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

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11/02/94

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: AMADO MINE GROUP

ALTERNATE NAMES:
ROSEBUD
OREONA
WHIPPERWELL
TIGER

PIMA COUNTY MILS NUMBER: 32

LOCATION: TOWNSHIP 21 S RANGE 10 E SECTION 20 QUARTER NW
LATITUDE: N 31DEG 35MIN 32SEC LONGITUDE: W 111DEG 20MIN 28SEC
TOPO MAP NAME: ARIVACA - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
GOLD LODE
SILVER
LEAD SULFIDE
ZINC SULFIDE
COPPER SULFIDE

BIBLIOGRAPHY:
AZBM BULL. 189, P. 104, 1974
ADMMR AMADO MINE FILE

AMADO MINE

REFERENCES

PIMA COUNTY
ARIVACA DISTIRCT
T21S R10E Sec. 20

Pima County MILS Index #32

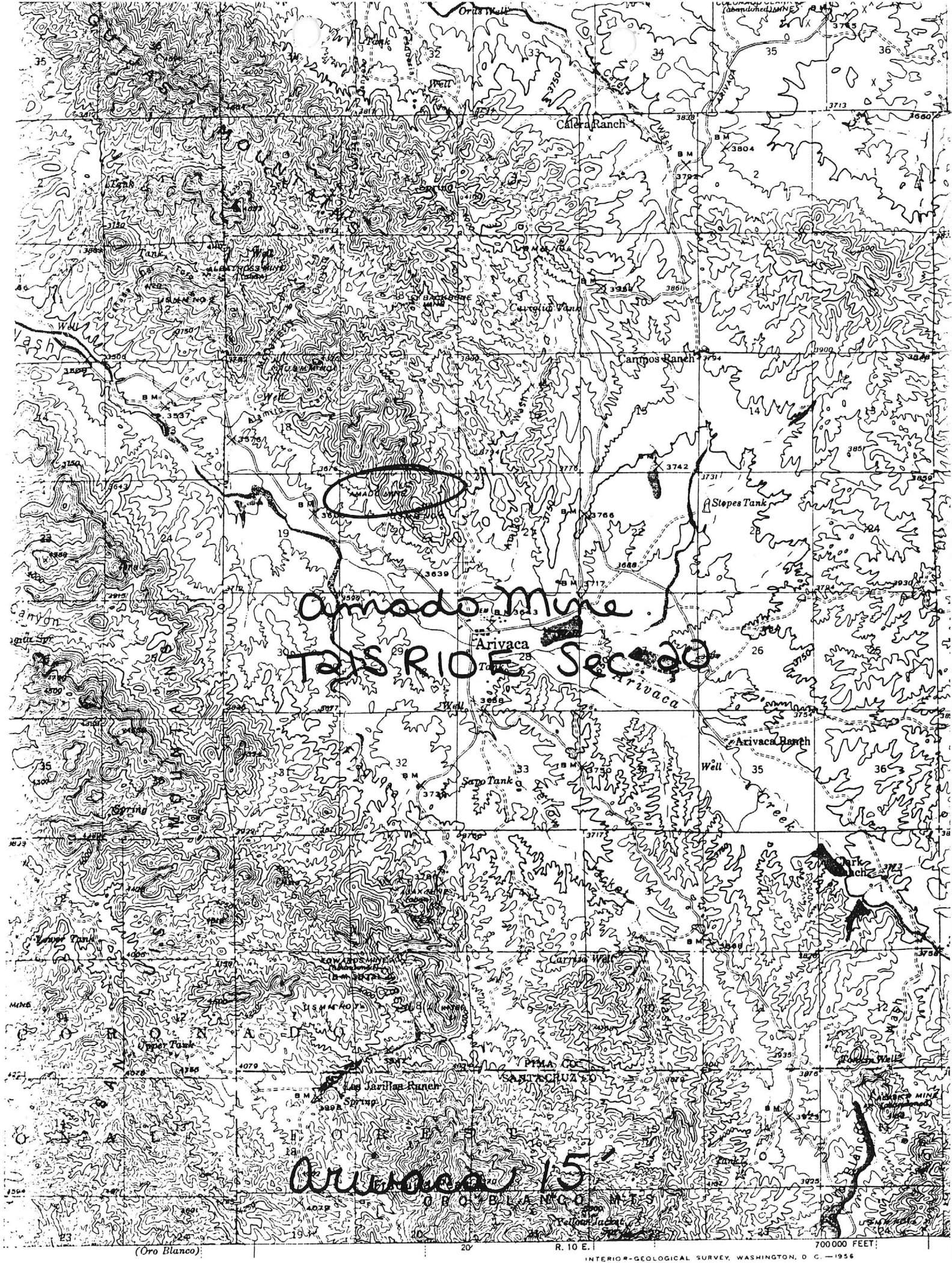
AKA: Rosebud, Oreona, Whipperwell, Tiger

ABM Bull. 189, p. 104

Book V-IV - A.L. Flagg vanadium report - Amado Group

USBM "U" File report - small showings vanadium - Amado Group

Arivaca 15' topo (included in file)


Calera Ranch
Campos Ranch
Stopes Tank
Arivaca
Arivaca Ranch
Sapo Tank
Carrizo Well
Las Jarillas Ranch
Spring
Upper Tank
Lower Tank
Yellow Jacket
PIMA CO.
SANTA CRUZ CO.
R. 10 E.
700000 FEET
(Oro Blanco)
INTERIOR-GEOLOGICAL SURVEY, WASHINGTON, D. C.—1956
Amado Mine
T25S R10E Sec 20
Arivaca 15'

Is being worked part time only by Odell Still and a Mr. Frisby, a jeep is needed to get up there. ALJ WR 3-31-63

LaCaruva Shaft - Old Amado property. Not operating. GWI WR 9-13-65

Amado mine claim NW of Arivaca belongs to Harvey Riggs of Arivaca. He also owns three claims at the Amado Mine; Amado, LaCruva and Paisano. GWI WR 1/7/76

CJH WR 4/8/83: Visitors: Mr. and Mrs. John A Seitz, owners of the Hill Top Mine, Oro Blanco District and Amado (Tiger) Mine, Arivaca District. Their winter address is Box 180, Arivaca, AZ and summers is Pewaukee, Wisconsin.

MG WR 4/25/86: A newspaper, Arivaca Trails, v. 1, no 1, April 1986, reports that Doc Merriman "was founder and operator of the Amado and Ajax mines."

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Amado Mine Date Nov. 13, 1956

District Arivaca District, Pima Co. Engineer Axel L. Johnson

Subject: Field Engineer's Report. Personal Visit & Information from T. R. Thomas, Manager.

Location Sec. 20 -- T 21 S -- R 10 E. About 2 miles NW of Arivaca.

Number of Claims 10 unpatented claims.

Owners F. Pixler, Casa Grande, Ariz. and Slim Leikem, 619 W. Simmons Rd., Tucson, Ariz.

Lessees and Operators Arivaca Mining Co., 407 Nash Bldg., Austin, Texas. T. R. Thomas, Manager, Arivaca, Ariz. (Home address as above) owns all the stock of the company. The Arivaca Mining Co. pays a 5 % royalty to the owners, Mr. Pixler and Mr. Leikem. In addition it pays a 5 % overriding royalty to Neil C. Vogel, Fred Sublett, and T. R. Thomas, ~~xxxxxxxxxxxxxx~~ who were previously operating the mine as the Vogel Mining Co. (See reports of June 3, 1955 and Aug. 10, 1954)

Principal Minerals Lead and Silver, with a small amount of Copper and Gold.

Number of Men Employed 6 men -- 4 at the mine, 1 at the mill, and Mr. Thomas, Mgr.

Production Rate About 9 tons of ore per day, drifting----mined and milled.

Geology Country rock is andesite and latite porphyry. True fissure veins, striking N 60 E, with almost vertical dips, cut across these rock formations. Veins are quite narrow (usually from 1 to 5 ft. wide), with a mineralized portion, in most places, being 24 inches or less in width. The part of the vein, now being explored and developed, is about 40 inches in width, with the mineralized part of the vein being 24 inches wide. Vein material consists of quartz, hematite, limonite, cerussite, galena, pyrite, chalcopyr.

Ore Values Mr. Thomas reports the ~~xxx~~ samples taken recently on the present working face averages about 5 % Lead, 5 oz. Silver, 0.2 oz. Gold, and 0.9 % Copper & no Zinc.

Milling & Marketing Facilities A small mill was constructed this summer and fall to treat the ore, and was just recently put into operation. Mr. E. L. Jarnegin, Arivaca is the mill foreman. Mill consists of a jaw crusher, a Gibson rod mill, & 1 table. Ore is crushed to from 75 to 100 mesh before tabling. Capacity is about 1 ton per hour.

Mine Workings (1) Amado shaft. This is 220 ft. deep, and almost vertical, with 3 levels---the 100, 150, & 200 ft. levels. Ore mostly stoped out above the 100 ft. level. Operators were last working on the 200 ft. level, but had to quit on account of the ore veins pinching out. Mr. Thomas states that further exploratory work may be done on same.

(2) La Caruva shaft. This shaft is 125 ft. deep, vertical. Vogel Mining Co. sank this shaft from a depth of 95 ft. to its present depth of 125 ft. Mr. Thomas reports that the ore vein contains only Gold, the Gold running from .03 oz. up to 1.0 oz per ton. There are no drifts or other mine workings, and no past product.

(3) The # 3 Tunnel. This adit is 600 ft. long, with a winze sunk 30 ft. in from the open. This winze is 49 ft. deep, with a drift from the bottom of the winze now in 30 ft. and being driven ahead.

Present Operations Operators are now driving the drift at the bottom of the winze in the # 3 Tunnel (as described above). Mr. Thomas reports that the progress is about 8 ft. per day, and from 8 to 9 tons of ore is recovered by selective mining and trucked to the mill (about 1/4 mile haul). Vein is about 40 inches wide at that point, but the mineralized portion of the vein is only about 24 inches in width.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine	Amado Mine	Date	June 3, 1955
District	Arivaca Dist., Pima Co.	Engineer	Axel L. Johnson
Subject:	Personal Visit, and information from Neil C. Vogel.		

Location. Section 20, T 21 S, R 10 E. About 2 miles northwest of Arivaca.

No. of Claims - 8 unpatented claims.

Owners. F. Pixler, Casa Grande, Ariz.
Slim Leikem, 619 W. Simmons Rd., Tucson, Ariz.

Lessees and Operators. Neil C. Vogel, 1632 N. Harley, Tucson, Ariz.--doing business as the Vogel Mining Co., Arivaca, Ariz. Mr. Vogel hasa bonded lease, with option to buy.

Principal Minerals. Lead, zinc and silver, with a small amount of copper.

No. of Men Employed--4 (day shift only)

Production Rate. One carload every 8 to 10 days, or about 3 carloads per month.

Geology. See my report of August 10, 1954.

Ore Values. Straight mine run ore runs approx. lead 6%, zinc 5%, silver 12 oz., copper 0.25%. Very little sorting is done preparatory to shipment.

Ore in Sight and Probable. A small amount of ore in sight. Mr. Vogel reports ore exposed about 200 ft. in length and 3 ft. in width, with a depth of 100 ft.. Mr. Vogel estimates probable ore to be about 10,000 tons.

Milling and Marketing Facilities. At present the ore is being shipped to the A. S. & R. Co. smelter at El Paso, Texas. A 30 ton mill will be installed in the near future according to present plans.

Present Mine Workings. See reports ~~xxxx

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Amado Mine — Date Aug. 10, 1954

District Arivaca District, Pima Co. — Engineer Axel L. Johnson

Subject: Field Engineers Report. Inf. from Neil C. Vogel and Personal Visit.

Location Sec. 20 ---T 21 S ----R 10 E. About 2 miles NW of Arivaca.

Number of Claims 8 unpatented claims.

Owners F. Pixler, Casa Grande, Ariz.
Slim Leikem, Tucson, Ariz. ---Addr.-- Clarence Leikem, 619 W. Simmons Rd., Tucson.

Lessees and Operators Neil C. Vogel, 1632 N. Harley, Tucson, Ariz., doing business as the Vogel Mining Co., Arivaca, Ariz. Mr. Vogel has a bonded lease with option to buy.

Principal metals and minerals Lead and silver. Lead in the form of cerussite (lead carbonate), and galena (lead sulphide).

Number of Men Working 2.

Production Rate No production yet. Operators are dewatering the shaft and a winze, and putting in ladders.

Geology The country rock is andesite and latite porphyry. The veins are true fissure veins, striking about N 60 E and having almost vertical dips (plus 80 deg/ either way). The vein, on which mining operations are contemplated, is from 4 to 5 ft.wide, the mineralized portion of the vein, varying from 1 to 5 ft. in width. The vein material consists of quartz, hematite, limonite, cerussite& galena, the galena containing fairly high silver values.

Ore Values Mr. Vogel states that the lead carbonate ores run up to 30 % lead, and that the sulphide ores run from 6 to 8 % lead, with from 4 to 40 oz. of Silver. He states that the ~~xxx~~ ore produced in the mine should run from 4 to 5 oz. of silver in most cases, with the lead content varying widely from 5 to 40 %. Most of the ore is, therefore, of milling grade, with some high grade spots of direct shipping ore.

