohave Gold Inc.** is optimistic about the possibilities of bringing its Pilgrim mine property to production.

Mohave (MVH:VSE, ASE) and **Galli Explorations**, a private company out of Reno, Nevada, are coordinating a drill program this month on the property, located in Mohave County, Arizona. The joint venture conducted a drill program in December 1985 with encouraging results, including one stem of more than 25 feet of 0.167 ounces of gold per ton.

"We're really very optimistic about having a mine down there," says Grant Howes, vice president and director of Mohave. "This month we should be back in there and proving up some actual reserves."

Grant says underground ore reserves are estimated at 200,000 to 500,000 tons of ore

that is amenable to heap leaching. The company is looking at an open pit mining situation.

Typical results from the December drilling included five feet of 0.043 ounces of gold per ton, 10 feet of 0.027, 10 feet of 0.036, five feet of 0.3, 10 feet of 0.08, five feet of 0.05, and 15 feet of 0.025 ounces of gold per ton.

"Because we hit mineralization and gold in every hole, we know it's quite a big deposit," says Howes.

"We have lots of water," he says, "which is one factor in our favor in the arid region. We also have electrical power right to the site, so our capital costs to get into production will be very low compared to other mines in that area."

"We really like the Arizona area," Howes told **NAGMIN**, "because it really hasn't been exploited as much as Nevada and there hasn't been as much modern geological work done down there."

7-4-86  
North American Gold Mining Industry News

gold

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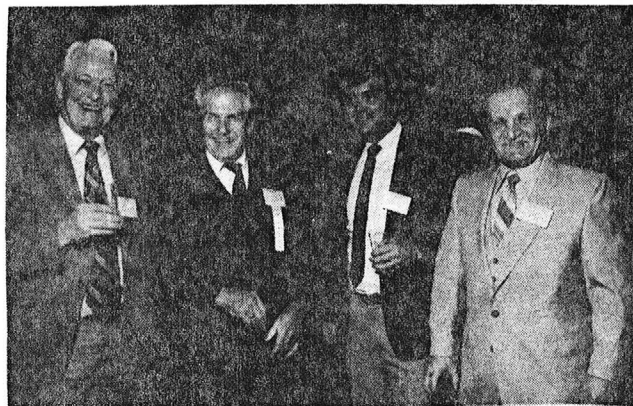
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Don Rotherham, chief geologist of Placer Development, and J. S. Kermeeen, vice-president of Seabright Resources.



Bud Laporte of Laporte Drilling Supplies, Donald E. Smith of D. E. Smith and Associates, Gren Schock of MPH Consulting and Henry Skowronski of Bradley Bros.



John Larche of Hemlo fame and Catherine Hume of Richardson Greenshields.



Viola Macmillan, Joe Perkin, a PDA director and Greta Firth, PDA executive secretary and convention co-ordinator.

## Metoil options high grade mine near Kingman, Ariz.

VANCOUVER — **Metoil Resources** has optioned a former high grade gold producer called the **Pilgrim** mine in Arizona, which has been dormant since the Second World War. The joint venture agreement, which includes **Galli Exploration Associates** of Reno, Nev., requires that both parties spend \$US200,000 to exercise their options.

The original property owners retain a 25% net profits interest so the companies will each have a 37.5% interest in the mine.

The property, which is located 21 miles northwest of Kingman, Ariz., consists of five patented and 90 additional claims, staked along the exposed length of a structure

1.5 miles long and 400 ft. wide.

Some underground and surface sampling has been done with one structure outside the previously mined area returning a composite sample which averaged 0.93 oz. gold over a 50-ft. area.

Company President Robert Pearson says there are a series of veins over a 2,000-ft. width, with fractures and shears in between, some of which are extremely high grade. He says there is good open pit potential, and estimates reserves at 100,000 tons grading 0.5 oz. gold. In general vein widths range from 3-20 ft., and there are high grade shoots throughout the large structure.

Previous operators mined three veins and had a 150-ton cyanide mill on the property. The mine is flooded to the 600-ft. level, although it does go down about 700 ft. Access to the property is good, and Mr. Pearson tells The Northern Miner 3-phase power exists to the mine site, one less hurdle to overcome if it achieved production again.

A rotary drill is being moved on to the property for a 20,000-ft. drill program, which should begin any day. Metoil has spent \$100,000 already and Galli must match that to remain in the venture.

Development and exploration drilling will continue on its Texas and Oklahoma oil and gas properties following **Warrior Resources'** private placement of one million shares at 90¢ each. The offering was oversubscribed.

All told another 16 wells will be drilled. Production testing will soon begin on the company's Ham 9 No. 2 well in Texas. Warrior also

## Granges drilling hits mineralization

Drilling by **Granges Exploration** at the company's Tartan Lake property near Flin Flon, Man., has confirmed that ore grade gold mineralization continues at depth, the company reports.

Hole 85 encountered 38.4 ft. grading 0.491 oz. gold per ton at a vertical depth of 770 ft. Hole 87 intersected 22.5 ft. grading 0.364 oz. gold per ton at a depth of 575 ft. The zone remains open along strike and at depth.

Granges is using two drill rigs and plans to add a third rig in the near future, the company says. A recent VLF survey has extended an associated geophysical anomaly 1,200 ft. to the east along strike.

Metallurgical tests on drill core samples are scheduled to start shortly in order to determine gold recoveries. Favorable metallurgical results will warrant an extensive exploration and development follow-up program, the company reports.

## Additional work for Rexspar/Placer bet

Additional exploration work is planned by **Consolidated Rexspar Minerals & Chemicals** and **Placer Development** on their joint ventured Mount McClennan gold property in B.C. Located near Rexspar's original claims, the property is owned 50% by Placer which remains the project operator, and by Rexspar and **Denison Mines** which hold 30% and 20% respectively.

During 1984, the source of a gold geochemical anomaly was discovered which Placer plans to evaluate with geophysical and geochemical surveys, Rexspar's annual report says. As at year-end, Rexspar also

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January 8, 1945

War Price and Rationing Board  
No. 81.8.1  
Kingman, Arizona

Gentlemen:

We have signed the application of  
the Producers Mines, Inc. and are enclosing  
the white copy herewith.

We have sent a copy to Mr. Holt.

Yours very truly,

Chas. H. Dunning  
Director

CHD:LP  
Enc.

September 10, 1942

MEMORANDUM

CUSTOM MILL PROJECT  
LEAD & ZINC  
CERBAT RANGE  
HALLETT THORNE

TO: W. C. Broadgate

FROM: J. S. Coupal

I had a visit with Hallett Thorne and I doubt very much if it would be of any advantage to have Thorne write a letter and place the blame for his dropping the project on the detail required on the Zinc Branch questionnaire.

His reason really for dropping the zinc project was the time and the large amount of work involved in getting all of the data necessary to make a proper presentation of the whole subject.

He became interested in a virgin scheelite property in California on which he is very enthusiastic and feels as though he can get quick action with a comparatively small amount of money.

September 3, 1942

✓ Mr. Hallett Thorne,  
Box 10  
Chloride, Arizona.

Dear Hallett:

We were advised in a memorandum from Elgin Holt that you were giving up your idea of converting the Producers mill into a custom copper, lead, and zinc concentrator and I am wondering as to the reasons for it.

The impression that I got was that the main reason was the difficulty, complicated and costly procedure for government cooperation, inasmuch as the government authorities would request such complete reports on each property which might ship to a custom plant even though the individual property could contribute but little. That would be a perfectly legitimate reason for saying the battle is too tough to fight.

I would like to know if that is the reason or if there are other factors as we like to have such cases to present to Washington to show them they are standing in their own light, and that they are the ones who are holding things back by their own restrictions. Of course, we would not want them to come back at us and say that it was largely an excuse for dropping a project otherwise unfeasible so therefore it should be presented in a manner to show the feasibility of the project. I would appreciate hearing from you on the subject.

With kindest personal regards, I am

Yours very truly,

CHARLES F. WILLIS, Chairman  
Board of Governors

CPW:MH

*Producers*

August 31, 1942

MEMORANDUM

CUSTOM MILL PROJECT  
HALLETT THORNE

TO: W. C. Broadgate

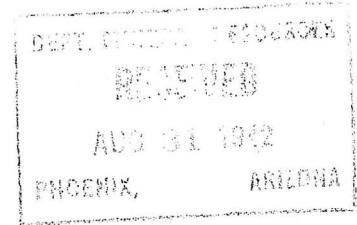
FROM: Earl F. Hastings

It appears to us that Thorne abandoned this project more by reason of a more attractive property in Shasta County, California, than the voluminous details requested by the Zinc Branch.

Sam Coupal is in Kingman at this time and will no doubt give you more exact information on this subject.



Washington, D.C.  
Aug. 28, 1942



SUBJECT: Custom Mill Project  
Lead & Zinc  
Cerbat Range  
Hallett Thorne

You remark that Thorne has abandoned the idea of setting up a project because the WPB data precedent to applying was too difficult and expensive to collect and arrange.

I presume this refers to the Zinc Branch questionnaire for setting up a project which I sent out at Sam's request. I certainly agree that it was very detailed, and in fact I had some words with Percy Butler of the Zinc Branch about it at the time.

Do you think it would be a good idea to get a letter from Thorne to the effect that he dropped the project because the Zinc Branch questionnaire required too much and too expensive preparation?

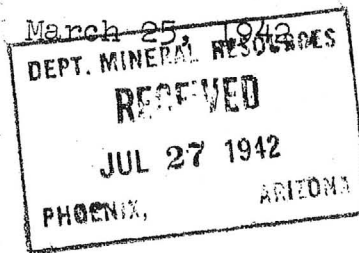
I could wave it in the faces of some of these particular gentlemen and, perhaps, get a reaction which might be beneficial to simplifying some of these questionnaires.

Of course, Thorne, in the letter, would have to outline the plausibility of the placing of the plant, otherwise the boys here would tell me that the questionnaire was just an excuse for dropping a project otherwise unfeasible.

*Bill*

Bill Broadgate

To: J. S. Coupal  
From: Elgin B. Holt



Hallett Thorne

Referring to my memorandum to you of July 16th, in which I stated that I visited Hallett Thorne on the morning of July 13th, as you instructed, but he was not ready yet to make any application for a loan due to other pressing matters, etc. At that time, we tentatively arranged to meet again at Producers on the morning of July 20th, to consider this matter again. Well, I went up there, but Mr. Thorne did not show up and Richardson said he was still very busy with other matters. So I left word that I had other work to do and for him to tell Thorne that I would be around Kingman until August 10th, and for Thorne to let me know several days ahead when and if he needed my services.

I then went ahead with other work connected with two or three people who have applied or who are getting ready to apply for mining loans and have been very busy all this week for these people and have made several trips to properties.

Last Thursday I again saw Mr. Thorne here in town and had another talk with him, but he has or had not made up his mind what to do. Seems wavering between the ideas of trying for the \$200,000 loan to WPB and making separate applications for smaller loans, including one \$5000 loan to unwater the Pay Roll mine. He stated he was not ready yet, but would advise me later should he decide to go ahead. So here the matter stands.

*on July 27th.*  
J. W. MILLER: As I wrote you, I am scheduled to visit J. W. Miller's property in Gold Basin. He is getting ready to apply for a \$20,000 loan. Has a lead gold mine of seeming promise. Will be busy with him for the time required to get his application finished, as I rather think I will have to do most of the work. So I have plenty of work ahead of me, as a number of people are bidding for our services.

Should Thorne later get ready to act, will do all I can for him; but his continued delays make it bad for other work coming along.

*Elgin B. Holt*  
Elgin B. Holt.

To: J. S. Coupal  
From: Elgin B. Holt



HALLETT THORNE &  
HOLT'S ITINERARY

I called at the Producers office last Monday morning, July 13th, and put in several hours with Hallett Thorne, who arrived there around 11 A. M. He stated he was not ready to make his application, and explained matters as follows:

1. That he had tentatively arranged to sell his Diesel power plant, but it would take this week to close the deal; but after paying urgent debts and installing a small power plant at Producers for electric lights, etc., he would not have a great deal left to meet current payrolls.
2. That he had originally planned to take over the Magma mill and remodel it to selective flotation to treat ores from the Juno, Pay Roll, Hidden Treasure and other mines around Chloride. This he calls his GROUP NO. 1 PROJECT. Also that he had planned to move the Producers mill to Cerbat and take over a group of mines there, including the Jim Kane mine, the Chicago and St. Louis mines. But he had been figuring on the Alpha to produce enough ore to at least start one of his units; but after sampling this property it had fallen down as to tonnage. The Cerbat unit, by the way, he calls: GROUP NO. 2 PROJECT. So he had given up the idea for the time being of applying for the big \$200,000 loan to put over these two projects. This due to lack of tonnage offerings.
3. He stated he thought it best to get a \$5000 loan with which to unwater the Pay Roll mine, which is around 350 feet deep and has around 5 feet of good zinc-lead-silver ore in bottom levels, per an assay map he has by Calvocoresses. Also he plans to apply for another \$5000 to build a road to the Chicago mine which has considerable low grade milling ore in surface workings. BUT, he did not want to move until he had secured options on some of these mines. In short, I arranged to meet him the Morning of July 20th at Producers, at which time he will have decided what to do, and may start getting up the applications for the said small loans. Said he will let me know next Saturday by letter whether to come to Producers or not next Monday.

As I had a date to examine J. H. Knight's Best Bet mine next Monday, July 20th, I went out to that property yesterday, cut some samples and will help him with his application for an RFC loan. Tomorrow I go to Keystone to examine the Andy Brown Mn property and next Saturday will help A. B. Maddox here start his application for a loan on a tungsten mine in the Maynard District. Also, yesterday, while visiting the J. H. Knight mine, I looked over Pete Vukoye's gold-lead-vanadinite mine nearby; Vukoye having made the trip out there with me. I only gave the latter property the once over and may have to go back.

As to July 27th, as I wrote you, I have a date with J. W. Miller to examine his Midgett gold-lead mine in Gold Basin Dist., and help him draw the papers for an RFC loan. So you will see I am managing to keep busy at this end

Elgin B. Holt.

October 24, 1940

Hallett W. Thorne  
~~Producer's Mine~~  
~~Chloride, Arizona~~

Dear Mr. Thorne:

Many thanks for your Treatment Schedule on custom ores. The scale of payments seems very fair and reasonable, and I hope they result in attracting ore so as to keep your plant running to capacity.

I will be in your district the 6th, 7th, and 8th of November and look forward to seeing you at that time. We can then discuss your reaction to my suggestion on the wage-hour question.

Yours very truly,

J. S. Coupal  
Director

JSC:nm

Sorry I missed  
you - this is  
what we are doing  
to open up lower grade  
resources of Mohave County.  
WJG

**PRODUCERS MINES, INC.**

Custom Ore Department  
CHLORIDE, ARIZONA

**TREATMENT SCHEDULE**

(Effective 10-1-40)

**PAYMENTS**

**GOLD:**

No payments for gold when under 0.03 ounces per ton.

When over 0.03 ounces per ton.....\$32.20 per oz.

Note: NO further deductions for extraction losses will be made except by special agreement with shipper on basis of laboratory test result.

**SILVER:**

No payments for silver when under 2.00 ounces per ton.

When over 2.00 ounces per ton.....71c per oz.

Deduction will be made for extraction losses in each case on the basis of laboratory test results. Miners silver affidavits must be furnished before settlement can be made.

**TREATMENT CHARGES**

Minimum charge of \$2.45 per ton, dry weight, on ores not exceeding \$6.00 per ton in value. To this charge add 5c for each 25c increase in value, to a maximum charge of \$10.00. (See printed schedule on reverse.) Where the ore exceeds \$15.00 per ton value, the minimum will be \$3.00.

✓ From these charges deduct the full cost of trucking from mine to mill, provided that the rate shall not be less than the minimums above stated.

These rates apply on shipments of 50 tons.

**SPECIAL QUANTITY CREDIT**

✓ For each 500 tons or multiple thereof, delivered during any month, a refund of 10c per ton will be made on the 10th of the following month.

**GENERAL CONDITIONS**

☞ All new shippers, or shippers whose ore changes in character, or shippers who move from one mine to another MUST send a 25-pound sample, charges prepaid, for testing BEFORE shipping. Also they must submit either a copy of their lease or a statement from the owner of the property as authority to ship therefrom.

☞ Shipper agrees that, after sampling, the shipment may be commingled with other ores or otherwise disposed of by this mill.

☞ Shipper must agree to settle shipments in accordance with established practice at this mill at the time of shipment and, to insure prompt settlements, must compare assays promptly by assay certificate or authorized settlement on mill assays at time of shipment. If such comparison is not made within 10 days after receipt of shipment, settlements will be made on mill assays.

☞ Trucking charges must either be guaranteed or prepaid by shipper.

☞ We reserve the right to limit shipments of ore with unfavorable milling characteristics.

