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08/01/88

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: ED'S PLACE

ALTERNATE NAMES:  
ED'S CAMP

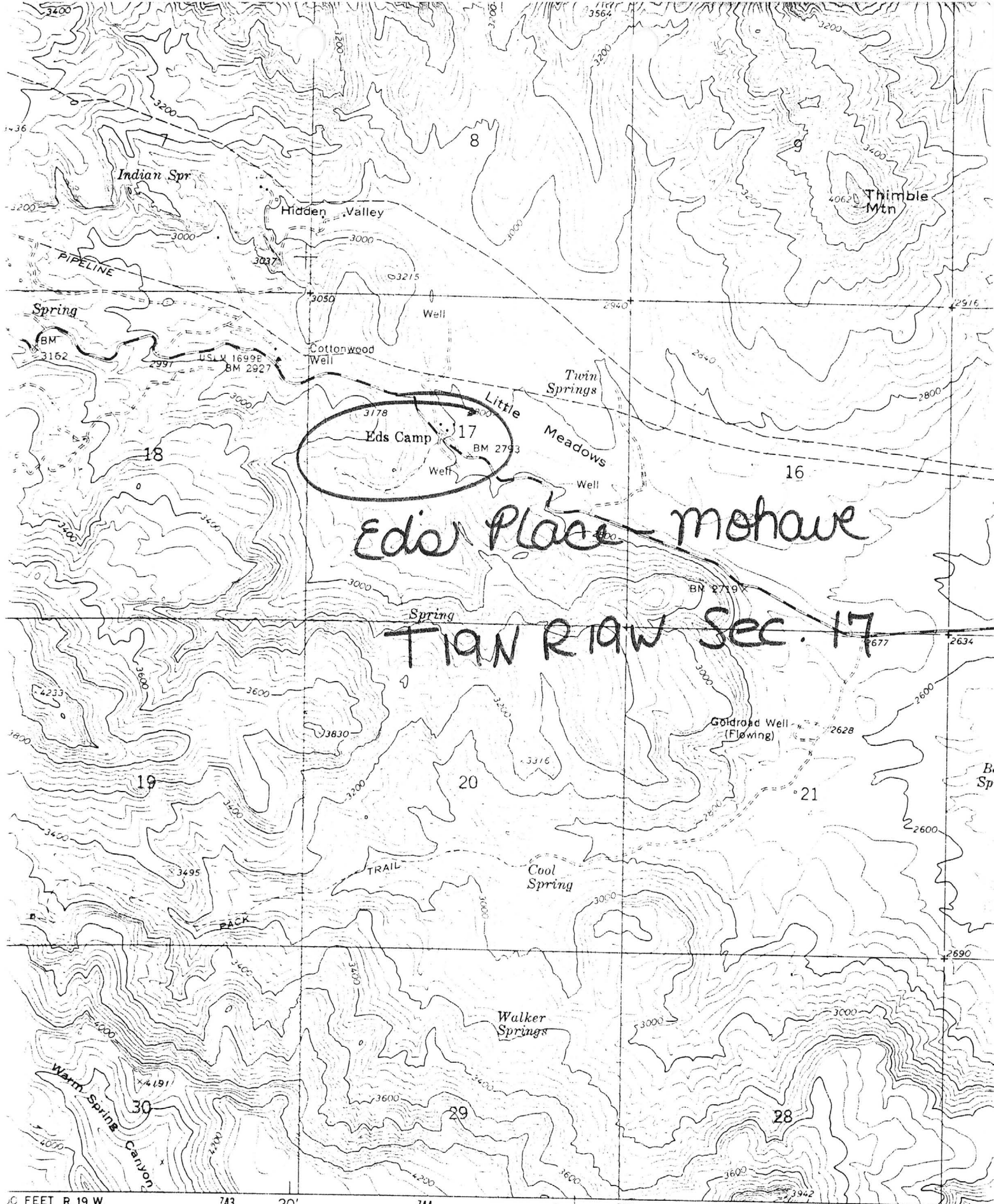
MOHAVE COUNTY MILS NUMBER: 726

LOCATION: TOWNSHIP 19 N RANGE 19 W SECTION 17 QUARTER --  
LATITUDE: N 35DEG 07MIN SEC LONGITUDE: W 114DEG 15MIN SEC  
TOPO MAP NAME: MT. NUTT 7.5 MIN

CURRENT STATUS:

COMMODITY:  
GOLD

BIBLIOGRAPHY:  
ADMMR ED'S PLACE FILE  
*ADMMR ARIZONA GEM FILE*

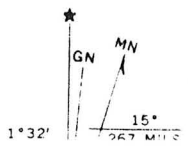
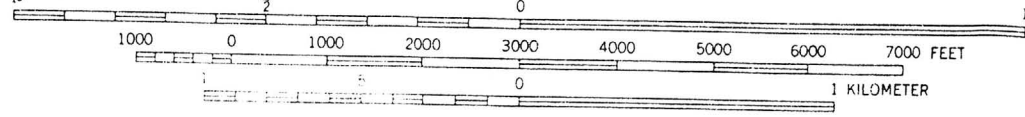


*Eds Place - mohave*

*TIAN RAW SEC. 17*

*Mt. Nutt 7'*

SCALE 1:24 000



10 FEET R. 19 W.

743 20' 744 745 746

CONTOUR INTERVAL 10 FEET

# *Details of a practical cyanide testing mill operating on gold ores*

L.L. "Ed" Edgerton is testing gold ores at his test plant in Mohave County alongside old U.S. Highway 66 at Ed's Place between Kingman and Oatman, Ariz.

Edgerton, a long-time miner and mill operator in the Oatman District, designed, erected and operates the test mill himself. He has more than 50 years' mining experience in this area, and is a very young and active 80-plus years of age.

Edgerton's efforts were to design a mill or cyaniding plant that any small operator, with minimum investment, could erect and operate.

One of the many ways that he economizes is the use of hard cherty pebbles instead of cast steel balls in the ball mill. The pebbles are recovered from nearby stream beds. In addition to saving on cost of the steel balls, cyanide efficiency is increased by elimination of iron particles in the solution.

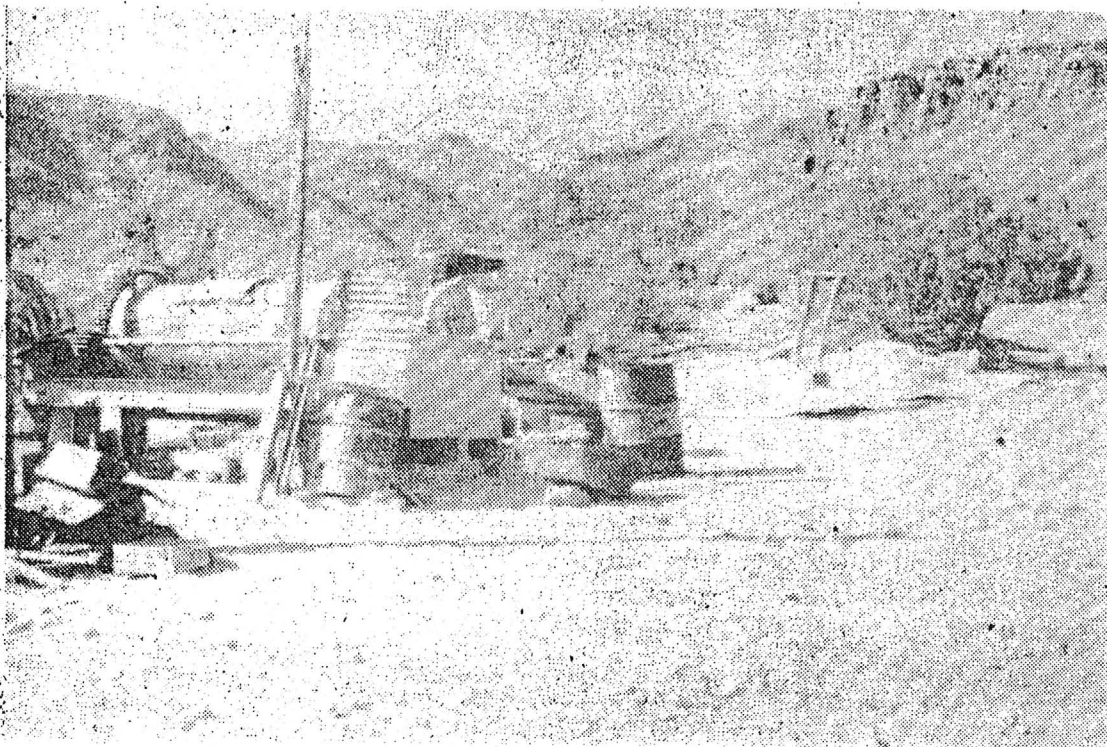
Heavy pieces of metallics are collected in a settling tank prior to leaching of the ore. The fine gold is dissolved or taken into the solution,