Ore in Sight and Probable Not yet determined by the operators.

Milling and Marketing Operators are considering building their own mill to mill the ore.

Present Mine Workings Old mine workings are as follows:
(1) 1 ---200 ft. deep shaft (vertical), with drifts and mine workings on the 100 ft. and 200 ft. levels.
(2) 1 -- 120 ft.deep shaft (vertical), with unknown amount of mine workings.
(3) 1 -- main adit with a 100 ft. winze from same.
(4) Several short adits along some of the ore veins on the property.

Past History Mine has been idle for many years. Last shipment from the property was made in 1948.

Present Operations Operators are now dewatering the shaft and the 100 ft. winze, and putting in ladders, in the winze. They will then take samples on the 100 ft. level of the mine, in order to find out how much ore is found on this level, and how much of this ore is shipping grade, and how much milling grade.

Am mine
Pima Co

Aa-16.1.0A

FROM FIELD TRIP REPORT - R. E. SHINKOSKEY
JULY - AUGUST 1954

ARIVACA MINING DIST.
Pima County, Arizona

Arivaca Mining District (south of Tucson): Vogel Mining Company has a lease and option on the Tiger (Amado) group near Arivaca and reports some tonnage of leady siliceous ore. Mr. Vogel indicates he will sublease the lead workings consisting of two tunnels and a shaft. A 600-ton dump on the property is reported to carry shipping values.

Alamo Hotel
COMPLETELY AIR-CONDITIONED
"Austin's Finest Small Hotel"
AUSTIN, TEXAS

LEE HUBBY
OWNER
JAMES R. SMITH
MANAGER

July 5 - 1954

Department of Mineral Resources
Phoenix, Ariz
Att - Mr Manning

RECEIVED
JUL 6 1954
86 DIR. INT. REV.
PHOENIX

Dear Sir :- We have taken a Bond & Lease on the Amada Mine located in the Arivaca mining Dist. and have moved some equipment on the property.

Records we have indicate an owners report on file in your Dept. M.R. 45 - dated Jan 30-42. The report is incomplete.

Could your office furnish me with any data you may have on hand and mail same for my attention at Bx 426, Tombstone, Arizona?

Yours Truly
Vogel Mining Co.
Neil Vogel.

Free Storage Garage Connects to Lobby

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
~~FIELD ENGINEER'S REPORT~~
NEWS ITEM

Mine Tiger Mine — Date April 4, 1952.

District Arivaca Mining Dist. — Engineer Axel L. Johnson

Subject: News Item --- Source of Information ---Philip Stevens

Location 1 3/4 miles northeast of Arivaca.

Number of Claims 7 unpatented claims

Owners Dale Pixler, Casa Grande, Ariz. and
Clarence (Slim) Liekem, Ft. Wayne, Indiana.

Leasers Philip F. Stevens, Arivaca, Ariz.
Harold Stevens, Arivaca, Ariz.
10 % lease with option to buy.
Operating property at present.

Metals Mined Lead and Silver ores.

Men Employed 4

Production Rate No definite production rate, as operators are at present doing development work.

Milling Facilities No milling facilities. Lots of milling grade ore laying on the dump, which is too low grade for direct shipping. This ore is lead carbonate, and may be difficult to mill.

Geology Have one vein about 4 ft. wide, and another vein about 18 inches wide. Veins dip to the north 45 to 60 degrees. Both hanging & footwalls are limestone.

Ore Values Ore runs about 20 % Lead, with about 24 oz. Silver and 0.02 oz. Gold. The ore is in the form of Lead Carbonates.

Old Workings 1--- 250 ft. shaft.
1--- 125 ft. shaft.
1300 ft. of drifting, 650 ft. on the 150 ft. level & 650 ft. on 250 ft. level.

Past Production Some tonnage shipped previously by Mr. Pixler, owner.

Present Operations Present operators are cleaning out the 250 ft. shaft now. They are now down to a depth of 67 ft., and will retimber the shaft to that depth, after which they will pump all the water out of the shaft, and repair same where necessary.

LIEKEM, CLARENCE (SLIM) and Dale Pixler, owners — 4-4-52
Ft. Wayne, Indiana.

MINE - TIGER MINE, Arivaca Mining Dist., Pima Co.

REPORT OF THE AMADO MINE

BY

EARLOW D. PHELPS E. M.

Summary

The Amado mine, located about two miles northwest from Arivaca, Arizona, and about sixty miles by road south of Tucson, Arizona, is an old property which has been worked at different times for the high grade gold and silver ore. The property comprises the Tiger group of eight lode claims.

The outcrop of the main ledge can be traced intermittently from the Amado shaft, easterly for a distance of over 2000. ft. There are three principal shafts, the Amado, La Caruva and Creona and three tunnels, numbers 1, 2, and 3, also numerous surface cuts.

The mining has been done largely from the drifts and stopes in the upper oxidized part of the veins, accessible from the pricipal shafts and tunnels.

Two distinct types of ore are indicated, first the gold-silver ore in an oxidized, honey combed quartz gangue, often referred to as "free milling" gold ore; second a silver-lead ore, also in a quartz guangue, but with low gold values and with much of the lead found as a sulfide, Galena. The latter ore predominates at the Amado shaft, No. 1 and No. 3 tunnels, while the former ore is characteristic of the La Caruva and Creona shaft workings. However the two ores both have the quartz gangue and in places are closely associated, apparently in the same vein.

The ore occurs in fissure veins, varying in width from an inch in width to 3½ ft. and in many places the old stopes show a width of six feet

It will be seen from a study of the samples taken that the values vary greatly, from low to high grade ore. This fact, coupled with the way in which the selective mining was done indicates that the best ore has been and will be found concentrated in shoots or pockets within the veins.

The ore has been mined from the upper workings along the ledge and from the accessible underground stopes, apparently by different operators, doing only just enough developement to get out the ore in sight and leaving the accessible workings pretty well "gutted".

As is often the case with early operated small properties in Arizona there is no record of total production. The Arizona Bureau of Mines bulletin No. 140 issued in 1936 reports „15,000. in gold from the Oreona.

There is no "ore in sight" or "ore developed" in any of the accessible workings at the Oreona. The lower part of the mine was inaccessible because of a broken ladderway.

The La Caruva ore is largely gold and silver values in a honeycombed Quartz. The values are extremely variable and unpredictable. Here also the readily accessible ore has been largely mined but there are good possibilities of finding other ore shoots or pockets adjacent too and below the present workings, by further development.

The Amado shaft offers the best opportunity for development at this time. First, because there is a better market now for the silver-lead ore which predominates here and second, because there is a working shaft, reportedly to the 200 ft. level. The mine is at present filled with water to about the 30 ft. level. H. D. Pixler unwatered the mine to a little below the 100 ft. level and his samples Nos. 17, 22 and 23 indicate the possibility of some milling ore remaining above the 100 ft. level.

Part of the dump at this shaft is undoubtedly residual ore, left

after the high grade ore was removed. A sample taken of this dump assayed $30.95 per ton and the measurement indicated 800. tons. A shipment of "mine of run" silver-lead ore from No. 3 tunnel assayed $42.05 per ton. The only recorded shipment of high grade ore from the Anglo shaft, would have an assay value of about $161. per ton at present market prices. A sample of a small amount of high grade ore left on the 30 ft. level of the Anglo(sample No. 9) assayed $130. per ton. A sample of the upper dump (No. 2) assayed $22.30. No systematic sampling was possible because of the inaccessibility of the lower workings and the worked out condition of those that were accessible.

It is only possible to judge what tonnage and values may be found with further exploration by the knowledge obtained from a study of the available data, ore occurence, geological conditions and the values found and exemplified by the samples taken and the ore shipments made.

Taking into consideration these various factors it seems reasonable to assume that sufficient ore will be found by exploration and development work on the 200 ft. level to justify the expense of unwatering and reconditioning the shaft, installing a hoist and machinery sufficient to cary through a program of development, to be more fully outlined in this report.

Much of the metalic values are lost by turning the ore direct to a smelter, and considerable low grade ore could be milled at a profit that will not stand the smelter costs and freight. It is therefore apparent that a mill will be necessary to make a success of this venture, and of course it is first essential that sufficient ore shall be developed to justify building such a mill.

Property, Ownership and Location.

The property consists of a group of eight lode claims, the Tiger Nos. 1 to 7 inc. and a claim called the Fraction. Six of these are full sized claims, 20.66 acres each, and two are fractional claims. (see claim map). Two patented claims, known as the Fairview and New Brunswick adjoin the Tiger group to the north.

The property is owned by H. D. Pixler, Casa Grande, Ariz., Sam Pisano, Arivaca, Ariz., and G. R. Licken, Tucson, Ariz., Mr. Pixler is the sole owner of the Tiger No. 4, 5, 6, and 7 and also the Fraction. He has a lease and option to buy the Tiger No. 1, 2, and 3 from Mr. Pisano and Mr. Licken.

The Amado shaft, from which the property gets its name, is situated near the westerly end of the Tiger No. 2 claim. It is about two miles northwest from the town of Arivaca, Pima County, Arizona, in section 20, T 21 S R 10 E, G & S R B & M. By road it is 60 miles from Tucson, Arizona to Arivaca. From Tucson it is 35 miles south on highway 89 to the Kingsley ranch and 25 miles west on the Sasabe road from the Kingsley ranch to Arivaca. The mine is accessible by car or truck over ½ mile of mine road with easy grade - turning right or north from the Sasabe graded road at a distance of about one mile west from Arivaca.

General Information

The Amado mine is situated in the foot hills of the Las Guyas mountains in the Arivaca mining district, at an elevation of approximately 3800 ft. Vegetation is scanty consisting largely of cacti and plants adapted to the arid ~~arid~~ climate of southern Arizona. It is hot in summer but mild and equitable in winter.

Arivaca is an old mining town with many of the original adobe buildings rehabilitated for present dwellings. There are probably not over 50 inhabitants at this time. The town has a water system, post

office, general store and gas station, but no telephone or power line service.

The Ruby, Black Diamond, Mary G, and Oro Verde are the only mines near Arivaca which are operating at the present time. Other mines in the district are, the Liberty, Black Princess, Cerro Colorado, Colo Clark, Las Guyas, El Darado, Ajax, Edwards, Alaska, San Louis, and Reata mine. The location of most of these mines are shown on the Arivaca quadrangle map published by the Geological Survey of the U. S. Dep't of Interior.

The railroad shipping point is Amado, a station on the Nogales branch of the So. Pacific R. R. This station is about two miles southeast of the Kingsley ranch - one mile south on highway 89 and one east of the highway. The trucking distance from the mine to Amado station is approximately 27 miles.

History

The following statements regarding the Amado were furnished by H. D. Pixler, Casa Grande, Ariz., and L. P. Merriman, Tucson, Ariz.

The ledge was opened in the early days in quest of high grade Gold and Silver - possibly by the Spaniards, as the remains of small smelters are still in evidence. A man by the name of Amado was the first known locator to work the property. There is no record of ore shippments made until Oct. 1929. (Phelps Dodge letter of Sept. 16, 1948, included in this report.) L. P. Merriman became interested in the property sometime in the "20's". He states that on finding a pocket of ore that assayed 24.5 oz./ton. ~~silver~~ gold an eastern capitalist took an interest in the property and the Amado Mines Inc., was formed. Merriman remained as sup't. A vertical shaft was sunk to the 200 ft. level and drifts extended on the 100 ft. level. Merriman states that the vertical shaft cut the vein at 120 ft. The ore encountered here was a lead carbonate containing nodules of Galena. The ground was very heavy and [illegible]

and texture of a shale and of sedimentary origin. They will be so classified unless a microscopic examination proves otherwise. The geologic map of the Arizona Bureau of Mines and U.S. Geological Survey indicates and classifies this shale to belong to the Comanche series of the Lower Cretaceous period.

A very thin bed of black colored, metamorphosed limestone is found between one of the bedding planes of the shale, close to the intrusive rocks.

The ore, of the principal ledge, occurs in fissure veins within the rhyolite and porphyry rocks and can be traced by the outcrop and workings for 2000 ft. east from the Amado shaft. The gangue material is largely quartz with occasional fragments of rhyolite in the ore. There are two types of ore; first, the gold-silver ore with little or no lead present; second, a lead-silver ore, low in gold values but carrying good silver values with the lead. Both ores have the quartz gangue and there is no clear demarkation between the two.

The predominate mineral in the lead silver ore is the lead sulfide, galena, with some silver sulfide, Argentite as well as some lead carbonate, Cerussite. Some pieces showing silver chloride "Horn Silver" or Cerargyrite are said to have been found on the dump. Also, some zinc in the form of Sphalerite, which is believed to have come from the 200 ft. level of the Amado workings.

The lead-silver ore is found at the Amado and the No. 3 tunnel and in the cut shown on Tiger No. 3 claim. There is a little copper carbonate showing at this latter workings. The best gold-silver values are found in the oxidized and honey combed quartz in several of the surface cuts and at the La Caruva. The Oreona undoubtedly yielded this type of ore. It is the so called "free - milling" ore in which the gold silver alloy has been separated

or "freed" from the iron sulfide in which it occured, by the oxidization of the sulfide. This makes it possible to collect the metal by mechanical means and by amalgamation. At greater depth, below the zone of oxidization, the gold and silver will be found combined with the sulfide ore and not amenable to separation by amalgamation. These ores must be shipped to a smelter or first concentrated by milling.