MINER  PRINT

For lots over 40 tons—Not over 50 tons.....	add 10c
For lots over 30 tons—Not over 40 tons.....	add 20c
For lots over 20 tons—Not over 30 tons.....	add 30c
For lots over 10 tons—Not over 20 tons.....	add 40c
For lots under 10 tons.....	Add 50c per ton and \$10.00 sampling charge

# SCHEDULE OF MILL CHARGES ON 50-TON LOTS

From	Assay Value	To	Treatment Charge	From	Assay Value	To	Treatment Charge	From	Assay Value	To	Treatment Charge
\$ .966		\$ 6.00	\$2.45	\$18.51		\$18.75	\$5.00	\$31.26		\$31.50	\$7.55
6.01		6.25	2.50	18.76		19.00	5.05	31.51		31.75	7.60
6.26		6.50	2.55	19.01		19.25	5.10	31.76		32.00	7.65
6.51		6.75	2.60	19.26		19.50	5.15	32.01		32.25	7.70
6.76		7.00	2.65	19.51		19.75	5.20	32.26		32.50	7.75
7.01		7.25	2.70	19.76		20.00	5.25	32.51		32.75	7.80
7.26		7.50	2.75	20.01		20.25	5.30	32.76		33.00	7.85
7.51		7.75	2.80	20.26		20.50	5.35	33.01		33.25	7.90
7.76		8.00	2.85	20.51		20.75	5.40	33.26		33.50	7.95
8.01		8.25	2.90	20.76		21.00	5.45	33.51		33.75	8.00
8.26		8.50	2.95	21.01		21.25	5.50	33.76		34.00	8.05
8.51		8.75	3.00	21.26		21.50	5.55	34.01		34.25	8.10
8.76		9.00	3.05	21.51		21.75	5.60	34.26		34.50	8.15
9.01		9.25	3.10	21.76		22.00	5.65	34.51		34.75	8.20
9.26		9.50	3.15	22.01		22.25	5.70	34.76		35.00	8.25
9.51		9.75	3.20	22.26		22.50	5.75	35.01		35.25	8.30
9.76		10.00	3.25	22.51		22.75	5.80	35.26		35.50	8.35
10.01		10.25	3.30	22.76		23.00	5.85	35.51		35.75	8.40
10.26		10.50	3.35	23.01		23.25	5.90	35.76		36.00	8.45
10.51		10.75	3.40	23.26		23.50	5.95	36.01		36.25	8.50
10.76		11.00	3.45	23.51		23.75	6.00	36.26		36.50	8.55
11.01		11.25	3.50	23.76		24.00	6.05	36.51		36.75	8.60
11.26		11.50	3.55	24.01		24.25	6.10	36.76		37.00	8.65
11.51		11.75	3.60	24.26		24.50	6.15	37.01		37.25	8.70
11.76		12.00	3.65	24.51		24.75	6.20	37.26		37.50	8.75
12.01		12.25	3.70	24.76		25.00	6.25	37.51		37.75	8.80
12.26		12.50	3.75	25.01		25.25	6.30	37.76		38.00	8.85
12.51		12.75	3.80	25.26		25.50	6.35	38.01		38.25	8.90
12.76		13.00	3.85	25.51		25.75	6.40	38.26		38.50	8.95
13.01		13.25	3.90	25.76		26.00	6.45	38.51		38.75	9.00
13.26		13.50	3.95	26.01		26.25	6.50	38.76		39.00	9.05
13.51		13.75	4.00	26.26		26.50	6.55	39.01		39.25	9.10
13.76		14.00	4.05	26.51		26.75	6.60	39.26		39.50	9.15
14.01		14.25	4.10	26.76		27.00	6.65	39.51		39.75	9.20
14.26		14.50	4.15	27.01		27.25	6.70	39.76		40.00	9.25
14.51		14.75	4.20	27.26		27.50	6.75	40.01		40.25	9.30
14.76		15.00	4.25	27.51		27.75	6.80	40.26		40.50	9.35
15.01		15.25	4.30	27.76		28.00	6.85	40.51		40.75	9.40
15.26		15.50	4.35	28.01		28.25	6.90	40.76		41.00	9.45
15.51		15.75	4.40	28.26		28.50	6.95	41.01		41.25	9.50
15.76		16.00	4.45	28.51		28.75	7.00	41.26		41.50	9.55
16.01		16.25	4.50	28.76		29.00	7.05	41.51		41.75	9.60
16.26		16.50	4.55	29.01		29.25	7.10	41.76		42.00	9.65
16.51		16.75	4.60	29.26		29.50	7.15	42.01		42.25	9.70
16.76		17.00	4.65	29.51		29.75	7.20	42.26		42.50	9.75
17.01		17.25	4.70	29.76		30.00	7.25	42.51		42.75	9.80
17.26		17.50	4.75	30.01		30.25	7.30	42.76		43.00	9.85
17.51		17.75	4.80	30.26		30.50	7.35	43.01		43.25	9.90
17.76		18.00	4.85	30.51		30.75	7.40	43.26		43.50	9.95
18.01		18.25	4.90	30.76		31.00	7.45	43.51		43.75	10.00
18.26		18.50	4.95	31.01		31.25	7.50	Over		43.75	10.00



The 230-ton cyanidation plant of Producers' Mines, Inc., H. W. Thorne, president and general manager, Chloride, Arizona, was closed down May 20, 1942, for the duration. The company is considering plans for transforming the mill into a 300-ton selective flotation plant to treat zinc-lead sulphide ores from mines in the Cerbat Range.

*MIN. JOURNAL 6/30/42*

NAME OF MINE: PRODUCERS MILL  
OWNER:

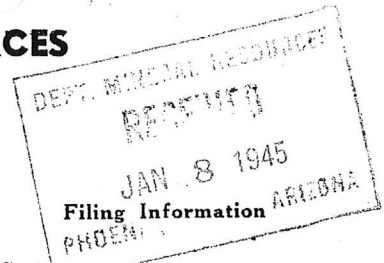
COUNTY: Mohave  
DISTRICT:  
METALS: Pb, Zn

OPERATOR AND ADDRESS		MINE STATUS	
Date:		Date:	
10/46	F.R. Vihel, Box 37, Litchfield	10/46	Prep. to revamp mill

White. Mo. V. 6000 Kingman 1/8

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON  
ACTIVE MINING PROJECT



Date January 5, 1945

Name of Mine Producers Mines Inc.

Owner or Operator H. W. Thorne

Address 114 Los Altos Drive

Mine Location 10 miles west of Chloride

File System

File No.

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

PRESENT OPERATIONS: (check X)

Production.....; Development.....; Financing.....; Sale of mine.....;

Experimental (sampling).....; Owner's occasional trip.....;

Other (specify) Moving Equipment from California back to mine at Chloride.

PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months

None

Approx. present rate per 3 months

None

Anticipated rate next 3 months

None

If in distant future check (X) here

X

EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars			
Light or Service Trucks	<u>1</u>	<u>1,670 mi.</u>	<u>167</u>
Ore Hauling Trucks			
Compressors			
Other Mine or Mill Eqpt.			

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Gold

REMARKS:

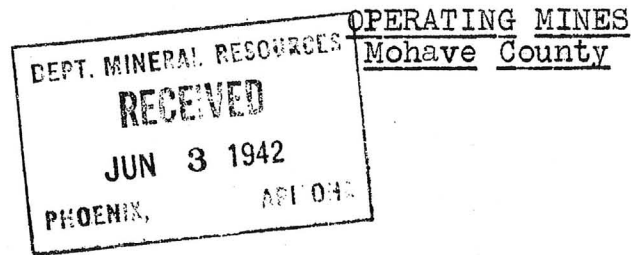
Equipment at Chloride mine to mine at Ivanpah, California and mine at Sonora, California and equipment must now be moved back to mine at Chloride, Ariz.

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By Winifred Hanna  
CHD.

May 29, 1942

To: J. S. Coupal  
From: Elgin B. Holt



PRODUCERS MINES, INC.: Located nine miles west of Chloride, Mohave County, Arizona. H. W. Thorne, Pres. & General Manager, Chloride, Arizona. Don Neely, mill superintendent; M. Z. Ivy, Chief Clerk.

This company has been operating a 230-ton cyanidation plant for several years.

On my arrival at Producers mine & mill office, Mr. M. C. Richardson informed me that the said mill was closed for the duration on May 20, 1942, and that Mr. Thorne was in California planning to finance transforming the mill into a 300-ton selective flotation plant to treat zinc-lead sulphide ores from mines located mainly in the Cerbat Range; that he, Richardson, personally had been examining mines in that area for the company since January, 1942; and that they had several properties lined up, etc.

Richardson stated that full details could not be learned until Mr. Thorne returned. I asked him to request Mr. Thorne to write Mr. Willis fully about his plans, when and if they materialize, and Richardson said he would do so.

Richardson said, however, that no production data would be available until Mr. Thorne returned.

## Pilgrim Mine Hits 8 Foot Vein of High Grade Ore

### Specimens Run as High as \$30,000 Per Ton; Entire Eight-foot Vein Averages Five Ounces in Gold

Nestled in the foothills of the river range of mountains about nine miles north and west of Chloride, the Pioneer-Gold Mining Co., operators of the Pilgrim mine, have struck one of the richest veins of ore ever to be uncovered in Mohave county.

After considerable search, the vein was struck on October 15 of this year and for one month has been showing increased values. Tuesday of this week E. F. Hastings, general manager of the mine, told a Miner representative that during the first eight days of November the "output of the mill is greater than in any previous complete month."

This showing alone indicates the ore to be at least four times richer in gold content than the ore previously milled, and in places high grade running into \$25,000 and \$30,000 rock is being brought to the surface. The ore is actually covered with gold when broken apart and the solid rock carries practically the same assay as the specimen pieces, Mr.

Hastings reports.

The company is now working on an eight-foot vein of ore which runs across its entire face an average of five ounces to the ton. This ore is found in a series of stringers, and has been uncovered from the 300-foot level to the surface and hit or crosscut at several points to a depth of 575 feet. Though not of the fabulous richness of the present ore, this entire body runs exceptionally high, and the mine is cleaning its dump, which runs about \$4 a ton, into the rich ore to dilute it. Also some \$10 and \$12 ore is being put into the high grade to bring its value down to an average of about \$35 to \$40.

So rich is the ore being recovered at present that the bottom of the slope is being swept up by broom-welding miners after each clean-up.

The mill, which is of 100-ton daily capacity, put out 2900 tons during October with only a ten hour shut down during the entire

month. Fifty-two men are working in the mine and mill and the mill is also taking ore from the Klondike mine which is working 14 men.

According to Mr. Hastings, federal mining engineers have informed him that the Pioneer mine will be one of the highest in production in Arizona during 1936. This figure does not include the Tom Reed mine of Oatman which handles a large amount of custom ore, but is for mills which handle ore belonging only to its own properties.

The mine is owned by B. A. Laselle, president of the company, of Los Angeles. Tom Slaughter, mill superintendent, and M. C. Richardson, mine superintendent, assist Mr. Hastings in the local operations of the company.

Mr. Richardson, after eight years of experience on this particular property, refuses to be unduly excited. He has long advocated his belief that high grade ore would be found in the Pilgrim mine. He is spending both his days and nights keeping his eye on this new strike.

Great credit is due him, according to mine authorities, for his development plan which exposed this unusual quantity of high grade ore, his engineering ingenuity being responsible for the strike.

### Diagram Showing Relation of South Pilgrim Property to Pilgrim Mine Property

Please Note Location of Expected Ore Body.

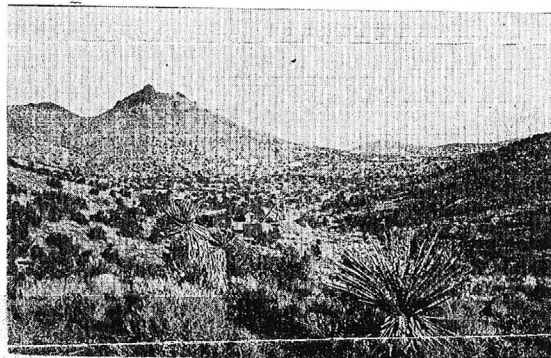
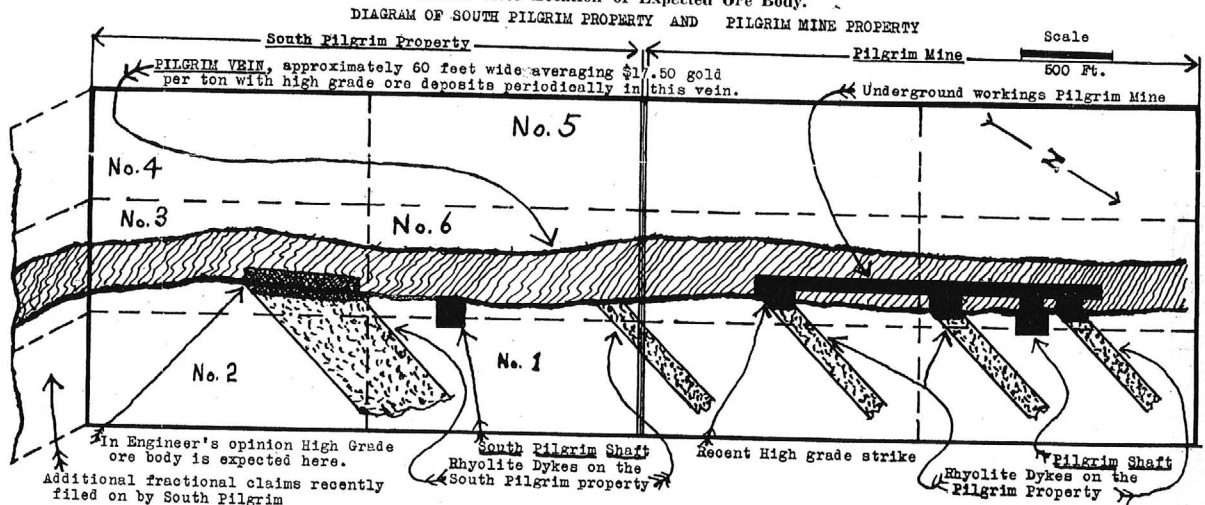
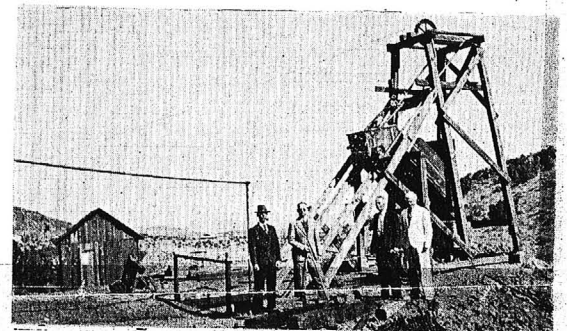


PHOTO TAKEN FROM A POINT ON THE SOUTH PILGRIM PROPERTY LOOKING NORTH ALONG THE PILGRIM VEIN. THIS SHOWS THE SOUTH PILGRIM SHAFT IN THE FOREGROUND, AND IN THE DISTANCE, THE PILGRIM LIVING QUARTERS, THE WHITE BUILDINGS, AND FURTHER IN THE DISTANCE THE PILGRIM SHAFT, MILL, ETC. THE SOUTH PILGRIM PROPERTY EXTENDS IN LENGTH FROM A POINT ABOUT 1000 FEET BACK OF WHERE THIS PHOTO WAS TAKEN TO A SHORT DISTANCE THIS SIDE OF THE WHITE BUILDING.



A CLOSE UP VIEW OF THE SOUTH PILGRIM SHAFT AND DUMP.

(Reprinted from Los Angeles Times, November 30, 1936.)

# Pilgrim Gold Mine Reports Bonanza Find in Arizona

## Fabulously Rich Ore in Stringers

CHLORIDE (Ariz.,) Nov. 29. (Exclusive)—Stringers of ore worth \$25,000 to \$30,000 a ton are being taken by the Pioneer Gold Mining Company from an eight-foot vein in the Pilgrim mine that averages five-ounces gold to the ton clear-across its face.

The strike is certainly one of the most spectacular ever made in Mohave county and may well be one of the most important. It has attracted an influx of prospectors to the vicinity of the Pioneer, which is located nine miles northwest of Chloride.

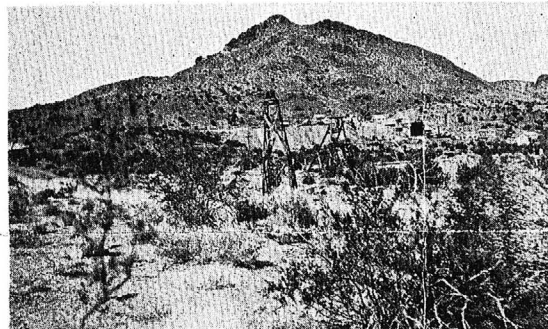
According to Manager E. F. Hastings, the find was made about the middle of October and extraction therefrom began November 1. Now the 100-ton mill is recovering almost as much gold in a week as it formerly recovered in a month.

### ORE SWEETENED

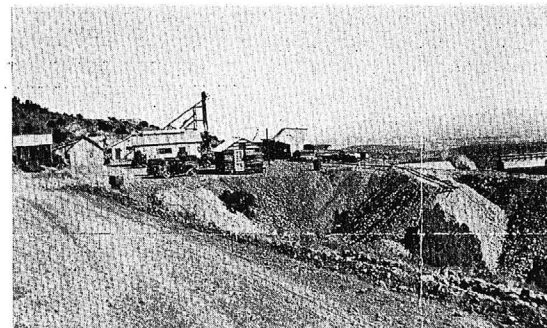
Ore from the dump that runs \$4 a ton and newly mined material that runs \$10 to \$12 is being sweetened with the highgrade to bring the average value up to \$35 or \$40.

Existence of the vein from the surface to the 300-foot level has been proven at several points, and it has also been crosscut as deep as 575 feet.

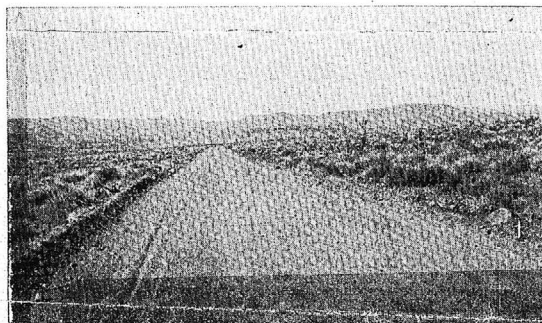
B. A. Laselle of Los Angeles is owner of the Pilgrim, which is operated in the name of the Pioneer company. Fifty-two men are on the payroll.



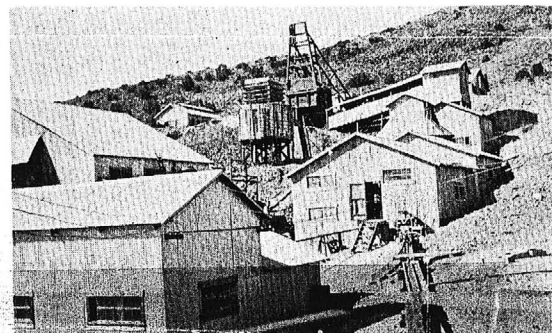
PILGRIM MINE PROPERTY SHOWING MILL, DUMP, SHAFT, ETC. SOUTH PILGRIM PROPERTY TO LEFT OF PHOTO.



NEARER VIEW OF PILGRIM, SHOWING SHAFT, DUMP, BLACKSMITH SHOP, OFFICE, MACHINE HOUSE, ETC. PILGRIM MILL IS ON THE SIDE OF HILL AND CANNOT BE SEEN BY REASON OF THE DUMP.



ROAD TO PILGRIM AND SOUTH PILGRIM PROPERTIES, TAKEN FROM THE KINGMAN BOULDER DAM HIGHWAY, THIS IS A HIGH GEAR ROAD TO THE PROPERTY. PILGRIM MINE IS LOCATED NEAR THE CENTER OF THE PHOTO AND ITS BUILDINGS CAN JUST BE MADE OUT. SOUTH PILGRIM PROPERTY IS JUST TO LEFT OF PILGRIM.



PILGRIM, SHOWING SHAFT, MILL BUILDING, AND POWER PLANT BUILDING.



Metallurgical Report on Investigations of Certain Mill Products  
from the Flotation Plant of the Pioneer Gold Mining Co.  
of Chloride, Arizona.