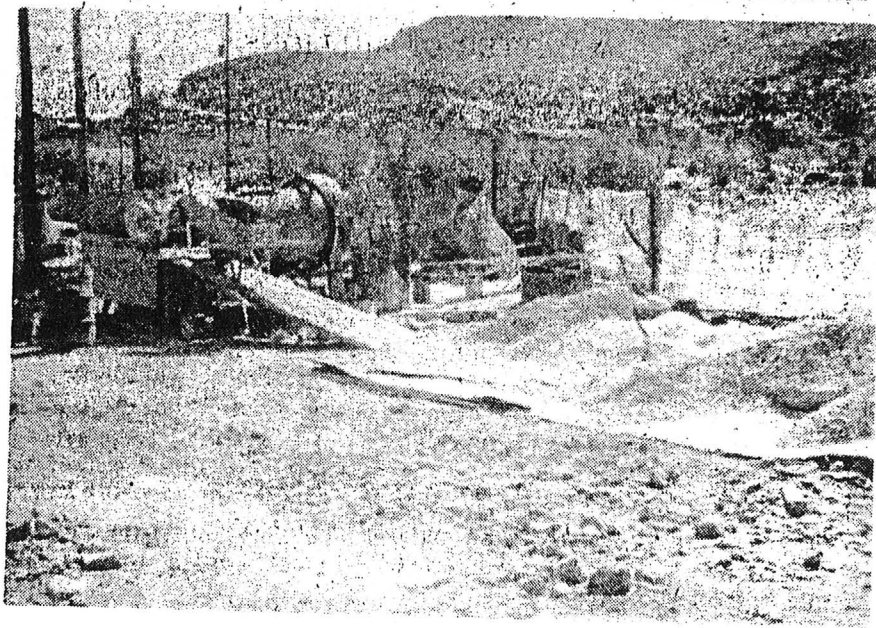
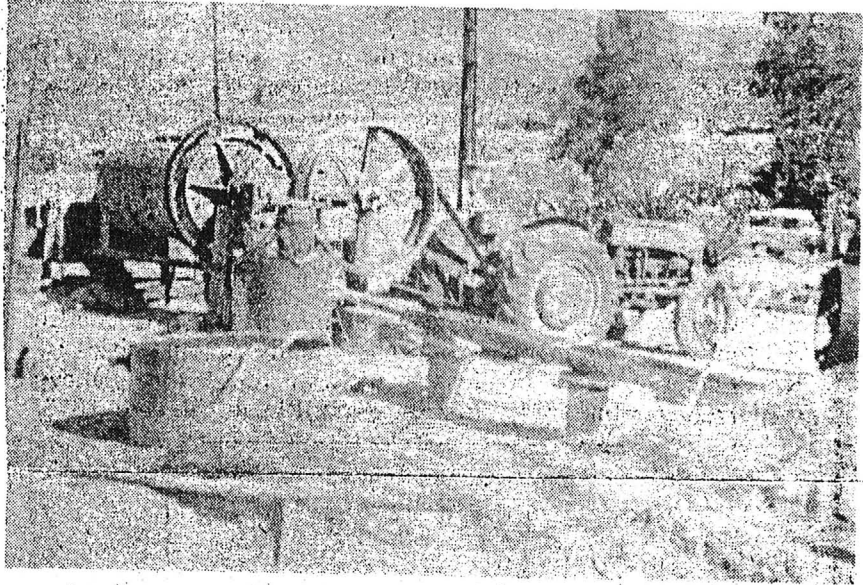
then precipitated from the solution in activated charcoal filter. This concentrate can be returned to ball mill.

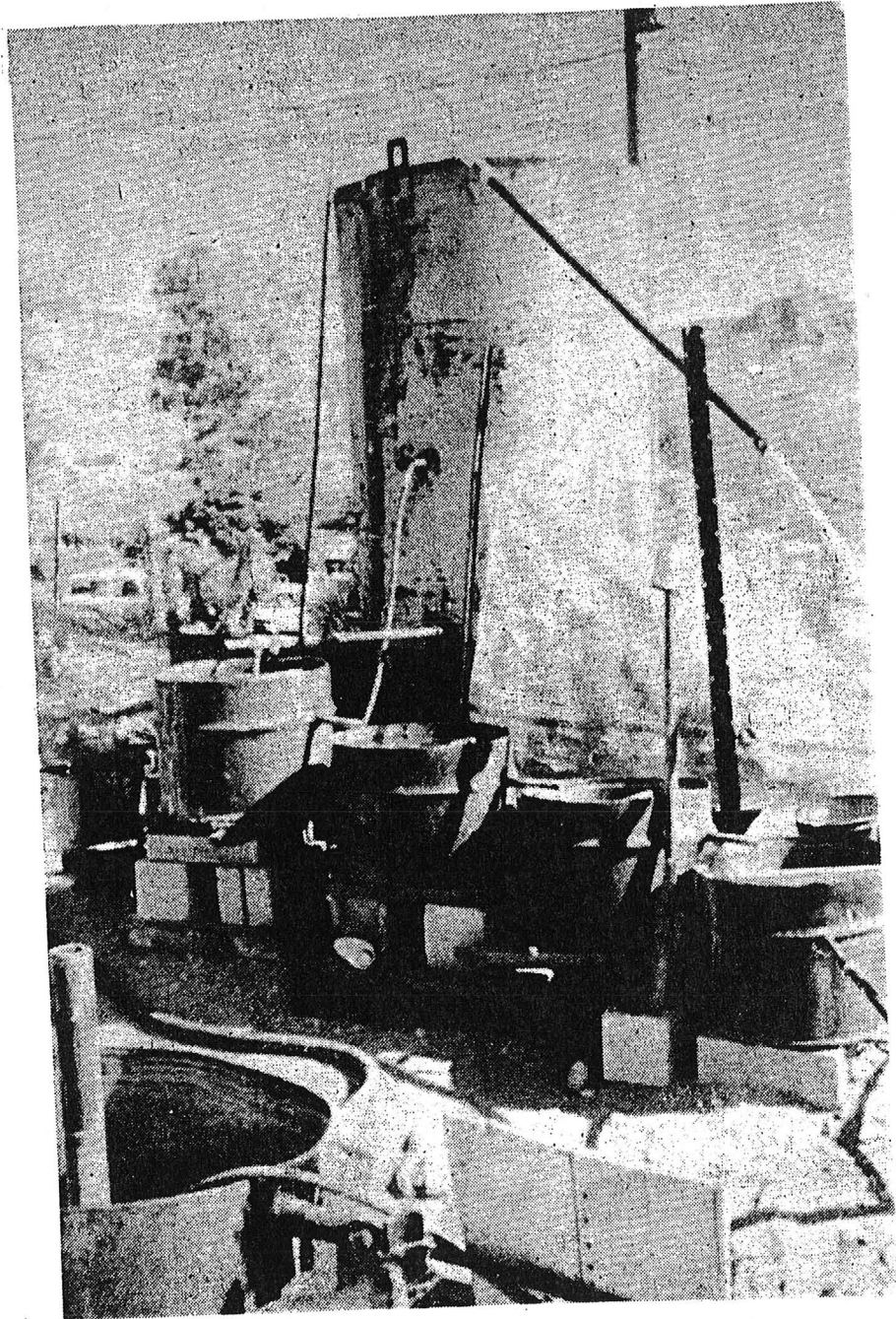
It is extremely important during this process to maintain proper pH content and that proper amounts of cyanide are used. Edgerton displays his "small miner" ingenuity and economics by using a common low-cost swimming pool test kit for pH control and the "finger" test for cyanide control. The finger test is to add cyanide into the solution, giving a greasy feel on the fingers.