It should be mentioned here, that while the the main ledge is within a rhyolite and quartz porphyry country rock, it is note worthy that the quartz fissure veins are not confined exclusively to this rock. The quartz vein on the Tiger No. 3 claim, which has values in both gold as well as the lead and silver, is entirely within the Arkose country rock.

The general strike of the veins is east and west and the dip steeply to the north, but all of the veins are highly distorted. The strike, where taken at different places and different veins varied from S 80° E., to N 50° E., and the dip from 40° North to vertical and even steeply to the south, in the winze below the 30 ft. level of the Amado.

The fissure veins vary in width from a seam to 3½ ft. or possibly more. The greatest sample width taken was 3.5 ft. However, empty stopes show a width of six feet or more.

It appears from a study of the samples taken and the stoping done, that the ore occurs in shoots and pockets throughout the ledge and will likely continue that way at greater depths.

Because of the fact that some zinc and a little copper is found in the gold, silver and lead ores, it should be noted that the normal order or sequence of the metals, in a primary ore deposit, as they will be found from the top down, is as follows; gold, silver, lead, zinc, copper and iron. The mineral zones containing these metals will be found overlapping and grading into each other. As the depth increases the minerals in the next higher zone are likely to decrease as the minerals in the next lower zone increase.

necessarily [illegible] that because lead is found in commercial amounts a similar amount of zinc will be found below the lead, though it is entirely possible. It is also possible that only a small amount of copper will be found in the copper zone; especially so with this ore, as there is not much copper indicated.

Development

Amado Shaft and No. 1 Tunnel:

A map of these workings in shown on the accompanying this report. The position of the samples and the areas where the ore had been removed by stoping are shown. The first ore was probably mined from the tunnel level before the height of the dump was raised. Later the winze was sunk and a drift extended east and west on the 30 ft. level. The ore between here and the tunnel level was, apparently, entirely removed. It was on the 30 ft. level that the high grade ore is said to have been found , in the west drift, which reportedly resulted in the forming of the Amado Mines Inc. The Amado vertical shaft was started and, according to all reports, eventually reached the 200 ft. level. Drifts were extended on the 100 ft. level as shown on the map. All workings below the 45 ft. level were under water at the time of this examination. However, as stated, Mr. Pixler unwatered the mine to a little below the 100 ft. level and the samples and data shown on the map are the result of his work on this level. There appears to be the possibility of finding 100 tons or more of , at least, milling ore in the area indicated on the map, between the 100 ft. and the 30 ft. levels.

Amado Shaft Dump Ore:

The ore found on the dump, extending from the shaft for a distance of 90 ft. along the dump, is believed to be the residual ore after the best ore had been removed for direct shipment to an ore buyer or some smelter. Measurements were taken to determine the tonnage and a uniform sample taken of this part of the dump. The volume or tonnage was determined by taking an

intervals, but the depth had to be approximated. The cross section areas were plotted to scale and the areas determined with a planimeter and the volume calculated, using the prismoidal formula and a factor of 20 cu. ft. per ton of broken ore to arrive at the tonnage. The calculations gave a total of 923. tons. The method used in getting a sample is given under "Sampling". The assay value of the sample was $30.35 per ton.

Amado Upper Dump:

This dump is located at the raise above No. 1 tunnel. It was measured and sampled similar to the main dump. There is an indicated 124 tons which assayed $22.33 per ton.

It will not be possible to make a clean cut division between the ore and the waste on both the dumps. Some ore will be lost or diluted with the waste if it is tried. Therefore it will be better to assume only 800 tons from the main dump and 100 tons from the upper dump.

No. 2 Tunnel:

This is a short cross cut tunnel near the top of the hill east of the Amado. There is no ore showing in this tunnel. There are a number of surface cuts and shallow workings adjacent thereto, where apparently some ore had been mined. One sample, No. 6, showed good values from a cut on a vein that strikes N 50° E, and north of the main vein, as shown on the claim map.

No 3 Tunnel:

This is the next easterly workings and just east of a wash, see claim map. The tunnel is 210 ft. long with a cross cut to the north near the end of the tunnel. It follows the irregular strike of the vein. Forty feet east from the portal there is an 80 ft. winze. It was from the stope which adjoins this winze that Mr. Pixler shipped the car of ore to the A. S. & R. Co., settlement sheet dated El Paso, Texas, 7/27/48. The winze was inaccessible below here. At 120 ft. east of the portal there is an old stope which was "holed" through to the surface. Apparently all the ore was removed from here. There is no ore showing in the tunnel east of this stope, and some

has encountered in the north cross cut.

La Caruva Shaft:

A vertical section map, on the plane of the vein, is included as a part of this report. However it is only a rough sketch and not based on accurate measurements or a survey.

The gold-silver ore in the oxidized and honey combed quartz is characteristic of these workings. The accessible ore has been almost entirely removed. There is a possibility of finding ore in the area west of the shaft on the 120 ft. level. At present the west drift is closed by bulkhead. However it may have been mined out before it was closed. It would not cost much to find out. Samples taken by H. D. Pixler indicates a little ore remaining in stope east of the shaft. There is no ore showing along the upper part of the shaft. The ground to the west, as shown by the sketch map, has been pretty well worked over. There is another fill and bulkhead west of the winze on the 30 ft. level. It is doubtful if any thing was left here. The samples taken of patches of ore left shows that the ore must have been very rich. See sample and assay sheet. At some later date, especially if there should be any change for the better with respect to gold, it would be advisable to do some exploration work at the La Caruva.

Greena Shaft:

The mining done from this shaft appears to have been the most extensive of all and there is the least sigh of any ore remaining above the 95 ft. level. A section of ladder is missing from the 135ft. depth in the shaft, but the bottom was not in sight from here and it is reported that the shaft has a depth of 200 ft. No records have been obtained of any of the ore mined, but as stated the Arizona Bureau of Mines records credit $15,000 gold produced up to 1936. It might be well to repair the ladderway and have a look at the lower workings.

There is the remains of an old mill which used chert pebbles for grinding and a table concentration, situated near the shaft. Mr.

Herriman sta[illegible] the mill was not a [illegible]ess and that much of the gold was lost. If this is true it would seem advisable to check on the tailings dump at the dam in the wash below.

Sampling

As stated, no systematic sampling could be done because most of workings were either mined out or inaccessible.

No. 1, was a sample of the Amado main dump and No.2 a sample of the upper dump. They were taken by dividing the dump into sections and taking a small shovel of ore from a little below the surface of the dump and equally spaced. The sample weighed about 45 lbs. The assayer was instructed to grind and mix the entire sample before putting any of it thru a splitter.

The mine samples were all cut with a moil and hammer across the width of the vein. A wide variation in values will be noticed from a study of the sample and assay tabulated sheets. This is in accord with the belief that the ore will be found in shoots or ore pockets.

Samples Nos. 17 to 34 were taken by H. D. Pixler. I believe that these samples were carefully taken and are representative of the ore sampled. Nos. 17 to 25 were taken by him after unwatering to below the 100 ft. level.

Production

Because of the extreme variation in the width of the veins, the irregularity of the stopes and the extent of the inaccessible workings it is impossible to make more than a guess at the production from the four principal shafts and tunnels, that is, the Amado shaft and No. 1 Tunnel, the No. 3 Tunnel, the La Caruva shaft and the Oreona shaft.

The only record of production is that of the Arizona Bureau of Mines which credits the Oreona with a production of $15,000. in gold up to the year 1936. The production from here was probably greater than at any of the other workings. All appear to have been worked at different

times, over considerable length of ti

Some of the ore was shipped to Nogales, but access to the records of the principal ore buyer there has not been granted.

The Phelps Dodge Corp. found a record of a shipment of one car of ore from the Amado Mines, Inc., in Oct. 1929 which assayed as follows; Gold 0.045 oz. / ton, Silver 22.41 oz./ton, Lead 34.90%, Zinc 4.0% and Copper 0. 27%. The insoluble was45.0% and Iron 1.9% with only a trace of Bismuth and Arsnic. Value, $161. (Au. $35. Ag.90¢,Pb.20¢/lb.)

The American Smelting & Refining Co, Hayden Plant, in a letter to H. D. Pixler & Son dated Oct. 7, 1948, lists 13 small shipments of from 4.7 to 16.8 tons each from the Amado Mine by J. E. Lewis from "Dec. 1938 to Mch 1941." Mr. Pixler finds that this ore came from the La Caruva, which accounts for the fact that it carried little or no lead. The lowest grade shipment, 14.8 tons, assayed 0.625 oz./ton gold 5.40 oz./ton silver. The highest shipment, 5.0 tons, assayed 2.95 oz. gold and 7.70 oz. silver per ton. The numerical average for the total of all shipments, 111.4 tons, was 1.5 oz./ton gold and 10.8 oz./ton silver. The assay value now, on this average is $62.35/ton.

H. D. Pixler made one shipment, 42.1 tons, which came from the winze and stope below No. 3 Tunnel, to the El Paso plant of the A. S. & R. Co dated 7/27/48. This was "mine of run" ore and was not sorted. The assay value per ton was as follows: Gold 0.16 oz., Silver 8.05 oz., Lead 7.3% and Copper 0.25%. At the current prices (Au. $35., Ag. 90¢, Pb. 20¢/lb.) the value per ton is $42.05, but at that time the price of lead was $17.50 per 100 or 17½¢ a pound, so the total assay value of the ore at the time of shipment was $38.35. However, after the deductions made by the smelter, the actual payment for the metal in the ore was $27.75, per ton. The treatment charge was $8.50 (now 9.50 per ton and the "lead deficiency" charge $2.43 plus .03 tax, per ton, or $10.95 per ton. Freight, switching and more taxes amounted to

$4.25 per ton [illegible] total cost of $15.20 [illegible] ton. This leaves a net smelter return of $12.55 per ton. The moisture reduced the tonnage to 40.29 tons, leaving a net smelter return of approximately $506. on a gross assay value of about $1600., for the total of 42 tons shipped.

This loss in smelting and transportation can be greatly overcome by milling the ore and sending only the concentrates from the mill, to the smelter.

Milling

A mill test was made on a sample of ore from the Amado dump, by the metallurgical department of the Arizona Bureau of Mines and a "Flow Sheet" prepared by the Western Machinery Co.; both of which are included with this report. The cost of the mill is estimated at $15,000., to handle about 30 tons a day. The metallurgical test gave a concentration of 24.7 to 100 tons or about one ton of concentrates for each four tons of ore and showed a saving of about 74% of the silver and 87% of the lead. It is assumed that the gold will be fully recovered by amalgamation units placed in the mill circuit.

It is apparent that a mill will not only make a big saving in cost, over shipping direct to a smelter, but it will also make it possible to mine lower grade ore.

In order to show the saving that will be made by milling the ore, over shipping it direct to a smelter, the following calculations have been made, using the assay results of No. 1 dump sample:-

Assay of heads - Gold 0.03/ton, Silver 7.00 oz./ton, Lead 5.90% using gold at $35.& silver at 90¢ per ton and lead at 20¢ per pound.

Using 40 tons of ore, recovery - 10 tons of concentrates and 74% of the sivler and 87% of the lead. Smelter treatment charge $9.50

	ore	concen'te
Value of metallics after smelter deductions -	$22.20/ton-	- $89.60/ton
Smelter treatment ch'ge & Lead deficiency - -	$12.00 "	- - $10.60 "
	$10.20	$79.00

40 tons x $10.20 = $408. 10 x 79.00 = $790.
Freight etc. - - - 163. 45.
$245. $745. less $100. milling = $645.

These amounts divided by 40 tons of ore gives a net value of $6.10 per ton by shipping direct to the smelter and $16.10 per ton by milling and shipping the concentrates. A saving of $10. a ton, by milling.

It is apparent that a mill will be necessary to make a success of the venture. The mining and trucking will cost more than $6.10/ ton.

Cost and Profit

Mining costs should not be high. Judging from the conditions found in the accessible parts of the mine. The walls stand well, with very little timbering and the shape and slope, or "rake" of the ore shoots seems favorable for "shrinkage" mining or stoping of the ore.

Sample No. 1, of the Amado dump, used in the calculations under milling, is presumed to be low grade ore, for this property, as it was the reject or ore left over after the best of the ore had been sorted out. It has an assay value of $30.95/ton. The assay value of the ore shipment made from the Amado to the Phelps Dodge Corp (A on the tabulated sheet of assays) was $161.35. The "mine of run" shipment made by Pixler (C on the assay sheet) has an assay value of $42./ton.

Using the same smelter costs and deductions as was used before and in accord with the A. S. & R. purchase schedule, A-1 included with this report, the total costs and profit per ton, on ore having an assay value of $42.00 per ton, can be itemized approximately as follows:

	Per ton
Development - - - - - - -	$3.00
Mining - - - - - - - - -	6.00
Milling - - - - - - - - -	2.50
Trucking to R. R. - - - -	1.50
	$13.00
Smelter treatment etc. -	10.00
R. R. Freight etc. - - -	4.50
Total cost - - - - - - -	$27.50
Net Profit per ton - - -	14.50
	$42.00

5.50 - 6.50

Assuming that the average ore will have a net value of $14.50/ton and that the development on the 200 ft. level discloses an ore shoot 3ft. thick(width of the ore in the vein) by 40 ft. wide (along the vein) by 100 ft. long (along the axis or "rake" of the vein, equal to

12,000. cu. ft. of ore. Using a factor of 12 cu. ft. per ton, there would be 1000. tons of ore with a net value of $14,500.