The ore treated in this mill comes from the Pilgrim Mine, owned by the company. The economic minerals are gold and silver. A superficial examination of the various mill products shows no visible sulfides nor, indeed, any base metallic substances other than the customary ball-mill iron. The gold occurs as finely divided particles and considerably larger flat, flaky grains. These latter are lighter in hue than the fine particles indicating that they are possibly higher in silver content. There is strong reason to believe that the gold occurs in the cleavages of the rock instead of being securely locked within the minute grains of quartz. The action of cyanide solution on relatively coarse sizes confirms this view.

According to our examinations of the samples submitted to us the ore is ground so as to permit 70% of it to pass through a 200 mesh screen. As a remote contingency, effective extraction of the gold from the entire classifier overflow could be made with no finer grind than this, by cyanidation.

### Scope of Investigation

Four mill products were examined and analyzed for their respective amenableities to cyanidation, viz., the Unit Cell concentrate, the Combined Concentrate, the Rougher Concentrate, and the Mill Tails. These tests are here presented separately. Typical screen analyses of these products are appended on other sheets.

### The Unit Cell Concentrate

This product assaying 296.38 ozs. Au and 94.12 ozs. Ag per ton did not readily respond to cyanidation. Although the reagent consumption of 3.8 lbs. of cyanide and 6.8 lbs. lime per ton of ore after 72 hours of agitation was not high considering the richness of the concentrate, the recovery was extremely low. This sad fact is further aggravated by the very poor settling qualities of the slime. As a somewhat vague guess it might be stated that such a slime could not possibly settle to even 55% solids. Amalgamation of this concentrate prior to treatment with cyanide would in all likelihood be advantageous. Considerable fouling of the quick-silver would result, however. Laboratory amalgamation was attempted with no success owing to the difficulty encountered in separating amalgam from slime after the agitation period. The very oiliness of the slime caused flotation of the mercury and rendered it quite unsuitable to settling and agglomeration.



### The Combined Concentrate

This concentrate, assaying 26.37 ozs. Au and 8.11 ozs. Ag per ton readily yielded its values to the action of cyanide solution. A recovery of 97.75% of the gold was made without grinding. 7.2 lbs. of cyanide and 7.0 lbs. of lime per ton were consumed after 72 hours of agitation. Although the recovery was high, nevertheless, a tailing resulted which in practice could hardly be discarded. It assayed 0.595 ozs. Au per ton. Parenthetically, even a 99% recovery would give a high tailing. Considering that some amount of the coarse sands from the Unit Cell Concentrate is present in this concentrate it would be a safe prediction that grinding would liberate more gold to the dissolving action of cyanide solution and considerably increase the extraction. However, as noted concerning the Unit Cell, some treatment prior to cyanidation could profitably be accorded this product. The settling qualities of the Combined Concentrate are also very poor but somewhat better than those of the Unit Cell Concentrate.

### The Rougher Concentrate

This product, more easily than either of the other two foregoing concentrates, permits of extraction of the values by cyanide solution. A recovery of 98.9% was made without grinding with a consumption of 0.9 lb. of cyanide and 5.1 lbs. of lime per ton after 72 hours of agitation. The settling rate was not good; in fact, only a little better than that of the Combined Concentrate.

### The Mill Tails

The tailing which assayed 0.06 ozs. Au and 0.32 ozs. Ag per ton offered no obstacles to reduction of its gold content by cyanidation. For purposes of comparison between flotation and cyanidation in the production of a final tailing agitation tests were made on both the plus 150 material and the minus 150 mesh sizes in the tailing. These tests show that a cyanide tailing of 0.015 oz. Au is the highest that could occur. To further extend the comparison this would mean a recovery of 96.28% on \$14.00 heads.

The plus 150 material in the tailing, assaying 0.08 oz. Au per ton was screened out and subjected to cyanidation. The tailing from this assayed 0.015 oz. Au per ton after 72 hours of agitation with reagent consumption of 0.5 lb. cyanide and 0.4 lb. lime per ton of ore.

A composite consisting of 93.7% of the plus 150 material in the mill tails and 6.3% of the Combined Concentrate (based upon mill concentration of 90 into 1 ratio) was given two cyanidation tests. One of these was unground and the other was given a 10 minute grind in alkaline cyanide solution. The recovery on the unground sample after 72 hours of agitation was 98.56%. Consumption was 0.7 lb. cyanide and 3.0 lbs. lime per ton of ore. The recovery on the sample which was ground for 10 minutes was 99.42% after 72 hours of agitation. Consumption was 1.34 lbs. cyanide and 4.4 lbs. of lime per ton of ore. Settling rates of both were good.

Incidentally, an alkalinity was taken on the water from the Mill Tails. It showed a pH of 7.6. Possibly the high gold content of the slime and fine sand portions of the tailing was attributable to this. However, the assay of the plus 150 portion did not differ from what was expected.

### Conclusions

Although it will be quite feasible to effect solution of the gold and silver in any of the products examined, certain physical complications militate against the installation of equipment to produce bullion from cyanide precipitates on the scene of operations. The very worst trouble that will be encountered will be the difficulty of effecting a separation of the dissolved values from the slimes. The former will of necessity be very high depending, of course, on the original head assay. Therefore, the dissolved values discarded with the slimes as a final tailing can be diminished only by very thorough washings. Then, the very poor settling qualities of the slimes would make these necessary washings very difficult. An unusually large area of tankage considering the amount of solids present would be required. It is doubtful if such slimes could be filtered readily. The cake would still contain a high ratio of liquids to solids. Re-pulping and re-filtering could lower the dissolved value loss. However, filtering can very likely be irksome when the clogging propensities of filtering media by this type of material is considered. High acid consumption with accompanying short life and frequent changes of filter cloths are evils with which such a plant would have to cope.

Removal of the bulk of the values in the Unit Cell Concentrate or complete exclusion of this product from the cyanide circuit would relieve in no small degree the difficulty of separating dissolved values from slimes inasmuch as that proportion of the gold, whatever it may be, would not be included. We do not know if attempts have been made to amalgamate the Unit Cell Concentrate on the Gibson amalgamator. It is our opinion that this machine will collect most of the gold in the Unit Cell Concentrate, thus minimizing the tie-up of gold in launders etc.

Due to the fact that some 70% of the values in the mill tails, if this is a representative sample, are to be found in the minus 150 mesh portion, it is our opinion that a great endeavor should be made, with the present plant, to reduce the value of this material. Such a reduction would result in a not inconsiderable lowering of tailing value.

The values are no doubt locked in the sand tailing, but slime conditioning by pH control with soda ash, for instance, might be effective in obtaining lower tailing. If this can be done, the physical characteristics of the products might be improved for cyanidation.

It would be well to again stress the two factors militating against cyanidation of the combined concentrate that is now being produced. (1) The grade of material is so high that unusual means will be required for removing the valuable solution from the gangue. (2) The physical character of the concentrate gangue is such that its separation from the solution will be very difficult.

In our opinion the mill tonnage could be raised to about 90 tons per day by sacrificing grind to some extent, and cyaniding the entire mill pulp, with a recovery equal to, or better than that of the present flotation mill. This would also eliminate the cost of marketing flotation concentrates.

Respectfully submitted,

By P. V. Brough  
G. E. Jarpe  
Metallurgists.

Date (?)

### Screen Analysis of Unit Cell Concentrate

Mesh	%	Au, Ozs. per ton	Distribution %
Plus 65	28.85	64.80	6.30
Plus 100	7.02	332.81	7.90
Plus 150	2.14	600.80	4.40
Plus 200	1.17	922.30	3.60
Minus 200 Sand	9.94	1710.85	57.80
Minus 200 Slime	<u>50.88</u>	<u>114.30</u>	<u>19.70</u>
Totals	100.00		99.70

Head Assay Au 296.38 ozs. Ag 94.12 ozs.  
 Calculated Head Au 293.92 ozs.

### Screen Analysis of Combined Concentrate

Mesh	%	Au, Ozs. per ton	Distribution %
Plus 65	2.38	16.70	1.50
Plus 100	1.79	36.59	2.40
Plus 150	1.79	58.34	4.00
Plus 200	2.19	55.50	4.50
Minus 200 Sand	14.51	65.68	36.00
Minus 200 Slime	<u>77.33</u>	<u>17.57</u>	<u>51.40</u>
Totals	99.99		99.80

Head Assay Au 26.37 ozs. Ag 8.11 ozs.  
 Calculated head Au 26.43 ozs.

### Screen Analysis of Rougher Concentrate

Mesh	%	Au, Ozs. per ton	Distribution %
Plus 65	None		
Plus 100	Trace		
Plus 150	0.81	7.33	6.80
Plus 200	1.01	Plus 150 & plus 200	Plus 150 & plus 200
Minus 200 Sand	15.79	4.56	37.60
Minus 200 Slime	<u>82.39</u>	<u>1.29</u>	<u>55.60</u>
Totals	100.00		100.00

Head Assay Au 1.83 ozs per ton. Ag. 0.81 ozs. per ton.  
 Calculated head Au 1.91 ozs. per ton

# Mill Tailing Screen Analysis

Mesh	%	Au, Ozs. per ton	Distribution
Plus 65	0.30	0.93	4.45
Plus 100	3.70	0.065	3.84
Plus 150	12.40	0.06	11.88
Plus 200	13.10	0.045	9.41
Minus 200 Sand	17.10	0.055	15.01
Minus 200 Slime	<u>53.40</u>	0.065	<u>55.41</u>
Totals	100.00		100.00

Head Assay Au 0.06 Ag 0.32  
 Calculated Head Au 0.0626

It will be observed that the plus 65 is somewhat high. This is because of the wood pulp that remained on the 65 mesh screen. In practice it is hardly likely that this wood pulp would fail to overflow the classifier.

## Screen Analysis of the plus 150 material taken from the mill tailing. (After 72 hrs. agitation)

Mesh	%	Au, Ozs. per ton	Distribution
Plus 65	2.28	0.03	4.11
Plus 100	26.16	0.02	31.42
Minus 100	<u>71.56</u>	0.015	<u>64.47</u>
	100.00		100.00

Head Assay Au 0.08  
 Tail Assay Au 0.015 72 hours cyanidation  
 Calculated Tail Assay Au 0.016

The plus 65 size in the above has been greatly depleted of gold after exposure to the cyanide solution. The precious metal deposited on the wood pulp is very easily dissolved.

Screen Analysis of Mill Tailing after Reducing  
the Unground plus 150 Mesh Tailing to  
0.015 Oz. Au by Cyanidation.

Mesh	%	Au. Ozs. per ton	Distribution %
Plus 150	16.40	0.015	4.68
Plus 200	13.10	0.045	11.22
Minus 200 Sand	17.10	0.055	17.92
Minus 200 Slime	<u>53.40</u>	0.065	<u>66.16</u>
Totals	100.00		99.98

Calculated Assay for the above Au 0.05246 Oz.

Assay of untreated tailing 0.06 oz. Au per ton.  
Assay of treated tailing 0.05246 Oz. Au per ton.  
Total reduction. About 0.01 Oz. Au per ton.

As the screen analysis of the mill tailing indicates that approximately 70% of values are in the minus 150 mesh portion, it seems to us that the most logical procedure will be to concentrate on reduction of the values in this material. From the standpoint of economics there is little inducement to attempt the 0.01 Oz. Au reduction shown above.



### Cyanide Test

Sample of Combined Concentrate(6.3%) and plus 150 Tails (93.7%).

Wt. of ore, grams 500 Sol. added 1120 cc. Not ground.

Initial charge, lbs. per ton sol. KCN 1.4

Lime added, lbs. per ton ore 5.2

### Leaching Period

Ratio of Sol. to Ore 2.24:1 Total cc. Sol. on charge 1120 cc.

24 hrs. titration KCN 1.1  
" " " CaO 1.3

48 hrs. titration KCN 1.1  
" " " CaO 1.2

72 hrs. titration KCN 1.1  
" " " CaO 1.0

Assay of Head 1.74 ozs. Au

Assay of Tail 0.025 ozs. Au

Recovery 98.56%

Settling qualities of slime good.

Cyanide consumption per ton ore 0.7 lb.

Lime consumption per ton ore 3.0 lbs.

### Cyanide Test

Sample of Combined Concentrate (6.3%) and plus 150 Tails (93.7%).

Time of grind 10 min. Wt. of Ore, grams 500 Sol. added 500 cc.

Initial charge, Lbs. per ton Sol. KCN 1.4

Lime added 5.2 lbs. per ton ore.

### Leaching Period.

Ratio of Sol. to ore. 2.24 ; l. Total cc. Sol on charge 1120

24 hrs. titration KCN 0.9  
CaO 0.9

48 hrs. titration KCN 0.9  
" " " CaO 0.9

72 hrs. titration KCN 0.8  
" " " CaO 0.8

Assay of Heads Ozs. Au ( Calculated ) 1.74

Assay of Tails Ozs. Au 0.01

Recovery 99.42%

Settling qualities of slime fairly good.

Cyanide consumption , lbs per ton ore 1.34

Lime consumption, lbs. per ton ore 4.4

Cyanide Test

Sample of minus 150 portion of general tailing

Wt. of ore, grams 500 Sol. added 500 cc.

Initial charge, lbs. per ton sol. KCN 2.3

Lime added, lbs. per ton ore 1.0

Leaching Period.

24 hrs. titration KCN 1.8  
" " " CaO 0.7

48 hrs. titration KCN 1.8  
" " " CaO 0.7

72 hrs. titration KCN 1.7  
" " " CaO 0.6

Head Assay Ozs. Au ( Calculated ) 0.06

Tail Assay Ozs. Au Trace

Recovery not calculable

Settling qualities of slime bad.

Cyanide consumption, lbs. per ton ore 0.6

Lime consumption, lbs. per ton ore 0.4

### Cyanide Test.

Sample of plus 150 tails. Assay Ozs. Au 0.08  
Wt. of Ore, Grams 500 Solution added 500  
Initial charge, lbs. KCN per ton sol. 1.8  
Lime added lbs. per ton ore 1.0

### Leaching Period

Ratio of Sol. to Ore 1:1 Total cc. sol. on charge 500

24 hrs. titration KCN 1.4  
" " " CaO 0.7

48 hrs. titration KCN 1.3  
" " " CaO 0.6

72 hrs. titration KCN 1.3  
" " " CaO 0.6

Screen analysis of tailing on separate sheet.

Recovery % Au 81.25

Lime consumption per ton ore 0.4 lbs.  
Cyanide consumption per ton ore 0.5 lbs.

### Cyanide Test

Sample of Rougher concentrate      Assay Ozs. Au 1.82 Ag 0.81  
Wt. of Ore, Grams 500      Solution added 1500

Initial charge, lbs. KCN per ton ore 3.0  
Lime added, lbs. per ton ore 6.9

### Leaching Period

Ratio of Sol. to Ore 3:1      Total cc. Sol. on charge 1500

24 hrs. titration KCN 0.8  
" " " CaO 0.6

48 hrs. titration KCN 0.7  
" " " CaO 0.6

72 hrs. titration KCN 0.7  
" " " CaO 0.6

Assay of tailing oz. Au 0.02  
Recovery Au % 98.90

Cyanide consumption per ton ore 0.9 lbs.  
Lime consumption per ton ore 5.1 lbs.

### Cyanide Test

Sample of Combined Concentrate      Assay Ozs. Au 26.37 Ag 8.11  
Wt. of Ore, Grams 500      Sol. added 1000  
Initial charge, Lbs. KCN per ton sol. 5.5  
Lime added, Lbs. per ton ore 8.0

### Leaching Period

Ratio of Sol. to Ore 2:1.      Total cc. Sol on charge 1000

24 hrs. titration KCN 2.3  
" " " CaO 6.7

48 hrs. titration KCN 2.1  
" " " CaO 0.6

72 hrs. titration KCN 1.9  
" " " CaO 0.5

Tailing assay Ozs. Au 0.595  
Recovery Au 97.75%

Settling qualities of slime very poor.

Cyanide consumption per ton ore 7.2 lbs.  
Lime consumption per ton ore 7.0 lbs.



### Cyanide Test

Sample of Unit Cell Concentrate      Assay Ozm. Au 296.38 Ag 94.12  
Wt. of Ore, Grams 500 Sol. added 1000

Initial charge, lbs. per ton sol. KCN 2.8  
Lime added lbs. per ton sol. 1.0

Leaching Period.  
Ratio of Sol to Ore 2:1 Total cc. Sol on charge 1000

24 hrs. titration KCN Trace  
" " " CaO Trace

48 hrs. titration KCN 0.2  
" " " CaO 0.6

72 hrs. titration KCN 0.8  
" " " CaO 0.6

After 24 hr. titration lime increased from 2 lbs. per ton ore (1.0 lb. per ton sol.) to 8.0 lbs. per ton ore (4.0 lbs. per ton sol.) Cyanide increased from 2.8 lbs. per ton sol. to 5.5 lbs. per ton sol.

After 48 hrs. cyanide increased to 8.5 lbs. per ton sol. to

Settling qualities of slime very poor.

Recovery Au % 8.51

Cyanide consumption per ton ore 14.4 lbs.  
Lime consumption per ton ore 6.8 lbs.

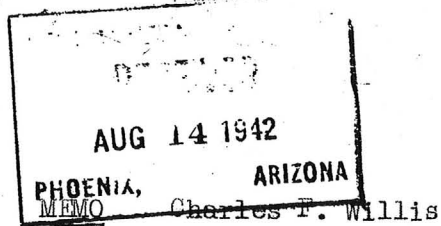
ARIZONA DEPT. OF MINES & MINERAL RESOURCES  
STATE OFFICE BUILDING  
416 W. CONGRESS, ROOM 161  
TUCSON, ARIZONA 85701

DEPT. MINERAL RESOURCES  
**RECEIVED**  
AUG 8 1942  
PHOENIX, ARIZONA

THIS SIDE OF CARD IS FOR ADDRESS



Mr. J. S. Coupal, Director,  
Dept. of Mineral Resources,  
413 Home Building B.,  
Phoenix, Az.



August 14, 1942

From: J. S. Coupal

Please note card from Holt stating that Hallett Thorne has about dropped his plans for a custom mill at or near Pima.

Producers' Mines, Inc., H. W. Thorne, president and general manager, Chloride, Arizona, is operating its mill at capacity on custom ore and it is understood that the company plans to continue as a custom plant as long as ore shipments are received or as long as the machinery can be kept in efficient operation. MINING JOURNAL-3-2-42

To: Coupal  
From: Holt

Kingman, 8/8/42.

Re - Hallett Thorne, saw him again several days ago and he said he had practically given up the idea of operating in the Cerbat Mountains due to labor conditions that will be encountered when Bull's Head Dam and the air port both get started. Said he is planning to take over a property in Nevada instead. So that just about trashes up any idea he had re-remodeling his mill. E. B. Holt.