The small experimental cyanide plant may very well serve as a recovery unit for metals from small high-grade gold-silver ore veins. However, it must be remembered there are a number of ores that are not economically or mineralogically susceptible to the cyanidation process.

Note: If additional information is needed, call Vernon Dale, Arizona Department of Mineral Resources, Tucson, Arizona, (602) 882-5399.







CRUDE ORE

Dodge type crusher (12") (10 hp.)

1/2" to stockpile

± 3/4 ton river-run hard cherty pebbles ±3" to 6"

Ball mill (Allison 3'x6') (10 hp.)

± 1/2 ton batch grind

± 38 revolutions per minute

Gravity flow to agitator  
± 36" dia. X ± 43"

Gravity flow to settling tank  
43" x 36"

Heavy metallies collect in bottom & are recovered periodically by dumping tank.

Sludge pumped to tailing pond

Gravity flow to settling tank  
48" dia. X 36"

Tails

Pregnant solution gravity flow to receiver tank (gas drum with float switch)

Pregnant and barren solution pumped to solution storage tank

Gravity flow

Line KCN or Water  
NaCN  
SOLUTION STORAGE TANK (43'x72")

Gas drum filter 1 (see sketch)

Gas drum filter 2

Gas drum filter 3

Activated charcoal precipitator (see sketch)

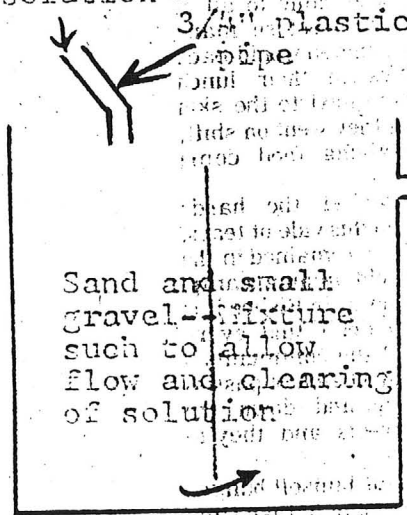
Precipitates

Solution (estimated 90% recovery on first pass)

NOTES:

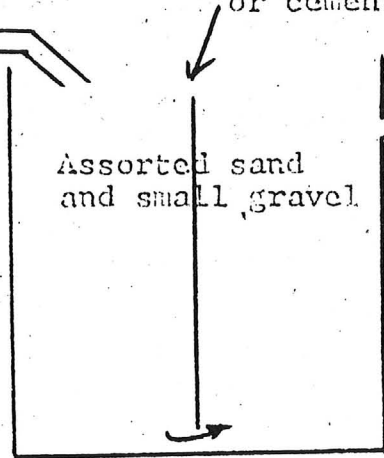
- 1--All filters and tanks coated inside with asphaltum.
- 2--No brass, lead, zinc, copper or galvanized pipe in circuits.
- 3--Five pounds charcoal precipitates at least five oz. gold and silver.
- 4--Add 2 pounds cyanide (NaCN or KCN) per ton of water for effective use of one pound.
- 5--Maintain pH of 8 to 10--NEVER LESS THAN 6 pH!
- 6--Add cyanide to barren solution of pH=3 until fingers dipped in solution feel soapy.
- 7--A simple chlorine tester for a swimming pool may be used for pH control.

Turbid pregnant solution

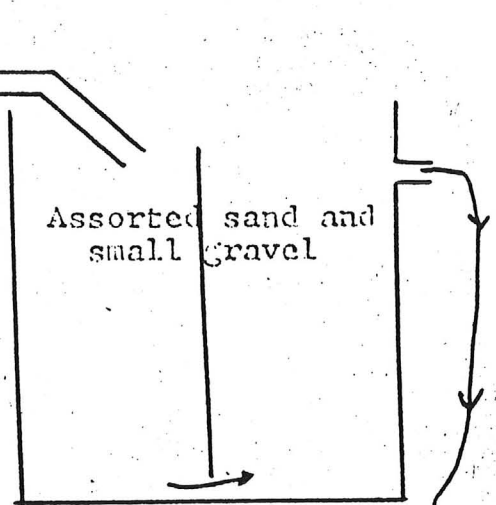


FILTER MADE FROM GAS DRUMS CUT IN HALF

Full divider, welded, brazed or cemented in center



(Sketch not to scale)

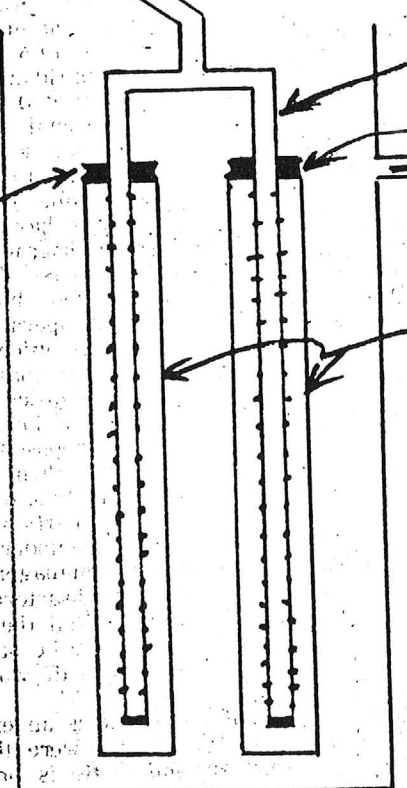


Clear pregnant solution

3/4" plastic tube

Clear filtered solution to activated charcoal

Muslin bag tied with iron wire in groove



1" PVC or black iron pipe with 1/16" dia. perforations

5 1/2" dia. wooden disc 1" thick

Barren solution to receiving tank

Muslin bags 5 1/2" dia. by 3 feet long filled with activated charcoal

(Activated charcoal is vegetable carbon. Has high absorptive capacity. Material is burned to release gold and silver values in metallic form)

CHARCOAL PRECIPITATOR--50 Gal. gas drum with top cut out. Sketch not to scale. All drums coated with asphaltum inside.



October 1976

# "Ed" Edgerton . . .

## HE'S MINING'S LIVING LEGEND

While most men, successful in one line of endeavor or another, are quite content to sit back, take it easy and rest on their so-called "laurels" as they reach the time in life where this becomes possible, a few rare individuals who exhibit the intelligence, drive and ambition to achieve success in several fields, are never satisfied and insist on learning—and doing more right on up to the moment they're ready to leave this vale of tears for eternal rest.

One such man is Ed Edgerton—L. L. Edgerton if you want to be formal.

He hangs his hat at "Ed's Place" about midway between Kingman and Oatman in Arizona's Mohave County.

What makes Ed unusual?

That question can be answered with one word—Everything.

Edgerton first saw the light of day in the state of Michigan. Instead of being born with a silver spoon in his mouth, he came kicking and screaming into this world with a miner's pick and a crop of blisters on his hands.

At least, so it seems.

Born into a mining family—his father operated mines and quarries producing such choice items as sandstone, copper, coal, bog and vein iron, marl, and peat. In the 80's the elder Edgerton was active in California and Colorado—Cripple Creek, the San Juans, Creede and Platora, to name a few famous Districts. He once owned the shotgun that was used to blast Jesse James' assassin, Bob Ford, into eternity in Ford's Creede saloon, the Exchange.