There is also estimated to be 800 tons of ore, already mined, on the dump with a net value after milling of $16.10/ton (see milling) or $12,900. and 100 tons on the upper dump with an estimated value of $1,100. or a total of $14,000.

A rough estimate of the cost of unwatering the mine, rehabilitating the shaft, building a headframe, installing a hoist and compressor, together with 100 to 200 ft. of development on the 200 ft. level, is placed at $13,000. If sufficient ore is developed to justify a building mill, $15,000. more will be necessary. A total of $28,000.

Conclusions and Recommendations

It is my belief, that because of the ore values indicated, at present prices and in view of the nature and extent of the workings, there is a good possibility of finding new or extended ore shoots, or recurring ore shoots, by further development at lower levels.

There is reason to believe that below the oxidized ore, which has been largely removed, there will be found sufficient values in the sulfides to justify further exploration.

It is therefore recommended that the work already mentioned as necessary to put the Amado shaft in working order be undertaken at this time, and that a reasonable amount of development on the 200 ft. level shall be done for the purpose of blocking out sufficient ore to justify a mill.

It is further recommended, that in the event of a more favorable market for gold, or lower mining costs, some development be done at the La Caruva, as already outlined under the La Caruva Shaft heading.

Respectfully submitted by

Harlow D. Phelps E.M.

Tucson, Arizona.
December 21, 1948.

Registered Professional Engineer.

This report includes the following:-

Claim Map of the Tiger Group.

Vertical Sectional maps of;-

Amado workings

La Caruva "

Oreona "

Mill Flow Sheet .

Metallurgical Test made by the Arizona Bureau of Mines.

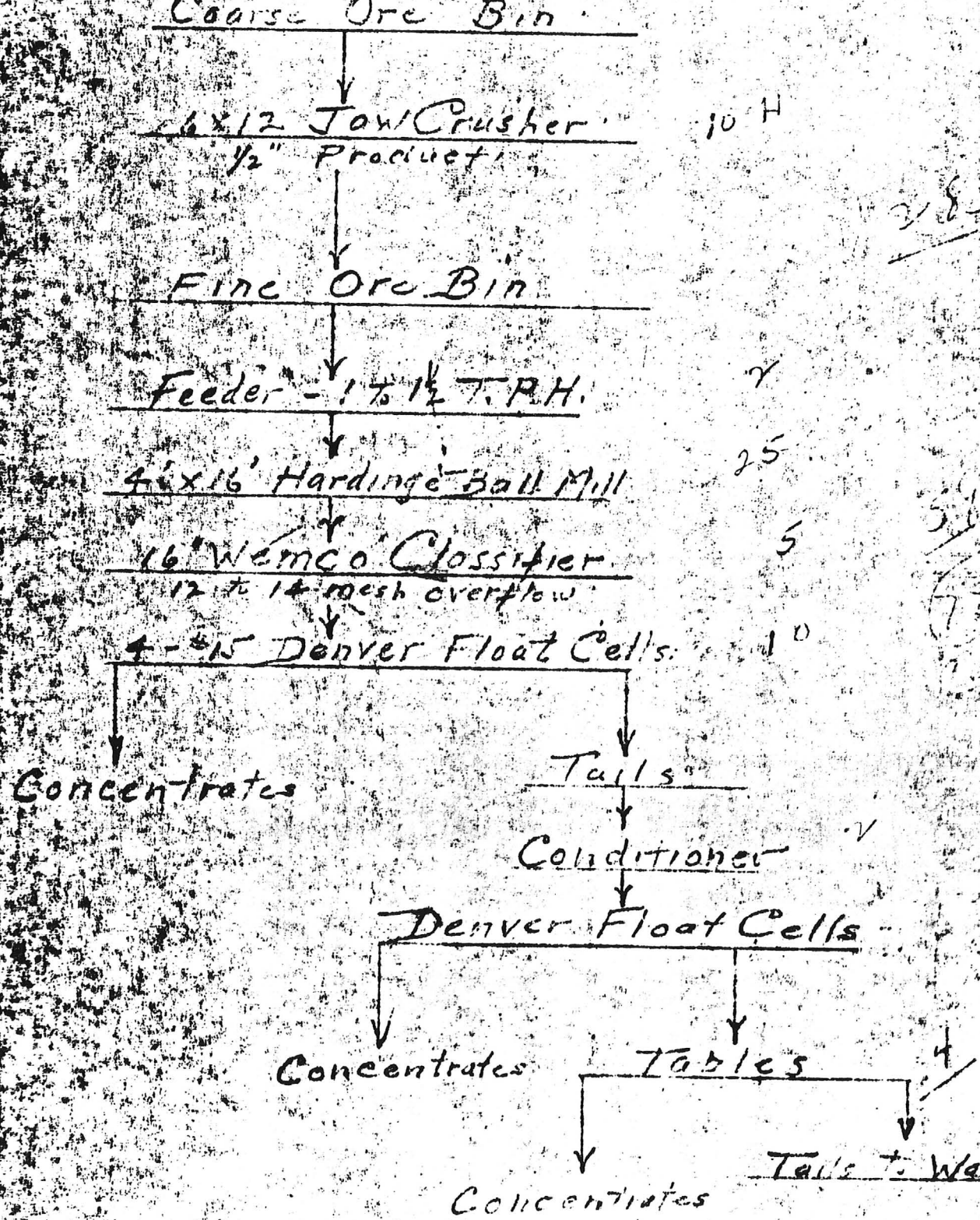
Two sample and assay sheets.

Original Smelter returns, A, B, and C.

A. S. & R. Co. Purchase Schedual.

Three photographs of workings.

Proposed Flow Sheet
By The Western Machinery Co.



Samples and Assays - Amado Mine

Note: Gold = Au, Silver = Ag, Lead = Pb.
Au @ $35/Troy oz, Ag @ 90¢/oz, Pb @ 20¢/lb

No	Location	Width ft.	Per Ton oz. Au	Per Ton $ Value	Per Ton oz. Ag	Per Ton $ Value	Per Ton % Pb.	Per Ton $ Value	Total Value
1.	Amado Dump - 45 lb. sample	—	0.03	1.05	7.00	6.30	5.90	23.60	30.95
2.	Upper Amado Dump	—	0.02	0.70	5.80	5.20	4.10	16.40	22.30
3.	Amado - Cut 100' N. - Grab Sample	—	0.005	—	0.90	0.80	0.70	2.80	3.60
4	Shaft - 25' So. of Disc. Shaft - No. 2	3.0	0.005	—	0.90	0.80	—	—	0.80
5	Cut - 150' E. " " " "	1.5	0.01	—	1.50	1.35	0.80	—	2.85
6	" 160' - N50°E " " "	1.0	0.35	12.25	4.00	3.60	4.70	18.80	34.65
7	Dump 120' " " " " "	—	0.02	0.70	0.70	0.65	0.60	2.40	3.70
8	Cut - 110' N60°E " " Fraction	1.2	0.005	—	0.30	—	0.30	—	—
9	Amado Shaft - 30 Ft. Level	1.5	0.02	0.70	19.40	17.45	28.00	112.00	130.15
10	" " " " "	1.5	0.01	—	1.30	1.15	2.10	8.40	9.90
11	La Caruva - Cut - 100' W of Shaft	1.5	0.40	14.00	3.60	3.25	0.50	—	17.25
12	" " - 120' Level - 45' E "	3.5	0.57	20.00	1.20	1.00	—	—	21.00
13	" " - Winze - 100' W of "	2.0	0.68	23.80	26.30	23.30	—	—	47.[illegible]
14	Oreona - 95' Level - 8' E of Shaft	3.1	0.01	—	0.90	.80	—	—	0.80
15	Grab Sample - Ore Pile - Tiger No. 3	—	0.26	9.10	1.80	1.65	2.00	8.00	18.75
	Ore Shipments Made								
A	Amado - 1 car - Ship'd P.D. Co. - Oct. 1937		0.045	1.55	22.41	20.20	34.20	139.60	161.35
B	La Caruva - 111.4 Tons - A.S.&R. 1938-41		1.50	52.60	10.80	9.75	—	—	62.35
C	No. 3 Tunnel - #2 " " " - 7/27/49		0.16	5.60	8.05	7.25	7.30	29.20	42.05

UNIVERSITY OF ARIZONA
ARIZONA BUREAU OF MINES
ORE TESTING SERVICE

June 21, 1957

Mr. C. Neel Vogel
1820 E. Hampton
Tucson, Arizona

Dear Mr. Vogel: Ore Test 1536

The gold-silver ore you delivered to the Arizona Bureau of Mines assayed 0.46 oz. gold and 8.3 ozs. silver per ton. The sample was high in quartz and would be in demand as a flux for smelting. Two flotation and two cyanidation tests were made on the ore.

Flotation Test 1

A sample was ground in a laboratory ball mill to 8.1 percent on 100-mesh and 66.1 thru 200-mesh and the pulp treated by flotation. The reagents are given in Table 1 and the results in Table 2.

The concentrate amounted to 1.5 tons per 100 tons of heads, assayed 23.75 ozs. gold and 430.35 ozs. silver per ton and contained 73.6 and 74.9 percents of the total gold and silver, respectively.

The tailing assayed 0.13 oz. gold and 2.20 ozs. silver per ton.

Flotation Test 2 - Fine Grind

A sample was ground to 0.5 percent on 100 and 91.5 thru 200-mesh and treated by flotation as in Test 1. The reagents are given in Table 3 and results in Table 4.

The concentrate amounted to 1.7 tons per 100 tons of heads, assayed 20.24 ozs. gold and 313.9 ozs. silver per ton and contained 75.3 and 75.6 percent of the total gold and silver, respectively.

The tailing assayed 0.115 oz. gold and 2.20 ozs. silver per ton.

METALLURGICAL RESULTS OBTAINED ABOVE SHOULD BE CONSIDERED AS ONLY APPLICABLE TO MATERIAL CONFORMING TO THE CHARACTER OF THE SAMPLE UPON WHICH THE TESTS WERE MADE.

Cyanidation Tests 3 and 4

Two samples were ground as in Tests 1 and 2 and each cyanided in revolving bottles for 48 hours. The cyanide consumption was 2.2 and 2.3 pounds per ton on Tests 3 and 4, respectively. The lime consumption was 2.2 pounds per ton.

The gold recovery was over 97.0 percent in each test but the silver was 59.1 percent on the coarse grind and 71.5 on the fine grind.

Conclusions

Flotation recovered only 75 percent of the gold and silver.

Cyanidation recovered 97 percent of the gold and 59.1 percent of the silver in coarse grind and 71.5 percent on fine grind.

The economics should be considered on milling against direct shipping of the ore as flux.

Yours very truly,

G.H.Roseveare
Metallurgist

UNIVERSITY OF ARIZONA

ARIZONA BUREAU OF MINES

ORE TESTING SERVICE

Ore No. 1536 Test No. 1

Conditions and Reagents

Point of Addition	Conditions			Reagents Pounds Per Ton									
	Time Mins.	% Solids	pH	A-33	Z-5	242							
Ball Mill	10			0.1									
Conditioner	2	7.1	7.4		0.6	0.1							
Rougher	6												

Remarks:

Metallurgical Products

Table 2

Product	Tons in 100 Tons Feed	Assays						% of Total					
		Gold	Silver					Gold	Silver				
Heads	100.0	0.48*	8.62*					100.0	100.0				
Concentrate	1.5	23.75	430.35					73.6	74.9				
Tailing	98.5	0.13	2.20					26.4	25.1				

Remarks: *Calculated

Grind

on 100 -	8.1
thru 100 on 200 -	25.8
thru 200	66.1

METALLURGICAL RESULTS OBTAINED ABOVE SHOULD BE CONSIDERED AS ONLY APPLICABLE TO MATERIAL CONFORMING TO THE CHARACTER OF THE SAMPLE UPON WHICH THE TESTS WERE MADE.

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ARIZONA BUREAU OF MINES

ORE TESTING SERVICE

Ore No. 1536 Test No. 2

Conditions and Reagents

Point of Addition	Conditions			Reagents Pounds Per Ton									
	Time Mins.	% Solids	pH	A-33	Z-5	242	Copper sulphate						
Ball mill	20			0.1									
Conditioner	2				0.1	0.1	0.15						
Rougher	6												

Remarks: A-33 - Aerofloat 33
Z-5 - Amyl xanthate
242 - Aerofloat 242

Metallurgical Products

Product	Tons in 100 Tons Feed	Assays			% of Total		
		Gold	Silver		Gold	Silver	
Heads	100.0	0.46*	8.86*		100.0	100.0	
Concentrate	1.7	20.24	393.9		75.3	75.6	
Tailing	98.3	0.115	2.20		24.7	24.4	

Remarks: *Calculated

Grind - on 100 - 8.1
-100 on 200- 25.8
-200 66.1

METALLURGICAL RESULTS OBTAINED ABOVE SHOULD BE CONSIDERED AS ONLY APPLICABLE TO MATERIAL CONFORMING TO THE CHARACTER OF THE SAMPLE UPON WHICH THE TESTS WERE MADE.

