



## **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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Arizona Department of Mines and Mineral Resources Mining Collection

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03/11/91

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: SUNRISE CLAIMS

ALTERNATE NAMES:

OPHIR PAT. CLAIMS  
GRANT PAT. CLAIMS

MARICOPA COUNTY MILS NUMBER: 178

LOCATION: TOWNSHIP 5 N RANGE 10 W SECTION 14 QUARTER NW  
LATITUDE: N 33DEG 46MIN 45SEC LONGITUDE: W 113DEG 16MIN 47SEC  
TOPO MAP NAME: GLADDEN - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD  
SILVER  
SILICON

BIBLIOGRAPHY:

USGS GLADDEN QUAD  
ADMMR SUNRISE CLAIMS FILE  
BLM MINING DISTRICT SHEET  
M.S #1142 & 1143

OPHIR, GRANT, & SUNRISE CLAIMS (Mine File)

MARICOPA CO.

See: Alpha Omega Mining Co. (Mine File - Map)

workings where the ore was not oxidized but was made up of characteristic quartz with associated sulphides, coarse gold was present. . . This gold had a fineness of 760 to 780. . . The galena was usually rich, so that, when the average mill concentrates assayed \$150 per ton, the clean galena concentrate assayed \$600.

"The outcrop was 1,000 feet long, but . . . the upper parts of the vein have been quarried in two large open pits. The westerly pit is 300 feet long and the easterly one 500 feet, with low-grade vein matter, which consists mostly of white quartz, remaining between them."

As indicated by areas of stoping shown on maps of the mine workings, the quarry pits were on the outcrops of two steeply eastward-pitching ore shoots of which the western one was mined to the 600-foot level, and eastern to the 1,000-foot level. Westward, the vein extends into granite and splits into several small but locally rich branches. Hutchinson continues:

"Granite of identical character was encountered in the westerly end of the 950 level, in the easterly end of the 1,550 level, and in a diamond drill hole put down from the latter. These points of exposure of granite indicate a probable easterly pitch of the contact."

Besides numerous faults of small displacement, two large faults, the Talmadge and Astor, have cut the vein. Hutchinson states that the Talmadge fault, which cuts the vein above the 450-foot level of the east shaft, dips 80° NE. and has a vertical displacement of 300 feet. The Astor fault, which cuts off the vein below the 950-foot level, is reported to be nearly parallel to the Talmadge fault, but its displacement remains unknown. Cross-sections of these features are given by Hutchinson, in the article already cited, and by A. P. Thompson, in *Min. Jour.*, vol. 14, pp. 9-11, 28-30, 1930.

#### SUNRISE MINE

The Sunrise mine is in northwestern Maricopa County, about 18 miles west of Wickenburg and 2½ miles south of U. S. Highway 60.

This deposit was located in 1915. In 1927, it was purchased by W. M. Ebner and associates who sank a 330-foot incline and did about 2,000 feet of development work. C. W. Mitchell obtained the property late in 1933 and, from March 1 to May 16, 1934, shipped 600 tons of ore that averaged \$24 in gold per ton.<sup>223</sup> About fourteen men were employed. Water for all purposes is hauled from Aguila, 11 miles distant.

The mine is at the southern base of some low hills that are composed of schist intruded by granitic porphyry. The vein strikes S. 20° W., dips about 45° NW., and occurs within a fault zone with granitic porphyry on the hanging wall and schist on

<sup>223</sup> Oral communication from Mr. Mitchell.

the foot wall. The vein is a stockwork, from 10 to 20 feet wide, of lenticular quartz veins, from a few inches to a few feet thick, in schist. Its outcrop is largely mantled by detritus.

The main adit or 200-foot level includes about 600 feet of drifts, and the 330-foot level about 150 feet of drifts. Most of the stopes extend above the 200-foot level. At the time of visit, the largest stope was some 45 feet high by 15 to 20 feet long by 4 to 5 feet wide.

The ore shoots appear to occur where the vein flattens and is intersected by transverse fractures. The ore consists of coarse, locally honeycombed to platy, brecciated white quartz with abundant limonite and hematite. In isolated places, a little pyrite is present. Most of the gold occurs as mediumly fine to coarse grains and flakes, mainly with pinkish-red hematite and limonite in fractures and cavities. The honeycombed and platy quartz with the hematite and limonite is reported to be of particularly high grade. According to Mr. Mitchell, the ore contains less than 0.25 ounce of silver per ounce of gold.

Wall-rock alteration along this vein consists of sericitization, silicification, and carbonatization.

#### BIG HORN DISTRICT

##### EL TIGRE MINE

El Tigre property of twelve claims, in the northwestern Big Horn Mountains mining district, of northwestern Maricopa County, is 15 miles by road south of Aguila.

This deposit was located in 1914 by the Sisson Brothers. According to local people, it was worked mainly between 1918 and 1924. During 1921, some bullion was produced in a 10-stamp mill built near a well, 3½ miles west of the mine. In 1922, ore was run through this mill, and old tailings were treated by cyanidation. According to J. B. Webb, the January, 1923, yield amounted to \$14,454 worth of gold.<sup>224</sup> Figures on the total production are not available.

At the mine, fine-grained gneissic granite, intruded by basic dike rocks, floors a hilly pediment. The ore, which occurs within a nearly flat fault zone, consists of massive to coarse-grained shiny quartz with abundant specularite and limonite. The wall rock has been notably altered to sericite.

Most of the production came from drifts and stopes which extend for a few tens of feet into the vein. These workings indicate that the ore body was very lenticular, with a maximum width of about 5 feet. Three inclined shafts, 50, 197, and 200 feet deep, respectively, were sunk below the outcrop. They are reported to have cut two separate veins, but little or no production was made from them.

<sup>224</sup> Oral communication.





DS

SUNRISE (P) MISSISSAUGA

## ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Governor Jane Dee Hull

Jacqueline E. Schafer, Director

### **REGISTERED MAIL-RETURN RECEIPT REQUESTED**

November 17, 1999

REF#: EU99-0629

Sunrise Gold Company  
Attention: Vera Zammitt  
1084 Ella Avenue  
Mississauga, ONT, Canada L5E 1H5

RE: Sunrise Gold Mine  
Inventory #102178  
Latitude 335436 / Longitude 1125915

### **NOTICE OF VIOLATION**

The Arizona Department of Environmental Quality (ADEQ), Water Quality Division, Water Quality Enforcement Unit, has determined that Sunrise Gold Company, of Mississauga, ONT, Canada, is in violation of the Arizona Revised Statutes (A.R.S.), Title 49-101 et seq. and applicable rules.

#### **I. FINDINGS OF FACT AND DESCRIPTION OF VIOLATION(S)**

1. Sunrise Gold Company, is the owner and/or operator of the Sunrise Gold Mine, a discharging facility, operating pursuant to Aquifer Protection Permit, P102178.
2. The owner/operator of the Sunrise Gold Mine has failed to submit monitoring data for the second (2nd) quarter of 1999, as required by the Aquifer Protection Permit issued for the facility. The monitoring data for the second (2nd) quarter of 1999, was due to ADEQ by July 28, 1999. Failing to monitor or report as required by an Aquifer Protection Permit is a violation of both the permit and A.R.S. §49-261.A.

#### **II. CITATIONS OF AUTHORITY**

1. The Arizona Department of Environmental Quality (ADEQ) shall prevent and abate all water pollution. [A.R.S. §49-104.A.11.].

2. The ADEQ shall adopt, by rule, an aquifer protection permit program to control discharges of any pollutant or combination of pollutants. [A.R.S. §49-203.4.]
3. The ADEQ shall consider and may prescribe, monitoring, record keeping and reporting requirements in an Aquifer Protection Permit. [A.R.S. §49-243.K.]
4. If the director of ADEQ determines that a person is in violation of any condition of an Aquifer Protection Permit, the director may issue an order requiring compliance within a reasonable timeframe. [A.R.S. §49-261.A.]

### **III. REQUIRED CORRECTIVE ACTIONS**

Within ten days of receipt of this Notice

1. The owner/operator of the facility shall submit completed Self-Monitoring Report Forms as required by the Aquifer Protection Permit for the second (2nd) quarter of 1999; or
2. The owner/operator of the facility shall submit a written explanation for failing to submit the Self-Monitoring Report Forms as required by the Aquifer Protection Permit for the second (2nd) quarter of 1999.

### **IV. REQUIRED DOCUMENTATION**

1. Adequate documentation of compliance shall consist of completed Self-Monitoring Report Forms as required by the Aquifer Protection Permit for the second (2nd) quarter of 1999. Although ADEQ has previously provided the owner/operator with Self-Monitoring Report Forms for the facility, additional Self-Monitoring Report Forms can be obtained from the Water Quality Data Unit by contacting Julie Collins at (602) 207-4688 or within Arizona, 1-800-234-5677 x4688.
2. All Self-Monitoring Report Forms and/or written explanations for failing to report, shall be sent to ADEQ at the following address:

Arizona Department of Environmental Quality  
Attn: Lynn Ott  
Water Quality Compliance Section  
3033 N. Central Avenue, M0501B  
Phoenix, AZ 85012

3. The above documentation shall be deemed "submitted" when received by ADEQ.

4. Any facility updates including owner/contact/operator name, address and phone number changes should be submitted as soon as the information is available.