But Ed didn't need a mining family background to make a name for himself in the profession. After all, a man who has the distinction of being recognized as the discoverer of eight new minerals—including "Edgetonite" which was named in his honor, has the ability to do a whole lot on his own.

Edgerton became proficient in the mining arts as a youth. He has worked in a lot of places and a number of jobs and in the course of long and interesting life has watched underground mining change from what was largely work employing hand laborers at backbreaking chores, to its present-day mechanized status. Among other things he served as a timberman and a miner in coal and iron mines, then turned to shaft work and followed the "big money" through Canada sinking shafts and doing railroad tunnel work. This led to working as a "sand hog" in New York City subway construction.

After a period spent in the San Francisco Bay area, 1915 saw Ed arrive in the booming Oatman, Ariz. District. He worked there and in nearby Gold Road prior to going into the Army in 1917. After World War I was over he returned to the Arizona that he's learned to love, to work and live.

True, Edgerton didn't spend all of the next 60 years in Mohave County, for he worked off and on as a consulting engineer for several of the major mining firms in Mexico, California and Colorado, with his knowledge of gold, gold mines and gold mining making him in considerable demand.

The rare earths and beryl became his specialty. Ed has produced some very special specimens of beryl crystals up to 15 feet in length and weighing as much as one ton. One monzonite crystal, the largest ever found, was nearly four feet long, two feet wide and weighed 800 pounds. He's also mined emeralds and aquamarines and shipped extremely high grade uranium ores as well as silica, feldspar, mica and bismuth.

Western Prospector & Miner  
news paper.

The lifetime miner currently operates mines and propsects in the Silver Creek, Mohave Mountain, Union Pass, Secret Pass, Minnesota, Cerbat, Aquaris and Cedar Mining Districts. While not shipping ores at the moment, he keeps up his assessment work and continues to propsect. He has constructed a pilot cyanide plant at his property just across the highway from his home and experiments with this process of recovering gold values from some of his ores.

Edgerton is proud of his accomplishments in the mining industry, but he exhibits greater pride in his current avocation—that of teaching ~~others everything they want to learn about geology, metallurgy and mining,~~ in courses he instructs at junior colleges in Kingman and Lake Havasu City. He's particularly pleased with the students he works with in the geology of the Hualapai Mountain Range. To Edgerton, the imparting of his knowledge to others is a very real responsibility. The way he expresses himself is, "I feel that I was given the opportunity to learn these things and that I am expected to amplify this knowledge then pass it on to others."

On the subject of mining as a means of livelihood, Edgerton observes, "There's no money in mining unless you know what you're doing and have a great measure of good luck."

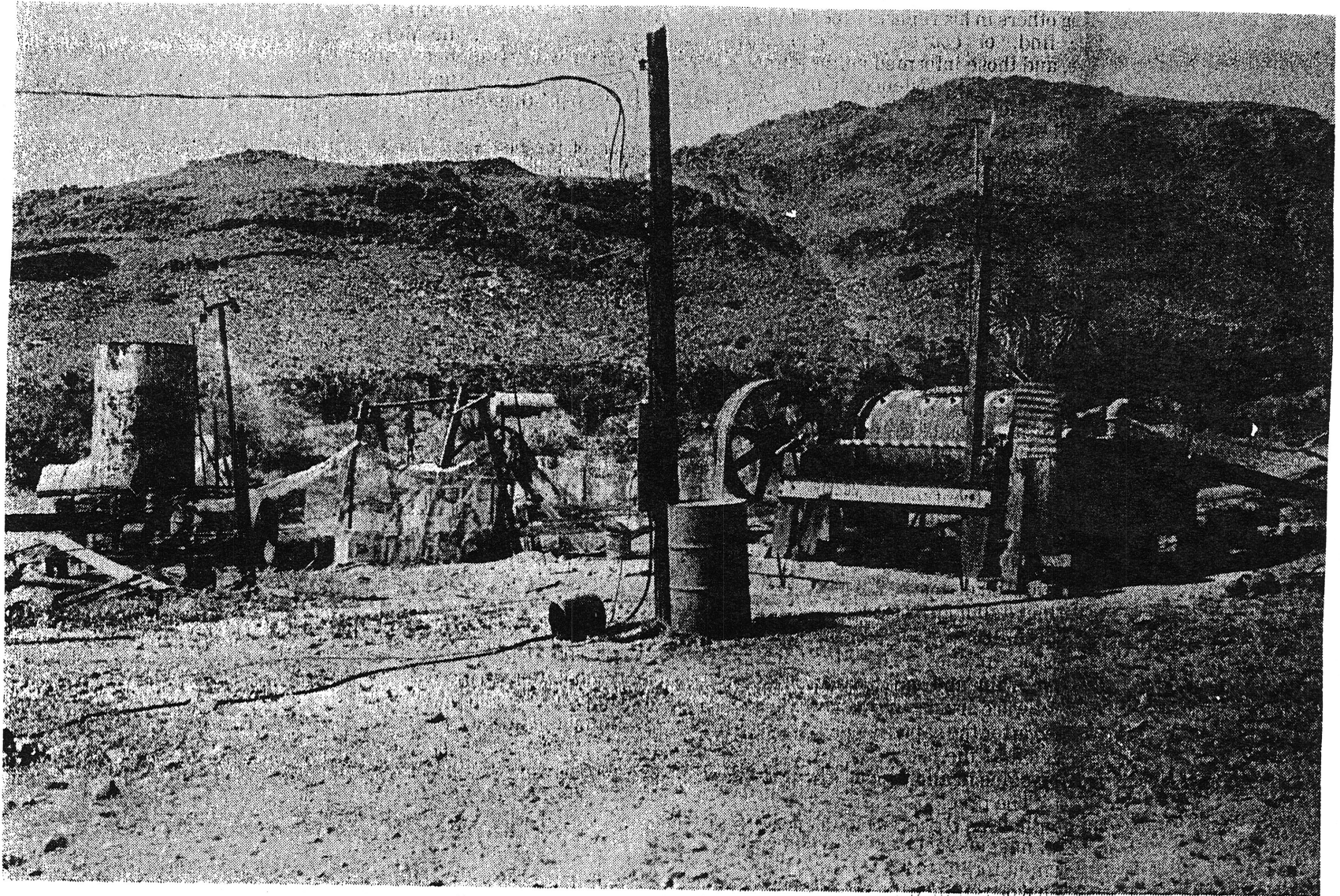
A man of many interests, Ed purchased what he describes as "320 acres of good land," established his camp, works a large irrigated garden plot, and generally enjoys life.

Thin, wirey, hard—with a leather-like complexion gained from a lifetime's exposure to the rays of the desert sun—Edgerton was, a few years ago, tapped on the shoulder by that great leveler of men, the Grim Reaper. What appeared to be stomach trouble was diagnosed at the Veterans' Administration Hospital as incurable cancer. After some weeks of hospitalization he was sent home to die.

Terrribly ill but not willing to accept the fate the VA medics prescribed for him, Ed set off to a uranium property he had that contained extremely high levels of radioactivity. Here he subjected himself to a combination of exposure to the atomic radiation and the heat of the almost unbearable desert sun..He literally cooked himself alive.

Little by little the illness passed. After a time convalescing at home the cancer-stricken man returned to the VA hospital for a checkup and amazed the medical staff with not only the fact that he was still alive, but confounded them still more when after extensive testing they could discover no indication that he'd ever been stricken by the dread disease.

Edgerton is, to the mining world, a living legend.. To his students, a beloved guide..To mankind, an inspiration.