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ARIZONA BUREAU OF MINES

ORE TESTING SERVICE

Ore No. 1108 Test No. 3

Conditions and Reagents

Point of Addition	Conditions			Reagents Pounds Per Ton								
	Time Mins.	% Solids	pH	A-31	Z-6	Na_2S	$CuSO_4$	H_2SO_4				
Ball Mill	5	60		0.08								
Sulphide Rougher	5	25	7.4		0.1							
Sulphide Cleaner	5											
Conditioner	20		9.2			2.5						
Oxide Rougher	15		8.5		0.5	0.5	0.5	0.25				
Oxide Cleaner	6											
Table												

Reagents: A-31 Aerofloat 31; Z-6 Pentazol Xanthate; Na_2S Sodium Sulphide; $CuSO_4$ Copper Sulphate; H_2SO_4 Sulphuric Acid; Grind 48 Mesh

Metallurgical Products

Product	Tons in 100 Tons Feed	oz. per ton: Assays						% of Total				
		Gold	Silver	Lead	Zinc			Gold	Silver	Lead		
Heads	100.0	0.07*	12.8*	10.7*	4.7*			100.0	100.0	100.0		
Sulphide Concentrate	2.0	1.50	201.7	59.7	7.2			43.1	31.6	11.1		
Sulphide cleaner Tailing	1.7	0.10	22.1	13.1	4.3			2.4	2.9	2.1		
Oxide Concentrate	12.9	0.06	20.0	33.3	5.4			11.1	20.2	40.0		
Oxide Cleaner Tailing	1.6	0.05	9.8	10.5	6.2			1.1	1.2	1.6		
Table Concentrate	9.8	0.07	25.6	37.6	16.5			9.9	19.4	34.4		
Table Middling	3.1	0.06	8.6	4.0	8.1			1.1	2.1	1.2		
Tailing	68.9	0.03	4.2	1.5	2.7			2.7	22.6	9.6		
Combined Flotation & Table Conc. Concentrate	24.7	0.35	37.9*	37.1*	10.0*			64.1	71.8	85.5		

*Calculated

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ARIZONA BUREAU OF MINES
ORE TESTING SERVICE

Ore No....1536 Test No.....3.....

Grind 10 minutes as in Test 1 Flotation

Cyanided in revolving bottle for 48 hours.

Cyanide consumption - 2.2 pounds per ton

Lime consumption - 2.2 pounds per ton

Table 5

Metallurgical Products

Product	Tons in 100 Tons Feed	Assays						% of Total					
		Gold	Silver					Gold	Silver				
Heads	100.0	0.47*	8.33*					100.0	100.0				
Solution after wash	84.2	0.25	2.70					97.9	59.1				
Tailing	100.0	0.01	3.36					2.1	40.3				

Remarks:

METALLURGICAL RESULTS OBTAINED ABOVE SHOULD BE CONSIDERED AS ONLY APPLICABLE TO MATERIAL CONFORMING TO THE CHARACTER OF THE SAMPLE UPON WHICH THE TESTS WERE MADE.

UNIVERSITY OF ARIZONA

ARIZONA BUREAU OF MINES

ORE TESTING SERVICE

Ore No....1536 Test No....4.....

Grind 20 minutes.

Cyanided in revolving bottle for 48 hours.

Cyanide consumption 2.3 pounds per ton.

Lime " 2.2

Metallurgical Products

Table 6

Product	Tons in 100 Tons Feed	Assays						% of Total				
		Gold	Silver					Gold	Silver			
Feed	100.0	0.43	8.08					100.0	100.0			
Solution & Wash	89.5	5.24	3.22					97.8	71.5			
Tailing	100.0	0.01	2.20					2.2	28.5			

Remarks:

Grind
on 100 0.5
Thru 100 on 200 - 8
Thru 200 - 91.5

METALLURGICAL RESULTS OBTAINED ABOVE SHOULD BE CONSIDERED AS ONLY APPLICABLE TO MATERIAL CONFORMING TO THE CHARACTER OF THE SAMPLE UPON WHICH THE TESTS WERE MADE.

№	Samples Taken by H.D. Pixler	Width	oz. Au	$ Value	oz. Ag	$ Value	% Pb	$ Value	Total Value
17	Amado - 100 Ft Level - E. of Raise	Approx 2 ft	0.02	0.70	18.80	16.90	19.10	76.40	94.00
18	" " " " " " " "	2	0.01	—	2.80	2.50	2.50	10.00	12.50
19	" " " " " " " "	2	0.01	—	2.60	2.34	3.50	14.00	16.30
20	" " " " " " Shaft	?	0.01	—	2.00	1.80	1.05	4.20	6.00
21	" " " " " " " " Shaft	?	0.01	—	1.40	1.25	0.60	2.40	3.65
22	" " " " Along 19th of Raise	—	0.02	0.70	8.60	7.75	3.50	14.00	22.45
23	" " " " Stope E of Shaft	1½	0.02	0.70	18.20	16.35	14.80	59.20	76.25
24	" Dump - Panned Concentrates	1	0.04	1.40	20.80	18.70	43.30	173.30	193.30
25	" 100 Ft. Level - West of Shaft - Stope	—	—	—	0.80	0.70	—	—	—
26	La Caruva - 120 Ft. Level - E. Drift Face		0.05	1.75	1.30	1.15	—	—	2.90
27	" " " " " E. of Shaft		0.10	3.50	1.90	1.70	—	—	5.20
28	" " - Stope - below 5a Level		0.26	9.10	3.90	3.50	—	—	12.60
29	" " - Dump - Grab Sample		0.30	10.50	1.80	1.60	—	—	12.10
30	" " - Stope - W. of Shaft		0.31	11.20	0.50	0.45	1.70	6.80	18.45
32	" " " " - E. " "		0.84	29.40	4.70	4.20	.30	—	33.60
31	" " - Back - W. Shaft 5a Level		2.00	70.00	11.40	10.25	.90	3.60	83.85
33	" " - Stope - E. of Shaft		14.94	523.00	36.10	32.50	3.30	13.20	568.70
34	Amado - 200 Level selected ore on Dump		—	—	11.80	10.60	28.90	115.60	126.20
							16.90 - Zinc		

La Caruva
Ave 1-115 - .64 Au
2-115 - .118 Au
Ave 1-115 - 6.12 Ag
Ave 2-115 - 8.3 Ag

PHELPS DODGE CORPORATION

DOUGLAS REDUCTION WORKS

DOUGLAS, ARIZONA

Sept. 16, 1948

Mr. H. D. Pixler
Box 542
Casa Grande, Arizona

Amado - Above 30' level!

Dear Sir:-

A search of our records shows that we received one (1) car of ore from the Amado Mines, Inc., Arivaca, Arizona in October 1929. The analysis was as follows:

"A"

Au	.045	Oz. Per Ton	1.45
Ag	22.41	" " "	17.92
Cu	.27	%	
Pb.	34.90	%	69
Insol.	45.0	%	88.37
Fe	1.9	%	
Mn	.2	%	
CaO	.4	%	
S	4.4	%	
Zn	4.0	%	
As	Trace		
Sb	0.1	%	
Bi	Trace		

This car was shipped from Amado, Arizona.

Yours very truly,

PHELPS DODGE CORPORATION
DOUGLAS REDUCTION WORKS

By Gilbert Hale
Gilbert Hale

GH:E

UNIVERSITY OF ARIZONA
ARIZONA BUREAU OF MINES
ORE TESTING SERVICE

July 7, 1958

Brittain and Hendrickson
691 E. Alta Vista
Tucson, Arizona

Dear Dale and Art: Ore Test 1580

The sample of gold ore from La Caruva mine was crushed thru 30-mesh and amalgamated in a revolving bottle for 30 minutes. The results are given in the following table:

	Assay oz.per ton gold	Distribution gold, percent
Heads	0.30*	100.0
Amalgam	.13**	43.3
Tailing	.17	56.4

* Calculated from products

** Ozs. gold per ton recovered by amalgamation

Forced amalgamation recovered 43.3 per cent of the total gold. This result is higher than could be expected on plates.

Yours very truly,

G.H.Roseveare, Metallurgist

Paid check # 1927

METALLURGICAL RESULTS OBTAINED ABOVE SHOULD BE CONSIDERED AS ONLY APPLICABLE TO MATERIAL CONFORMING TO THE CHARACTER OF THE SAMPLE UPON WHICH THE TESTS WERE MADE.

ARTHUR HENDRICKSON

DALE BRITTAIN

Dec 26, 1957
N. Vogel Property
La Caruva Mine
1.5 Miles North of Arivaca

BRITTAIN-HENDRICKSON MINING CO.

MINE DEVELOPMENT — CONSULTING — LEASING

891 E. ALTA VISTA
TUCSON, ARIZONA
PHONE MA 4-3597

#1 - 18" width East Face, Stope above 100' Level
Some ore in back - qtz vein is narrow & there would be delatio, from by taking mining width - both walls fairly hard
Need occassional stulls or leave pillars.

#2 - 30" width West side of Shaft - taken from back above fill in 100' level - 10 to 15 Tons of fill in sight.

#3 - 10 to 15 tons of fill - in 100' Level on W. side of shaft (gro

#4 - 36" West face - Collar of shaft - 50'.
This would most probably the cheapest and quickest pla to start - (not much ore left here, though)

AMERICAN SMELTING AND REFINING COMPANY

EL PASO SMELTING WORKS

BOUGHT OF (Vogel Mng. Co.)
ADDRESS 1820 E. Hampton, Tucson, Ariz.
SHIPPING POINT Sahuarita, Ariz.
NAME OF MINE

EL PASO, TEXAS, 10/7 1955
SMELTER LOT 2883
SHIPPERS LOT
CLASSIFICATION pb ore
PURCHASE TERMS 4049

RATES, EXCEPT ON CONTRACTS, SUBJECT TO CHANGE WITHOUT NOTICE

Arrival Date	Car Number	Car RR	Gross Weight	Containers No.	Containers Weight	Wet Weight	% H2O	Dry Weight
9/19	151570	SP				77900	4.0	74784

QUOTATIONS

Coinage Silver		¢ per oz.
Foreign "	90.75	¢ per oz.
Lead $	15.00	per cwt.
Copper		¢ per lb.

B/L Date: 9/13

Assays	Oz. per Ton Gold	Oz. per Ton Silver	Wet Lead %	Copper %	Insol %	SiO2 %	Iron %	Mn %	Lime %	Zinc %	S %	Al2O3 %	As %	Sb %	Bi %	%
Smelter	0	11.9	9.5	.09						5.3			.10	.12	0	
Assayer																
Umpire																
Metallics																
Settle		11.9	9.5	.09												

VALUES PER TON

	Pay Content	Price	Amount	Freight (Fixed)
Gold				
Silver, Less % Min. 10%	10.9	.8925	9.73	9.73
Lead, Less 30% @ 90 %	144.0	.130	18.72	7.20
Copper, Less 0 %				
Prices Value			28.45	16.93
Less Deductions (Net Charge)			5.55	5.55
Freight Value			x x x	11.38
Net Value			22.90	@ 37.3920

Deductions	Charge	Credit
Base, Incl. Labor Adj.	5.50	
Excess Value Over $		
¢ Per Unit Pb + − %		
Lead—Copper Price Escalator		
Bullion Freight Tax .00035	.05	
Insol—Silica		
Iron—Lime		
Zinc		
As: Sb: Bi:		
Net Charge	5.55	

−10.92 Wet Ton

	Debits	Credits
Dry Tons		856.28
Tax 5.31	182.24	
	9.95	
	100.30	
	56.38	
	507.41	
	856.28	856.28

Less Penalty 38.95
Less Overhauling 4.76
Wet Tons @ 3.95+15% P.T. 176.93
Reset 5.19
Less Sulfuring 2.50 + 3%
97.38 + 2.92
Less Representation $
Umpire $
Sampling $
Equity Withheld Pending Receipt of Silver Affidavit
B 308
Less Penalty 20%

Balance Due Shipper

Correct

Approved

AMERICAN SMELTING AND REFINING COMPANY

EL PASO SMELTING WORKS

BOUGHT OF Vogel Mining Co.
ADDRESS 1820 E. Hampton, Tucson, Ariz.
SHIPPING POINT
NAME OF MINE

EL PASO, TEXAS 6/16 1955
SMELTER LOT 1764
SHIPPERS LOT
CLASSIFICATION pb ore
PURCHASE TERMS 4049

RATES, EXCEPT ON CONTRACTS, SUBJECT TO CHANGE WITHOUT NOTICE

Arrival Date	Car Number	Car RR	Gross Weight	Containers No.	Containers Weight	Wet Weight	% H_2O	Dry Weight
5/26	151139	SP				104000	4.9	98904

QUOTATIONS

Coinage Silver	90.0
Foreign "	90.25
Lead $	15.00
Copper	

B/L DATE:

Assays	Oz. per Ton Gold	Oz. per Ton Silver	Wet Lead %	Copper %	Insol %	SiO_2 %	Iron %	Mn %	Lime %	Zinc %	S %	Al_2O_3 %	As %	Sb %	Bi %	%
	0	10.4	8.0	.12	74.2	63.8	2.4			4.7		3.1			0	
	.005	10.7	8.3	.18												
			8.3													
		10.55	8.3													

VALUES PER TON

Payment	Pay Content	Price	Amount	Freight (Fixed)
Gold				
Silver, Less % Min. 1oz	9.55	.8875	8.48	8.48
Lead, Less 30% @ 90 %	122.40	.130	15.91	6.12
Copper, Less % @ %				
Gross Value			24.39	14.60
Less Deductions (Net Charge)			5.54	5.54
Freight Value			x x x	9.06
Net Value			18.85	@49.452

Deductions	Charge	Cr
Base, Incl. Labor Adj.	5.50	
Excess Value Over $		
¢ Per Unit Pb + — %		
Lead—Copper Price Escalator		
Bullion Freight Tax .00035	.04	
Insol—Silica		
Iron—Lime		
Zinc		
As: Sb: Bi:		
Net Charge	5.54	
— 8.62 Wet Ton		

Less Freight 52.00
Less Switching 4.76
Less Hauling 2.50 + 3%
Less Representation $ 9.00
Wet Tons @ 3.95+15% P.T. 236.21
Reset 5.19
130.00 + 3.90
Umpire $ 6.00
Sampling $
Amount Withheld Pending Receipt of Silver Affidavit
Tax 7.09
Dry Tons
B.235
Less Penalty 10%

Debits	Credits
	932.17
243.30	
9.95	
133.90	
15.00	
54.50	
475.52	
932.17	932.17

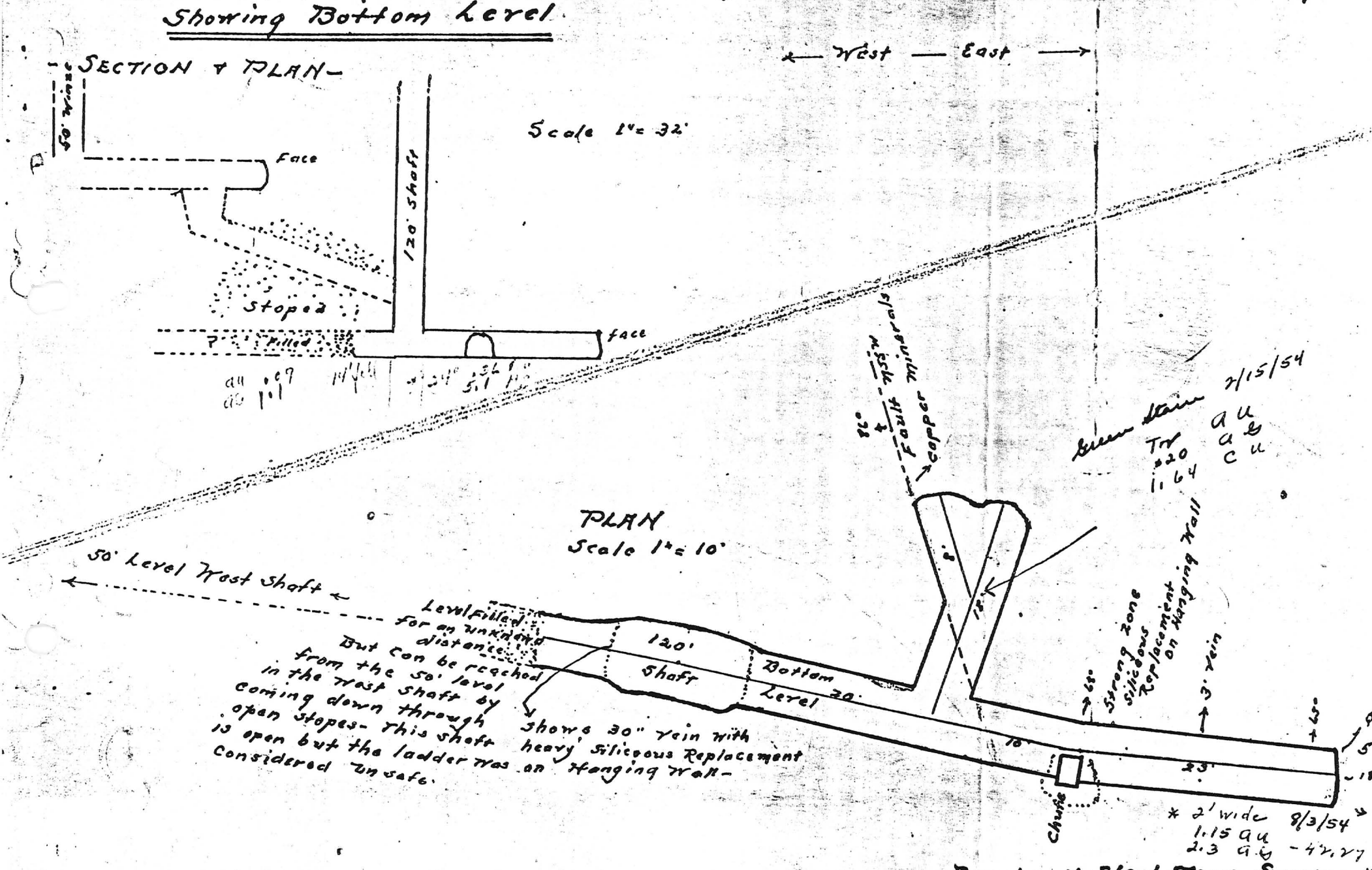
Balance Due Shipper

Correct

Approved

La Caruva - Main Shaft - (East Shaft) -
Showing Bottom Level

Fig. 6



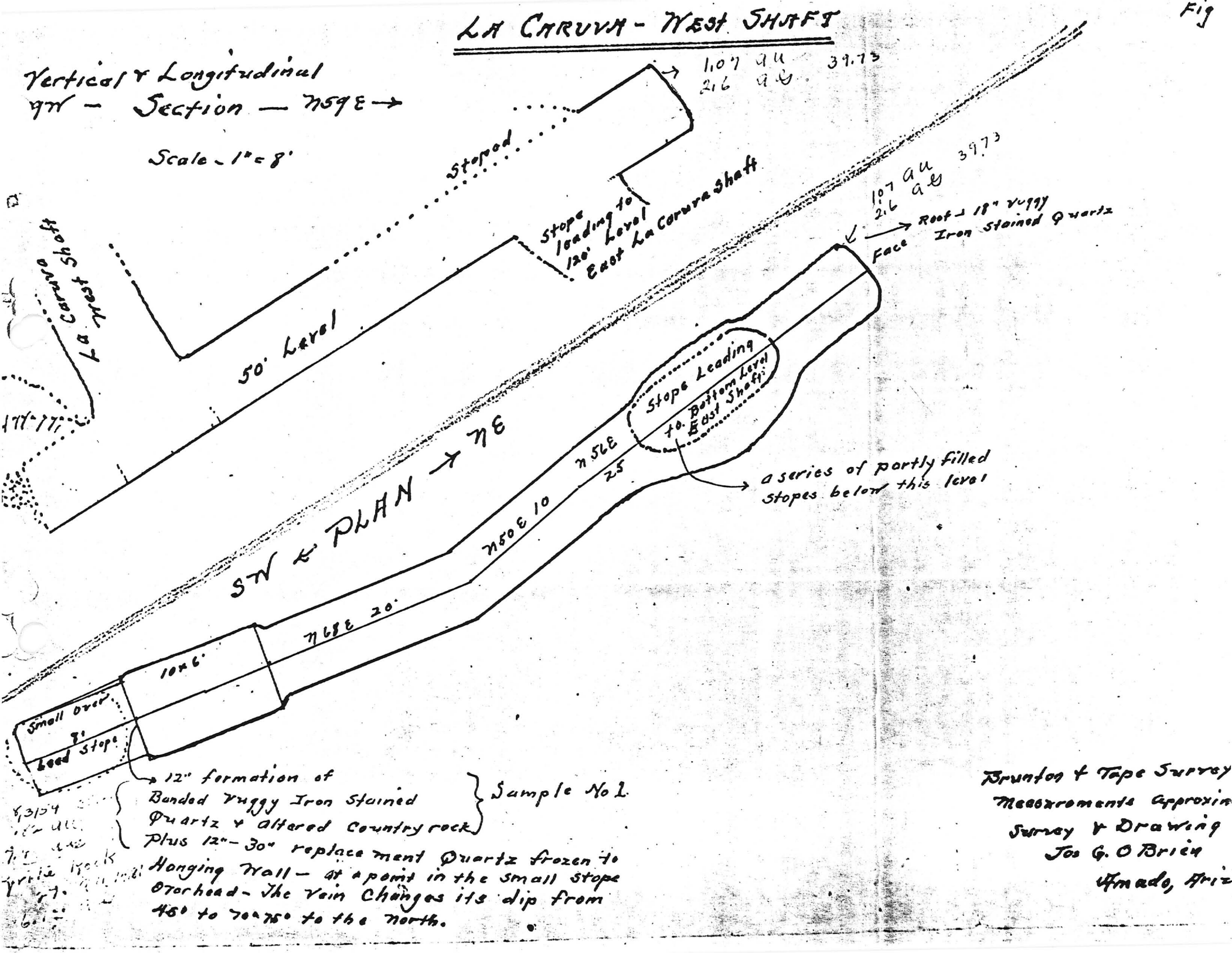
Brunton + Steel Tape Survey
Bearings magnetic -
Measurements approximate -
Survey + Drawing By
Jos. G. O'Brien

Fig

LA CARUVA - WEST SHAFT

Vertical & Longitudinal
SW - Section - N59E →

Scale - 1" = 8'



Brunton & Tape Survey
Measurements approxim
Survey & Drawing
Jos G. O'Brien
Amado, Ariz

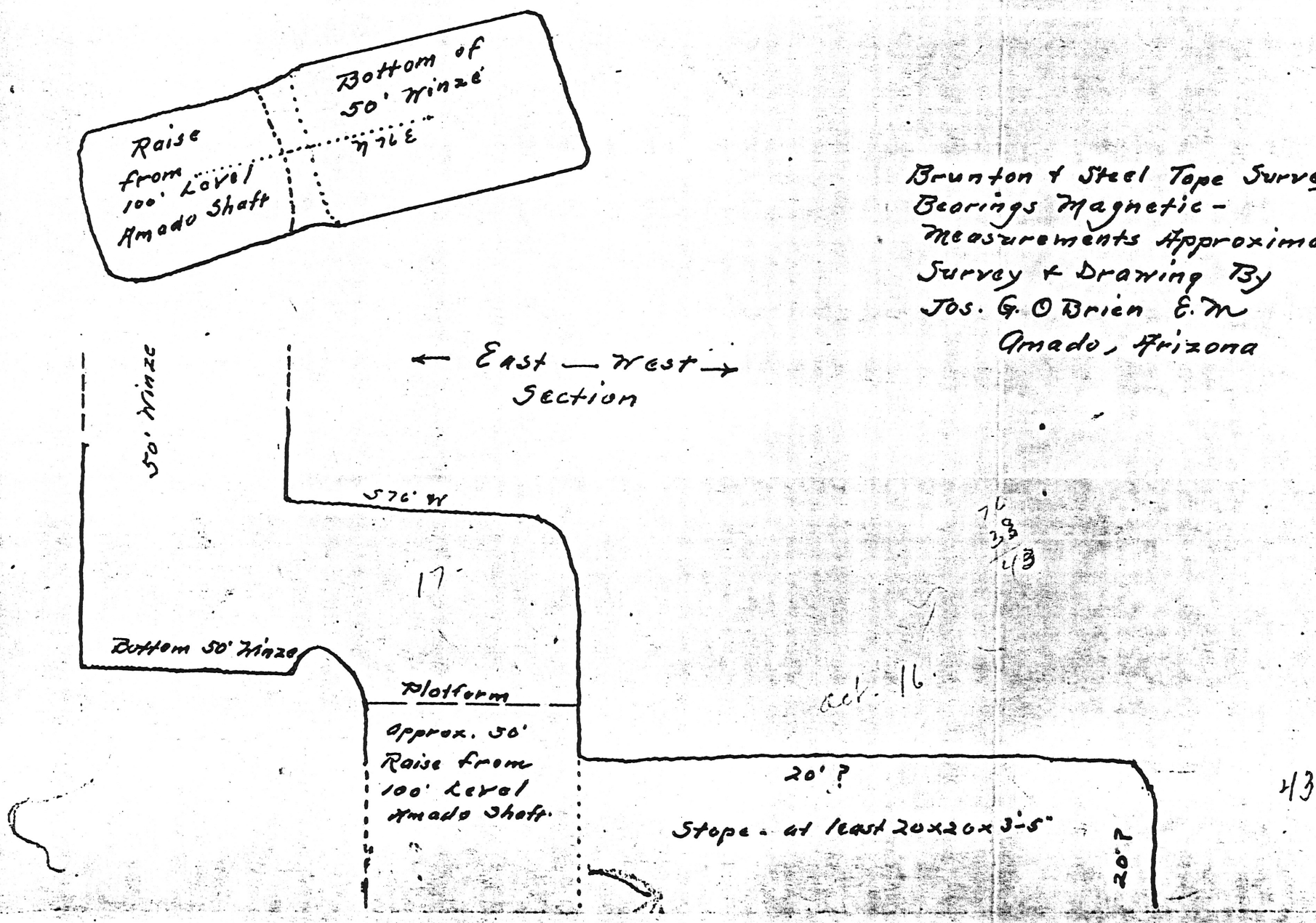
Fig. 3

AMADO MINE - ADIT No. 1 -

WINZE - 50' LEVEL

- PLAN

Scale 1" = 5'