**V. STATEMENT OF CONSEQUENCES**

Failing to adequately respond to this notice in a timely manner will result in an ADEQ referral to the Arizona Attorney General's Office for an escalated enforcement action. At ADEQ's request, the Arizona Attorney General shall file a civil complaint in superior court to recover substantial civil penalties up to twenty-five thousand dollars (\$25,000) per day per violation. [A.R.S. §49-262.C.]

**Achieving compliance and/or providing an explanation for noncompliance does not preclude ADEQ from seeking civil penalties through the Attorney General for the above-cited violations.**

**VI. OFFER TO MEET**

ADEQ personnel are willing to schedule a meeting to discuss the violations and corrective actions. Prior to the meeting, please submit the following: 1) an agenda that specifies the issues that you wish to discuss and 2) the names and affiliations of the participants that will be accompanying you.

If you would like to meet, or feel that this notice has been sent in error, please contact Lynn Ott at (602) 207-4816, or 1-800-234-5677 x 4816, within five days of receipt of this notice.

*M. Reza Azizi*

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M. Reza Azizi, Manager,  
Water Quality Enforcement Unit

cc: Maricopa County Environmental Services  
BLM - Ralph Costa 222 N. Central Ave., Phoenix, AZ 85004-2203 RE: AZA 25797

Page 4  
Sunrise Gold Co.  
November 17, 1999

bc: BLM - Jim Hutchinson 2015 W. Deer Valley Rd. Phoenix, AZ 85027  
AZ Dept. of Mine & Mineral Resources 1502 W. Washington Phoenix, AZ 85007  
AZ State Mine Inspector 1700 W. Washington, Ste. 400 Phoenix, AZ 85007  
AZ State Land Dept. 1616 W. Adams Phoenix, AZ 85007  
ADEQ - Eric Wilson, Manager, Mining Unit  
ADEQ-WQEU Facility File  
ADEQ-WQEU Reading File  
lwo

ARIZONA DEPARTMENT OF MINER. RESOURCES  
Mineral Building, Fairgrounds  
Phoenix, Arizona

1. Information from: Dave Stewart  
Address: 7340 E. Shoeman Lane, Scottsdale, Arizona
2. Mine: Sunrise 3. No. of Claims - Patented 3  
Unpatented 33
4. Location: As shown on maps
5. Sec 14 Tp 5N Range 10 W 6. Mining District Ellsworth, Maricopa County
7. Owner: Stewart Company LTD, Dave Stewart
8. Address: Same
9. Operating Co.: None At Present
10. Address: \_\_\_\_\_
11. President: \_\_\_\_\_ 12. Gen. Mgr.: \_\_\_\_\_
13. Principal Metals: Gold, some Ag 14. No. Employed: \_\_\_\_\_
15. Mill, Type & Capacity: Gravity, projected to be 100 & PD
16. Present Operations: (a) Down  (b) Assessment work  (c) Exploration   
(d) Production  (e) Rate \_\_\_\_\_ tpd.
17. New Work Planned: Hope to get into operating around March when funding is  
obtained.
18. Misc. Notes: They plan a crusher, ball mill, jigs, table at 100 TPD, will mine  
underground. The 4 x 5 ball mill they plan to use probably won't handle  
100 TPD.

Date: December 13, 1979

(Signature)

(Field Engineer)

July 24, 1975

EXPLORATION  
EVALUATION  
DEVELOPMENT  
MANAGEMENT

3418 N. Forgeus Ave.  
Tucson, Arizona

RECONNAISSANCE REPORT

OPHIR, GRANT AND SURPRISE CLAIMS

ELSWORTH MINING DISTRICT, MARICOPA COUNTY, ARIZONA

Location and Property

The Ophir, Grant and Surprise Claims consist of 3 patented lode mining claims located in Sec. 14, T. 5 N., R. 10 W., Elsworth Mining District, Maricopa County, Arizona. This places them about 15 miles south of Agulla and along the southeast side of the Harquahala Mountains about a mile and a half northwest of Tiger Wash.

The Santa Fe Railroad and U. S. Highways 60 and 70 pass through Agulla and Interstate I-10 passes about 15 miles to the south. A well graded county road connects these two highways and passes about 1½ miles east of the property. A good mine road connects the property with the county road in Tiger Wash.

Water is available in Tiger Wash and some has been produced from a well a short distance up-stream in the wash which crosses the claims. The amount is not known.

The basis for this report is a brief visit to the property together with the writer's general knowledge of the area from the examination of other properties nearby.

Geology

The geology of the area consists of typical Basin and Range mountain structures. Mountain blocks have been up-lifted as the result of major faults along their flanks. The Harquahala Mountains and the Big Horn Mountains to the southeast of the claims are examples of this type of range. The internal structure of these ranges is usually complicated folded and faulted structures. The mountain cores customarily consist of crystalline granitic types of rocks and metamorphic rocks cut by a variety of acidic and basic dikes and veins. The veins often are mineralized and usually follow cross-cutting shear zones. Along the flanks

of the ranges may or may not be sedimentary rocks. If they are present, they normally are late Paleozoic carbonates and/or Tertiary volcanics, sandstones and gravels. Recent alluvium frequently over-laps all of the older rocks.

The basins consist of down-dropped blocks flanking the ranges such as the Harquahala Plain to the southwest of the claims or the Aguililla Valley to the northeast. These basins are customarily filled to a considerable depth by Tertiary and Quaternary (Recent) alluvium effectively concealing all older rocks and structures.

Occasionally volcanics break through to the surface.

The rocks underlying the claims consist of Precambrian Yavapai schist which has a strike direction of somewhat east of north and a dip of about  $45^{\circ}$  or less to the east. These Precambrian rocks range in character from mica schists to gneisses. They have been cut by 7 or more major quartz veins which strike somewhat east or west of north and dip about  $75^{\circ}$  to the northeast, thus cutting across the metamorphic structures. Metamorphosed limestone (marble) occurs to the west and southwest of the claims and has been extensively quarried.

Granitic and gneissic rocks are found to the north and west of the claims. The core of the range is probably a Laramide granite and this is probably responsible for the metamorphism of the Paleozoic(?) limestones into marble. It may also be the source of the quartz veins.

The major quartz veins are well developed and strong where noted. They are interconnected with minor quartz veins and stringers which are quite irregular and sharply cut across the metamorphic and shear structures in which the main veins lie. Portions of the minor veins may parallel the older structures.

In places basic dikes cut across the quartz veins, but in general they tend to follow the Precambrian structures and shear structures.

The main quartz veins appear to be controlled by a series of roughly parallel shear zones which have been filled in whole or in part by quartz and quartzose material. The balance of the shear zone is filled with gouge, breccia and blocks of the surrounding rock. The major shear zones are usually several feet to 4 or 5 feet in width. The quartz veins range from a few inches to several feet in width and probably pinch and swell.

The quartz is gray and fractured with locally heavy hematite and limonite (iron oxides) stain. Crystal cavities and

box-works derived from the removal of sulfide minerals through leaching are present from place to place. Some copper carbonate staining is also present.

Free gold is visible along some of the fractures and cavities in the quartz vein. Other free gold is present as individual particles enclosed in quartz. Some gold appears to be present in the hematite residue in the leached cavities and box-works.

The original metal mineralization appears to have been free gold, chalcopyrite and pyrite. Assays show some silver. Manganese oxides are locally present but are not abundant as in the area to the east.

#### Development

The property has 10 or more shafts ranging from an estimated 40 - 60 or more feet deep together with numerous pits, cuts and similar workings. The extent of the underground workings is not known because of inaccessibility.

At one time a small stamp mill was located on the property and processed the ore produced.

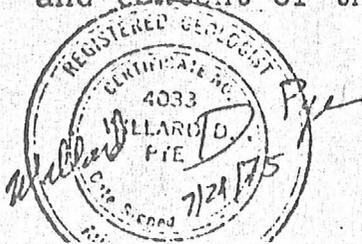
Reports from several sources indicate that the claims at one time produced some good gold ore values, but to date the writer has not located any production or other records. The writer knows from experience connected with similar quartz veins elsewhere in the immediate area that some of these quartz veins may carry good pockets of gold.

The writer did not sample the veins for their gold and/or other metals nor did he have any assays made. However, attached are two assay sheets. One shows 1.98 ounces of silver per ton, 2.740 ounces of gold per ton and 88.7 percent silica. Copper was nil. The other sheet shows gold ranging from nil to 1.22 ounces and silver from nil to 1.25 ounces per ton. The last group of assays were taken from various dumps, outcrops and the tailings from the stamp mill.