(Do not write in this space)

(Wrap each specimen separately, or place it in a substantial bag, by itself, with a number attached, identical with the number on this card.)

Ore \_\_\_\_\_  
Cabinet \_\_\_\_\_  
No. \_\_\_\_\_

Specimen No. 22, collected by Robert E. Morrow  
Field Engineer

Name of ore Gold

Operator \_\_\_\_\_

Minerals contained \_\_\_\_\_

Mine active or inactive Active

Gangue \_\_\_\_\_

If inactive, when operated \_\_\_\_\_

Depth at which taken 600 ft. Level

Specimen presented by Company

Approximate mineral content (in terms of average per ton) Gold \$20 per ton  
Average.

Date Aug 22, 1940

Notes (Any general information regarding the history of the property.)

Name of mine or claim Producers

This mine is employing at present 125 men, and is operating on 700 ft. level in ore of good value.

Group AKA. PILGRIM

District River Range

Location (distance and direction by highway from what town) 10 mi. W. Chloride

Owner of property Producers Mi. Corp.

If more space is desired for notes, use other side.

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

See IC 6945  
See Smith Pilgrim (file)

Mine SOUTH PILGRIM MINE

Pilgrim Mine

Date May 8, 1941.

District Weaver Mining Dist., Mohave County.

Engineer Elgin B. Holt.

Subject:

BRIEF STATEMENT

OWNER: South Pilgrim Mining Company, incorporated under the laws of the State of Arizona. Address: Kingman, Arizona.

METALS: Gold.

LOCATION: Property is located about 10 miles southwesterly from Chloride, Arizona, and covers the southeasterly extension of the Pilgrim Mine, belonging to Producers Mines, Inc.

NOTE: On May 6th and 7th I inspected this property, and was shown through the underground workings thereof by Mr. W. H. Clark, Superintendent. I took no samples for assay; hence my investigations herein outlined, concern mainly a physical description of the mine.

GEOLOGY: The country rock within and surrounding this property consist of tertiary lavas, such as andesite, rhyolite, latite, etc. Schrader states: "The Pilgrim district, which is about two miles in length and trends northwestward, lies 9 miles west of Chloride, in the eastern foot hills of the range, at an elevation of about 3,600 feet. The country rock is principally rhyolite and granite porphyry. The main opening is the Pilgrim mine, on the northwest. It was discovered March, 1904 ~~XXXXXXXXXX~~. Soon after it was bonded to Brockman, who developed it. ~~XXXXXXXXXX~~. This mine is situated on a contact vein between rhyolite breccia, with trachytic rhyolite, forming the hanging wall and granite porphyry in the foot wall." ( F. C. Schrader, U. S. G. S. Bulletin 327, 1909.)

THE PILGRIM MINE is now operated by the Producers Mines, Inc., H. W. Thorne, president and treasurer, under contract or purchase from original owners. This property was producing, in July, 1940, 4,700 tons of ore per month, and treating it in a 230-ton counter-current cyanidation plant. Ore treated is oxidized material carrying mainly gold values, with some silver. At the present time the Producers mill, just mentioned, is treating mainly customs ores from properties within a 100-mile radius.

AREA consists of 6 unpatented mining claims - belonging to the South Pilgrim Mining Company - 3 claims wide by 2 claims in length, running North 22 degrees 25 minutes West. These claims cover the main southeasterly extension of the Pilgrim mine as well as the mineralized ore zone thereof.

THE MID WALL VEIN, traversing both the South Pilgrim and Pilgrim properties, lies on a contact between rhyolite breccia on the hanging wall and andesite on the foot wall. Its strike is N 57 deg. W; its dip being 45 deg. southwesterly.

DEVELOPMENT WORK: The South Pilgrim shaft is sunk in andesite on the footwall side of the Mid Wall vein to a depth of 525 feet, and at an angle of 46 deg. southwesterly; 3 stations being cut at 100-foot intervals, more or less.

On the 100-foot level, a drift was run southeasterly 240 feet and northwesterly 140 feet; both of these on the Mid Wall vein; but no commercial ore was found.

NOTE: Broadly speaking, the Mid Wall vein, so far developed in South Pilgrim ground, is practically barren of gold values, except at points where this vein is intersected by a series of parallel fractures, occurring on the foot-wall side of said vein, and striking about north and south. At points where these fractures intersect the Mid Wall vein, small shoots of gold ore have been found, of no great importance.

On the 300-foot level, no drifting on the Mid Wall vein has been done; but a station was cut and a cross-cut was run southwesterly to the Mid Wall vein, 60 feet from shaft; no ore being found in this cross-cut.

On the 300-foot level, a cross-cut was run 40 feet southwesterly from shaft to the Mid Wall vein, on which a drift was run 60 feet southeasterly on vein and a small lens of ore was found in this drift, assaying \$21.00 gold per ton, per Mr. Clark.

On the 400-foot level, a cross-cut was run 40 feet southwesterly to Mid Wall vein, on which a drift was run 500 feet southeasterly. At a point in this drift 300 feet from shaft, a small broken ore shoot was found, assaying from \$8.00 to \$10.00 gold per ton, per assay certificates furnished me by Mr. Clark. This ore shoot has a length of about 20 feet, and is of no great importance.

On the 500-foot level, a cross-cut was run southwesterly from shaft to Mid Wall vein, a distance of 35 feet. Thence, a drift was run 140 feet southeasterly on said vein, showing bunches of gold ore occasionally.

THE 500-FOOT LEVEL CROSS-CUT: On the said 500-foot level, Mr. Clark is now driving a cross-cut northeasterly from shaft, with the express end in view of intersecting the FOOT WALL VEIN, which will be discussed in the next paragraph of this statement. This cross-cut, which now has a length of 150 feet from shaft crosses an ore-bearing fracture, in calcite, about 120 feet from shaft. Samples taken by Clark from this fracture, showing bands of calcite and quartz, assayed \$7.33 and \$10.50 gold per ton. This is most promising, in that this fracture may lead to an ore body. The strike of this fracture is about North 10 degrees East; hence it may lead to the Foot Wall vein, at some distance further north, where it is believed important workable ore shoot will be found, as hereinafter set forth.

THE FOOT WALL VEIN: The Foot Wall vein, in Pilgrim ground, parallels the Mid Wall vein, lying about 200 feet therefrom, on the foot-wall side thereof, or on the northeasterly side, and dipping in the same direction as the said Mid Wall vein, at exactly what angle I did not have time to determine. This Foot Wall vein is a strong ore-bearing fissure, with long workable shoots of excellent grade milling ore, proven in the Pilgrim mine to contain the most important ore bodies yet found in that property.

According to surveys, the said Foot Wall vein strikes southeasterly into South Pilgrim ground, more or less paralleling the Mid Wall vein. However, the said Foot Wall vein has not yet been located in the underground workings of the South Pilgrim mine. It is the object of the 500-foot cross-cut, as stated, to pick up this vein. Hence, this cross-cut should be continued by all means, an unknown distance, ranging from 50 to 300 feet further, in order to locate the vein referred to; and once found, should the vein be proven to have commercial ore, drifts, of course should be run each way on the same. This is the work I recommend to be done in the South Pilgrim mine, as a first consideration. Other work should be planned later, after



the work just referred to has been completed, and after the property has been thoroughly examined and surveyed by a competent geologist or engineer.

In other words, I am confident, that with skillfully directed work, ore bodies of importance will be found somewhere along the main ore zone within South Pilgrim ground. I have little or no confidence, however, that these ore bodies will be encountered along the Mud Wall vein, which, I understand, was not very productive of milling ore in the main Pilgrim property.

For instance, the Pilgrim mine is developed to the 700-foot level by a winze from the 500-foot level, which is reached by a main inclined shaft. The winze is located approximately 2,000 feet northwesterly from main shaft, in that part of the mine from which the major production has been obtained.

Note that the main productive area of the Pilgrim mine is located 2,000 feet northwesterly from the shaft. Hence there is ample room for the existence of important workable ore bodies along the main ore-bearing zone within the boundaries of the South Pilgrim mine.

Therefore, while this property is now in the prospect stage, and has not as yet produced commercial ore in quantity, I believe, from facts herein outlined, that the expenditure of considerable additional money is warranted in carrying forward exploratory work, more or less set forth, or indicated, in this statement.

Elgin D. Holt,  
Field Engineer.

And she added:

"Thank you for your continued support for our research collections by sending us the "Mohave County Spotlight". There is always so much news about Kingman and Mohave County within. You're such a prolific writer, it is difficult to keep up with you."

### In Search of Old Places

Recently, Malach examined an old map of the Adela Mine located along the old wagon road from Wikiup to Signal. Malach knew only a few segments of that road in a rather mountainous terrain.

Where is the site of the Adela Mine? -was his question. The old map showed a location of shafts, tunnels, cabin and arrastra. What is left of it now?

Malach passed the information about the Adela Mine to Albert Miller, who lives on forty acres of land across from the Signal site. Miller participated in the Malach's field trips in the past.

Miller asked Tina Madril, born in Signal and now rancher's widow, living on the ranch near the site of the mining camp of Greenwood. Tina Madril took Malach to the Greenwood site a few years ago. Tina Madril not only heard about the Adela Mine, but knew its side.

On Saturday, Nov. 6, 1982, Malach with wife Doreen and the Alberts made a succesful trip to the Adela Mine. What was marked on the map as 'cabin' turned to ~~the~~ the remnants of half carved out of the solid rock and half constructed with rocks hole in the ground, still showing wood parts of doorway and roof. The arrastra in ruin was adjacent to the cabin site.

A blacksmith forge fireplace remained near one tunnel with shaft. Other signs, such as rock retaining walls, told that the people lived and worked at the place called Adela Mine.

Such and other ways led and are leading Malach to the old and forgotten sites of life in Mohave County permitting him to make record of it on photographs.

### "Chloride Miner"

The 'Mohave County Miner' is known as the newspaper, which was started in Mineral Park.

The mining town of Chloride had the "Chloride Miner" published by the Tennessee-Schuykill mine. Also at the turn of the century, the "Arizona Arrow" was published in Chloride after its owner moved it to that mining town.

In 1916, the "Chloride Mining Review" according to an advertisement, was "the leading newspaper with reliable news of Chloride Mining District, subscription was \$3.00 per year, and Bert D. Morris was editor and manager.

### Unusual Miner Discovery

In his research, Malach came across many kinds of mine discovery incidents, but not connected with a cattle stampede

In the early part of 1909, a carload of cattle stampeded at the McConnico railroad station and scattered northward through Sacramento Valley. Men begun rounding the cattle. One of them, called "Pretty Jim" Smith, found himself searching for cattle in the foothills below the present Pilgrim mine site in Black Mts. He found several pieces of ore showing gold. No prospecting was done where Smith stopped to rest, hence no mines existed. Smith passed the news about his discovery, and miner M.C. Dempsey made a prospecting trip to the area.

Dempsey found free gold in a prominent outcrop where later the Pilgrim mine was opened. He located a few claims and returned to Snowball camp near Vivian where he worked. Samples of the Dempsey's ore assayed up to \$70.00 per ton. Demspey wrote to his friend William O'Dae in Chloride and the two men started to work on a shallow shaft. From it they secured 12 tons of ore, which was shipped

to the Needles smelter with net profit of over \$1,200.00.

And the Pilgrim mine started its production. Today, large Pilgrim mine-mill installations in ruin show the once productive mine, which a cattle stampede started.

### "Good Old Days"

In the announcement of the Tennessee-Schuykill mine mangement effective Jan. 1, 1941, was the new increase of pay scale per hour for a seven day work week.

In the five groups of mine workers, the lowest pay was for janitor, crushman, etc. They were to receive 48 cents per hour, and the pay for full week was \$20.00. Muckers and similar workers would receive 52 cents per hour, and \$33.28 for full seven day week. The hoistman's pay was to be 64 cents and \$40.96 for full week. The highest pay belonged to the shift boss with 74 cents per hour and \$47.36 for the seven day week.

Such were the wages of the mine workers of the largest mine in Chloride with some 400 employees forty three years ago.

### Location of Kelvin

Recently, the "Miner" published an item 75 years old: "John Brennan, an old miner and prospector of this county, died in the local jail in Kelvin a few days ago". Brother Pat of John Brennan was found dead in hills of Jerome, and the "Miner" continued: "John wandered back to this county and prospected and mined here for some time after the brother's death, and then disappeared. It was thought that he had perished on the desert, but later he showed up in the south part of the Territory."

The news item gave an impression that Kelvin was in Mohave County. Not so, because it was in Pinal County. On the site of Kelvin was first established a stage coach station in 1877, followed by the town of Kelvin for the Ray Mining Co. reduction plant. Kelvin was also known as Ray Junction. Kelvin was named after Kelvin Grove of Scotland.

### Similar Case with Fremont

In recent issue of "Mohave County Spotlight", Fremont was mentioned as location on one of the stores of "Lovin & Withers" main store in Kingman.

Location of Fremont is unanswered, as yet, but it could also be located in one of the surrounding Mohave County counties, and it disappeared as many other small mining communities.

### Burro Creek Recreation Camp

The Burro Creek Recreation Camp is under the management of the Bureau of Land Management, and Mr. and Mrs. Dick Newbold were recently appointed hosts for that facility on volunteer basis.

The BLM official in charge of that camp requested Roman Malach to help the new hosts in providing information on the history, etc. of the surrounding area.

On Tuesday, Nov. 23, 1982, Malach with wife Doreen and the Millers from Signal made the trip to the Burro Creek Camp located along the Highway 93 bridge. Malach left the available reading material, answered questions and promised the Newbolds information, including some interesting places for rock hunting.

The BLM office in Kingman with the Manager Roger Taylor provides Malach with all needed help in his work as County Historian.

### Uranium Exploration on Arizona Strip

In the recent Mohave County Spotlight issues, a few items of uranium

COPY

Duluth, Minn., Oct. 30, 1929

Mr. Fred W. Koehler,  
San Fernando, Calif.

My Dear Mr. Koehler:

You have asked me for a brief statement of my views as to the possibilities of the South Pilgrim mining property, in Arizona, which carries the Pilgrim vein southerly from the mine of that name.

Very little work has been done on this property, but the Pilgrim has been developed considerably and has just now made some remarkable discoveries. It is this work and these discoveries that are calling attention to the South Pilgrim ground.

Therefore this statement of mine will have to do chiefly with the Pilgrim, and with the connection between the two, the bearing which the one has on the other.

Pilgrim mine is in Mohave County, Arizona, and is some ten miles west of Chloride, connected therewith by a good road which is at present some 15 miles in length, but is to be shortened when work now contemplated has been done. The mine lies on the eastern slope of the Black Mountains, along the western side of which the Colorado River flows. The elevation of the mine is about 3,500 feet above the sea. Chloride is the present terminus of the Arizona & Utah branch of the Santa Fe railway and is the town from which supplies for most of this mining region are secured. This branch railroad connects with the main line near Kingman, and is about 25 miles long. With the Boulder Dam under construction, the road probably will be extended north to that point.

The region is typical of what is commonly called the Arizona desert, and water is not plenty. Pilgrim has developed enough for present needs by a well close to the mine, and no doubt can get more by going further into the valley. In parts of the district there is a broad belt of rhyolite tuff that seems to carry inexhaustible supplies of water, but I do not know whether this tuff is to be found close to these properties. The site of Boulder Dam is but a few miles away, and when this dam is completed power will be ample for all purposes and at low cost. Now oil is used, freighted from Chloride. It is cheap.

With the Boulder Dam completed or even well begun, the general mining and industrial development of this region will gain tremendously.

At the present time overall mining and milling costs in the district should not exceed \$5 or \$6 a ton, on any reasonable operation in veins of average width and character. Later they can no doubt be reduced. In fact, it seems to me that \$5 should be enough to cover costs now. It is not a difficult and distant mining region, labor costs are standard, but little timber is used, supplies are not high and the milling of this ore is a simple affair, with high savings of the gold contained in it.

The whole area between the railroad and the Colorado River is a well known mining district, with numerous mines. Those of the Cerbat range and near Chloride are predominantly silver; those of the Black Mountains are gold, with little else. These latter include such properties as the Tom Reed, Gold Roads, United Eastern, Vivian, Pilgrim, Mocking Bird, Moss and others, distributed over an area of some twenty-five miles in length. Many millions of dollars have been taken from these mines. The region is by no means exhausted and should show a long and steady production from older mines and development of the new ones.



The Pilgrim mine was first developed many years ago, at a time when ores either were milled with high losses, or where packed on burro back to the Colorado River, thence transported on river steamer down to the Gulf and thence around the coast to San Francisco, for treatment. Either of these processes meant that any ore that could be treated must be rich. In those days some ore running up to \$100 a ton was shipped from the Pilgrim, but the greater part of what was mined ran not far from \$10. This could not be handled then. The mine's spectacular high grade discoveries are new and have been the cause of great interest within the past few weeks. I would not be surprised to see a boom develop thereabouts as the result of what has been found.

Pilgrim has an inclined shaft about 350 feet deep, with a quartz vein perhaps 20 feet wide dipping west about 35°. On the 235 - and 350 ft. levels stations were cut and drifting and crosscutting has been developing the ore body. High grade ore is found on both levels and there is no reason to doubt that it extends from surface at least to the bottom of the workings. As oxidation extends a long ways beyond the bottom of the mine, it is probable that there is a very considerable further depth of good ore.

The average gold values in the district seem to be from \$10 to, say, \$15 a ton, and it is too much to expect that the spectacular ores recently found can be more than sporadic. They need not be, for a \$10 ore ought to pay well and these very rich streaks and seams make splendid sweeteners.

From my brief examination of the mine and from what I know of the district, I am quite confident that the Pilgrim vein occurs as a contact between rhyolite and granite-porphry, with very deep oxidation, so that one can expect to go several hundred feet beyond the bottom of the present mine without encountering a change in the character of the ore. This is an important factor in milling development. This ore carries coarse gold, freely distributed through the vein material.

The Pilgrim vein extends southerly into South Pilgrim ground without a break; the latter carries the extension of the vein for nearly 3,000 feet with no surface indications of material faulting. The surface appearance of the vein is generally quite similar to what is along the Pilgrim, and assays made from samples taken at various points along this 3,000 feet are quite like, I am told, those that came from the surface of the Pilgrim, that is they run from a little over a dollar to several dollars a ton.

The value of South Pilgrim depends entirely on what may be the mineralization of Pilgrim vein south of the line separating the properties. While indications are that the agency which introduced gold north of the line performed the same kindly act across the line; the geology does not change, the mineralizing rocks are the same, all conditions apparently are alike, yet it is impossible to state with assurance that gold does exist on the South Pilgrim until it is found there. It ought to be there and in quantity.