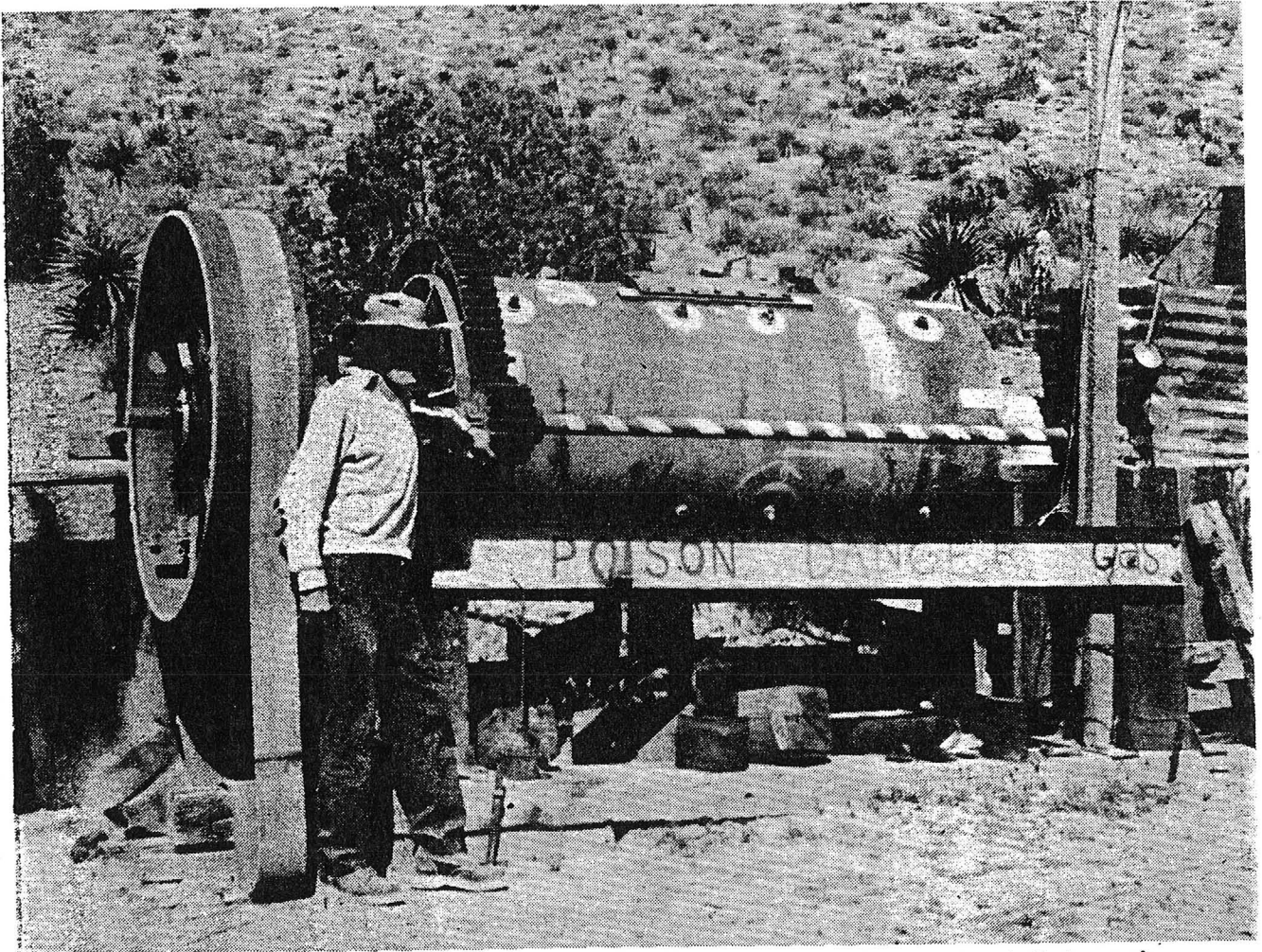


**THIS SMALL PILOT PLANT** is located in Mohave County, Ariz., and is set up to recover gold values via the cyanide method. The property of veteran mining man Ed Edgerton, who is unique in the

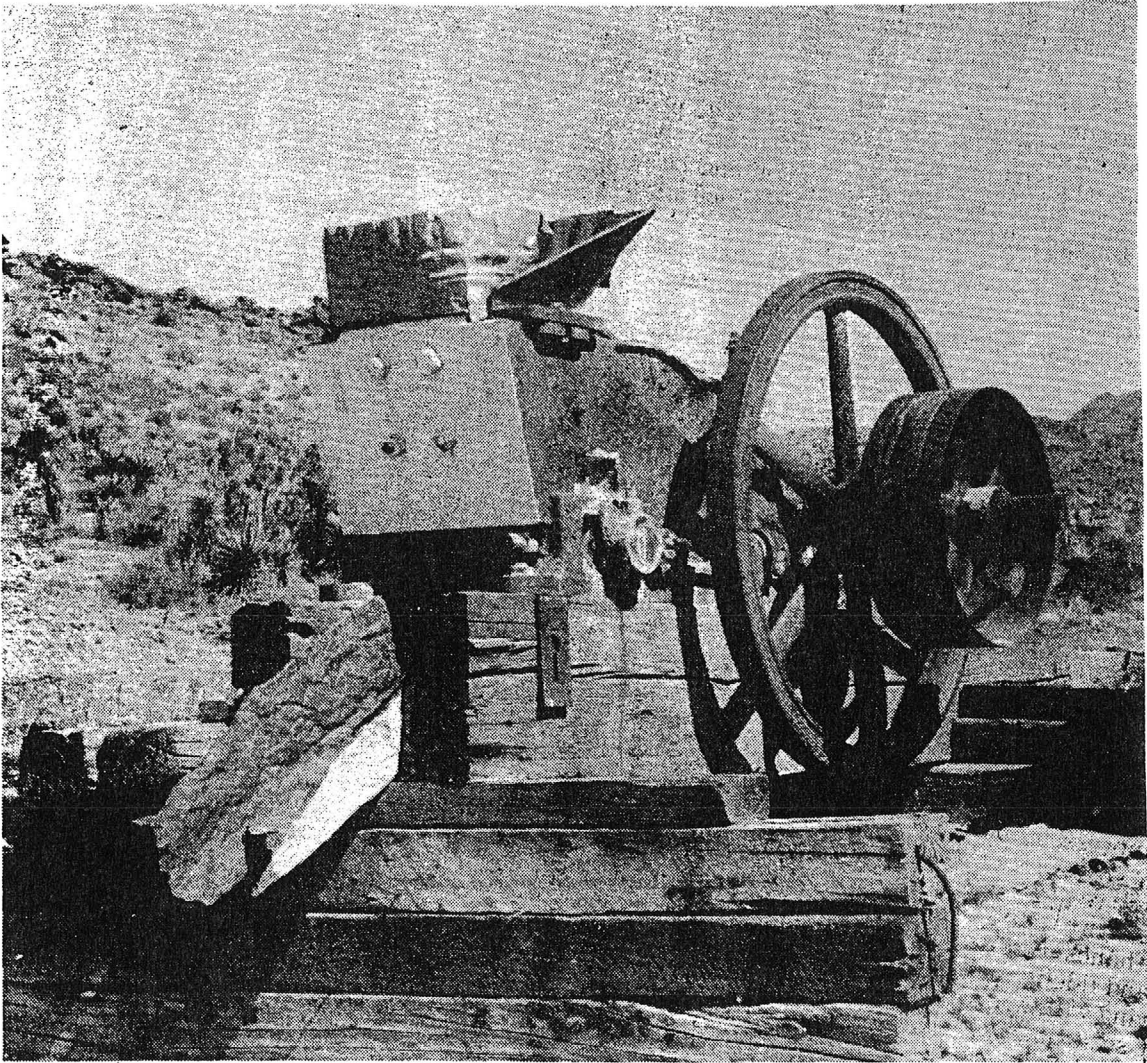
fact that he is one of the comparatively few small mine and mill operators in the country who are actually getting down to business, digging rock and milling the ore themselves.