#### Conclusions and Recommendations

Based upon the reconnaissance visit to the property it is concluded that property has potential as a gold-silver prospect with numerous mineralized veins on it, therefore, it is

Recommended that further geological exploration be done upon it to further assess its mineral potential and that further sampling be done to determine the distribution and content of the various minerals in the veins.



*Willard D. Pye*  
Willard D. Pye  
Consulting Geologist  
Arizona State Board of  
Technical Registration #4033

# ARIZONA TESTING LABORATORIES

A DIVISION OF CLAUDE E. McLEAN & SON LABORATORIES, INC.  
817 WEST MADISON ST. PHOENIX, ARIZONA 85007

PHONE 254-6181

For Agilis Engineering Company  
325 Howe Street, Room 107  
Vancouver, B.C., Canada

Date May 29, 1974

Sample of Ore

Received: -----

Submitted by: -----

## ASSAY CERTIFICATE

Gold figured at \$ 200.00 per ounce

Silver figured at \$ 5.00 per ounce

LAB. NO.	IDENTIFICATION	GOLD		SILVER		PERCENTAGES	
		OZ. PER TON	VALUE	OZ. PER TON	VALUE		
	<i>Cipitir</i>						
6951	0-1	0.04	\$ 8.00	0.05	\$ 0.25		
	0-2	0.08	16.00	trace			
	0-3	nil		nil			
	0-4 Tailings	0.62	124.00	0.20	1.00		
	0-5	0.01	2.00	0.05	0.25		
	0-6 Ore Pile	0.40	80.00	0.10	0.50		
	#2	1.22	244.00	1.25	6.25		
	3L1- R1	nil		2.65	13.25		
	Top	0.06	12.00	0.35	1.75		
	<i>another property</i>						

Respectfully submitted,

ARIZONA TESTING LABORATORIES

*Claude E McLean Jr*

Claude E. McLean, Jr.

FORM 12 A K. P. S.

# INSPIRATION CONSOLIDATED COPPER COMPANY

SMELTING DEPARTMENT

ASSAY CERTIFICATE

Inspiration, Arizona

Name Mojave Minerals, George Adeline, Box 743, Carefree, Ariz.

Class Prospect Lot SAMPLE BULK SHIPPING Date October 18 1974

Smelter Lot	Per Ton of 2000 Lbs.		Per Cent Copper	Per Cent Insoluble	Per Cent Si O <sub>2</sub>	Per Cent Al <sub>2</sub> O <sub>3</sub>	Per Cent Fe	Per Cent CaO	Per Cent S	Per Cent
	Oz. Silver	Oz. Gold								
<u>HARD QUARTZ NEW BATCHES</u>	<u>198</u>	<u>2740</u>	<u>TR</u>		<u>887</u>	<u>18</u>	<u>58</u>	<u>07</u>	<u>01</u>	

*[Signature]*

Chief Chemist

## GENERAL INFORMATION

### OPHIR, GRANT AND SUNRISE MINES

The property is located about 100 miles northwest of Phoenix, Arizona; it is 14 miles south of Aguila, Arizona, on a well-kept county road that runs within two miles of the property. There are good roads to the property and throughout the property.

Each claim covers 20 acres, three are patented, that is held in fee, and 33 unpatented claims plus a mill site. These claims are located on government land, and to retain title it is only necessary to do a minimum amount of development or assessment work. These unpatented claims surround the patented claims and are a kind of a buffer between our property and others.

We do not know when these mines were first worked. There was at one time a stamp mill on the property which crushed the ore and then the gold and silver were removed. There is no evidence of what kind of mining equipment that was used; it appears that it was very primitive, in comparison to modern mining methods.

A person can see that thousands of tons of ore have been removed from the various shafts; those who did this did something with the ore that was removed and evidently made money doing it.

The first thing that strikes a person in looking over the area is that there are no tailing (waste) dumps anywhere. We can only conclude that someone assayed these dumps, found value, and hauled them away to a mill and a refinery. The work that has been done can be considered by us as exploratory since their work opened up the various ore bodies which are now ready to mine.

This type of mining stopped at the start of WW II. This property lay dormant until 1976 when the price of gold and silver began to climb. The owners of these patented claims were up in years and were well off financially and weren't interested in beginning a mining operation.

In 1976, a group of 'Novice' mine developers came along. They obtained a lease on this property and three other mining properties scattered over the State of Arizona.

They immediately filed on the 33 unpatented claims plus a mill site. They brought in a dozer and cut a good road from the county road to the claims and then cut roads throughout the claims to all the open shafts. They set up a water system for the mill, brought in a crusher and ball mill and a placer table. They built the headframe and collared the #4 shaft, put down ladders to the 100 foot level, laid track for the skip loader to the bottom of the shaft, installed electrical and air lines throughout the mine and took less than one ton of ore out of the mine. They ran out of money and put their equipment up for sale.

If they got any advice at all, it was mostly bad. Had they had sufficient funds to proceed they wouldn't have been able to extract any gold or silver from the ore, they had the wrong kind plus insufficient equipment for their mill.

They gave up their lease plus the unpatented claims. We a few months later leased the property with an option to purchase.

Prior to entering into any agreements to obtain this property we consulted with many people, including Dr. Pye, the geologist, made our own inspections, consulted with a mining engineer then we entered into the lease-option agreements.

The conclusions of all knowledgeable men we have discussed this property, they agree, that thousands of tons of ore is present, its free milling gold, that its comparatively low grade ore.

We then went to a mining and chemical engineer and retained him to aid us in selecting the proper milling and mining equipment, and to set the mill up functioning properly for us. This man has his own precious metals refinery, and he will probably be the one who does the refining of our concentrates.

There are experienced mill operators available, but only after the mill is properly set up. There are also experience miners in the area. We have retained the services of a man who has had over thirty years experience in underground mining, as a miner, foreman and mine superintendant to be in charge of the underground mining. The veins and the ore bodies are well defined both on the surface and underground and these can be followed without difficulty.

The #4 shaft, where we will begin operations, is sunk on one of the ore veins, we believe this shaft is from 250 to 300 foot deep, it is cleaned out with the track and air and electrical lines down to 35 feet below the 100 foot level. At the 50 and 100 foot levels drifts (tunnels- 5X7') run off the shaft in two directions following the veins for about 50'.

The miners drill the ore vein, they could drill up, down or straight ahead, then they blast out the ore which is then removed to the skip loader that is waiting to be loaded in the shaft, by the slusher. A slusher is a air driven shovel, like a drag-line, that by the use of a bucket and two cables brings the ore from the tunnel to the skip loader in the shaft. This slusher is sufficiently portable that it can be moved from drift to drift, level to level and it provides a quick inexpensive way of loading the ore.

When the ore is loaded into the skip, it is taken to the top and dumped into an ore bin that is connected with a chute to the initial crusher.

The ore then is crushed to a designated fineness, by our mining engineer, from the crusher the ore goes into a jig, a jig is a piece of equipment that separates the gold nuggets from the ore.

From the jig the ore goes to the first ball mill, it grinds up the ore again, from here the ore goes to a classifier, this sends the coarse material to the second ball mill and the fine material goes to the finishing tables. The finishing tables separates the gold bearing particals from the other material. There are three types of material that comes off the finishing tables, the tailings(waste) however assays are made of the tailings to determine whether we are extracting all the precious metals. The next material that comes off the tables are the middleings, this material contains some precious metals and is pumped back to the ball mill to be reground and rerun over the tables. The third material is the concentrates, these should assay about one ounce of gold per pound. So in one eight hour shift, we would recover only about 30 pounds of gold concentrates.

The gold concentrates go from the table into a container, which is then locked with two padlocks. We have one key the refiner has the other. We take the concentrates to the refinery, the container is opened and a cut (sample) is taken fro the concentrates. We divide the cut, he does his assay, we have ours done by a public assayer. When the results are back, if they are the same, we then unlock the container, turn the concentrates over to the refiner to refine and sell the gold. At this time we receive payment for one-half of the value of the concentrates as determined by the assays. The balance due us will be paid when the concentrates are refined and sold. The time elapsing here depends on how busy the refiner is.

Later when we have paid off our encumbrances, which now are only \$20,000 for the equipment and \$3,000 for the compressor and having built up a satisfactory reserve, we will distribute the profits directly to the partners in whatever manner they chose, cash, gold bullion or concentrates. Your tax attorney should be consulted about the method that is the best for you.

The investors share of the investment credit tax benefits are available to the limited partners.

Depletion and depreciation on equipment allowances are also available to the partnership.