In order to answer this important question it will be necessary to do some work. It is an investigation that must be made under ground. A shaft should be sunk and deep enough and with enough lateral development to prove the matter with some degree of authority. Diamond drilling has been suggested, but I do not believe in it for such work as this. All a drill hole could prove would be the presence of a vein and its width at the point where it was intersected. You know now that you have a vein and you can assume its width with some definiteness. If a drill core showed gold it would only prove that at that particular inch there was a value; if it did not you might be disappointed without reason, for it would be surprising if, even in a rich vein, gold were to show in a bit of rock like a drill core. As a machine for finding formation the diamond drill has its function, as a method of testing veins, it is almost worthless, generally.

I recommend that a site for a shaft be selected with great care and after a study of the ground throughout your property, at a spot adjacent to the footwall of the vein. That it be sunk, first, in South Pilgrim ground which it has in the immediate vicinity of the mine; and second, that the shaft be deep enough and have sufficient lateral workings to prove or disprove the presence of gold in the vein. If at first you find little or no gold in the vein, you ought not to be discouraged for there are almost 3,000 feet of vein somewhere on which gold should exist in paying quantity.

I regard the South Pilgrim as a very favorable prospect and one that is well worth spending a large amount of money upon, and I should like very much to be consulted from time to time in the course of your development.

(SIGNED)

Dwight E. Woodbridge



*W*

# United States Senate

## MEMORANDUM

Dec. 15

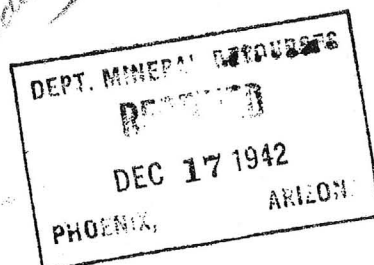
*H*  
*C*

Hallett Thorne called tonight  
and will see him tomorrow.

Apparently he has been in town several  
days and Conover recommended that he  
see me about some of his troubles...  
I don't yet know what they are.

*Producers*

Bill Broadgate



PILGRIM MINE

MOHAVE COUNTY

RRB WR 11/11/83: Bob Nakaota, Geologist, Albuquerque, New Mexico, called for information on the Pilgrim Mine, Mohave County. He has done some work for NM & AZ Land Company and Santa Fe. He will be working in Mohave County for Santa Fe and will come into the office when he gets to Arizona.

---

MG WR 7/18/86: In addition to the five patented claims comprising the Pilgrim mine (Mohave Co), Galli Exploration, Ren, Nevada (c), has apparently controlled the area with the Pil group of claims.

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GALLI EXPLORATIONS

7/86

P O Box 12307

Reno, Nevada 89510

- Mohave Gold Inc. & Galli Explorations, a private company out of Reno, NV are coordinating a drill program this month on the property, located in Mohave Co. The jt. venture conducted a drill program in December 1985 with encouraging results, including one stem of more than 25 feet of 0.167 ounces of gold per ton. (north american gold mining industry news, 7-4-86)

See: Pilgrim Mine (file) mohave Co.

NJN WR 7/10/87: Fred Johnson (card) reported that Galli Exploration (card) has put in new drill pads at the Pilgrim (file) Mohave County in preparation for more drilling.

---

NJN WR 11/27/87: Wayne Girard, Mohave Gold (card) reported that they plan a new drilling program to begin shortly at the Pilgrim (file) Mohave County. On November 19 they issued a new release which raised \$240,000 for the Pilgrim. They are hopeful that this drilling phase will confirm a half million tons of material grading between .05 to .1 oz/ton Au.

---

PILGRIM MINE

MOHAVE COUNTY

MG WR 12/4/87: Mr. Pete Galli reports that he won a lawsuit against Mohave Gold Pilgrim - file) Mohave County. He plans to drill 42 - 45 holes soon at the Pilgrim property; he drilled 17 holes two years ago and was encouraged by the results.

-----

NJN WR 12/11/87: Wayne Girard of Mohave Gold called and reported that a recent court decision gives Gexa Gold a 75% interest in the Pilgrim (file) Mohave County. Gexa Gold was formerly Galli Resources. Their drill program reported earlier is to start December 15.

-----

MG WR 1/29/88: Learned from Pete Galli that he has almost completed a recent drilling program at the Pilgrim property (file) Mohave County. The results are discouraging.

-----

NJN WR 12/29/87: Peter Galli of Gexa (card) reported that they have completed their drilling program at the Pilgrim (file) Mohave County. With partial results available, they have been categorized as not too favorable, as the mineralized areas were too thin at the 700' level and, although much better at the 300' level, much of that has been mined. Also generally discouraging is that they have not found much disseminated value between the 3 vein systems as had been hoped.

-----

*George Rick and I*

Rick, George and I drove to the old Producer's mill site (Pilgrim mine) where we augered three preliminary samples from the tailing pond estimated to contain about 400,000 tons. VBD WR 8/25/76

---

9-3-42

Thorne, Hallett *W.*  
Box 10  
Chloride, Arizona

See Producers Mines, Inc.

Re - converting Producers mill into a custom copper, lead,  
and zinc concentrator

See Producers Mines - Re Treatment Schedule on ores 10-24-40

See SOUTH PILGRIM MINE - Re Field Engineers Report 5-8-41  
(Owner-PRODUCERS MINES, INC.)

See PRODUCERS MINES, INC. - re gas application 1-5-45

The mill at the Pilgrim mine at Chloride, Arizona, is being remodeled, it is stated, new screens being put in and the machinery overhauled. While this work is being done, development work is being continued along the drift from the lowest level, and additional exploration of the

# MOHAVE GOLD INC.

#802 - 550 - 11th Ave. S.W. Calgary, Alberta, T2R 1M7, (403)237-5100, FAX (403)262-1127  
Listed on The Alberta Stock Exchange, symbol "MVH".

## Pilgrim Mine Project

Located 21 miles northwest of Kingman, Arizona, the Pilgrim Mine project consists of five patented and additional claims staked along the exposed length of a structure 1.5 miles long and 400 feet wide. The mine was a profitable producer of gold and silver until 1942 when production ceased permanently because of World War II.

The mine was first discovered in March 1904 and was worked intermittently until 1934, at which time a cyanide mill was constructed that operated until the war. At the time of the government-ordered shutdown of U.S. mining operations, the Pilgrim Mine was operational but no mining has been done since.

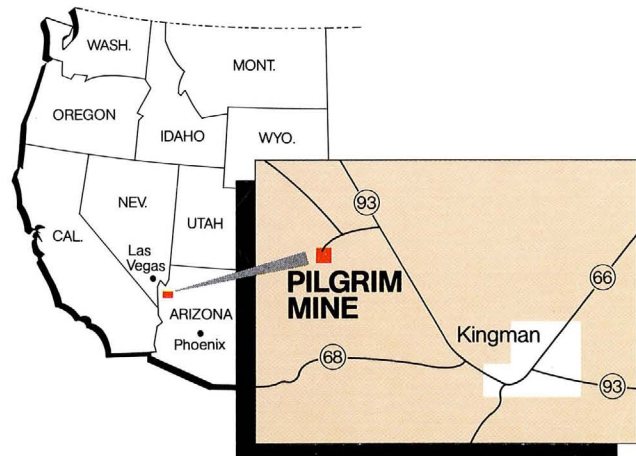
Exploration has provided encouraging results on the extent and grade of ore body. Preliminary work uncovered a series of parallel veins over a 200 foot width, with fractures and shears in between, some of which exhibit high grades. Underground samples from the old workings indicate gold values as high as 5.67 oz/ton gold and silver up to 1.74 ounces per ton of ore. A ten-foot section in a cross-cut between the upper and middle veins on the third level contained 0.25 oz/ton gold over a fifty-foot area, indicating open-pit ore can be developed and suggesting that this possibility was not recognized during the early-day mining activity.

Three additional anomalous zones have been uncovered through geochemical and geophysical reconnaissance surveys. The first zone extends from the old workings on the Pilgrim ore body indicating a strong continuance of mineralization favorable to both underground and open-pit mining. Three new parallel structures have been located on the project. Geochemical results are high enough for expression in ounces per ton rather than the customary parts per million.

These results range from .001 to .048 ounces per ton of gold and .005 to .428 ounces per ton of silver on surface. Correlated geophysical data from the

electromagnetic survey suggests these anomalous zones are thirty to forty feet wide on each of the separate parallel mineralized structures. A wide spread reconnaissance drilling program was carried out in the fall of 1985 with very encouraging results. Every hole encountered favorable mineralization with one grading .167 oz/ton over 25 feet. Because the ore is heap leachable, the Company feels it can profitably mine grades as low as .02 oz/ton.

The mine is easily accessible and has sufficient water and power for a commercial operation. Three-phase power exists at the mine site one less hurdle to overcome when the mine achieves production once again. (Continued on page 3)



*Reverse circulation drilling on East Pilgrim vein.*



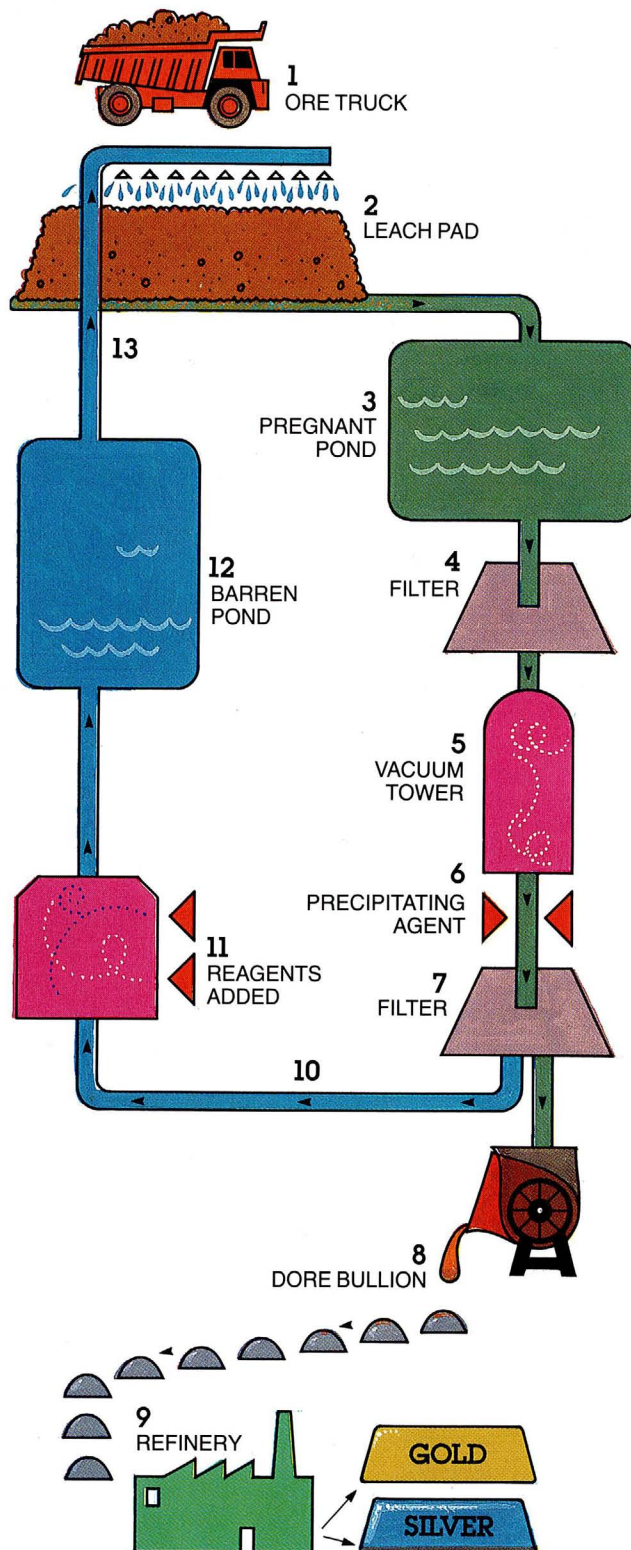
# Heap Leaching Process

Heap leaching or "solution mining" is a fairly new method of extracting gold. This method far surpasses conventional methods for low grade ores in the following ways:

- retrieves small concentrations of gold and silver (low grades)
- rate of retrieval provides cash flow and return on assets
- low capital costs

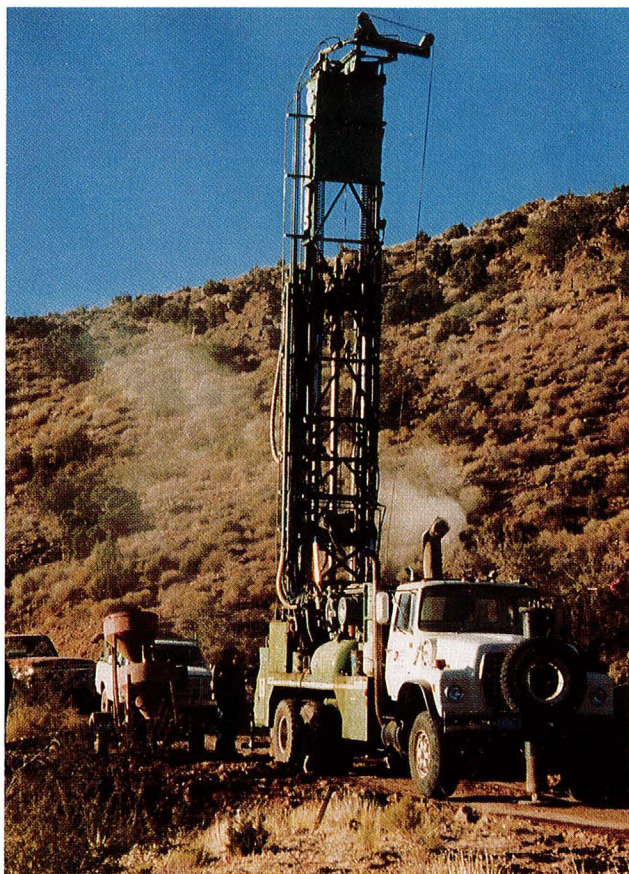
The following is a description of the heap leaching process:

1. Mining: ore is mined or gathered from previously loaded stock piles
2. Leaching pad: ore which may or may not have to be crushed is heaped onto a pad and is leveled. The leaching solution is applied to the top of the heap by a sprinkler system causing percolation throughout the heap which, dissolves the gold. The solution then flows to a pond
3. Pregnant pond: collection basin for metalladen solution
4. Filter
5. Vacuum Tower
6. Zinc and Lead Nitrate: solution is circulated through a recovery plant where metal values (gold and silver) are removed by zinc precipitation or through absorption by activated carbon
7. Filter: reduces the precipitate containing the gold to a powder
8. Dore Bullion: gold is fired (or converted into bullion containing gold and silver)
9. Refinement: purification
10. The solution is recycled
11. Re-agents added
12. Barren Pond solution is stored until ready for reuse
13. Solution piped to heap for leaching process to begin again





The property has both underground and open-pit potential, providing the operator with the ability to adjust mining methods to optimum economic recovery as dictated by the capricious nature of the precious metals and financial markets. The nature and size of the deposit will determine the amount of capital required for production.



*Drill rig on Main Pilgrim vein.*



*Sample preparation.*

## Property Evaluation

DAVID S. EVANS Ph.D., P.Geol., FGAC has completed an evaluation of the Pilgrim Mine property in Mohave County, Arizona. In his report, he has completed an extensive overview of physical features, history, geology, geochemistry and geophysics. Incorporating past data and current evaluations, Dr. Evans has concluded the following:

1. Estimated that upwards of 200,000 tons of material amenable to underground mining may still remain.
2. The Pilgrim property displays similar characteristics and features of the Oatman Mining District which has yielded 2.2 million oz., of gold and 1.4 million oz. of silver.
3. Underground and surface mapping, surface geochemical surveys, reconnaissance geophysical survey, and reconnaissance reverse circulation drilling suggest the presence of well developed structurally-controlled precious metals mineralization along a measured trend exceeding 2,000 feet in length and up to 800 feet in width.

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CANADA  
T2R 1M7

4. Additional work is justified, including "step-out" and "in-fill" reverse circulation drilling, recalculation of underground ore reserves and metallurgical testing to further delineate whether surface leaching or underground mining is best suited to this property.

Based on these conclusions, a two phase program of assessment is recommended.

A first stage calls for step out and infill reverse circulation drilling to estimate and classify the Pilgrim ore reserves into drill indicated probable, and proven categories. Phase two drilling will undertake to define in some detail individual ore blocks or panels for prefeasibility and feasibility evaluation needed for mine development and production planning.

Drilling results include zones assaying 0.167 oz/ton Au over a true thickness of 25 feet. Evaluation to date indicates both underground and open pit potential. Tests confirm the ore is amenable to the cost efficient heap leaching process and this method has been recommended.

The Previous program of 17 holes drilled indicated potential reserves of 1,000,000 tons of .05 to .10 AU. Twenty-five holes are planned for the next stage on 200' x 70' centres to test this potential reserve. This test is of a small portion of the overall structure which hosts favourable zones for gold mineralization. A second objective for this program is to test new areas outside the immediate Pilgrim Mine for further potential reserves. 13 - 15 drill holes are planned in five separate areas.

## Corporate Directory

### Listing

Alberta Stock Exchange - MVH.A  
U.S. 12G Registration 82-940

### Head Office

#802 - 550 - 11th Ave. S.W.  
Calgary, Alberta  
T2R 1M7

### Directors and Officers

Daniel J. Gallagher, Chairman of the Board  
and Secretary Treasurer  
Robin W. Pearson, President  
Robert K. Howard, Director

### Transfer Agent and Registrar

Canada Trust  
505 - 3rd Street, S.W.  
Calgary, Alberta  
T2P 3Y8

### Auditors

Doupe Dick & Cook  
405 - 1333 - 8 Street S.W.  
Calgary Alberta  
T2R 1M6

### Solicitors

John G. Magnus  
Barrister, Solicitor and Notary  
Suite 301, 665 - 8th Street, S.W.  
Calgary, Alberta  
T2P 3K7

### Bankers

TORONTO DOMINION BANK  
Medical Arts Branch  
902 - 8th Ave. S.W.  
Calgary, Alberta  
T2P 1H8

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DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine SOUTH PILGRIM MINE

*Pilgrim Mine*

Date May 8, 1941.

*See IC 6945  
See South Pilgrim (file)*

District Weaver Mining Dist., Mohave County.

Engineer Elgin B. Holt.

Subject:

BRIEF STATEMENT

OWNER: South Pilgrim Mining Company, incorporated under the laws of the State of Arizona. Address: Kingman, Arizona.

