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07/16/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: PENTLAND

ALTERNATE NAMES:

ARIZONA COPPER PROPERTY

YAVAPAI COUNTY MILS NUMBER: 1039A

LOCATION: TOWNSHIP 12 N RANGE 1 E SECTION 17 QUARTER NE
LATITUDE: N 34DEG 25MIN 28SEC LONGITUDE: W 112DEG 16MIN 13SEC
TOPO MAP NAME: POLAND JUNCTION - 7.5 MIN

CURRENT STATUS: DEVEL DEPOSIT

COMMODITY:

COPPER SULFIDE
LEAD
SILVER

BIBLIOGRAPHY:

USGS POLAND JUNCTION QUAD
ARIZONA MINING JOURNAL JAN. 1918 P 24, JUNE
1918 P 44
YAVAPAI MAGAZINE MAR. 1918 P 5 SHARLOT HALL
MUSEUM PRESCOTT, AZ
WEBB, W.F. PRECAMBRIAN GEOLGOY AND ORE DEPTS.
NEAR POLAND JUNCTION U OF AZ THESIS 1979
ADMMR PENTLAND FILE
LINDGREN, W. ORE DEPTS. OF JEROME & BRADSHAW
MTN QUADS USGS BULL 782 1926 P 141

PENTLAND

YAVAPAI COUNTY

T12N R1E Sec 17 NE $\frac{1}{4}$

MILS Yavapai Index #1039A

Arizona Mining Journal, June, 1918, p.44

USGS Bull #782, p. 141 (Included in file)

Mt. Union Quadrangle (Included in file)

Yavapai Magazine March 1918, p. 5, Sharlot Hall Museum, Prescott

Geology Report- Webb, W. F., Precambrian Geology and Ore Deposits near
Poland Junction, 1979

CROWN KING DISTRICT
 CROWN KING DISTRICT
 PRESCOTT NATIONAL FOREST

**SPECIAL USE
 APPLICATION AND REPORT**

Ref: FSM 2712

FOREST SERVICE USE	d. District (7-8)	e. User number (9-12)	f. Kind of use (13-15)
	g. State (16-17)	h. County (18-20)	k. Card No. (21)

PART I - APPLICATION (To be completed by applicant)

Application is hereby made for a permit to use National Forest land as indicated below:

1. Description of land: (Attach MAP or PLAT) A request for a Special Use Permit is hereby submitted on the following parcels of land within the Crown King District of the Prescott National Forest: T12N, R1E: Sec. 11; SE $\frac{1}{4}$ SE $\frac{1}{4}$ (Unsurveyed) Sec. 12; SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 13; W $\frac{1}{2}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 14; E $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$

(Map is attached)

2. Purpose of use.

Minerals exploration program which may include any or all of the following:

1. Existing access road improvement
2. Access road building and drill site preparation
3. Claim staking
4. Geophysical surveys
5. Geochemical surveys
6. Geologic mapping
7. Exploratory drilling

3. Land Area applied for (For Rights-of-Way show length and width and convert to acres; for other uses show acres)

Length in: $\frac{6600 \text{ (Miles) or (Feet)}}{\text{(Feet)}} \times \text{Width } \frac{2640 \text{ (Feet)}}{\text{(Feet)}} = 400 \text{ (Acres)}$

4. Improvements

a. Description Approximately 1.2 miles of light duty road building may be necessary to gain access to the proposed drill site locations and the center of exploration activity described above. The proposed access road and possible drill site locations are shown on the attached map.

b. Plans attached Yes No. If "NO" show date plans will be furnished

c. Estimated cost	d. Construction will begin within	e. Construction will be completed within
\$ (Presently not Available)	1 (Months)	12 (Months)

Date of Application	Applicants name and signature	Applicant's address
May 24, 1977	American Selco Inc. By: <i>Paul S. Strobel</i> Paul S. Strobel Project Manager	621 S. Montezuma Prescott, Arizona 86301 (ZIP Code)

(OVER)

July 19, 1976

ADDENDUM NUMBER 2
OPERATIONAL USE PLAN
AMERICAN SELCO, INC.

American Selco intends to drill a rotary hole on our Pentland Claims in the area near the old Hackberry and Pentland Mines as shown on the attached map.

After the hole has been completed, the drill site ^{and spur road JES} will be restored to its original condition as nearly as possible.

A \$200.00 surety bond is presently in effect to insure the completion of the restoration work.