## MINE

### Equipment Needed for the Underground Mine

1. Stoper, drills, hoses, etc.	\$ 900	to \$ 1,500
2. Compressor, 310 CFM (\$4,000) dn. Balance in 6 months.	1,000	1,000
3. Slusher, two buckets	2,000	2,000
4. Blower	200	300
5. Welding and Cutting Equipment	200	200
6. Explosives, fuses, etc.	500	500
7. Hand Tools	300	500
8. Misc. hard hats, wiring, lights, etc	300	500
9. Ore Bin	300	500
	<u>\$5,700</u>	<u>\$7,000</u>

### Equipment Supportive

1. Steel cable for hoist, 350'
2. Motor for hoist (electric or air)
3. Water lines
  - a. To the different levels in the mine
  - b. From the well to the water tanks

We have no figures for the supportive equipment, the cable is about .75 pr foot, we may have an electric motor that we can use on the hoist, and the water lines are plastic.

ESTIMATED ORE RESERVES  
ORPHIR, U.S. GRANT, SUNRISE MINES

DEFINITIONS:

1. Proven Ore: Measured Blocked out ore; is determined from exposure in outcrops, cuts, pits, shafts, mine workings, drill holes and otherwise where measurements are so closely spaced that the computed tonnage will have a high degree of accuracy.
2. Indicated Ore: Probable; is computed upon observable data which are projected for a reasonable distance on the basis of geological evidence and the tonnage computed is reasonably assured but not absolutely certain.
3. Inferred: Possible Ore; is computed largely on broad knowledge of the geological environment and the character of the mineralization. Few measurements are available. The computed tonnage is a reasonable estimate rather than a quantitative amount.

BASIS OF THIS REPORT

1. Geology: Dr. Pye's report, page 2, says that "They have been cut by seven or more major quartz veins---". "The major veins are well developed and strong where noted" "The quartz veins range from a few inches to several feet in width." And on Page 3: "Free Gold is visible along some of the fractures and cavities of the quartz vein, other free gold is present as individual particles enclosed in quartz."

" - --- it is concluded that the property has potential as a gold and silver prospect with numerous mineralized veins on it ---".

CONCLUSION AS TO GEOLOGY

1. Gold and Silver are present in numerous mineralized veins.

## 2. OBSERVATION

1. Seven or more veins that can be observed and followed on the surface for distances that range from a few hundred feet to over 2000 feet.

2. The surface width of the veins vary in width to less than a foot to over five feet.

3. Underground: #4 shaft has been opened to a depth of 135 feet the vein there is over two and one-half feet wide. This vein connects to another shaft that is about 600 feet from #4 shaft and is 150 deep and the vein here is about three feet wide.

CONCLUSION: This vein extends downward at least 135 feet and maintains a width of at least two and one-half feet. and is visible on the surface several hundred feet beyond each shaft.

## ESTIMATED ORE RESERVES

1. Proven Ore:	1000 Length	in feet
	135 Depth	
	<u>2.5 Width</u>	
	337,500	Cubic feet

337,555 cubic feet X 206.5 (weight per cubic foot) = 69,693,750 lbs.  
divided by 2000 (pounds per ton) = 34,846 tons of Proven ore.

### 2. Indicated (Probable Ore)

Six veins, averaging 1000 feet in length, average depth, from cuts and shafts 50 feet, average width two and one-half feet.

6000 Length	in feet
50 Depth	
<u>2.5 width</u>	
750,000	cubic feet

750,000 cubic feet x 206.5 (weight of ore in place) = 154,875,000 lbs  
divided by 2000 pounds = 77,437 tons of Probable Ore.

### 3. Inferred (Possible Ore)

1. From the one vein discussed under Proven Ore; By extending vein downward an additional 200 feet, (an old timer says the #4 shaft is 350 feet deep) since the veins widen at the lower level we can conclude that it will remain the same or wider.

2 times the proven ore, 34,846 tons = 69,692 tons

2. From the six veins discussed under Probable Ore: We can extend these downward, almost on a Probable basis for an additional 235 feet or  
363, 780 Tons of Possible Ore

#### Summary of Estimated Ore Reserves:

1. Proven Ore	34,846
2. Probable Ore	77,437
3. Possible Ore	433,472
Total Estimated Ore Reserves:	545,755 Tons

There are other veins on the surface which can be observed, no attempt has been made to compute this tonnage.

## OPHIR, GRANT AND SUNRISE MINES

Development work already completed on the property

1. Eleven shafts all sunk on surface veins, their depth range from 12 to 250 feet deep.
2. One shaft, #4, is over 200 feet deep, has a concrete base around the opening, a headframe is in place, with steel track down to the 100 foot level, an ore skip loader. The air and electrical lines are in to the 100 foot level with four drifts ready to work, two on the fifty foot level and two on the 100 foot level.
3. Roadways are in throughout the property; there is sufficient water on the property, two streams plus a well and windmill, to supply a 100 ton a day mill.

The funds necessary to develop the property to its present workable condition would be well over \$500,000.

MILL

The following equipment is necessary to place the mill in production, with a capacity of 100 tons of ore per day.

This equipment is on the property:	Market Value
1. TD International Dozer	\$ 5,000
2. 150 KW Diesel Generator	18,000
3. 45 KW Diesel Generator	2,200
4. Rock Crusher, which contains	
a. Primary Crusher (12 X 24" Jaws)	
b. Secondary Crusher	
c. Primary Rolls	
d. Secondary Rolls	
e. Conveyer or Elevator	
f. Panel Board, 120,220,440 Volts	
g. Trommel and Feeders	35,000
5. 3' X 5' Ball mill on 40' trailer	8,000
6. 1969 GMC Dump Truck, 5 yards	2,000
	<u>\$70,200</u>

We can purchase this equipment for \$50,000, if we pay \$30,000 down the balance in six months.

Additional Equipment needed for Mill;

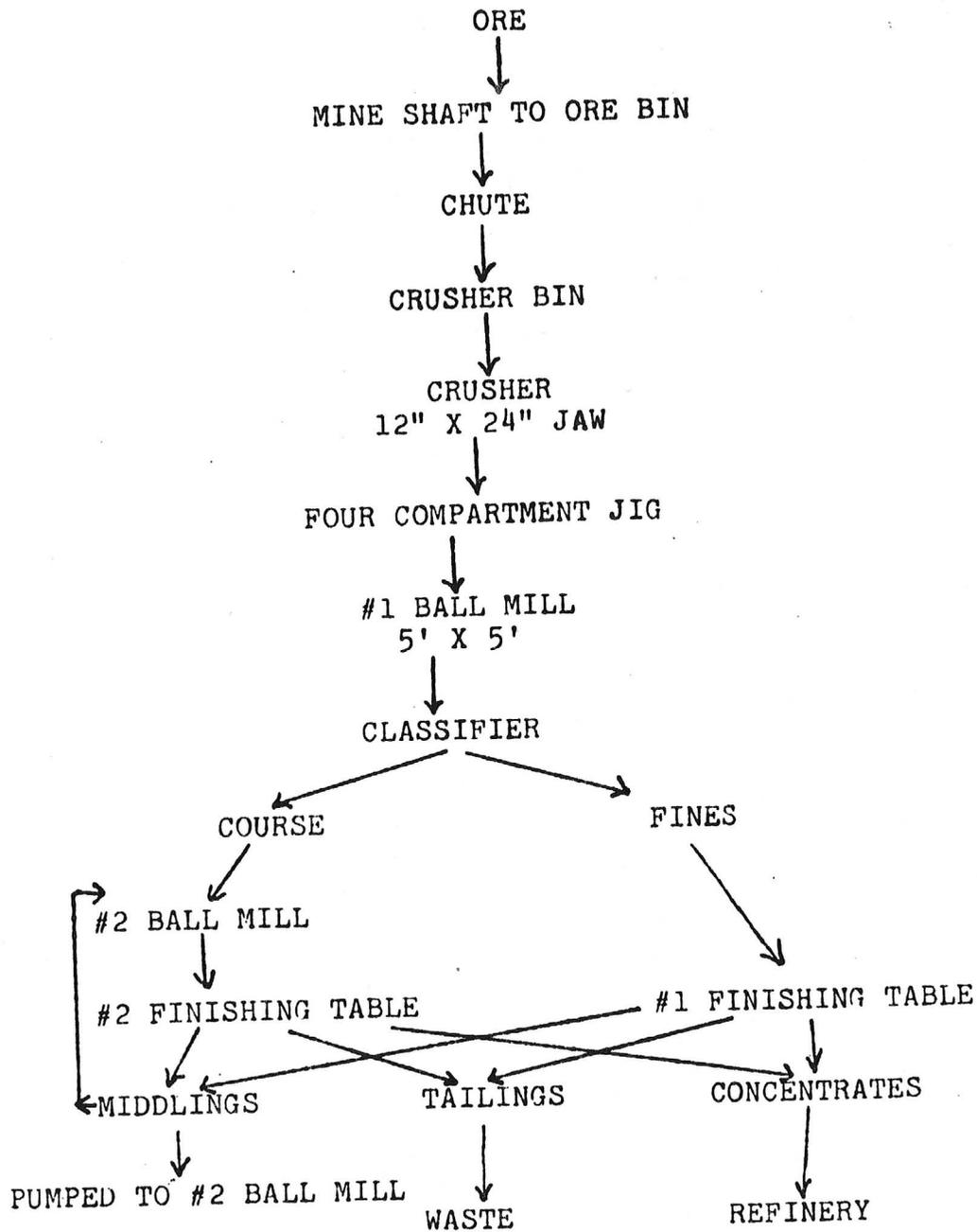
	COSTS	
1. Classifier	\$ 3,500	to \$ 4,500
2. Two Wilfley Finishing Tables	2,000	4,000
3. Ball Mill ( 5' X 5')	6,500	8,500
4. Four Compartment Jig	1,600	2,200
5. Two Conveyers	3,000	5,000
6. Two Pumps	600	1,600
	<u>\$17,200</u>	to \$25,800