METALS: Gold.

LOCATION: Property is located about 10 miles southwesterly from Chloride, Arizona, and covers the southeasterly extension of the Pilgrim Mine, belonging to Producers Mines, Inc.

NOTE: On May 6th and 7th I inspected this property, and was shown through the underground workings thereof by Mr. W. H. Clark, Superintendent. I took no samples for assay; hence my investigations herein outlined, concern mainly a physical description of the mine.

GEOLOGY: The country rock within and surrounding this property consist of tertiary lavas, such as andesite, rhyolite, latite, etc. Schrader states: "The Pilgrim district, which is about two miles in length and trends northwestward, lies 9 miles west of Chloride, in the eastern foot hills of the range, at an elevation of about 3,600 feet. The country rock is principally rhyolite and granite porphyry. The main opening is the Pilgrim mine, on the northwest. It was discovered March, 1904 ~~XXXXXXXXXX~~. Soon after it was bonded to Brockman, who developed it. ~~XXXXXXXXXX~~. This mine is situated on a contact vein between rhyolite breccia, with trachytic rhyolite, forming the hanging wall and granite porphyry in the foot wall." ( F. C. Schrader, U. S. G. S. Bulletin 597, 1909.)

THE PILGRIM MINE is now operated by the Producers Mines, Inc., H. W. Thorne, president and treasurer, under contract of purchase from original owners. This property was producing, in July, 1940, 4,700 tons of ore per month, and treating it in a 250-ton counter-current cyanidation plant. Ore treated is oxidized material carrying mainly gold values, with some silver. At the present time the Producers mill, just mentioned, is treating mainly customs ores from properties within a 100-mile radius.

AREA consists of 6 unpatented mining claims - belonging to the South Pilgrim Mining Company - 3 claims wide by 2 claims in length, running North 23 degrees 25 minutes West. These claims cover the main southeasterly extension of the Pilgrim mine as well as the mineralized ore zone thereof.

THE MID WALL VEIN, traversing both the South Pilgrim and Pilgrim properties, lies on a contact between rhyolite breccia on the hanging wall and andesite on the foot wall. Its strike is N 57 deg. W; its dip being 45 deg. southwesterly.

DEVELOPMENT WORK: The South Pilgrim shaft is sunk in andesite on the footwall side of the Mid Wall vein to a depth of 525 feet, and at an angle of 46 deg. southwesterly; 5 stations being cut at 100-foot intervals, more or less.

On the 100-foot level, a drift was run southeasterly 240 feet and northwesterly 140 feet; both of these on the Mid Wall vein; but no commercial ore was found.

NOTE: Broadly speaking, the Mid Wall vein, so far developed in South Pilgrim ground, is practically barren of gold values, except at points where this vein is intersected by a series of parallel fractures, occurring on the foot-wall side of said vein, and striking about north and south. At points where these fractures intersect the Mid Wall vein, small shoots of gold ore have been found, of no great importance.

On the 800-foot level, no drifting on the Mid Wall vein has been done; but a station was cut and a cross-cut was run southwesterly to the Mid Wall vein, 60 feet from shaft; no ore being found in this cross-cut.

On the 500-foot level, a cross-cut was run 40 feet southwesterly from shaft to the Mid Wall vein, on which a drift was run 60 feet southeasterly on vein and a small lens of ore was found in this drift, assaying \$21.00 gold per ton, per Mr. Clark.

On the 400-foot level, a cross-cut was run 40 feet southwesterly to Mid Wall vein, on which a drift was run 500 feet southeasterly. At a point in this drift 200 feet from shaft, a small broken ore shoot was found, assaying from \$8.00 to \$10.00 gold per ton, per assay certificates furnished me by Mr. Clark. This ore shoot has a length of about 20 feet, and is of no great importance.

On the 500-foot level, a cross-cut was run southwesterly from shaft to Mid Wall vein, a distance of 55 feet. Thence, a drift was run 140 feet southeasterly on said vein, showing lanches of gold ore occasionally.

THE 500-FOOT LEVEL CROSS-CUT: On the said 500-foot level, Mr. Clark is now driving a cross-cut northeasterly from shaft, with the express end in view of intersecting the FOOT WALL VEIN, which will be discussed in the next paragraph of this statement. This cross-cut, which now has a length of 150 feet from shaft crosses an ore-bearing fracture, in endosite, about 130 feet from shaft. Samples taken by Clark from this fracture, showing bands of calcite and quartz, assayed \$7.35 and \$10.50 gold per ton. This is most promising, in that this fracture may lead to an ore body. The strike of this fracture is about North 10 degrees East; hence it may lead to the Foot Wall vein, at some distance further north, where it is believed important workable ore shoot will be found, as hereinafter set forth.

THE FOOT WALL VEIN: The Foot Wall vein, in Pilgrim ground, parallels the Mid Wall vein, lying about 200 feet therefrom, on the foot-wall side thereof, or on the northeasterly side, and dipping in the same direction as the said Mid Wall vein, at exactly what angle I did not have time to determine. This Foot Wall vein is a strong ore-bearing fissure, with long workable shoots of excellent grade milling ore, proven in the Pilgrim mine to contain the most important ore bodies yet found in that property.

According to surveys, the said Foot Wall vein strikes southeasterly into South Pilgrim ground, more or less paralleling the Mid Wall vein. However, the said Foot Wall vein has not yet been located in the underground workings of the South Pilgrim mine. It is the object of the 500-foot cross-cut, as stated, to pick up this vein. Hence, this cross-cut should be continued by all means, an unknown distance, ranging from 50 to 500 feet further, in order to locate the vein referred to; and once found, should the vein be proven to have commercial ore, drifts, of course should be run each way on the same. This is the work I recommend to be done in the South Pilgrim mine, as a first consideration. Other work should be planned later, after

the work just referred to has been completed, and after the property has been thoroughly examined and surveyed by a competent geologist or engineer.

In other words, I am confident, that with skillfully directed work, ore bodies of importance will be found somewhere along the main ore zone within South Pilgrim ground. I have little or no confidence, however, that these ore bodies will be encountered along the Mud Wall vein, which, I understand, was not very productive of milling ore in the main Pilgrim property.

For instance, the Pilgrim mine is developed to the 700-foot level by a winze from the 500-foot level, which is reached by a main inclined shaft. The winze is located approximately 2,000 feet northwesterly from main shaft, in that part of the mine from which the major production has been obtained.

Note that the main productive area of the Pilgrim mine is located 3,000 feet northwesterly from the shaft. Hence there is ample room for the existence of important workable ore bodies along the main ore-bearing zone within the boundaries of the South Pilgrim mine.

Therefore, while this property is now in the prospect stage, and has not as yet produced commercial ore in quantity, I believe, from facts herein outlined, that the expenditure of considerable additional money is warranted in carrying forward exploratory work, more or less set forth, or indicated, in this statement.

Elgin B. Holt,  
Field Engineer.



And she added:

"Thank you for your continued support for our research collections by sending us the "Mohave County Spotlight". There is always so much news about Kingman and Mohave County within. You're such a prolific writer, it is difficult to keep up with you."

### In Search of Old Places

Recently, Malach examined an old map of the Adela Mine located along the old wagon road from Wikiup to Signal. Malach knew only a few segments of that road in a rather mountainous terrain.

Where is the site of the Adela Mine? -was his question. The old map showed a location of shafts, tunnels, cabin and arrastra. What is left of it now?

Malach passed the information about the Adela Mine to Albert Miller, who lives on forty acres of land across from the Signal site. Miller participated in the Malach's field trips in the past.

Miller asked Tina Madril, born in Signal and now rancher's widow, living on the ranch near the site of the mining camp of Greenwood. Tina Madril took Malach to the Greenwood site a few years ago. Tina Madril not only heard about the Adela Mine, but knew its side.

On Saturday, Nov. 6, 1982, Malach with wife Doreen and the Alberts made a successful trip to the Adela Mine. What was marked on the map as 'cabin' turned to the remnants of half carved out of the solid rock and half constructed with rocks hole in the ground, still showing wood parts of doorway and roof. The arrastra in ruin was adjacent to the cabin site.

A blacksmith forge fireplace remained near one tunnel with shaft. Other signs, such as rock retaining walls, told that the people lived and worked at the place called Adela Mine.

Such and other ways led and are leading Malach to the old and forgotten sites of life in Mohave County permitting him to make record of it on photographs.

### "Chloride Miner"

The 'Mohave County Miner' is known as the newspaper, which was started in Mineral Park.

The mining town of Chloride had the "Chloride Miner" published by the Tennessee-Schuykill mine. Also at the turn of the century, the "Arizona Arrow" was published in Chloride after its owner moved it to that mining town.

In 1916, the "Chloride Mining Review" according to an advertisement, was "the leading newspaper with reliable news of Chloride Mining District, subscription was \$3.00 per year, and Bert D. Morris was editor and manager.

### Unusual Miner Discovery

In his research, Malach came across many kinds of mine discovery incidents, but not connected with a cattle stampede

In the early part of 1909, a carload of cattle stampeded at the McConnico railroad station and scattered northward through Sacramento Valley. Men begun rounding the cattle. One of them, called "Pretty Jim" Smith, found himself searching for cattle in the foothills below the present Pilgrim mine site in Black Mts. He found several pieces of ore showing gold. No prospecting was done where Smith stopped to rest, hence no mines existed. Smith passed the news about his discovery, and miner M.C. Dempsey made a prospecting trip to the area.

Dempsey found free gold in a prominent outcrop where later the Pilgrim mine was opened. He located a few claims and returned to Snowball camp near Vivian where he worked. Samples of the Dempsey's ore assayed up to \$70.00 per ton. Dempsey wrote to his friend William O'Dae in Chloride and the two men started to work on a shallow shaft. From it they secured 12 tons of ore, which was shipped



to the Needles smelter with net profit of over \$1,200.00.

And the Pilgrim mine started its production. Today, large Pilgrim mine-mill installations in ruin show the once productive mine, which a cattle stampede started.

### "Good Old Days"

In the announcement of the Tennessee-Schuykill mine mangement effective Jan. 1, 1941, was the new increase of pay scale per hour for a seven day work week.

In the five groups of mine workers, the lowest pay was for janitor, crushman, etc. They were to receive 48 cents per hour, and the pay for full week was \$20.00. Muckers and similar workers would receive 52 cents per hour, and \$33.28 for full seven day week. The hoistman's pay was to be 64 cents and \$40.96 for full week. The highest pay belonged to the shift boss with 74 cents per hour and \$47.36 for the seven day week.

Such were the wages of the mine workers of the largest mine in Chloride with some 400 employees forty three years ago.

### Location of Kelvin

Recently, the "Miner" published an item 75 years old: "John Brennan, an old miner and prospector of this county, died in the local jail in Kelvin a few days ago". Brother Pat of John Brennan was found dead in hills of Jerome, and the "Miner" continued: "John wandered back to this county and prospected and mined here for some time after the brother's death, and then disappeared. It was thought that he had perished on the desert, but later he showed up in the south part of the Territory."

The news item gave an impression that Kelvin was in Mohave County. Not so, because it was in Pinal County. On the site of Kelvin was first established a stage coach station in 1877, followed by the town of Kelvin for the Ray Mining Co. reduction plant. Kelvin was also known as Ray Junction. Kelvin was named after Kelvin Grove of Scotland.

### Similar Case with Fremont

In recent issue of "Mohave County Spotlight", Fremont was mentioned as location on one of the stores of "Lovin & Withers" main store in Kingman.

Location of Fremont is unanswered, as yet, but it could also be located in one of the surrounding Mohave County counties, and it disappeared as many other small mining communities.

### Burro Creek Recreation Camp

The Burro Creek Recreation Camp is under the management of the Bureau of Land Management, and Mr. and Mrs. Dick Newbold were recently appointed hosts for that facility on volunteer basis.

The BLM official in charge of that camp requested Roman Malach to help the new hosts in providing information on the history, etc. of the surrounding area.

On Tuesday, Nov. 23, 1982, Malach with wife Doreen and the Millers from Signal made the trip to the Burro Creek Camp located along the Highway 93 bridge. Malach left the available reading material, answered questions and promised the Newbolds information, including some interesting places for rock hunting.

The BLM office in Kingman with the Manager Roger Taylor provides Malach with all needed help in his work as County Historian.

### Uranium Exploration on Arizona Strip

In the recent Mohave County Spotlight issues, a few items of uranium

COPY

Duluth, Minn., Oct. 30, 1929

Mr. Fred W. Koehler,  
San Fernando, Calif.

My Dear Mr. Koehler:

You have asked me for a brief statement of my views as to the possibilities of the South Pilgrim mining property, in Arizona, which carries the Pilgrim vein southerly from the mine of that name.

Very little work has been done on this property, but the Pilgrim has been developed considerably and has just now made some remarkable discoveries. It is this work and these discoveries that are calling attention to the South Pilgrim ground.

Therefore this statement of mine will have to do chiefly with the Pilgrim, and with the connection between the two, the bearing which the one has on the other.

Pilgrim mine is in Mohave County, Arizona, and is some ten miles west of Chloride, connected therewith by a good road which is at present some 15 miles in length, but is to be shortened when work now contemplated has been done. The mine lies on the eastern slope of the Black Mountains, along the western side of which the Colorado River flows. The elevation of the mine is about 3,500 feet above the sea. Chloride is the present terminus of the Arizona & Utah branch of the Santa Fe railway and is the town from which supplies for most of this mining region are secured. This branch railroad connects with the main line near Kingman, and is about 25 miles long. With the Boulder Dam under construction, the road probably will be extended north to that point.

The region is typical of what is commonly called the Arizona desert, and water is not plenty. Pilgrim has developed enough for present needs by a well close to the mine, and no doubt can get more by going further into the valley. In parts of the district there is a broad belt of rhyolite tuff that seems to carry inexhaustible supplies of water, but I do not know whether this tuff is to be found close to these properties. The site of Boulder Dam is but a few miles away, and when this dam is completed power will be ample for all purposes and at low cost. Now oil is used, freighted from Chloride. It is cheap.

With the Boulder Dam completed or even well begun, the general mining and industrial development of this region will gain tremendously.

At the present time overall mining and milling costs in the district should not exceed \$5 or \$6 a ton, on any reasonable operation in veins of average width and character. Later they can no doubt be reduced. In fact, it seems to me that \$5 should be enough to cover costs now. It is not a difficult and distant mining region, labor costs are standard, but little timber is used, supplies are not high and the milling of this ore is a simple affair, with high savings of the gold contained in it.

The whole area between the railroad and the Colorado River is a well known mining district, with numerous mines. Those of the Cerbat range and near Chloride are predominantly silver; those of the Black Mountains are gold, with little else. These latter include such properties as the Tom Reed, Gold Roads, United Eastern, Vivian, Pilgrim, Mocking Bird, Moss and others, distributed over an area of some twenty-five miles in length. Many millions of dollars have been taken from these mines. The region is by no means exhausted and should show a long and steady production from older mines and development of the new ones.

The Pilgrim mine was first developed many years ago, at a time when ores either were milled with high losses, or where packed on burro back to the Colorado River, thence transported on river steamer down to the Gulf and thence around the coast to San Francisco, for treatment. Either of these processes meant that any ore that could be treated must be rich. In those days some ore running up to \$100 a ton was shipped from the Pilgrim, but the greater part of what was mined ran not far from \$10. This could not be handled then. The mine's spectacular high grade discoveries are new and have been the cause of great interest within the past few weeks. I would not be surprised to see a boom develop thereabouts as the result of what has been found.

Pilgrim has an inclined shaft about 350 feet deep, with a quartz vein perhaps 20 feet wide dipping west about 35°. On the 235 - and 350 ft. levels stations were cut and drifting and crosscutting has been developing the ore body. High grade ore is found on both levels and there is no reason to doubt that it extends from surface at least to the bottom of the workings. As oxidation extends a long ways beyond the bottom of the mine, it is probable that there is a very considerable further depth of good ore.

The average gold values in the district seem to be from \$10 to, say, \$15 a ton, and it is too much to expect that the spectacular ores recently found can be more than sporadic. They need not be, for a \$10 ore ought to pay well and these very rich streaks and seams make splendid sweeteners.

From my brief examination of the mine and from what I know of the district, I am quite confident that the Pilgrim vein occurs as a contact between rhyolite and granite-porphry, with very deep oxidation, so that one can expect to go several hundred feet beyond the bottom of the present mine without encountering a change in the character of the ore. This is an important factor in milling development. This ore carries coarse gold, freely distributed through the vein material.

The Pilgrim vein extends southerly into South Pilgrim ground without a break; the latter carries the extension of the vein for nearly 3,000 feet with no surface indications of material faulting. The surface appearance of the vein is generally quite similar to what is along the Pilgrim, and assays made from samples taken at various points along this 3,000 feet are quite like, I am told, those that came from the surface of the Pilgrim, that is they run from a little over a dollar to several dollars a ton.

The value of South Pilgrim depends entirely on what may be the mineralization of Pilgrim vein south of the line separating the properties. While indications are that the agency which introduced gold north of the line performed the same kindly act across the line; the geology does not change, the mineralizing rocks are the same, all conditions apparently are alike, yet it is impossible to state with assurance that gold does exist on the South Pilgrim until it is found there. It ought to be there and in quantity.

In order to answer this important question it will be necessary to do some work. It is an investigation that must be made under ground. A shaft should be sunk and deep enough and with enough lateral development to prove the matter with some degree of authority. Diamond drilling has been suggested, but I do not believe in it for such work as this. All a drill hole could prove would be the presence of a vein and its width at the point where it was intersected. You know now that you have a vein and you can assume its width with some definiteness. If a drill core showed gold it would only prove that at that particular inch there was a value; if it did not you might be disappointed without reason, for it would be surprising if, even in a rich vein, gold were to show in a bit of rock like a drill core. As a machine for finding formation the diamond drill has its function, as a method of testing veins, it is almost worthless, generally.

I recommend that a site for a shaft be selected with great care and after a study of the ground throughout your property, at a spot adjacent to the footwall of the vein. That it be sunk, first, in South Pilgrim ground which it has in the immediate vicinity of the mine; and second, that the shaft be deep enough and have sufficient lateral workings to prove or disprove the presence of gold in the vein. If at first you find little or no gold in the vein, you ought not to be discouraged for there are almost 3,000 feet of vein somewhere on which gold should exist in paying quantity.

I regard the South Pilgrim as a very favorable prospect and one that is well worth spending a large amount of money upon, and I should like very much to be consulted from time to time in the course of your development.

(SIGNED)      Dwight E. Woodbridge



January 8, 1945

War Price and Rationing Board  
No. 81.8.1  
Kingman, Arizona

Gentlemen:

We have signed the application of  
the Producers Mines, Inc. and are enclosing  
the white copy herewith.