After completion of the drilling and restoration of the site, the District Ranger may inspect the area to assure that the work is satisfactory.

The surety bond may be held for additional work on these or other claims within the district.

AGREED TO BY:

Paul S. Strobel, Jr.

Paul S. Strobel, Jr.
Project Manager
AMERICAN SELCO, INC.
621 S. Montezuma
Prescott, Arizona 86301

7/20/76
(Date)

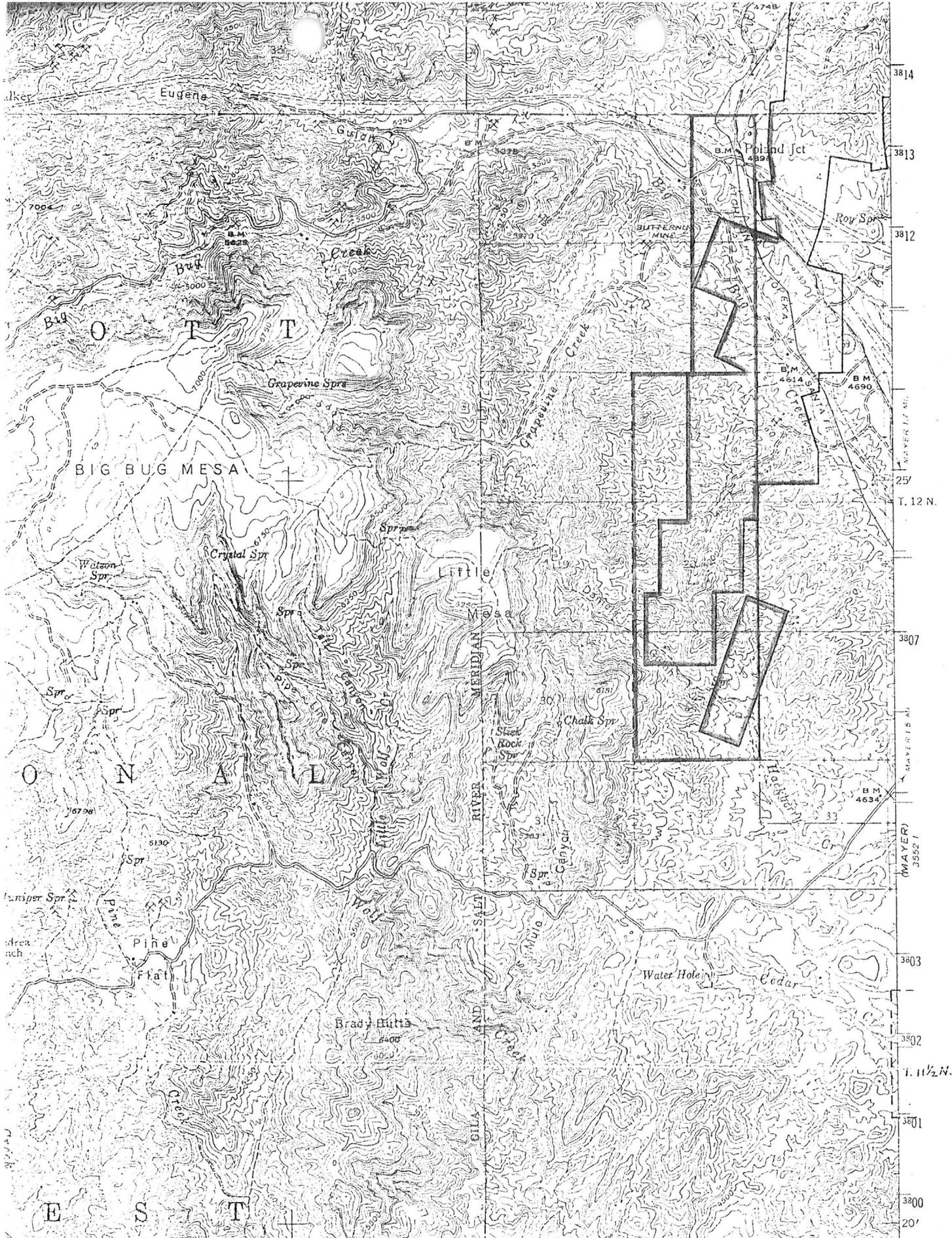
APPROVED BY:

Jerry E. Schmidt
Jerry E. Schmidt
Crown King District Ranger
Prescott National Forest
P.O. Box 2549
Prescott, Arizona 86301