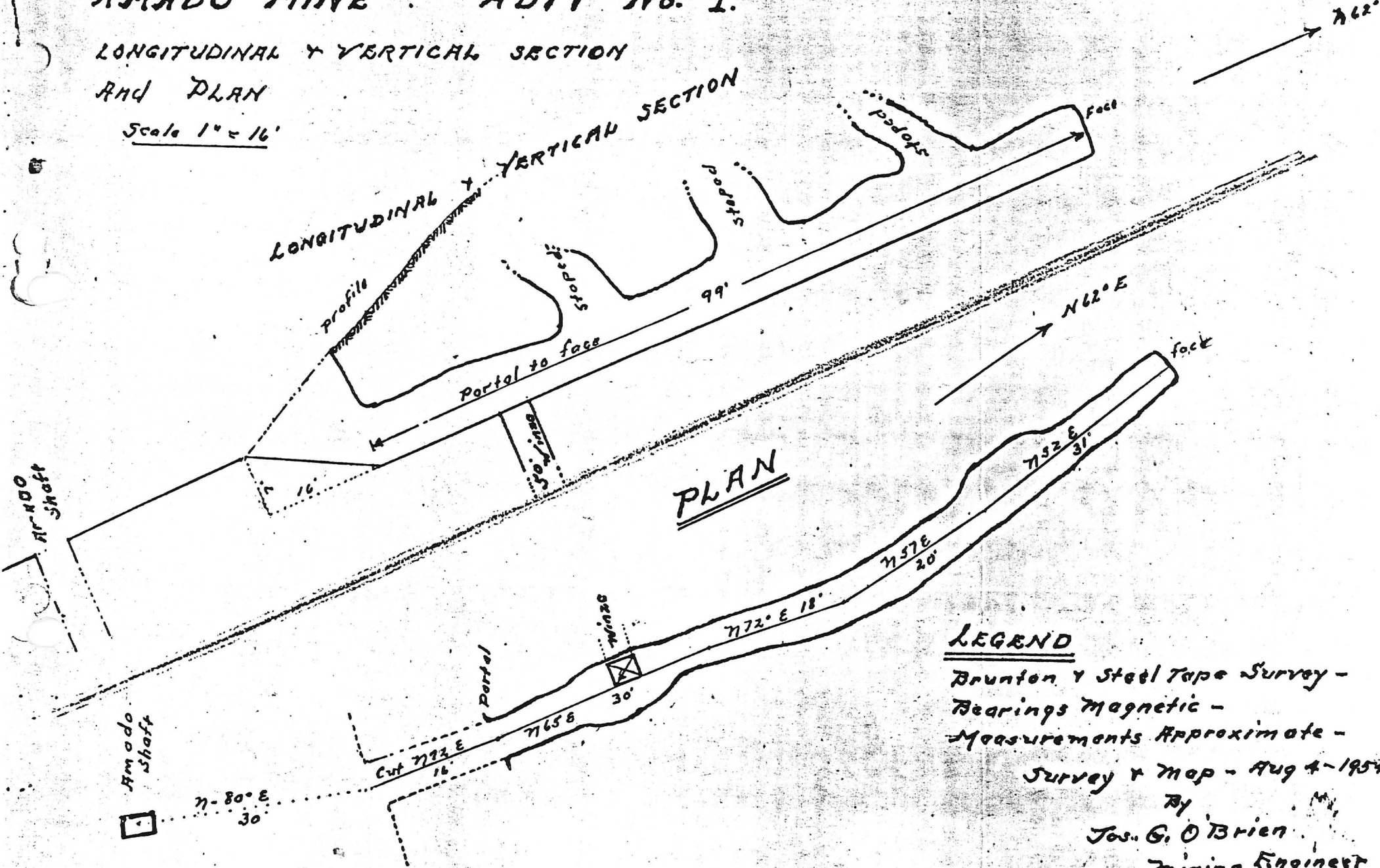


AMADO MINE . ADIT No. 1.

Fig. 1

LONGITUDINAL + VERTICAL SECTION
AND PLAN

Scale 1" = 16'



LEGEND

Brunton + Steel Tape Survey -
Bearings Magnetic -
Measurements Approximate -

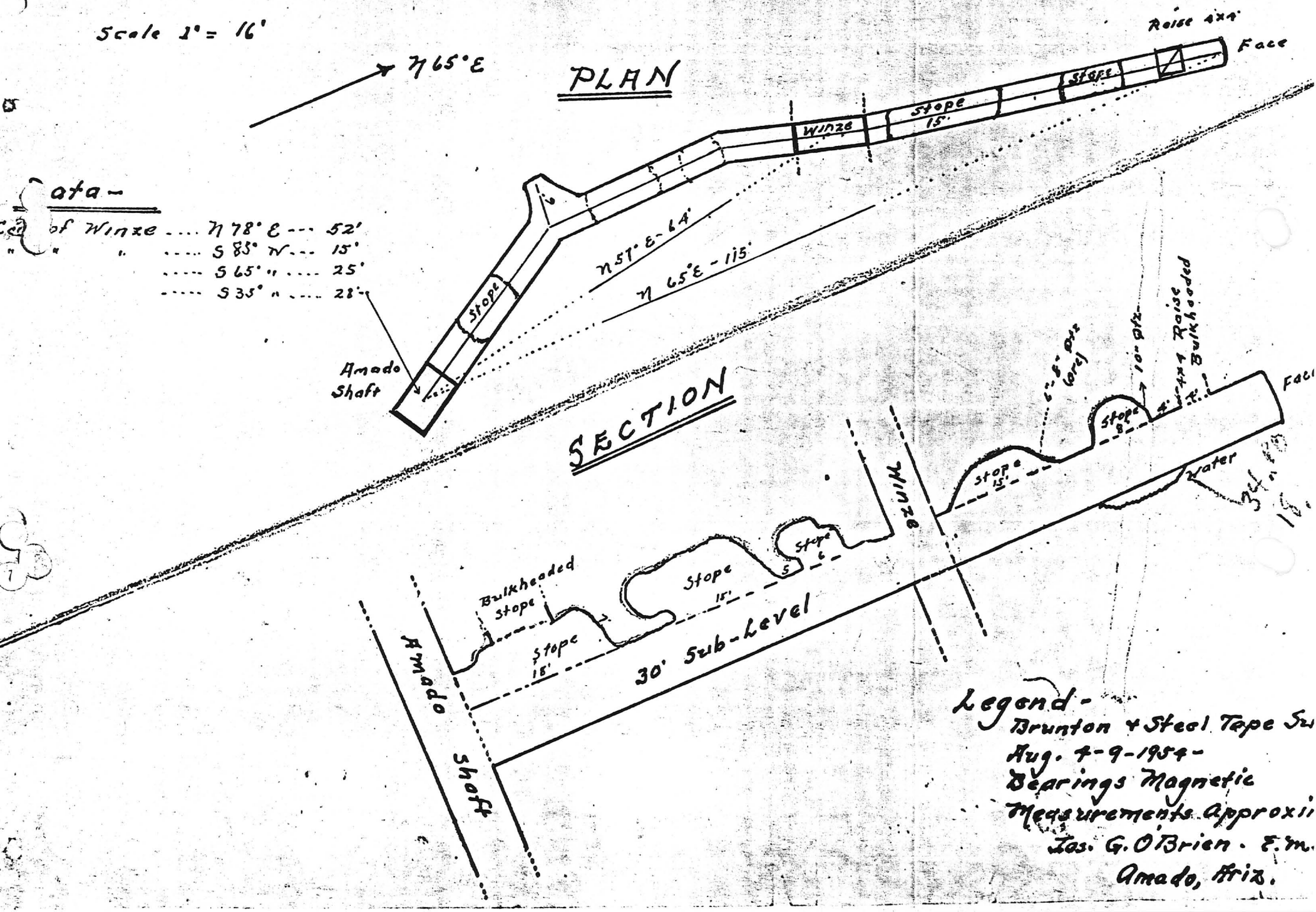
Survey + Map - Aug 4 - 1954
By
Jos. G. O'Brien
Mining Engineer
Amado, Ariz.

Fig. 2

AMADO MINE – ADIT No. 1 – SUB-LEVEL –

30' Below Collar Of WINZE – – PLAN & SECTION –

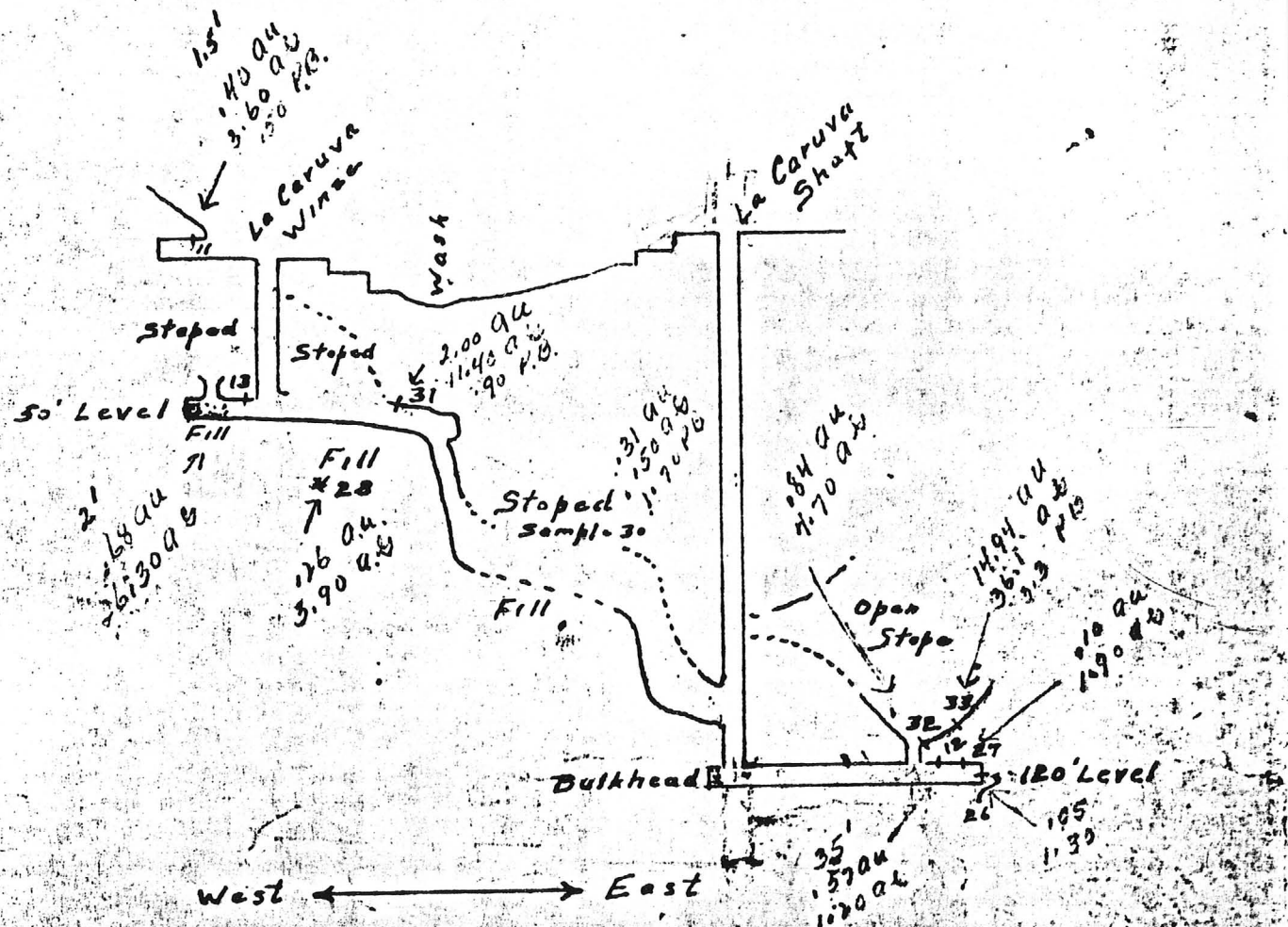
Scale 1" = 16'



Data –

Collar of Winze .... N 78° E --- 52'
" " " .... S 85° W --- 15'
.... S 65° " .... 25'
.... S 35° " .... 28'

Legend –
Brunton & Steel Tape Su
Aug. 4-9-1954 –
Bearings Magnetic
Measurements approxi
Jas. G. O'Brien. E.M.
Amado, Ariz.