We have sent a copy to Mr. Holt.

Yours very truly,

Chas. H. Dunning  
Director

CHD:LP  
Enc.

*Producers*

September 10, 1942

MEMORANDUM

CUSTOM MILL PROJECT  
LEAD & ZINC  
CERBAT RANGE  
HALLETT THORNE

TO: W. C. Broadgate

FROM: J. S. Coupal

I had a visit with Hallett Thorne and I doubt very much if it would be of any advantage to have Thorne write a letter and place the blame for his dropping the project on the detail required on the Zinc Branch questionnaire.

His reason really for dropping the zinc project was the time and the large amount of work involved in getting all of the data necessary to make a proper presentation of the whole subject.

He became interested in a virgin scheelite property in California on which he is very enthusiastic and feels as though he can get quick action with a comparatively small amount of money.



September 3, 1942

✓  
Mr. Hallett Thorne,  
Box 10  
Chloride, Arizona.

Dear Hallett:

We were advised in a memorandum from Elgin Holt that you were giving up your idea of converting the Producers mill into a custom copper, lead, and zinc concentrator and I am wondering as to the reasons for it.

The impression that I got was that the main reason was the difficulty, complicated and costly procedure for government cooperation, inasmuch as the government authorities would request such complete reports on each property which might ship to a custom plant even though the individual property could contribute but little. That would be a perfectly legitimate reason for saying the battle is too tough to fight.

I would like to know if that is the reason or if there are other factors as we like to have such cases to present to Washington to show them they are standing in their own light, and that they are the ones who are holding things back by their own restrictions. Of course, we would not want them to come back at us and say that it was largely an excuse for dropping a project otherwise unfeasible so therefore it should be presented in a manner to show the feasibility of the project. I would appreciate hearing from you on the subject.

With kindest personal regards, I am

Yours very truly,

CHARLES F. WILLIS, Chairman  
Board of Governors

CFW:MH

# United States Senate

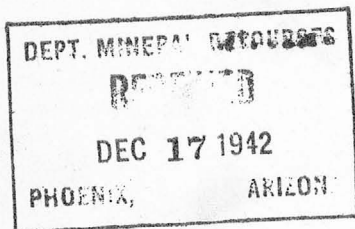
## MEMORANDUM

Dec. 15

Hallett Thorne called tonight  
and will see him tomorrow.

Apparently he has been in town several  
days and Conover recommended that he  
see me about some of his troubles...  
I don't yet know what they are.

Bill Broadgate



*Producers*

August 31, 1942

MEMORANDUM

CUSTOM MILL PROJECT  
HALLETT THORNE

TO: W. C. Broadgate

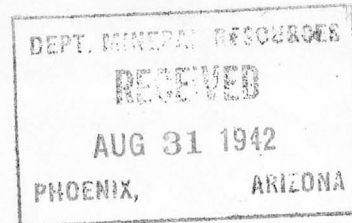
FROM: Earl F. Hastings

It appears to us that Thorne abandoned this project more by reason of a more attractive property in Shasta County, California, than the voluminous details requested by the Zinc Branch.

Sam Coupal is in Kingman at this time and will no doubt give you more exact information on this subject.

Washington, D.C.  
Aug. 28, 1942

SUBJECT: Custom Mill Project  
Lead & Zinc  
Cerbati Range  
Hallett Thorne



You remark that Thorne has abandoned the idea of setting up a project because the WPB data precedent to applying was too difficult and expensive to collect and arrange.

I presume this refers to the Zinc Branch questionnaire for setting up a project which I sent out at Sam's request. I certainly agree that it was very detailed, and in fact I had some words with Percy Butler of the Zinc Branch about it at the time.

Do you think it would be a good idea to get a letter from Thorne to the effect that he dropped the project because the Zinc Branch questionnaire required too much and too expensive preparation?

I could wave it in the faces of some of these particular gentlemen and, perhaps, get a reaction which might be beneficial to simplifying some of these questionnaires.

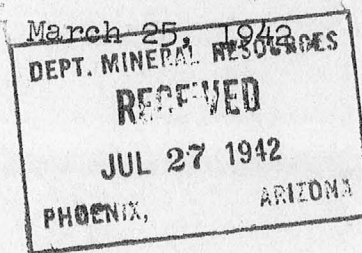
Of course, Thorne, in the letter, would have to outline the plausibility of the placing of the plant, otherwise the boys here would tell me that the questionnaire was just an excuse for dropping a project otherwise unfeasible.

*Bill*

Bill Broadgate



To: J. S. Coupal  
From: Elgin B. Holt



Hallett Thorne

Referring to my memorandum to you of July 16th, in which I stated that I visited Hallett Thorne on the morning of July 13th, as you instructed, but he was not ready yet to make any application for a loan due to other pressing matters, etc. At that time, we tentatively arranged to meet again at Producers on the morning of July 20th, to consider this matter again. Well, I went up there, but Mr. Thorne did not show up and Richardson said he was still very busy with other matters. So I left word that I had other work to do and for him to tell Thorne that I would be around Kingman until August 10th, and for Thorne to let me know several days ahead when and if he needed my services.

I then went ahead with other work connected with two or three people who have applied or who are getting ready to apply for mining loans and have been very busy all this week for these people and have made several trips to properties.

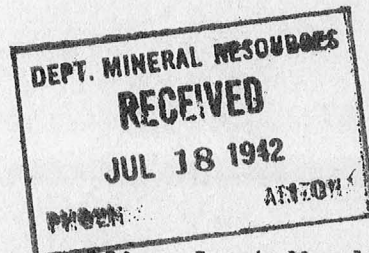
Last Thursday I again saw Mr. Thorne here in town and had another talk with him, but he has or had not made up his mind what to do. Seems wavering between the ideas of trying for the \$200,000 loan to WPB and making separate applications for smaller loans, including one \$5000 loan to unwater the Pay Roll mine. He stated he was not ready yet, but would advise me later should he decide to go ahead. So here the matter stands.

*on July 27th.*  
J. W. MILLER: As I wrote you, I am scheduled to visit J. W. Miller's property in Gold Basin. He is getting ready to apply for a \$20,000 loan. Has a lead gold mine of seeming promise. Will be busy with him for the time required to get his application finished, as I rather think I will have to do most of the work. So I have plenty of work ahead of me, as a number of people are bidding for our services.

Should Thorne later get ready to act, will do all I can for him; but his continued delays make it bad for other work coming along.

*Elgin B. Holt*  
Elgin B. Holt.

To: J. S. Coupal  
From: Elgin B. Holt



I called at the Producers office last Monday morning, July 13th, and put in several hours with Hallett Thorne, who arrived there around 11 A. M. He stated he was not ready to make his application, and explained matters as follows:

1. That he had tentatively arranged to sell his Diesel power plant, but it would take this week to close the deal; but after paying urgent debts and installing a small power plant at Producers for electric lights, etc., he would not have a great deal left to meet current payrolls.
2. That he had originally planned to take over the Magma mill and remodel it to selective flotation to treat ores from the Juno, Pay Roll, Hidden Treasure and other mines around Chloride. This he calls his GROUP NO. 1 PROJECT. Also that he had planned to move the Producers mill to Cerbat and take over a group of mines there, including the Jim Kane mine, the Chicago and St. Louis mines. But he had been figuring on the Alpha to produce enough ore to at least start one of his units; but after sampling this property it had fallen down as to tonnage. The Cerbat unit, by the way, he calls: GROUP NO. 2 PROJECT. So he had given up the idea for the time being of applying for the big \$200,000 loan to put over these two projects. This due to lack of tonnage offerings.
3. He stated he thought it best to get a \$5000 loan with which to unwater the Pay Roll mine, which is around 350 feet deep and has around 5 feet of good zinc-lead-silver ore in bottom levels, per an assay map he has by Calvocoresses. Also he plans to apply for another \$5000 to build a road to the Chicago mine which has considerable low grade milling ore in surface workings. BUT, he did not want to move until he had secured options on some of these mines. In short, I arranged to meet him the Morning of July 20th at Producers, at which time he will have decided what to do, and may start getting up the applications for the said small loans. Said he will let me know next Saturday by letter whether to come to Producers or not next Monday.

As I had a date to examine J. H. Knight's Best Bet mine next Monday, July 20th, I went out to that property yesterday, cut some samples and will help him with his application for an RFC loan. Tomorrow I go to Keystone to examine the Andy Brown Mn property and next Saturday will help A. B. Maddox here start his application for a loan on a tungsten mine in the Maynard District. Also, yesterday, while visiting the J. H. Knight mine, I looked over Pete Vukoye's gold-lead-vanadinite mine nearby; Vukoye having made the trip out there with me. I only gave the latter property the once over and may have to go back.

As to July 27th, as I wrote you, I have a date with J. W. Miller to examine his Midgett gold-lead mine in Gold Basin Dist., and help him draw the papers for an RFC loan. So you will see I am managing to keep busy at this end

Elgin B. Holt.

*Elgin B. Holt*



October 24, 1940

Hallett W. Thorne  
~~Producer's Mine~~  
Chloride, Arizona

Dear Mr. Thorne:

Many thanks for your Treatment Schedule on custom ores. The scale of payments seems very fair and reasonable, and I hope they result in attracting ore so as to keep your plant running to capacity.

I will be in your district the 6th, 7th, and 8th of November and look forward to seeing you at that time. We can then discuss your reaction to my suggestion on the wage-hour question.

Yours very truly,

J. S. Coupal  
Director

JSC:mm

Sorry I missed  
you - this is done  
to open up lower grade  
resources of Mahan County.  
H.W.

## PRODUCERS MINES, INC.

Custom Ore Department  
CHLORIDE, ARIZONA

### TREATMENT SCHEDULE

(Effective 10-1-40)

#### PAYMENTS

##### GOLD:

No payments for gold when under 0.03 ounces per ton.

When over 0.03 ounces per ton.....\$32.20 per oz.

Note: NO further deductions for extraction losses will be made except by special agreement with shipper on basis of laboratory test result.

##### SILVER:

No payments for silver when under 2.00 ounces per ton.

When over 2.00 ounces per ton.....71c per oz.

Deduction will be made for extraction losses in each case on the basis of laboratory test results. Miners silver affidavits must be furnished before settlement can be made.

#### TREATMENT CHARGES

Minimum charge of \$2.45 per ton, dry weight, on ores not exceeding \$6.00 per ton in value. To this charge add 5c for each 25c increase in value, to a maximum charge of \$10.00. (See printed schedule on reverse.) Where the ore exceeds \$15.00 per ton value, the minimum will be \$3.00.

From these charges deduct the full cost of trucking from mine to mill, provided that the rate shall not be less than the minimums above stated.

These rates apply on shipments of 50 tons.

##### SPECIAL QUANTITY CREDIT

For each 500 tons or multiple thereof, delivered during any month, a refund of 10c per ton will be made on the 10th of the following month.

#### GENERAL CONDITIONS

All new shippers, or shippers whose ore changes in character, or shippers who move from one mine to another MUST send a 25-pound sample, charges prepaid, for testing BEFORE shipping. Also they must submit either a copy of their lease or a statement from the owner of the property as authority to ship therefrom.

Shipper agrees that, after sampling, the shipment may be commingled with other ores or otherwise disposed of by this mill.

Shipper must agree to settle shipments in accordance with established practice at this mill at the time of shipment and, to insure prompt settlements, must compare assays promptly by assay certificate or authorized settlement on mill assays at time of shipment. If such comparison is not made within 10 days after receipt of shipment, settlements will be made on mill assays.

Trucking charges must either be guaranteed or prepaid by shipper.

We reserve the right to limit shipments of ore with unfavorable milling characteristics.

MINER  PRINT

For lots over 40 tons—Not over 50 tons.....add 10c  
For lots over 30 tons—Not over 40 tons.....add 20c  
For lots over 20 tons—Not over 30 tons.....add 30c  
For lots over 10 tons—Not over 20 tons.....add 40c  
For lots under 10 tons.....Add 50c per ton and \$10.00 sampling charge

# SCHEDULE OF MILL CHARGES ON 50-TON LOTS

From	Assay Value	To	Treatment Charge	From	Assay Value	To	Treatment Charge	From	Assay Value	To	Treatment Charge
\$ .966.....		\$ 6.00 .....	\$2.45	\$18.51.....		\$18.75 .....	\$5.00	\$31.26.....		\$31.50 .....	\$7.55
6.01.....		6.25 .....	2.50	18.76.....		19.00 .....	5.05	31.51.....		31.75 .....	7.60
6.26.....		6.50 .....	2.55	19.01.....		19.25 .....	5.10	31.76.....		32.00 .....	7.65
6.51.....		6.75 .....	2.60	19.26.....		19.50 .....	5.15	32.01.....		32.25 .....	7.70
6.76.....		7.00 .....	2.65	19.51.....		19.75 .....	5.20	32.26.....		32.50 .....	7.75
7.01.....		7.25 .....	2.70	19.76.....		20.00 .....	5.25	32.51.....		32.75 .....	7.80
7.26.....		7.50 .....	2.75	20.01.....		20.25 .....	5.30	32.76.....		33.00 .....	7.85
7.51.....		7.75 .....	2.80	20.26.....		20.50 .....	5.35	33.01.....		33.25 .....	7.90
7.76.....		8.00 .....	2.85	20.51.....		20.75 .....	5.40	33.26.....		33.50 .....	7.95
8.01.....		8.25 .....	2.90	20.76.....		21.00 .....	5.45	33.51.....		33.75 .....	8.00
8.26.....		8.50 .....	2.95	21.01.....		21.25 .....	5.50	33.76.....		34.00 .....	8.05
8.51.....		8.75 .....	3.00	21.26.....		21.50 .....	5.55	34.01.....		34.25 .....	8.10
8.76.....		9.00 .....	3.05	21.51.....		21.75 .....	5.60	34.26.....		34.50 .....	8.15
9.01.....		9.25 .....	3.10	21.76.....		22.00 .....	5.65	34.51.....		34.75 .....	8.20
9.26.....		9.50 .....	3.15	22.01.....		22.25 .....	5.70	34.76.....		35.00 .....	8.25
9.51.....		9.75 .....	3.20	22.26.....		22.50 .....	5.75	35.01.....		35.25 .....	8.30
9.76.....		10.00 .....	3.25	22.51.....		22.75 .....	5.80	35.26.....		35.50 .....	8.35
10.01.....		10.25 .....	3.30	22.76.....		23.00 .....	5.85	35.51.....		35.75 .....	8.40
10.26.....		10.50 .....	3.35	23.01.....		23.25 .....	5.90	35.76.....		36.00 .....	8.45
10.51.....		10.75 .....	3.40	23.26.....		23.50 .....	5.95	36.01.....		36.25 .....	8.50
10.76.....		11.00 .....	3.45	23.51.....		23.75 .....	6.00	36.26.....		36.50 .....	8.55
11.01.....		11.25 .....	3.50	23.76.....		24.00 .....	6.05	36.51.....		36.75 .....	8.60
11.26.....		11.50 .....	3.55	24.01.....		24.25 .....	6.10	36.76.....		37.00 .....	8.65
11.51.....		11.75 .....	3.60	24.26.....		24.50 .....	6.15	37.01.....		37.25 .....	8.70
11.76.....		12.00 .....	3.65	24.51.....		24.75 .....	6.20	37.26.....		37.50 .....	8.75
12.01.....		12.25 .....	3.70	24.76.....		25.00 .....	6.25	37.51.....		37.75 .....	8.80
12.26.....		12.50 .....	3.75	25.01.....		25.25 .....	6.30	37.76.....		38.00 .....	8.85
12.51.....		12.75 .....	3.80	25.26.....		25.50 .....	6.35	38.01.....		38.25 .....	8.90
12.76.....		13.00 .....	3.85	25.51.....		25.75 .....	6.40	38.26.....		38.50 .....	8.95
13.01.....		13.25 .....	3.90	25.76.....		26.00 .....	6.45	38.51.....		38.75 .....	9.00
13.26.....		13.50 .....	3.95	26.01.....		26.25 .....	6.50	38.76.....		39.00 .....	9.05
13.51.....		13.75 .....	4.00	26.26.....		26.50 .....	6.55	39.01.....		39.25 .....	9.10
13.76.....		14.00 .....	4.05	26.51.....		26.75 .....	6.60	39.26.....		39.50 .....	9.15
14.01.....		14.25 .....	4.10	26.76.....		27.00 .....	6.65	39.51.....		39.75 .....	9.20
14.26.....		14.50 .....	4.15	27.01.....		27.25 .....	6.70	39.76.....		40.00 .....	9.25
14.51.....		14.75 .....	4.20	27.26.....		27.50 .....	6.75	40.01.....		40.25 .....	9.30
14.76.....		15.00 .....	4.25	27.51.....		27.75 .....	6.80	40.26.....		40.50 .....	9.35
15.01.....		15.25 .....	4.30	27.76.....		28.00 .....	6.85	40.51.....		40.75 .....	9.40
15.26.....		15.50 .....	4.35	28.01.....		28.25 .....	6.90	40.76.....		41.00 .....	9.45
15.51.....		15.75 .....	4.40	28.26.....		28.50 .....	6.95	41.01.....		41.25 .....	9.50
15.76.....		16.00 .....	4.45	28.51.....		28.75 .....	7.00	41.26.....		41.50 .....	9.55
16.01.....		16.25 .....	4.50	28.76.....		29.00 .....	7.05	41.51.....		41.75 .....	9.60
16.26.....		16.50 .....	4.55	29.01.....		29.25 .....	7.10	41.76.....		42.00 .....	9.65
16.51.....		16.75 .....	4.60	29.26.....		29.50 .....	7.15	42.01.....		42.25 .....	9.70
16.76.....		17.00 .....	4.65	29.51.....		29.75 .....	7.20	42.26.....		42.50 .....	9.75
17.01.....		17.25 .....	4.70	29.76.....		30.00 .....	7.25	42.51.....		42.75 .....	9.80
17.26.....		17.50 .....	4.75	30.01.....		30.25 .....	7.30	42.76.....		43.00 .....	9.85
17.51.....		17.75 .....	4.80	30.26.....		30.50 .....	7.35	43.01.....		43.25 .....	9.90
17.76.....		18.00 .....	4.85	30.51.....		30.75 .....	7.40	43.26.....		43.50 .....	9.95
18.01.....		18.25 .....	4.90	30.76.....		31.00 .....	7.45	43.51.....		43.75 .....	10.00
18.26.....		18.50 .....	4.95	31.01.....		31.25 .....	7.50	Over.....		43.75 .....	10.00



MIN. JOURNAL 6/30/42

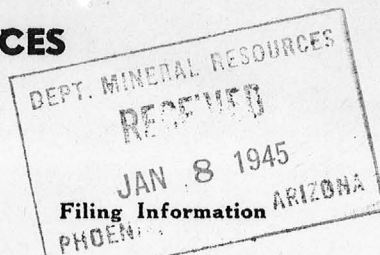
METALS: Pb, Zn

OPERATOR AND ADDRESS		MINE STATUS	
Date:		Date:	
10/46	F.R. Vihel, Box 37, Litchfield	10/46	Prep. to revamp mill

White - M. & Ova Kngman 1/8

# DEPARTMENT OF MINERAL RESOURCES

## REPORT TO OPA ON ACTIVE MINING PROJECT



Date January 5, 1945

Name of Mine Producers Mines Inc.