Most of the additional equipment has been located. We feel that if we have cash in hand we can obtain this equipment at a price we are willing to pay. After the Mill is in, we feel that we will probably need two additional finishing tables. But these can be purchased after we have sold some of our products

Total Funds needed to place the mill in production:

1. Down payment on equipment that is on property:	\$ 30,000
2. Additional Equipment (high figure)	25,800
	<u>\$ 55,800</u>

FLOW SHEET  
GOLD CONCENTRATOR



## COST SUMMARY

1. Down payment on mill, equipment on property:	\$30,000
2. Additional Mill equipment	25,800
3. Equipment for Mine	7,000
4. Labor, Supervision and Miscellaneous	<u>5,000</u>
	\$67,800

With the expenditure of the above funds, the mine and mill will be ready to begin production. We have taken the high figures in estimating the cost of the additional mine and mill equipment.

At this point the total sums owed by the Partnership will be \$20,000 due on the mill and \$3,000 owed on the compressor and we have six months to retire these debts.

### TIME: From Funds to Production

1. Mine; Two weeks
2. Mill; Three weeks

Required Funds:	\$100,000
Expenditures	<u>67,800</u>
Reserve:	\$ 32,200

## DAILY PRODUCTION PROJECTION

1. The mine production will be limited to the capacity of the mill, or 100 tons of ore per day.
2. The ore through out the property should average .30 ounces per ton recoverable or 30 ounces of gold bullion per day.
3. Cost of Mining, \$10.00 per ton or \$ 1,000
4. Cost of Milling, \$10.00 per ton or 1,000
5. Overhead, Insurance and Misc., \$5.00 per ton or 500  
Daily on Site Costs: \$ 2,500
6. Refining and Sales, 10% of the gold recovered three ounces or \$ 1,050

We will assume the price of refined gold at \$350 per oz.

### Summary

1. 30 ounces of Gold at \$350 per ounce = \$10,500
2. On Site Costs= 2,500
3. Refinery and Sales Costs= 1,050
4. Royalty Payments 945  
Daily Net Profit= \$ 6,005

(Royalty payments are 10% of the net refinery returns or \$10,500 gross minus \$1,050 = \$9,450, 10% of \$9,450 = \$945.)

The mine and mill will work five days per week, eight hours per day and that is what the above projection is based upon.

When the mine and mill are in operation for awhile we propose to add one additional shift in the mine and two additional shifts on the mill. Sufficiently trained help, on the mill, will be available at this time. This will of course almost triple our production.

It must be understood that these gold bearing veins pinch and swell, that is they narrow in places and widen in others. We will strike sections where there will be only a trace of gold per ton, then there will be sections where the gold will run four or maybe eight ounces per ton. What we have projected is a realistic average.

INVESTORS ANTICIPATED RETURNS  
ON LIMITED PARTNERSHIP UNITS

A

		Anticipated Net Profits are based on 100 tons per day		
		PER DAY	* PER MONTH	* PER YEAR
1.	Estimated profit one shift (see report)	\$ 6,005	\$ 120,100	\$1,441,200
2.	Investment Increments:			
a.	\$100,000 = 40% Ownership	2,402	48,040	576,480
b.	50,000 = 20% Ownership	1,201	24,020	288,240
c.	30,000 = 12% Ownership	721	14,412	172,944
d.	20,000 = 8% Ownership	480	9,608	115,296

B

		Based on 180 tons per day		
3.	Total Estimated Profit Two Shifts:			
	180 Tons = 54 Ounces At \$350 per ounce = \$ 18,900 gross			
	Less on site costs; \$2,500 X 2 = \$5,000			
	Less refinery and sales 10% = 1,890			
	Less Royalty, \$18,900-\$1,890 = 1,701	8,591		
		\$10,309	\$ 206,180	\$2,474,160
4.	Investments Increments			
a.	\$100,000	4,124	82,472	989,644
b.	50,000	2,062	41,236	494,832
c.	30,000	1,237	26,474	296,899
d.	20,000	825	16,494	197,933

C

		Based on 250 tons per day		
5.	Total Estimated Profits Three Shifts:			
	250 tons = 75 ounces at \$350 per ounce = \$26,250 gross			
	Less on site costs; \$2,500 X 3 = \$7,500			
	Less refinery & sales 10% = 2,625			
	Royalty, \$26,250-\$2,625 10% = 2,363	12,488		
		\$13,762	\$275,240	\$3,302,880
6.	Investment Increments			
a.	\$100,000	5,505	110,096	1,321,152
b.	50,000	2,752	55,480	660,576
c.	30,000	1,652	33,029	396,346
d.	20,000	1,101	22,019	264,230

\* 20 day Month

\* 240 day year

## RESUME

WILLARD D. PYE

### PERSONAL DATA

Willard Dickison Pye

Office Address: 3418 N. Forgeus Ave., Tucson, Arizona 85716

Home Address: 3418 N. Forgeus Ave., Tucson, Arizona 85716

Born: February 20, 1915

### TRAINING (College and University)

Oberlin College, Oberlin, Ohio  
A.B., 1935

California Institute of Technology, Pasadena  
M.S., 1937

University of Chicago, Ph.D., 1942

### FIELDS OF SPECIALIZATION

Undergraduate: Geology and Mathematics majors; Physics and Chemistry minors.

Graduate (M.S.): Geophysics and Economic Geology (ore deposits)

Graduate (Ph.D.): Petroleum, Ore Deposits, and Sedimentation

### SCHOLASTIC HONORS

President, Geology Club, 1934-35

Phi Beta Kappa, 1935

Sigma Xi, 1937

Virgil Kirkham Fellowship in Geology (University of Chicago) 1940-42

### PROFESSIONAL LICENSES

Arizona State Board of Technical Registration (Consulting Geologist) No. 4033

California State Board of Registration for Geologists No. 2654

### REFERENCES

Who's Who in America

American Men of Science

Who's Who in American Education

Various oil, geological, and other directories

## POSITIONS

Consulting Geologist: Full time 1970 – present; also, for short periods at various times from 1935 – 1970.

Professor of Geology, Department of Geology, University of Arizona, Tucson, Arizona, 1957 – 1970.

Chairman and Professor, Department of Geology and Geography, North Dakota State University, Fargo, North Dakota, 1947-57.

Executive Secretary, Yellowstone-Bighorn Research Association, 1954-55.

National Science Foundation Research Associate – Research Northern Great Plains, 1953-54.

Research Geologist, Princeton University, 1953-54.

Director, Elk Basin Geological Summer Field Camp, 1953-54.

The Texas Company, Rocky Mountain Division Research Geologist – special geological problems, 1946-47.

The Texas Company, in charge Idaho-Utah District, 1943-46.

National Defense Research Corporation (N.D.R.C.) - In charge classified research, for Chemical Warfare Service, 1942-43.

Illinois Geological Survey, Research Assistant, 1940-42.

University of Chicago, Instructor, 1940-42.

Carter Oil Company, Geologist, 1937-40 (Now part of EXXON corporation)

U.S. Soil Conservation Service, Sedimentation Research, 1936-37.

California Institute of Technology, Graduate Instructor, 1935-37.

Shell Oil Company, Geophysicist, 1936.

Oberlin College, Laboratory Assistant, 1933-35.

## OTHER NON-COMMERCIAL ACTIVITIES (selected)

Arizona Oil and Gas Commission, Advisor, 1964-1970.

National Petroleum Council, Committee on Future Petroleum Resources of the United States, Southern Arizona and New Mexico district; also, reviewer of papers on Arizona, Utah, Western Colorado, Western New Mexico and Nevada – 1969-1970.

Director, Arizona Oil and Gas Association, 1961 – present;  
President 1965-66.

Director, International Geophysical Year (I.G.Y.) Aurora and Airglow studies, Northern Great Plains, 1956-57.

Director, North Dakota Institute of Regional Studies, 1956-57.

Secretary and Director, Red River Valley Investment Fund, 1957-58.

President, Northwest Investors Research, 1956-57.

Delegate and consultant to National Science Foundation conference on geology in colleges with small geology departments, 1953.