7/24/76
(Date)

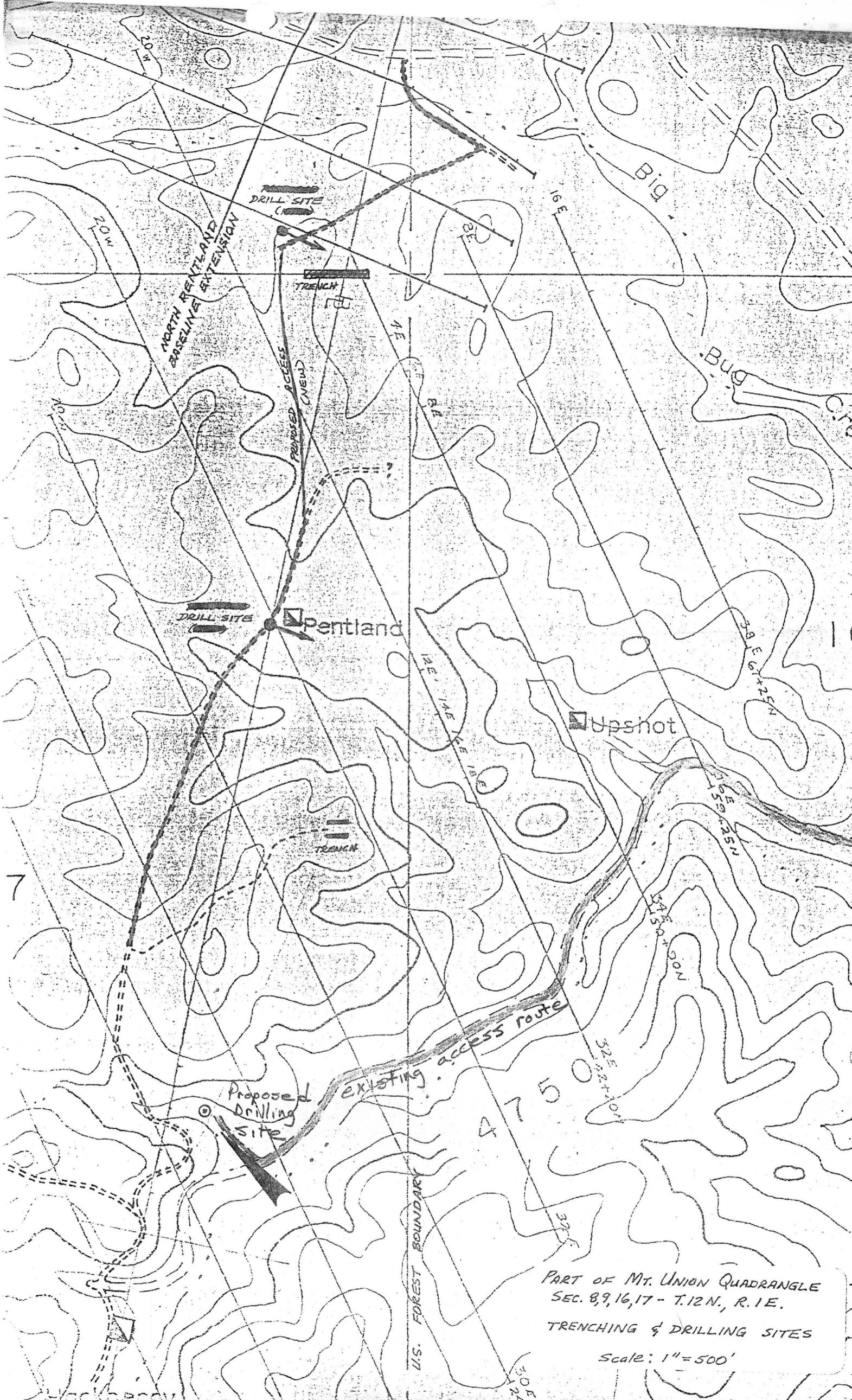
Proposed
Drilling
Site

475



MT. UNION QUADRANGLE
 1" = 1 mile
 Application area outlined in green.
 American Selco property outlined red.