**ED EDGERTON, teacher, geologist, metallurgist, miner and propsector. He's lived an exciting and worthwhile life.**

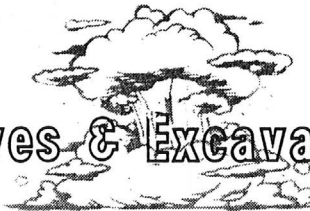


**THE PEBBLE MILL** at Ed Edgerton's cyanide plant between Kingman and Oatman in Mohave County, Arizona is sturdily mounted and does an excellent job of grinding the gold ores. Edgerton uses pebbles from nearby gulches rather than iron balls.



**THE CRUSHER EDGERTON** employs in his milling operation has a long and interesting history of breaking ores in Mohave County. Ed says, "It's like me. It may not be young in years but it sure keeps right on plugging away."

# Empire Explosives & Excavation Companies



P.O. BOX 562

PINEDALE, CALIFORNIA 93650

(209) 439-3335

John H. Jett, Director  
Arizona Department of Mineral Resources  
Mineral Building, Fairgrounds  
Phoenix, Arizona 85007

JAN 26 1979

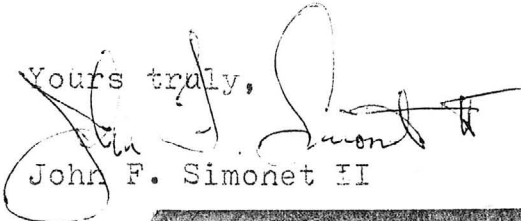
Dear Mr. Jett,

I hope that this is addressed to the current director for Arizona's Department of Mineral Resources but if not I must apologize. This is a letter that I intended to write almost three years ago but was engaged in another project until recently.

The subject of Mr. L. L. (Ed) Edgerton's cyanidation plant was and is of great interest to me and my company. If that information is still available and any other along the same line has since been made available, we would appreciate anything your office could send us.

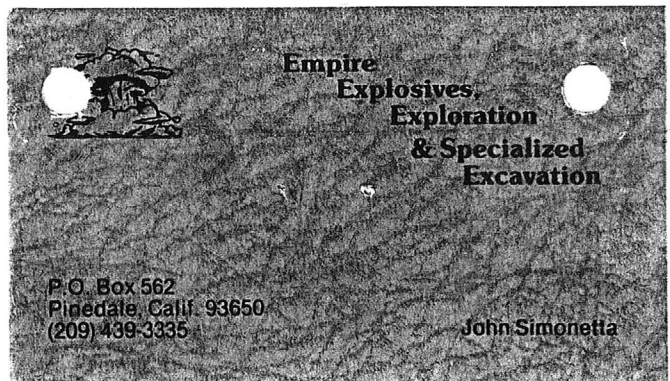
Thank you for any help you can give us.

Yours truly,

  
John F. Simonet II

*Cliff*  
*Let's discuss*

JFS/rsl  
cc: file  
enc: card  
Jan. 21, 1979



ED'S PLACE

MOHAVE

I drove to Ed's Place to talk to Ed Edgerton. He has stated in writing that he can furnish 150 tons of ore per day to a mill, ore containing 12 to \$100 per ton. However, he cannot state that ore is blocked out, and I suspect he has cut few if any samples for assay. He did say that the three deposits which can furnish 150 tons per day can be sampled, but not on three sides. VBD WR 4/24/76

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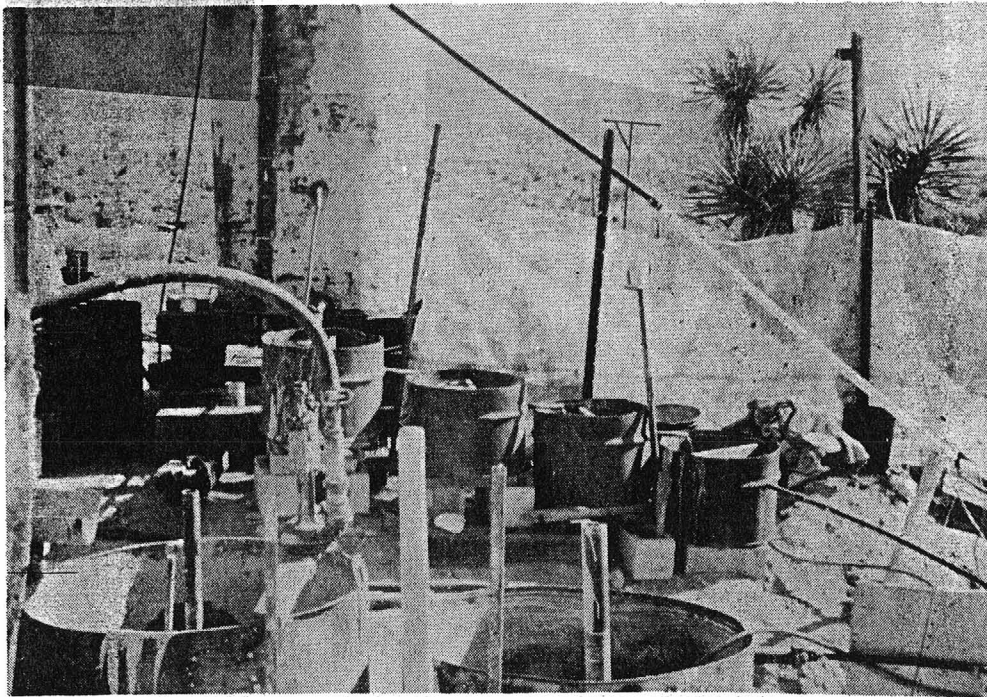
I drove to Ed's Place where I talked to Ed Edgerton and to George Mc-Devitt; both members of a committee from ASMOA appointed to assist the County in their efforts to attract a custom mill to Mohave County. VBD WR 5/23/76

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I picked up Dave Barber at the County Courthouse in Kingman and drove to Ed's Camp where I sketched a flow sheet of Edgerton's cyanide operation and obtained factual data for writing up the process for publication in Pay Dirt. He is quite willing to permit publication and believes the process can be used by many small operators of gold veins. I also took pictures of the equipment in operation. Dave Barber discussed the custom mill (or toll) idea with Edgerton, who reiterated what had been said previously at meetings with Aldridge. Mr. Barber arranged for a meeting between Edgerton and Aldridge. VBD WR 10/9/75

Dave Barber, Admin. Aide to the Mohave County Mgr. and Board of Supervisors, called to ask about Ed Edgerton's operation. It seems Ed gave the County Historian named Malek, or Malich, a hard luck story about having an experimental setup and not making enough money to pay laborers. VBD WR 10/17/75



However, it must be remembered there are a number of ores that are not economically or mineralogically susceptible to the cyanidation process — so check before you construct.

PAY DIRT for March 22, 1976

**It may look like a Rube Goldberg fantasy, but the small, inexpensive mill being operated by Ed Edgerton of Oatman works. It gives encouragement to many small operators that they may be able to afford to build small plants at minimum investment to turn a profit on their mining properties.**

# Mobile Service Fleet

It's been a long time since our mobile service technicians took their fathers' tools and rode to the great tricycle wreck Today, each is a trouble- equipped with special tools and meters to handle routine lift truck problems at a customer's job site. For major repairs, he can arrange pick up and delivery

VBD Weekly report for week ending April 5, 1975 - Ed Edgerton reports that he is ready to start a gold leaching project.

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**Ed Egerton of Mohave County is working hard at getting a gold cyanide leaching plant setup on his property between Kingman and Gold Road.**

Western Prospector & Miner  
6/75



*Edgerton*

STATE OF ARIZONA  
DEPARTMENT OF MINERAL RESOURCES  
MINERAL BUILDING, FAIRGROUNDS  
PHOENIX, ARIZONA 85007

December 2, 1975

Mr. L. L. Edgerton  
Box 900 - 0 Star Route  
Kingman, Arizona 86401

Dear Mr. Edgerton:

A flowsheet of your cyanide operation has been prepared by Vernon Dale. Copies of the flowsheet and sketches in duplicate are enclosed for your review, additions, deletions and corrections, if needed. I wish to compliment you on the simplicity of design.