Owner or Operator H. W. Thorne

Address 114 Los Altos Drive

Mine Location 10 miles west of Chloride

File System

File No.

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

### PRESENT OPERATIONS: (check X)

Production.....; Development.....; Financing.....; Sale of mine.....;

Experimental (sampling).....; Owner's occasional trip.....;

Other (specify) Moving Equipment from California back to mine at Chloride.

### PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months

None

Approx. present rate per 3 months

None

Anticipated rate next 3 months

None

If in distant future check (X) here

X

### EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars			
Light or Service Trucks	<u>1</u>	<u>1,670 mi.</u>	<u>167</u>
Ore Hauling Trucks			
Compressors			
Other Mine or Mill Eqpt.			

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

Gold

### REMARKS:

Equipment at Chloride mine to mine at Ivanpah, California and mine at Lemnawe, California and equipment must now be moved back to mine at Chloride, Ariz.

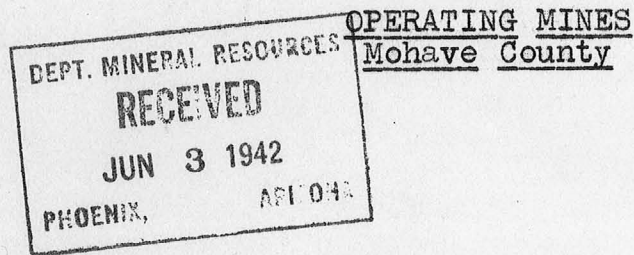
ARIZONA DEPARTMENT OF MINERAL RESOURCES

By

Winifred Hanna  
CHD.

May 29, 1942

To: J. S. Coupal  
From: Elgin B. Holt



PRODUCERS MINES, INC.: Located nine miles west of Chloride, Mohave County, Arizona. H. W. Thorne, Pres. & General Manager, Chloride, Arizona. Don Neely, mill superintendent; M. Z. Ivy, Chief Clerk.

This company has been operating a 230-ton cyanidation plant for several years.

On my arrival at Producers mine & mill office, Mr. M. C. Richardson informed me that the said mill was closed for the duration on May 20, 1942, and that Mr. Thorne was in California planning to finance transforming the mill into a 300-ton selective flotation plant to treat zinc-lead sulphide ores from mines located mainly in the Cerbat Range; that he, Richardson, personally had been examining mines in that area for the company since January, 1942; and that they had several properties lined up, etc.

Richardson stated that full details could not be learned until Mr. Thorne returned. I asked him to request Mr. Thorne to write Mr. Willis fully about his plans, when and if they materialize, and Richardson said he would do so.

Richardson said, however, that no production data would be available until Mr. Thorne returned.



# Pilgrim Gold Mine Reports Bonanza Find in Arizona

## Fabulously Rich Ore in Stringers

CHLORIDE (Ariz.,) Nov. 29. (Exclusive)—Stringers of ore worth \$25,000 to \$30,000 a ton are being taken by the Pioneer Gold Mining Company from an eight-foot vein in the Pilgrim mine that averages five ounces gold to the ton clear across its face.

The strike is certainly one of the most spectacular ever made in Mohave county and may well be one of the most important. It has attracted an influx of prospectors to the vicinity of the Pioneer, which is located nine miles northwest of Chloride.

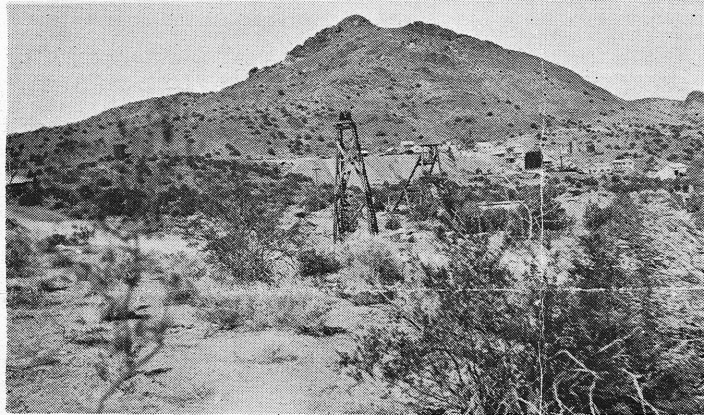
According to Manager E. F. Hastings, the find was made about the middle of October and extraction therefrom began November 1. Now the 100-ton mill is recovering almost as much gold in a week as it formerly recovered in a month.

### ORE SWEETENED

Ore from the dump that runs \$4 a ton and newly mined material that runs \$10 to \$12 is being sweetened with the highgrade to bring the average value up to \$35 or \$40.

Existence of the vein from the surface to the 300-foot level has been proven at several points, and it has also been crosscut as deep as 575 feet.

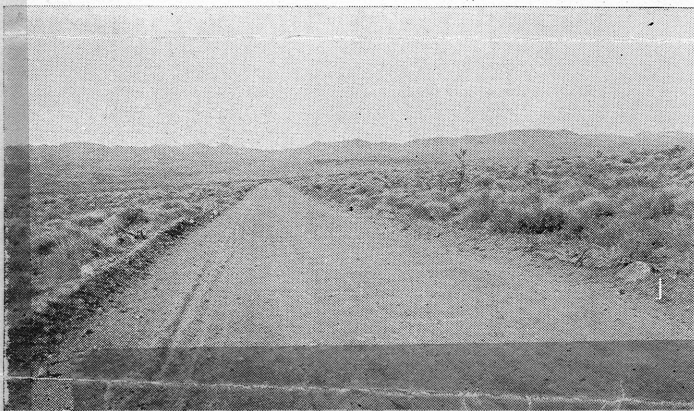
B. A. Laselle of Los Angeles is owner of the Pilgrim, which is operated in the name of the Pioneer company. Fifty-two men are on the payroll.



PILGRIM MINE PROPERTY SHOWING MILL, DUMP, SHAFT, ETC. SOUTH PILGRIM PROPERTY TO LEFT OF PHOTO.



NEARER VIEW OF PILGRIM, SHOWING SHAFT, DUMP, BLACKSMITH SHOP, OFFICE, MACHINE HOUSE, ETC. PILGRIM MILL IS ON THE SIDE OF HILL AND CANNOT BE SEEN BY REASON OF THE DUMP.



ROAD TO PILGRIM AND SOUTH PILGRIM PROPERTIES, TAKEN FROM THE KINGMAN BOULDER DAM HIGHWAY. THIS IS A HIGH GEAR ROAD TO THE PROPERTY. PILGRIM MINE IS LOCATED NEAR THE CENTER OF THE PHOTO AND ITS BUILDINGS CAN JUST BE MADE OUT. SOUTH PILGRIM PROPERTY IS JUST TO LEFT OF PILGRIM.



PILGRIM. SHOWING SHAFT, MILL BUILDING, AND POWER PLANT BUILDING.



# Pilgrim Mine Hits 8 Foot Vein of High Grade Ore

## Specimens Run as High as \$30,000 Per Ton; Entire Eight-foot Vein Averages Five Ounces in Gold

Nestled in the foothills of the river range of mountains about nine miles north and west of Chloride, the Pioneer-Gold Mining Co., operators of the Pilgrim mine, have struck one of the richest veins of ore ever to be uncovered in Mohave county.

After considerable search, the vein was struck on October 15 of this year and for one month has been showing increased values. Tuesday of this week E. F. Hastings, general manager of the mine, told a Miner representative that during the first eight days of November the "output of the mill is greater than in any previous complete month."

This showing alone indicates the ore to be at least four times richer in gold content than the ore previously milled, and in places high grade running into \$25,000 and \$30,000 rock is being brought to the surface. The ore is actually covered with gold when broken apart and the solid rock carries practically the same assay as the specimen pieces, Mr.

Hastings reports.

The company is now working on an eight-foot vein of ore which runs across its entire face an average of five ounces to the ton. This ore is found in a series of stringers, and has been uncovered from the 300-foot level to the surface and hit or crosscut at several points to a depth of 575 feet. Though not of the fabulous richness of the present ore, this entire body runs exceptionally high, and the mine is cleaning its dump, which runs about \$4 a ton, into the rich ore to dilute it. Also some \$10 and \$12 ore is being put into the high grade to bring its value down to an average of about \$35 to \$40.

So rich is the ore being recovered at present that the bottom of the stope is being swept up by broom-wielding miners after each clean-up.

The mill, which is of 100-ton daily capacity, put out 2900 tons during October with only a ten hour shut down during the entire

month. Fifty-two men are working in the mine and mill and the mill is also taking ore from the Klondike mine which is working 14 men.

According to Mr. Hastings, federal mining engineers have informed him that the Pioneer mine will be one of the highest in production in Arizona during 1936. This figure does not include the Tom Reed mine of Oatman which handles a large amount of custom ore, but is for mills which handle ore belonging only to its own properties.

The mine is owned by B. A. Laselle, president of the company, of Los Angeles. Tom Slaughter, mill superintendent, and M. C. Richardson, mine superintendent, assist Mr. Hastings in the local operations of the company.

Mr. Richardson, after eight years of experience on this particular property, refuses to be unduly excited. He has long advocated his belief that high grade ore would be found in the Pilgrim mine. He is spending both his days and nights keeping his eye on this new strike.

Great credit is due him, according to mine authorities, for his development plan which exposed this unusual quantity of high grade ore, his engineering ingenuity being responsible for the strike.

### Diagram Showing Relation of South Pilgrim Property to Pilgrim Mine Property

Please Note Location of Expected Ore Body.

DIAGRAM OF SOUTH PILGRIM PROPERTY AND PILGRIM MINE PROPERTY

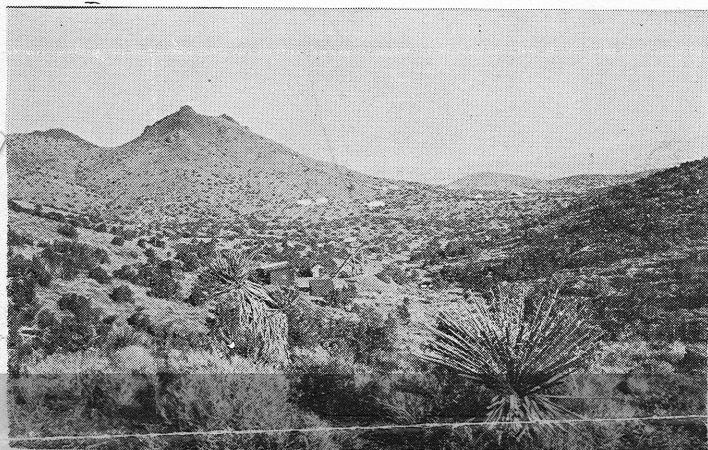
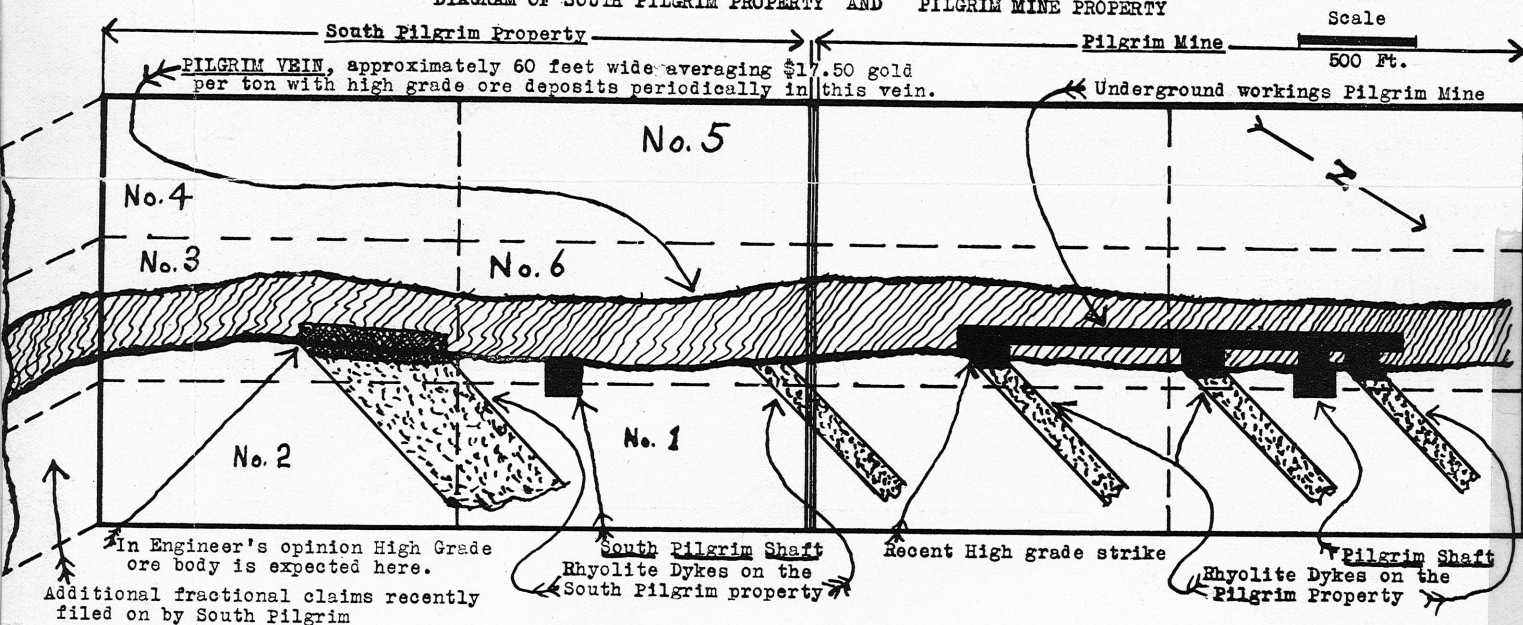
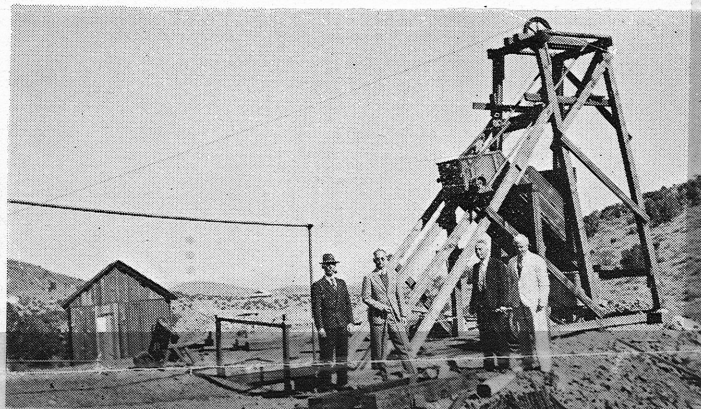


PHOTO TAKEN FROM A POINT ON THE SOUTH PILGRIM PROPERTY LOOKING NORTH ALONG THE PILGRIM VEIN. THIS SHOWS THE SOUTH PILGRIM SHAFT IN THE FOREGROUND, AND IN THE DISTANCE, THE PILGRIM LIVING QUARTERS, THE WHITE BUILDINGS, ETC. FURTHER IN THE DISTANCE THE PILGRIM SHAFT, MILL, ETC. THE SOUTH PILGRIM PROPERTY EXTENDS IN LENGTH FROM A POINT ABOUT 1000 FEET BACK OF WHERE THIS PHOTO WAS TAKEN UP TO A SHORT DISTANCE THIS SIDE OF THE WHITE BUILDING.



A CLOSE UP VIEW OF THE SOUTH PILGRIM SHAFT AND DUMP.

(See Other Side)

AUG 14 1942  
PHOENIX, ARIZONA  
MEMO Charles T. Willis

August 14, 1942

From: J. S. Coupal

Please note card from Holt stating that Hallett Thorne has about dropped his plans for a custom mill at or near Pima.

Producers' Mines, Inc., H. W. Thorne, president and general manager, Chloride, Arizona, is operating its mill at capacity on custom ore and it is understood that the company plans to continue as a custom plant as long as ore shipments are received or as long as the machinery can be kept in efficient operation. MINING JOURNAL-32-42

U. S. DEPARTMENT OF THE INTERIOR  
BUREAU OF MINERAL RESOURCES  
**RECEIVED**  
AUG 8 1942  
PHOENIX, ARIZONA

THIS SIDE OF CARD IS FOR ADDRESS



Mr. J. S. Campbell, Director,  
Dept. of Mineral Resources,  
413 Home Builders B.,  
Phoenix, Az.

To: Counsel  
From: Holt

Kingman, 8/8/42.

Re - Hallett Thorne, saw him again  
several days ago and he said he had  
practically given up the idea of  
operating in the Cerbat Mountains  
due to labor conditions that will be  
encountered when Bull's Head dam  
and the air port both get started. Said  
he is planning to take over a property  
in Nevada instead. So that just  
about washes up any idea he had re-  
remodeling his mill. E.B. Holt.



(Do not write  
in this space)

(Wrap each specimen separately, or place it in a substantial  
bag, by itself, with a number attached, identical with the  
number on this card.)

Ore \_\_\_\_\_

Cabinet \_\_\_\_\_

No. \_\_\_\_\_

Specimen No. 22, collected by Robert E. Morrow  
Field Engineer

Name of ore Gold

Operator \_\_\_\_\_

Minerals contained \_\_\_\_\_

Mine active or inactive Active

Gangue \_\_\_\_\_

If inactive, when operated \_\_\_\_\_

Depth at which taken 600 ft. Level

Specimen presented by Company

Approximate mineral content (in terms of  
average per ton) Gold #20 per Ton  
Average.

Date Aug 22, 1940

Notes (Any general information regarding  
the history of the property.)

Name of mine or claim Producers

This Mine is employing at  
present, 125 Men, and is  
operating on 700 ft. Level  
in Ore of good value.

Group AKA. PILGRIM

District River Range

Location (distance and direction by high-  
way from what town 10 mi. W. Chloride

Owner of property Producers Mi. Corp.

If more space is desired for notes, use  
other side.