3814
 3813
 3812
 25'
 T. 12 N.
 3807
 3803
 3802
 T. 11 1/2 N.
 3801
 3800
 20'
 3799
 3798



NORTH PENTLAND
BASELINE EXTENSION

DRILL SITE

TRENCH

PROPOSED ACCESS
(NEW)

DRILL SITE

Pentland

Upshot

TRENCH

Proposed
Drilling
Site

existing access route

U.S. FOREST BOUNDARY

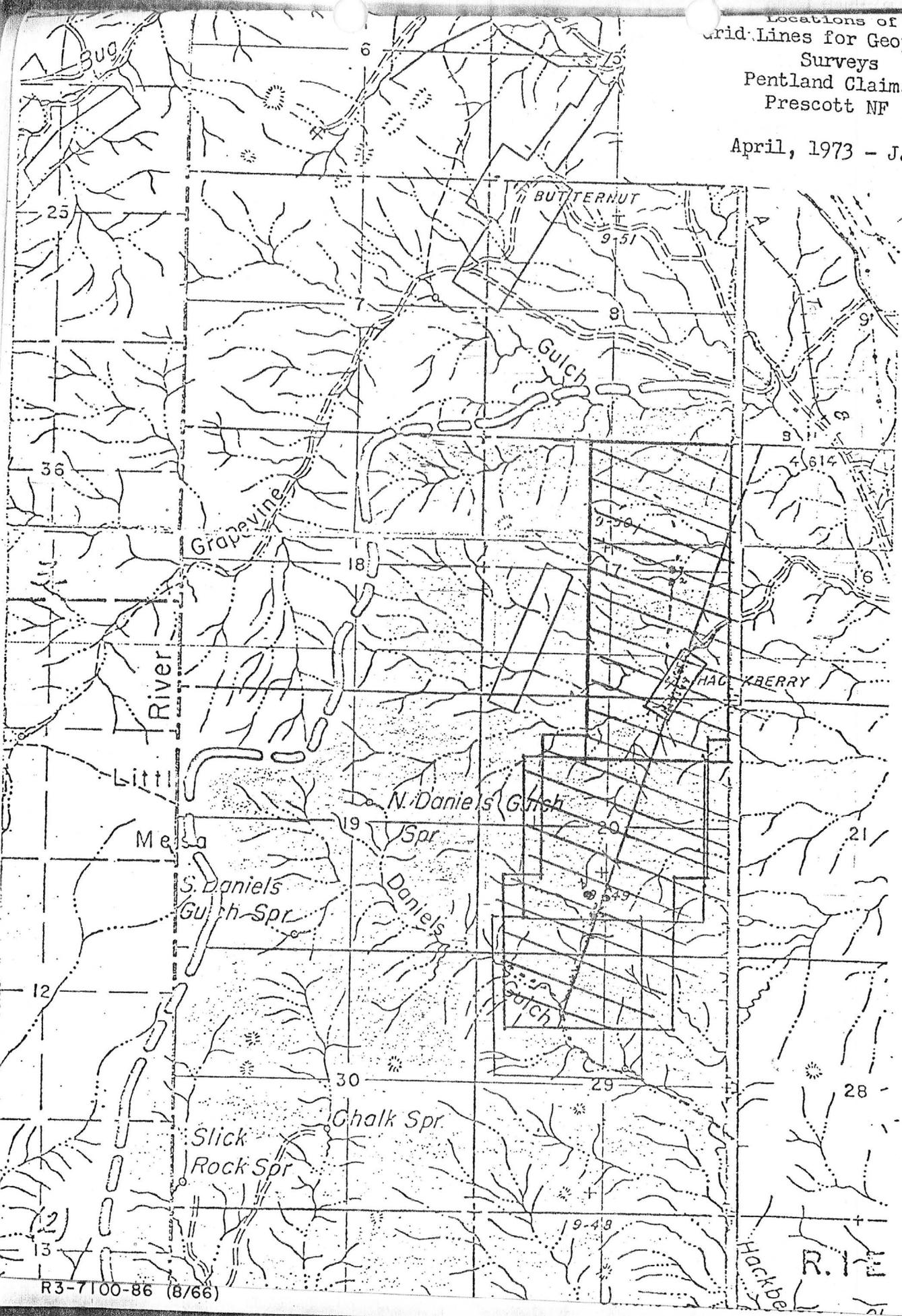
PART OF MT. UNION QUADRANGLE
SEC. 8, 9, 16, 17 - T. 12 N., R. 1 E.