We all believe that this flowsheet and the sketches with snapshots taken by Mr. Dale will assist other small mine operators in producing gold and silver from ores amenable to the cyanidation process. We would like to issue a press release as shown on the enclosed sheet. We need your permission to issue the release.

We will arrange for the release when you have returned one copy of the proposed release, flowsheet and sketches with your permission to publish.

We are also enclosing a stamped, self-addressed envelope for your convenience.

With best wishes,

John H. Jett  
Director

Enclosures

cc: Vernon Dale - Tucson

PROPOSED PRESS RELEASE

FROM: JOHN H. JETT, DIRECTOR  
ARIZONA DEPARTMENT OF MINERAL RESOURCES  
MINERAL BUILDING, FAIRGROUNDS  
PHOENIX, ARIZONA 85007  
(602) 271-3791

DATE: \_\_\_\_\_

L. L. (ED) Edgerton is testing gold ores at his test plant in Mohave County alongside old U.S. Highway 66 at Ed's Place between Kingman and Oatman.

Mr. Edgerton, a long time miner and mill operator in the Oatman District, designed, erected and operates the test mill himself. He has more than fifty years' mining experience in this area, and is a very young and active \_\_\_\_\_ years of age.

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Heavy pieces of metallics are collected in a settling tank prior to leaching of the ore. The fine gold is dissolved or taken into the solution, then precipitated from the solution in activated charcoal filter.

It is extremely important during this process, to maintain proper pH content and that proper amounts of cyanide are used. Mr. Edgerton displays his "small miner" ingenuity and economics by using a common low-cost swimming pool test kit for pH control and the "finger" test for cyanide control. The finger test is to add cyanide under the solution, giving a greasy feel on the fingers.

The small experimental cyanide plant may very well serve as a recovery unit for metals from small high-grade gold-silver ore veins. However, it must be remembered there are a number of ores that are not economically or mineralogically susceptible to the cyanidation process.

# Crude Ore

Dodge type crusher (12-inch) (10HP)

$\pm 3/4$  ton river-run  
hard, cherty pebbles  $\pm 3" \text{ to } 6"$

Ballmill (Allison 3'x6') (10HP)  
 $\pm 1/2$  ton batch ground  
 $\pm 38$  revolutions per minute

Gravity flow to  
Agitator  $\pm 36" \text{ Dia.} \times \pm 48"$

Gravity flow  
to settling  
tank  $\pm 48" \text{ Dia.} \times \pm 36"$

Heavy metalies collect  
in bottom and are  
recovered periodically  
by dumping tank.

Sludge pumped  
to tailing pond

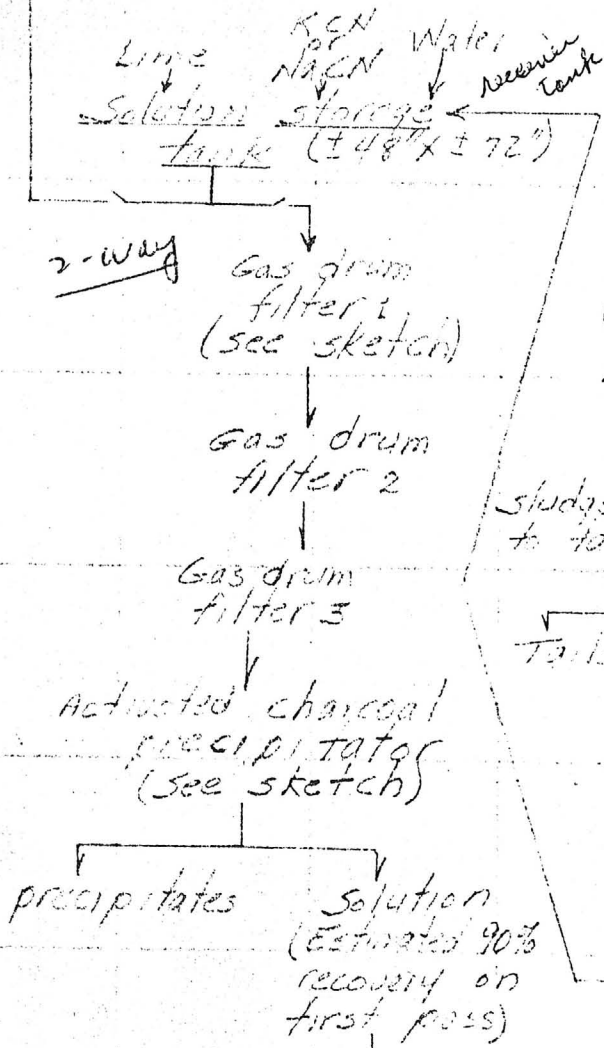
Gravity flow  
to settling tank  
 $\pm 48" \text{ Dia.} \times \pm 36"$

2 tanks  
(aligned  
links)

Agitated solution gravity flow  
to receiver tank (gas drum  
with float switch)

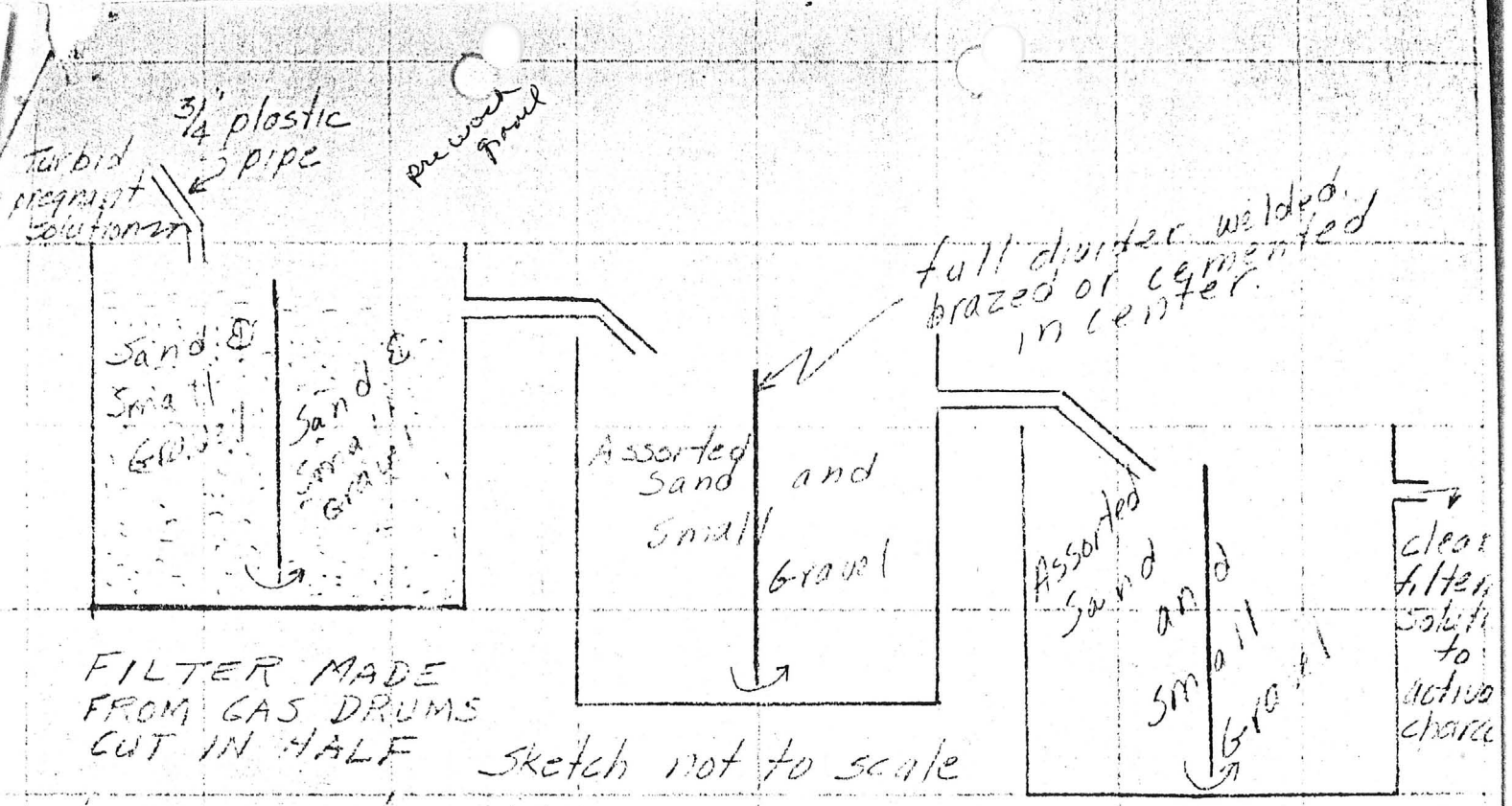
Pregnant and barren  
solution pumped to solution  
storage tank