**SOCIETY MEMBERSHIPS (Scientific and Professional – both current and former)**

National and Regional

American Association of Petroleum Geologists  
American Institute of Mining and Metallurgical Engineers  
Geological Society of America  
Seismological Society of America  
Sigma Xi  
Society of Economic Paleontologists and Mineralogists  
Society of Exploration Geophysicists

**SOCIETY OFFICES AND COMMITTEES**

American Association of Petroleum Geologists

Committee on Stratigraphic Correlations, 1959-63  
Carbonate Rock Sub-Committee, of Research Committee, 1959-61  
Committee for Preservation of Samples and Cores, 1959-60  
Research Committee on Subsurface Reservoir Conditions, 1948-51

American Geological Institute

Chairman, Glossary Committee on Sedimentation, 1951-56  
Chairman, Glossary Committee on Paleogeography, 1951-56  
Chairman, Educational Committee for North and South Dakota and Montana, 1950-54

Arizona Geological Society – Geological Society of America, Cordilleran Section

Chairman, Registration and Arrangements Committee, 1958 Joint Meeting  
Editor, Stratigraphic Papers, 1959 Joint Meeting Guidebook  
Field Trip Leader (Stratigraphic Trip), 1959 Joint Meeting

Arizona Oil and Gas Association

Director, 1961 – present  
President, 1965-66  
Chairman various committees (Speaking, Membership, Public Relations, etc.) 1961 – present  
Chairman, Arizona Mineral Information Planning Committee, 1962-64

Society of Economic Paleontologists and Mineralogists

Research Committee, 1957-61  
Co-chairman, Research Fund Committee, 1959-60  
Steering Committee representing Society of Economic Paleontologists and Mineralogists to  
American Geological Institute Glossary Committee, 1953-58

Miscellaneous

Chairman, Research Committee, American Association of University Professors, 1951-52

Field Trip Leader, New Mexico Geological Society, Black Mesa Trip, 1958

Research Committee, North Dakota Geological Society, 1951-53

Chairman, Research Committee, Wyoming Geological Society, 1946-68

**PUBLICATIONS**

Author of approximately 50 publications on various topics including, oil and gas, coal, helium, oil shales, metallic and non-metallic mining, sedimentation, stratigraphy, paleogeological and tectonic studies, drilling and reservoir engineering, geophysics and related topics.

**TRAVEL**

Geological work and/or travel throughout the United States and most of the provinces of Canada. Geological work in Mexico, northwestern South America, and travel and geological work throughout Europe, Near and Middle East and North Africa.

This exhibit is incorporated into that Mining Lease and Option dated September 21, 1979 wherein GEORGE EDELINE and MABEL STEINEGGER are "Lessor" and THE STEWART COMPANY, LTD., is "Lessee." The "Mining Claims" are situated in the Ellsworth Mining District, Maricopa County, Arizona, and the patents are recorded in the Office of the County Recorder of Maricopa County, Arizona, in the Dockets and Pages as follows:

<u>Name</u>	<u>Docket</u>	<u>Page</u>
Orphir	6165	172
U. S. Grant	6165	176
Sunrise	6165	180.

Subject to legal ingress and egress over said lands to property known as Harquahala Limestone Claims No. 1 and 2 located in Section 10, Township 5 North, Range 10 West and Harquahala Limestone Claim No. 3 located in Section 11, Township 5 North, Range 10 West, Gila and Salt River Base and Meridian.

*J.E.  
M.P.  
A.S.*

The "MINING CLAIMS", also include all other patented or unpatented Mining Claims which may hereinafter be acquired by Lessor or Lessee in surrounding additional property or within one (1) mile of the outside perimeter of the foregoing Patented Claims as herein described.

Assay averages of the #1, 2, and 4 Shafts ORPHIR Mine, exposed on the 50 foot and the 100 foot levels.

SHAFT #	Width in Feet of sample	ASSAY	AVERAGE GOLD PER FOOT
1 & 2	1 1/2	.404 X 1 1/2 =	.606
"	1 2/3	.222 X 1 2/3	.370
"	1 2/3	.258 X 1 2/3	.430
"	1 1/2	.014 X 1 1/2	.021
"	1	.015 X 1	.015
<hr/>			<hr/>
1 and 2	7.332		1.442

( 1.442 OZ. divided by 7.332 feet = .1966721 )

4	5/6	1.472 X 5/6 =	1.223
"	3.	.240 X 3.	.720
"	5/6	.148 X 5/6	.123
"	5/6	.230 X 5/6	.192
"	1/2	.015 X 1/2	.008
"	2.	.018 X 2.	.216
"	3.	.180 X 3.	.540
"	1 1/2	.998 X 1 1/2	1.497

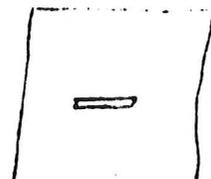
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4 12.4999 FEET 4.519 OZ.

( 4.519 OZ. divided by 12.4999 FT. = .3615228 )

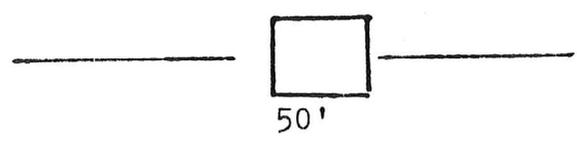
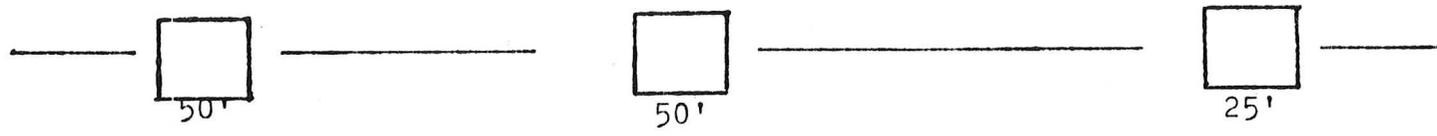
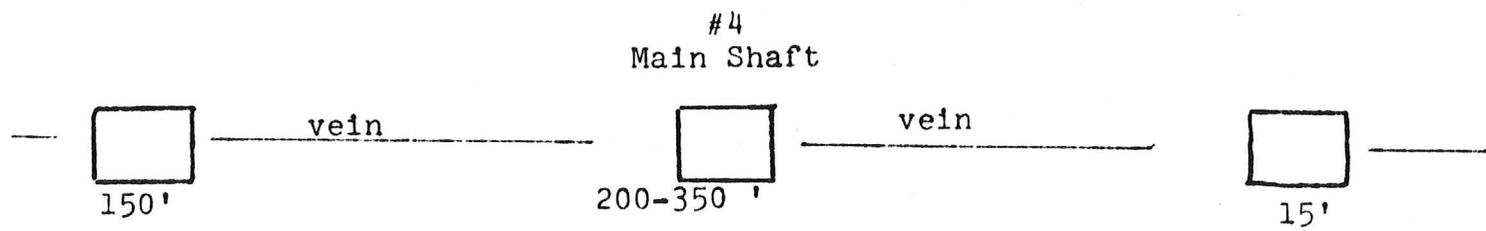
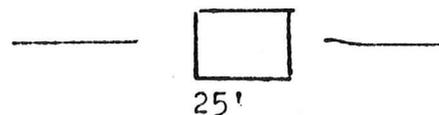
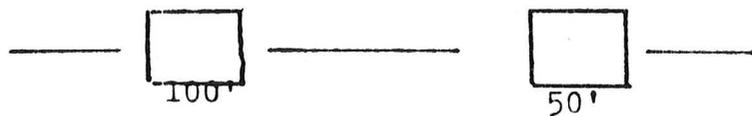
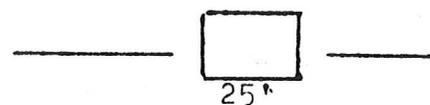
1 and 2 SHAFTS	1.442 OZ.	7.332 FEET	=	.1966721 OZ FEET
4	4.519 "	12.499 "	=	.3515228 " "
<hr/>				<hr/>
1,2, and 4	5.961 OZ.	19.8319 FT.	=	.3005763 AVG. OZ.