TRENCHING & DRILLING SITES

Scale: 1" = 500'

Locations of
Grid Lines for Geophysical
Surveys
Pentland Claims
Prescott NF

April, 1973 - J. Prochnau



photograph (pl. 15, B), there are open spaces between the concentric structures, suggesting that a colloid of iron sulphide has replaced the minerals, later taking up sulphur and crystallizing as marcasite. The character of the replacing solutions and the chemical reactions have not yet been fully elucidated. The solutions could not have been acid, for they replaced quartz as well as sulphides.

HACKBERRY MINE

The schist belt of the Boggs and Iron Queen mines extends northward toward Humboldt, near which the old Huron mine was located. There is little to be seen of these old workings.

To the south the schist belt passes 2 miles north of Mayer, just north of the old Boggs smelter, and continues northwest of Mayer to the Mayer-Pentland and Hackberry mines. At the Pentland mine is a large dump of chlorite schist, showing in places a little chalcopryrite, pyrite, and arsenopyrite, with quartz and ankerite. Rather extensive exploration evidently failed to reveal large bodies of sulphide ore.

At the Hackberry mine, formerly owned by the Commercial Mining Co. and later by the George A. Treadwell Co., much work has been done. The mine has been idle since 1909 and the gallow's frame is slowly decaying. George A. Treadwell opened it with W. S. Logan and Colonel Green, of Cananea, after having bought it from the Phelps Dodge interests. The depth of the shaft is 900 feet, and the ore carries copper with a little gold and silver.

The dumps show mainly chloritic schist, which in thin section discloses a quartz mosaic with abundant parallel strings and foils of green chlorite, some sericite, a little biotite, and later metacrysts of epidote. Magnetite and apatite are also present. In part the schist is distinctly quartzitic.

Rock of another type contains abundant magnetite cemented together by a mosaic of radial amphibolite and quartz. Probably there is also some garnet in this rock. This locality, therefore, presents the same indications of igneous metamorphism as were observed at the Boggs and Iron Queen mines. The ore minerals impregnating the schist are pyrite and chalcopryrite, with minor amounts of galena and sphalerite, accompanied by a gangue of quartz and ankerite. Tetrahedrite was also observed. The mineralization was essentially that typical for these deposits, and it is believed that actinolite and magnetite are products introduced at an earlier date before the sulphide mineralization.

It looks as if the Hackberry mine had produced a considerable amount of ore.

U. S. G. S. Bull 782
p. 141

Yavapai County

ANOTHER COPPER NEAR MAYER IS TO THE FRONT

JAN 15 1920

Arrivals from Mayer report that important development work is being done by the Arizona Copper & Mining corporation, in the course of which a new shoot has been determined of four feet in width by driving a crosscut of 44 feet west of the main shaft.

The mineral content at this depth of 350 feet is a high grade chalcopryrite, and on Saturday the new ore body was still in place and the extent of the discovery was not known.

This strike is causing much comment in the Mayer field, and is said to be one of the most important mineral showings ever made in the belt which this property occupies, fully demonstrating the advisability of crosscutting no matter what depth may have been reached in sinking on the supposed main fissure.

The greatest depth reached on the property heretofore was about 700 feet, the floor of the shaft carrying a good grade of copper ore, but for reasons best known to the management the new exploration was deemed expedient and verifies the wisdom of so doing.

Sam A. Hobson, general manager, left Saturday night for the East to consult with stockholders, which is regarded as rather significant at this time, and is said to confirm reports in circulation of a big proposition being solved.

The Arizona Copper & Mining Co. is installing newer and larger equipment on the Pentland mine. Development work has now reached a depth of 800 ft. and preparations are being made to mine and ship ore from the 500 and 600-ft. levels.

1-3-20

Article text: preferred stock shall be entitled to a preferred dividend of seven per cent per annum, payable out of the surplus or profits of the company annually, at such times as the Board of Directors may determine or as may be fixed in the By laws, and such dividends shall be cumulative. When dividends of seven per cent have been paid in any year on the entire preferred and common stock issued and outstanding, no further dividends for that year may be paid on all stock without distinction until the preferred stock shall have received dividends of twelve per cent for such year. All dividends in excess of twelve per cent shall be paid to the holders of the common stock in this corporation. Holders of preferred stock shall not be entitled to dividends in excess of twelve per cent per annum and cumulation of dividends shall not bear interest.

In case of liquidation or dissolution of this corporation, either voluntary or involuntary, the holders of preferred stock shall be entitled to be paid in full, both the par amount of their shares and any unpaid cumulative dividends at the rate of seven per cent per annum up to the date of said dissolution.