Gravity flow



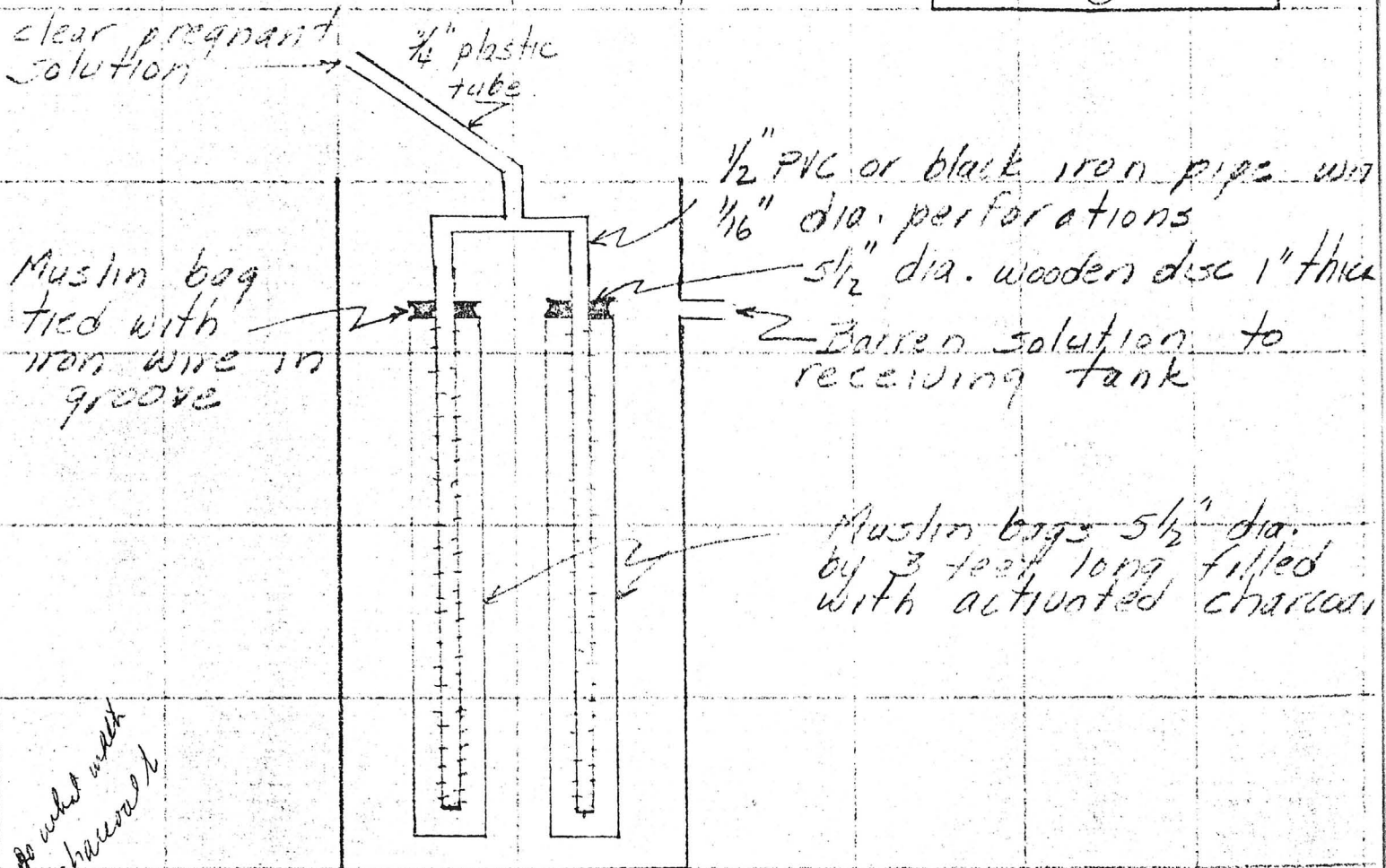
## Notes:

1. All Tanks & filters coated inside with asphalt
2. There is no brass, lead, zinc, copper, nor galvanized pipe in circuits
3. Five pounds charcoal precipitates at least 5000 grs. of gold and silver.
4. Add 2 pounds cyanide (NaCN or KCN) per ton of water for effective use of 1 pound.
5. Maintain pH of 8 to 10 - never less than 6 pH
6. Add cyanide to barren solution of  $\text{pH} = 8$  until fingers dipped in solution feel soapy.
7. A simple chlorine tester for a swimming pool may be used for pH control



FILTER MADE FROM GAS DRUMS CUT IN HALF

Sketch not to scale



CHARCOAL PRECIPITATOR  
50-gallon gas drum with top cut out  
Sketch not to scale

to weld with charcoal strip



STATE OF ARIZONA  
DEPARTMENT OF MINERAL RESOURCES  
MINERAL BUILDING, FAIRGROUNDS  
PHOENIX, ARIZONA 85007

September 23, 1975

TRIP TO "ED'S PLACE" MILL, 9-16-75, BY JOHN JETT, DIRECTOR

Mr. Edgerton, owner, Keith Gunnett, worker.

The mill is located across from Ed's camp on Gold Road. Ore is being mined from Silver Creek, Secret Pass, Cerbat and Wallapai. Four small stockpiles are at the mill site (total estimate is four tons) for testing. Mill is erected and is running test batches. Changes are still being made.

A small Blake jaw crusher is used to crush material to 95% minus one inch. Output is stockpiled, then by wheelbarrow moved to the mill, believed to be an Allison Mfg. Co. make, estimated a  $3\frac{1}{2}$  X 7. It is used as a pebble mill. Hard pebbles are from a local place. Output from ball mill goes to an agitator settling tank. Heavy free gold sinks to the bottom, overflow goes to cyaniding tanks (2 in series). Output from the mill appeared to be all lead, 100% 40 mesh with a large percentage 100-200 mesh. From cyaniding tank, solution goes to pump reservoir tank. An intermittently operated pump elevates solution to storage tank. From there it feeds through 2 (or 3) filters. Overflow goes to activated charcoal tank. 3 cannisters, 5 pounds of activated charcoal each, are in the tank. Each cannister can receive 5 ounces of gold and silver, one pound per ounce. Overflow is recycled.

There is some question on last part of the description as to its accuracy. Notes are not clear.

Rate of 1 gallon per minute through filter. Some cyanide introduced at feed of mill to "grind in cyanide".

Leach is for four days. No more than 4 tons of leach capacity, so maximum rate is 1 ton per day.

Mr. Edgerton said there is a drill rig working in Secret Pass. He believes they are looking for  $\text{CaF}_2$ .

Mr. Edgerton has a model of a special trommel he made. It has a continuous spiral lifter bar entire length. This permits more polishing of rock by giving effective travel distance of more than 3 times trommel length.