These are Channel assays,

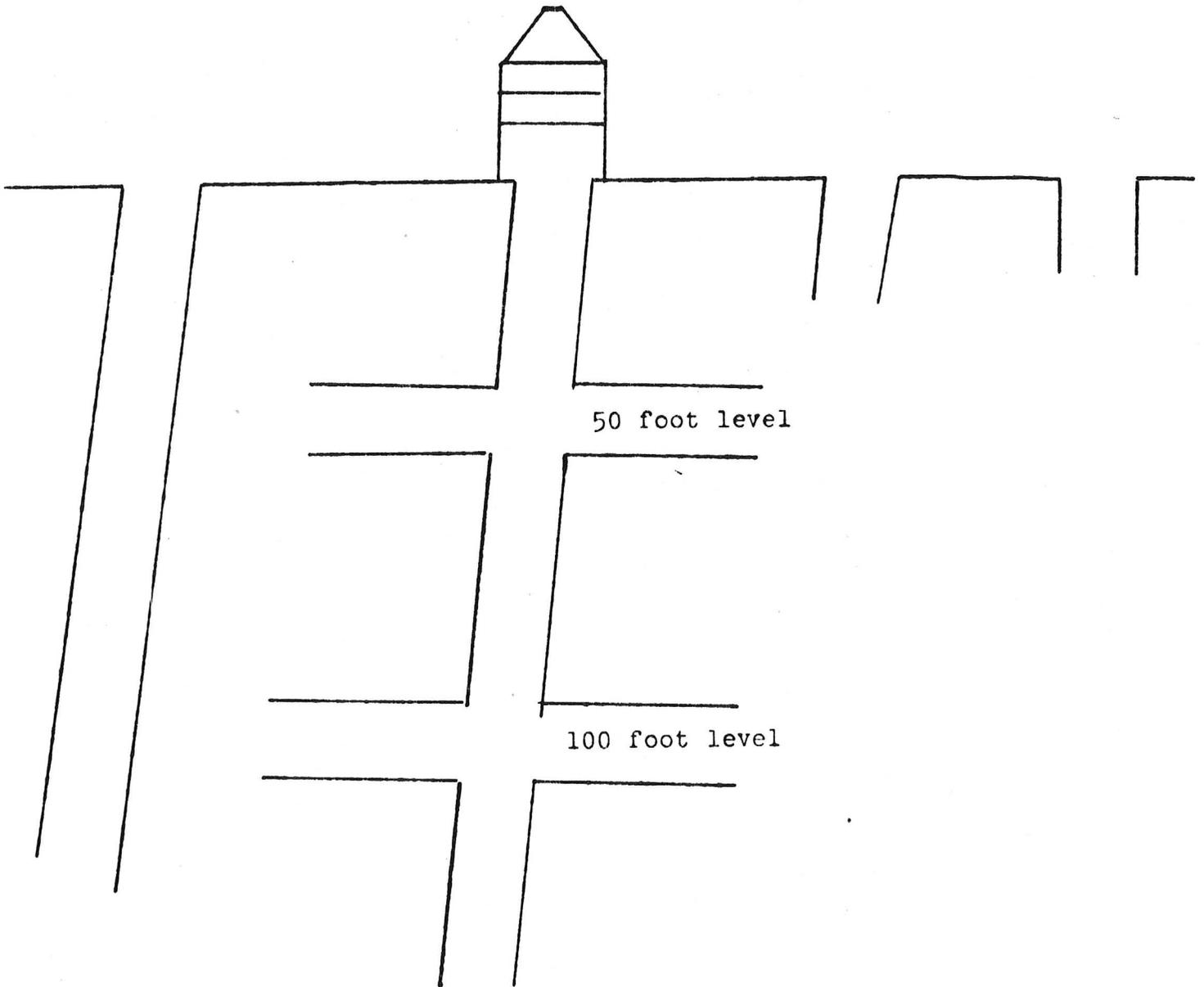




DETAILS OF SHAFT LOCATIONS AND DEPTHS  
SHOWING EXPOSED SURFACE VEINS



CROSS-SECTION OF #4 SHAFT, SHOWING THE HEADFRAME AND THE ANGLE OF THE SHAFTS WHICH FOLLOW THE VEIN DOWNWARD. THE DRIFTS EXTEND FROM THE SHAFT FOR APPROXIMATELY 50' IN EACH DIRECTION FOLLOWING THE VEIN.



zc 9  
640

N. 0° 01' W.

Sec 10  
640

Sec 11  
637.79

Sec 12  
640

N. 0° 01' W.

19° 58' W.  
79.94

N. 89° 44' W.  
80.10

Spring

0.44  
9.47

N. 0° 01' W.

Sec 15  
640

37.79  
37.74  
24.79  
39.98  
582.42

N. 89° 50' W.  
79.88

Sec 13  
640

N. 0° 01' W.

zc 16  
640

N. 0° 01' W.

19° 51' W.  
80.06

N. 89° 47' W.  
80.06

N. 89° 50' W.  
79.90

N. 89° 54' W.  
79.88

Sec 23  
640

Sec 24  
640

N. 0° 01' W.

zc 21  
640

N. 0° 01' W.

19° 5

N. 89° 50' W.  
79.98

N. 0° 01' W.

NORTH

# ARIZONA TESTING LABORATORIES

A DIVISION OF CLAUDE E. McLEAN & SON LABORATORIES, INC.  
817 WEST MADISON ST. PHOENIX, ARIZONA 85007

PHONE 254-6181

For Agilis Engineering Company  
325 Howe Street, Room 107  
Vancouver, B.C., Canada

Date May 29, 1974

Sample of Ore  
Submitted by: -----

Received: -----

## ASSAY CERTIFICATE

Gold figured at \$200.00 per ounce

Silver figured at \$ 5.00 per ounce

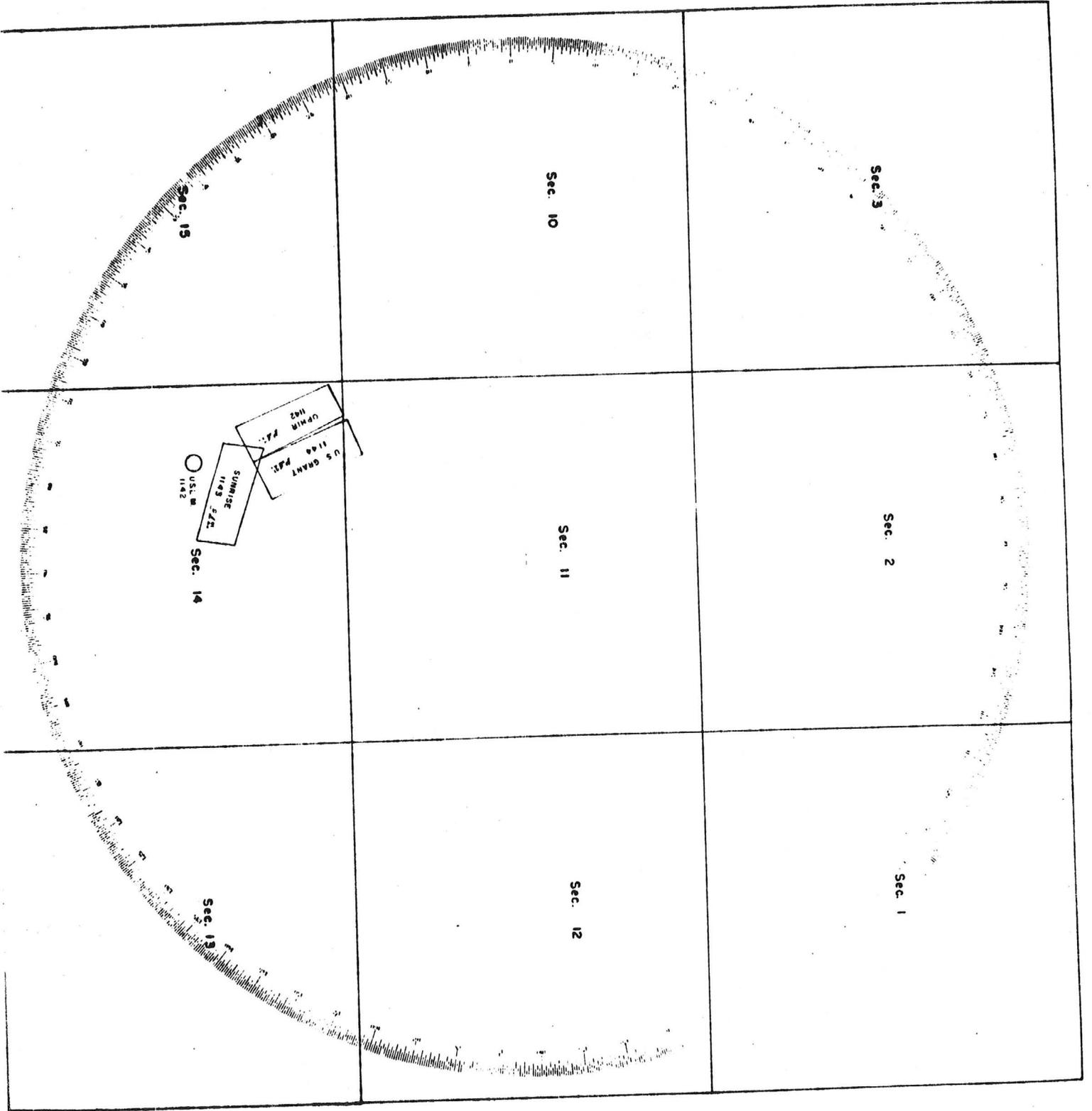
LAB. NO.	IDENTIFICATION	GOLD		SILVER		PERCENTAGES	
		OZ. PER TON	VALUE	OZ. PER TON	VALUE		
	<i>Ciphir</i>						
	<i>Sample 1715-e</i>						
6951	0-1	0.04	\$ 8.00	0.05	\$ 0.25		
	0-2	0.08	16.00	trace			
	0-3	nil		nil			
	0-4 <u>Tailings</u>	<u>0.62</u>	124.00	0.20	1.00		
	0-5	0.01	2.00	0.05	0.25		
	0-6 Ore Pile	0.40	80.00	0.10	0.50		
	#2	1.22	244.00	1.25	6.25		
	3L1- R1	nil		2.65	13.25		
	Top	0.06	12.00	0.35	1.75		
	<i>another property</i>						

Respectfully submitted,

ARIZONA TESTING LABORATORIES

*Claude E. McLean, Jr.*

Claude E. McLean, Jr.