's of meet and me Directors

(From Tue day's Daily)

Yesterday at Mayer a meeting of the stockholders of the Arizona Copper Mining corporation was held, J. E. Paule of Chicago, one of the heaviest stockholders, having come from the east to be present. It was decided to make a number of changes in the direction of its affairs. The company owns the Pentland mine.

The following directors were chosen at the meeting: J. E. Paule of Chicago, S. E. Doane and W. E. Burrows of Cleveland, Ohio, and B. A. Hobson of Mayer. It is expected that Mr. Doane will come to Mayer within the next month to assist in carrying out the new plans of the company.

Mr. Paule and Mr. Hobson also are interested in the Gillispie mine, situated about 24 miles south of Mayer. Its ores carry gold and silver, and development work first was carried on last September, when profitable ores was encountered in drifts on both the north and south sides of the shaft. Mr. Paule has announced that a mill will be installed on the property by April 1, and that there is enough ore to keep the mill in operation for some time.

-----The Arizona
Copper & Mining Co., owner of the Gillespie mine, is to erect
a mill. Sufficient ore has been developed to run the mill
for a year. 3-19-21

-----A mill is to be erected on the Gillespie property, owned
by the Arizona Copper & Mining Co., for which Samuel
Hobson, of Mayer, is manager. The plant should be com-
pleted by May 1. 3-26-21

The shaft at the Pentland mine is down 650 ft. A cross-
cut 12 ft. west at the 600-ft. level cut the orebody, which, at
the 500-ft. level, was 14 ft. wide, averaging 4% copper.
The shaft is to be continued to the 1000-ft. level. 9-26-18

SHAFT DOWN TO 500 LEVEL AT A. C. & M. CO.

IN SINKING SEVERAL BOD-
IES OF ORE SHOWING
COPPER VALUES OF
FROM 1½ TO 6 PER CENT
ENCOUNTERED. 1918

Mining men who yesterday visited the property of the Arizona Copper and Mining Corporation state that the shaft is nearly down to the 500 level and that the plans of President and Manager A. W. Davis, are to begin crosscutting and drifting at that level.

The perpendicular shaft is going down in the hanging wall side of the vein, and is gradually crosscutting the formation. In the sinking of the 470 feet, now attained, several bodies of various grade ore have been passed

through, showing values of from 1½ per cent to 6 per cent across the entire formation cut through. Mr. Davis plans to crosscut the entire zone which is over 300 feet wide, and feels more confident than ever that his company is in line for bringing in a producer worth while.

All recent visitors to the property have been so pleased with the outlook, and many so surprised at the splendid surface showing that they wonder that it had escaped the notice of the copper magnates up to this time. They say it has exactly the same indications as many of the other great mines in the Arizona schist belt, which extends at least through this section from Jerome to Blue Belle. They see no reason why this property should fail to make one of the great mines of the State.

This is another proof that Yavapai county is all right and backs up the statements of the substantial and staunch friends of the mining industry here that old Yavapai requires only the partnership of capital to make her rise still higher in Arizona's list of great copper counties.

STRIKE ON PENTLAND GROUP ADDS TO RORE OF MINES IN YAVAPAI

MAYER, Ariz., May 4.—Ten feet of shipping ore has been encountered in the west crosscut at the 500-foot level in the Arizona Copper mine, locally known as the Pentland mine. This sounds like a simple statement but in reality it is without doubt the most important ore discovery made in the Mayer district for many a day. The Arizona Copper & Mining corporation was started locally about a year ago on a group of mining claims owned by E. B. Pentland, of this place. The first stock was subscribed for in Mayer. It was later financed in the east to the extent of about \$100,000.

The company has done actual mining. A 2-compartment shaft was put down to the 500-foot level which depth it reached last week. Crosscutting was commenced east and west, the expectation being that ore would be found on each side of the shaft. The first vein to be encountered came in about 20 feet west of the shaft. The vein so far has been cut through for ten feet, showing an excellent grade of smelting ore in copper and silver. There is reason to believe that the vein will be much wider.

Fine Grain Ores

The ore occurs in the schist, the copper values being in the form of chalcopyrite which is closely disseminated in the schist. Mining men who have examined the strike are particularly well pleased with the fineness of the grain of the ore.

A meeting of the directors of the company has been called to consider whether to continue the shaft 500 feet deeper, to the 1,000-foot level, or to explore the present 500-foot level first.

No strike of ore in the Mayer district has had such a "lifting" effect for many months as this Pentland strike. Considerable of the stock is held locally and everybody is holding onto it at double the price of last week before the strike was made. They are expecting to hear of something sensational before the width of the vein is fully determined. Then, the mine is so close to Mayer, about two miles northwest, that it means a payroll that will come directly to the town. Most of the miners live in Mayer and go back and forth to work each day.

Opens New District

Outside of the world of the strike to the stockholders of the company and its effect on the business of Mayer, it means a great deal to the district for the mine is located in an entirely new camp, off from the Blue Bell and Binghamton strikes. The mine adjoins the old Hackberry mine on the north and is about one mile south of the old Boggs mine. The ore system runs parallel to the Blue Bell belt, about one mile west and it can be easily traced northward through the Iron Queen, Boggs, Swindler, Lone Pine and the property that has just been taken over by the Humboldt Consolidated Copper company. No properties have been developed to the south of the Pentland mine, to any

en up the Yavapai schist. The depth of the shaft, 500 feet, is sufficient to find permanent ore bodies as has been proven in the Blue Bell, Binghamton and other deep mines of the district. Another vein of ore is known to exist east of the shaft, and it is expected to be encountered at any time.

This mine undoubtedly has a great future. It is well managed, and results have come just about as planned at the beginning of things a year ago. There need be no experiments either in the mining of the ore or in the milling for there, are now in the Mayer district a number of successes on the same class of ore. There is as yet no talk of the company putting up its own mill at the mine. The most important thing, in the planning by the company, is to "find a mine" first which is considered good business.

Custom Ore Plant

Mayer is soon to have a custom ore plant. The Mayer Ore Purchasing company has leased the old Gray Eagle mill a mile below town and in a few days will be ready to buy custom ore. The capacity will be about 100 tons for the oil flotation process and 60 tons coarse concentration. Later on, the company will be ready to handle oxidized copper ore in the leaching department. The mill is in charge of H. A. Wagner, who was the original inventor of the electrolytic process for which the mill was built. The whole plant is now under lease to the Mayer Ore Purchasing company.

A custom mill has been greatly needed in the Mayer district. Any sized ore shipment will be handled, from a carload to a sack. It will be possible for the small mine owner to find an outlet for his ore in small lots.

The company also acts as purchasing agent for ores which will be sampled and shipped to the outside reduction works. A complete sampling department has been established in which to make tests on ores to determine the best methods for treatment and there is also a custom assay office at the plant. The mill will start off with plenty of ore for a steady run. About fifty tons daily have been secured to begin with.

OLD PROPERTY IN ACTION

Sam A. Hobson, general manager, Arizona Copper & Mining corporation, Mayer, announces that the work of installing a new and bigger equipment on the company property has been completed. The property of the company is better known as the Pentland and has attained development work to the 800-foot level.

The revival of this property is causing favorable comment and it is stated the period of shipping is to be maintained indefinitely, the zones having exposed an immense tonnage of ores of a desirable copper content. The marketing place as yet has not been decided upon.

Another Copper For Mayer Field Being Determined

Arrivals from Mayer report considerable interest now being manifested in the Pentland mine, three miles distant, by a strike occurring at a depth of about 200 feet, in which a high grade copper ore has been determined.

Work was resumed on this property only a short time ago, when sinking from the 150-foot level started, and sulphides coming in has naturally occasioned favorable comment over another copper belt for that field coming into existence. A close

company is operating, and some of the stockholders reside in this city.

ANOTHER COPPER NEAR MAYER IS IN ACTION

Installing of a new and bigger equipment by the Arizona Copper & Mining corporation on the holdings near Mayer is announced as completed, and in a few days production will be resumed after a short suspension.

This property is better known as the Pentland, and has attained considerable notice as development has progressed to depth of about 800 feet. Mining men generally view it as one of the most desirable of coppers in that field.

While in the city yesterday Sam A. Hobson, general manager, expressed himself optimistically over the future, and since the new operating plant is in position, saying that stopping begins from the 500 and 600-foot levels for shipping to follow at once, while drifting south will be a volitional movement.

The revival of this property is causing favorable comment and it is stated the period of shipping is to be maintained indefinitely, the zones having exposed an immense tonnage of ores of a desirable copper content. The marketing place as yet has not been decided upon.