FORM 12 A K. P. S.

# INSPIRATION CONSOLIDATED COPPER COMPANY

SMELTING DEPARTMENT  
ASSAY CERTIFICATE  
Inspiration, Arizona

Name Major Mineral, George Adeline, Box 743, Campree, Ariz.  
 Class Product Lot SAME AS SHIPPED Date October 18 1974

Smelter Lot	Per Ton of 2000 Lbs.		Per Cent Copper	Per Cent Insoluble	Per Cent Si O <sub>2</sub>	Per Cent Al <sub>2</sub> O <sub>3</sub>	Per Cent Fe	Per Cent CaO	Per Cent S	Per Cent
	Oz. Silver	Oz. Gold								
<u>119 GORRYZ</u>	<u>198</u>	<u>2740</u>	<u>Tol</u>		<u>887</u>	<u>18</u>	<u>58</u>	<u>07</u>	<u>02</u>	

[Signature]  
Chief Chemist

zc 9  
640

Sec 10  
640

Sec. 11  
637.79

Sec. 12  
640

19° 58' W.  
79.94

N. 89° 44' W.

N. 89° 55' W.

N. 89° 50' W.

80.10

Spring

0.44

9.47

37.79

40

79.86

79.88

zc 16  
640

Sec 15  
640

39.98

Sec 14  
582.42

Sec 13  
640

19° 51' W.  
90.06

N. 89° 47' W.

80.06

N. 89° 59' W.

79.90

N. 89° 54' W.

79.88

zc 21  
640

Sec 23  
640

Sec 24  
640

19° 5

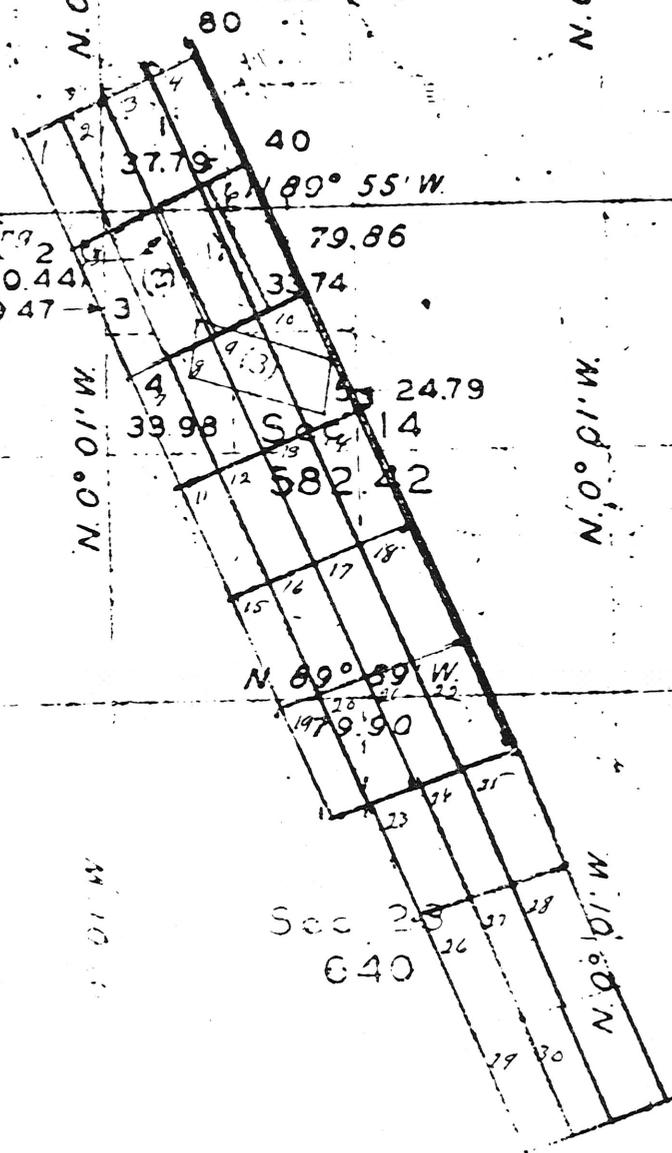
N. 89° 50' W.

79.98

N. 0° 01' W.

NORTH

INTE  
Sec



zc 9  
640

Sec 10  
640

Sec. 11  
637.79

Sec. 12  
640

19° 58' W.  
79.94

N. 89° 44' W.

N. 89° 55' W.

N. 89° 50' W.

80.10

Spring

79.86

79.88

zc 16  
640

Sec 15  
640

39.98

582.42

Sec 13  
640

19° 51' W.  
90.06

N. 89° 47' W.

N. 89° 59' W.

N. 89° 54' W.

80.06

1979.90

79.88

zc 21  
640

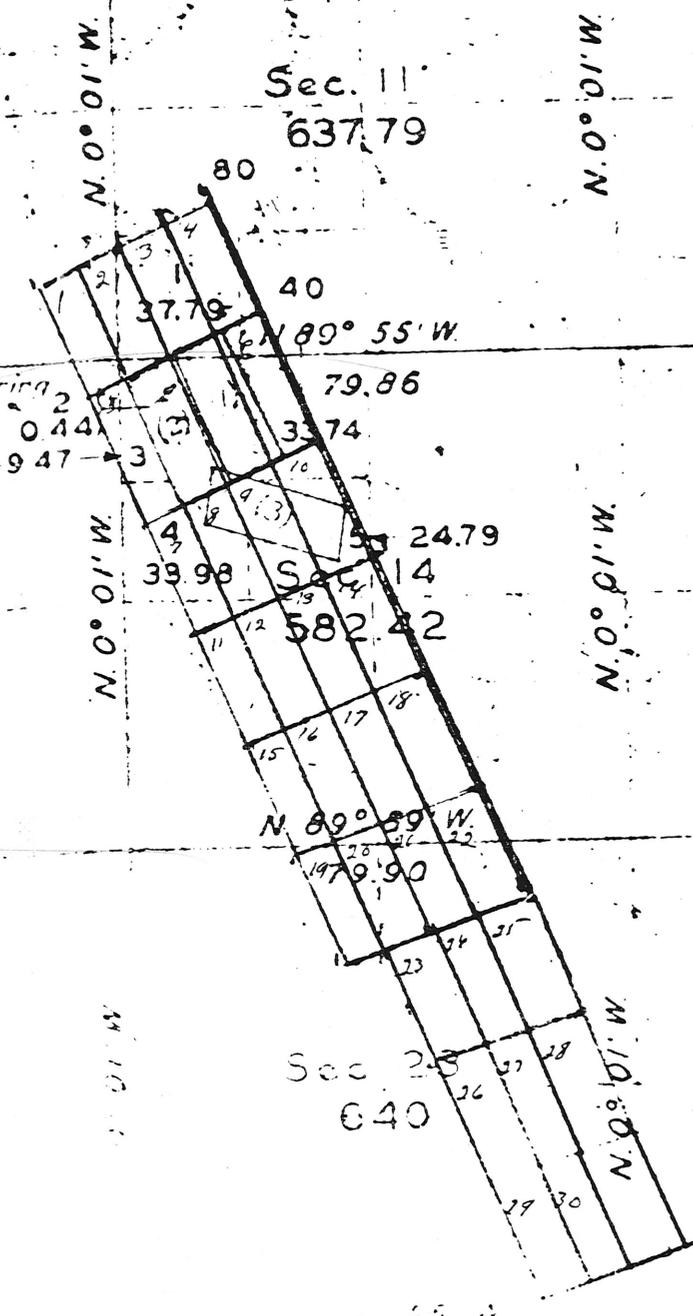
Sec 23  
640

Sec 24  
640

19° 50'

N. 89° 50' W.

79.98



NORTH

INTE  
Sec

Sec. 1

Sec. 12

Sec. 13

Sec. 2

Sec. 11

Sec. 14

Sec. 3

Sec. 10

Sec. 15

U.S. GRANT  
1144 PAT.  
UPHIR  
1142

SUNRISE  
1143 PAT.

U.S.M.  
1142