LA CARUVA

Scale :- 1" = 40'

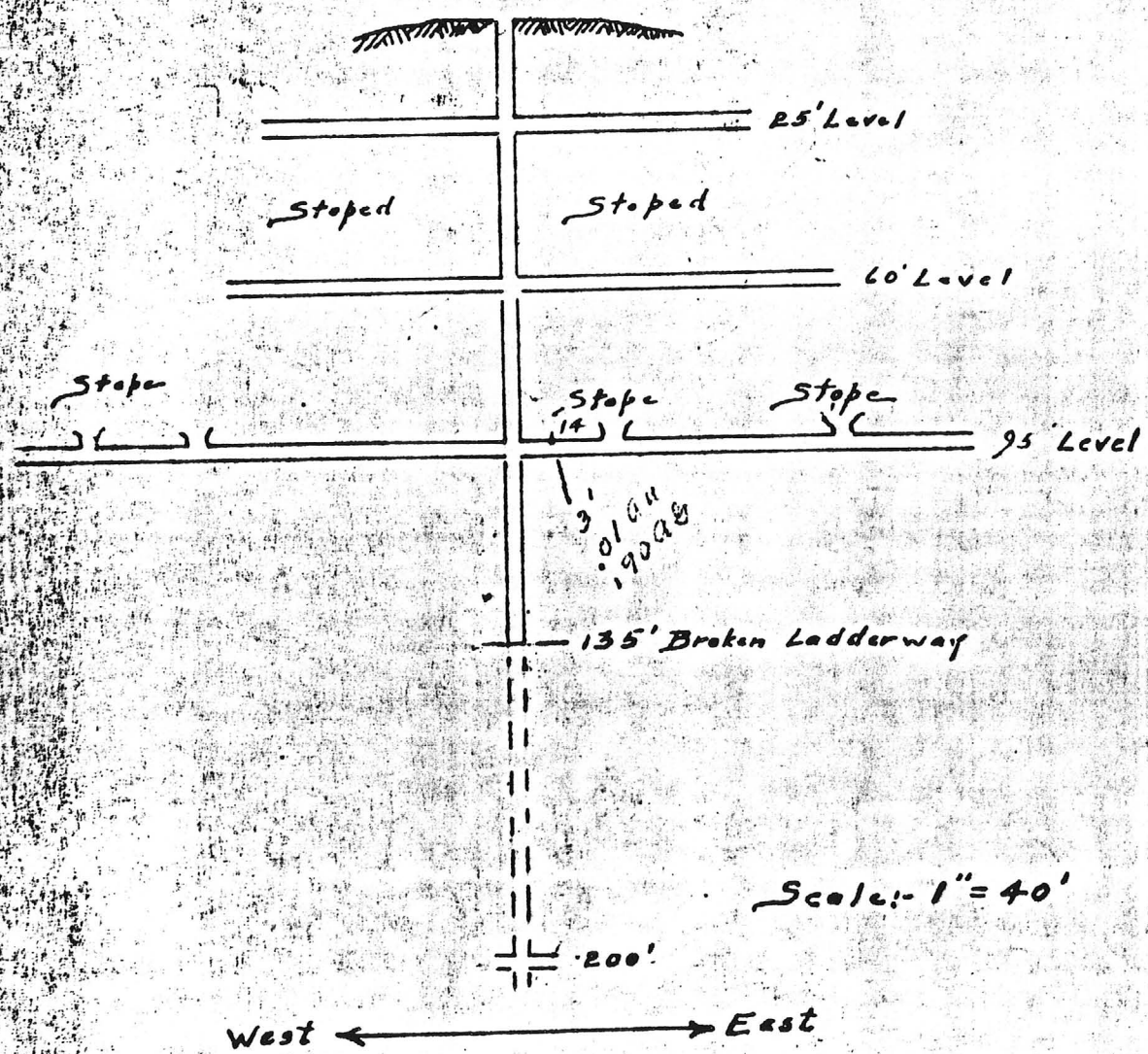
To accompany Report By:-

Harlow D. Phelps

Slip N10° E on

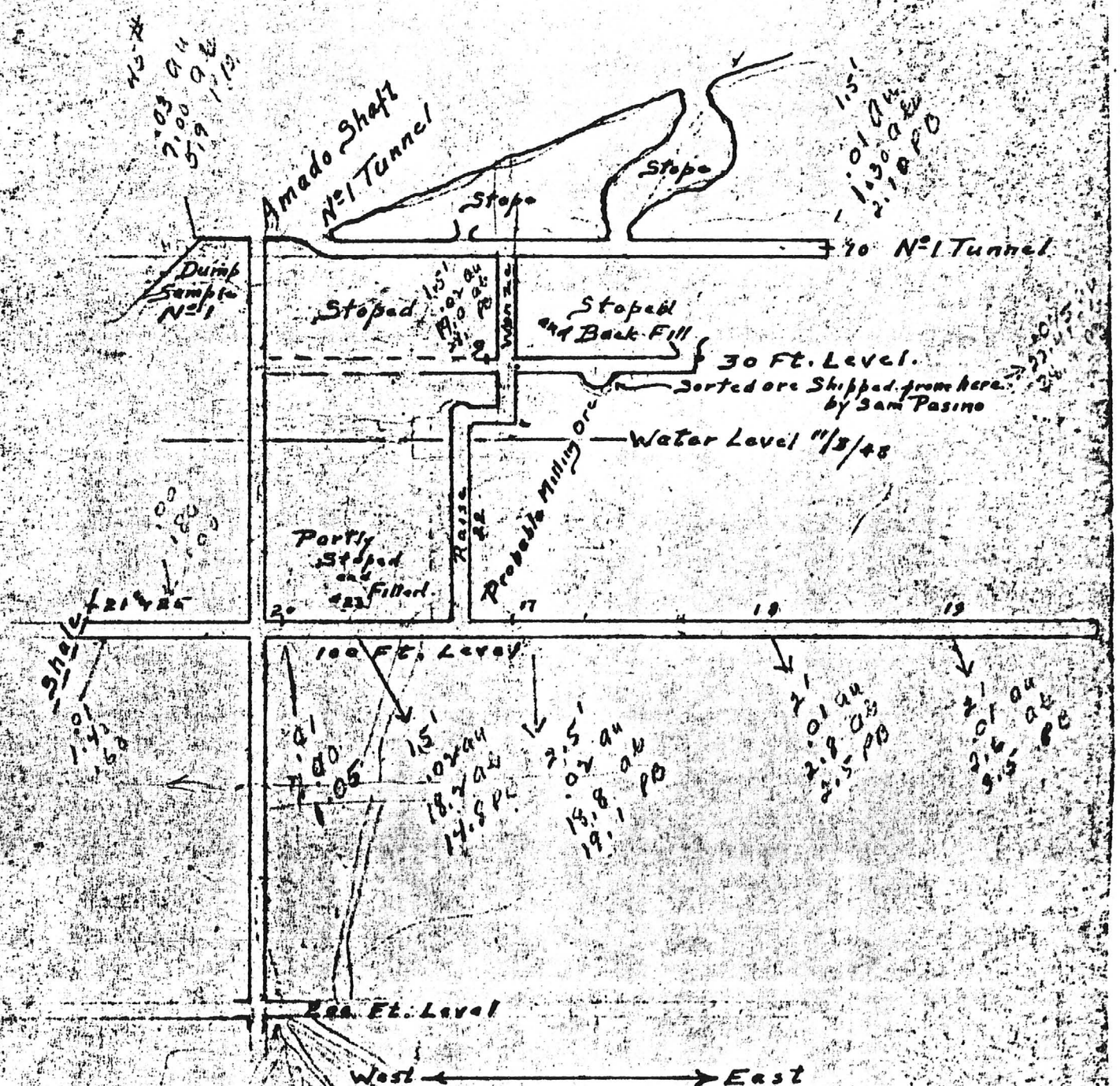
on Cinco Creek

S 20° Level



OREONA SHAFT

To Accompany Report By:- Harlow D Phelps



AMADO WORKINGS

Scale:- 1 IN. = 40 Ft.

To accompany Report By:-

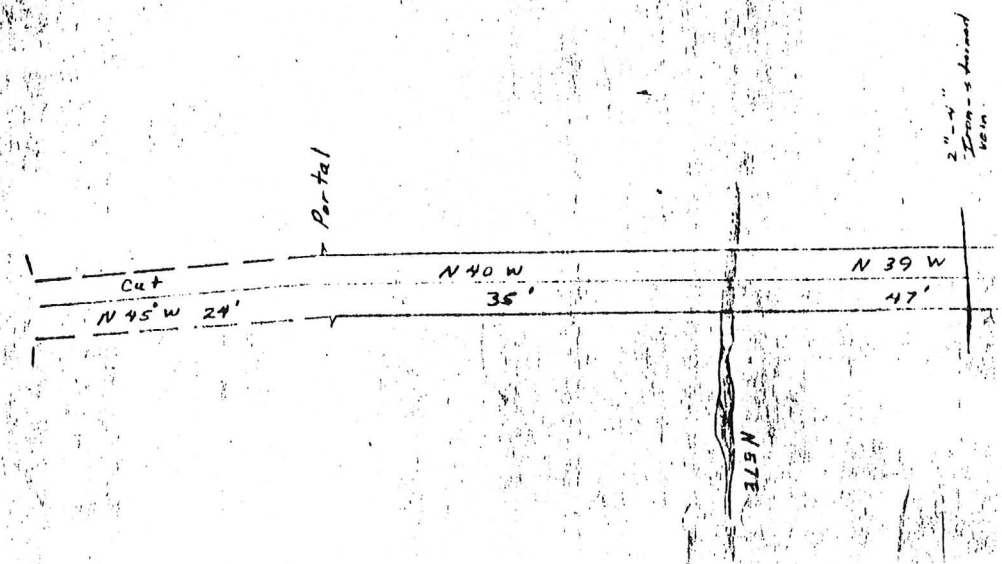
Harford D. Phelps

Amado Mine — Adit No. 2

Plan

Showing veins in Plan & Section

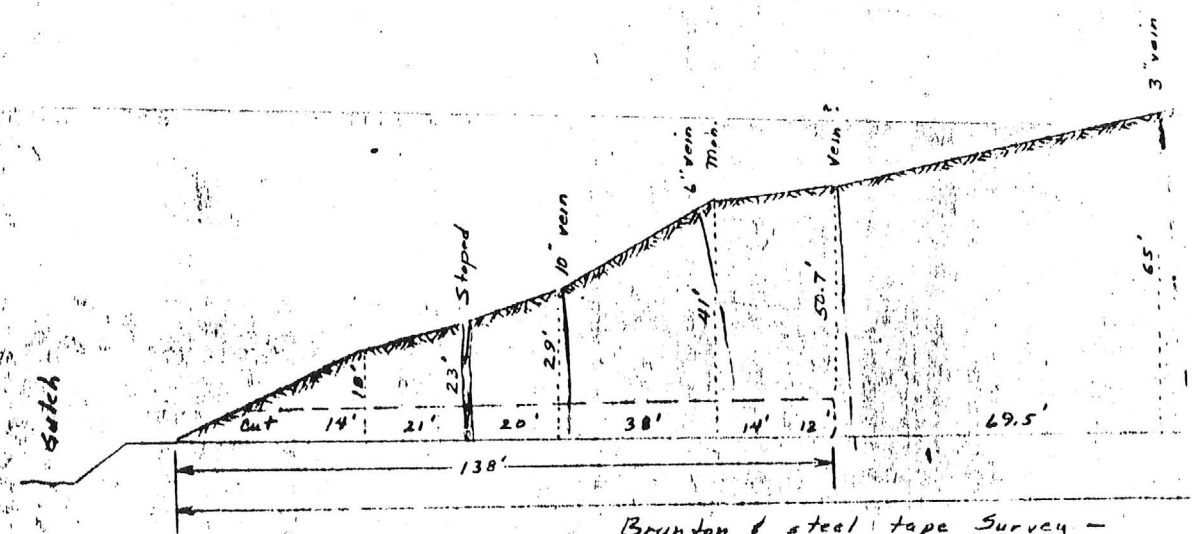
Scale 1" = 12.5'



Longitudinal Section — A profile on the bearing of the Crosscut for 409' — Bearing N-40°-W

Scale 35' = 1"

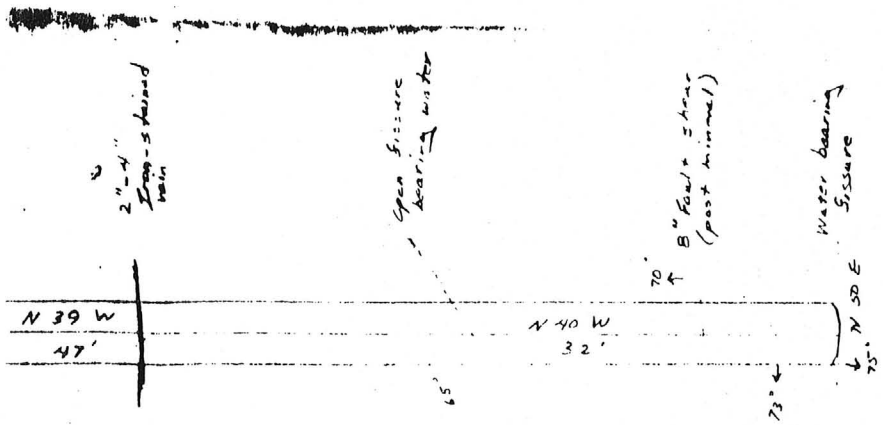
— Veins shown in Red —



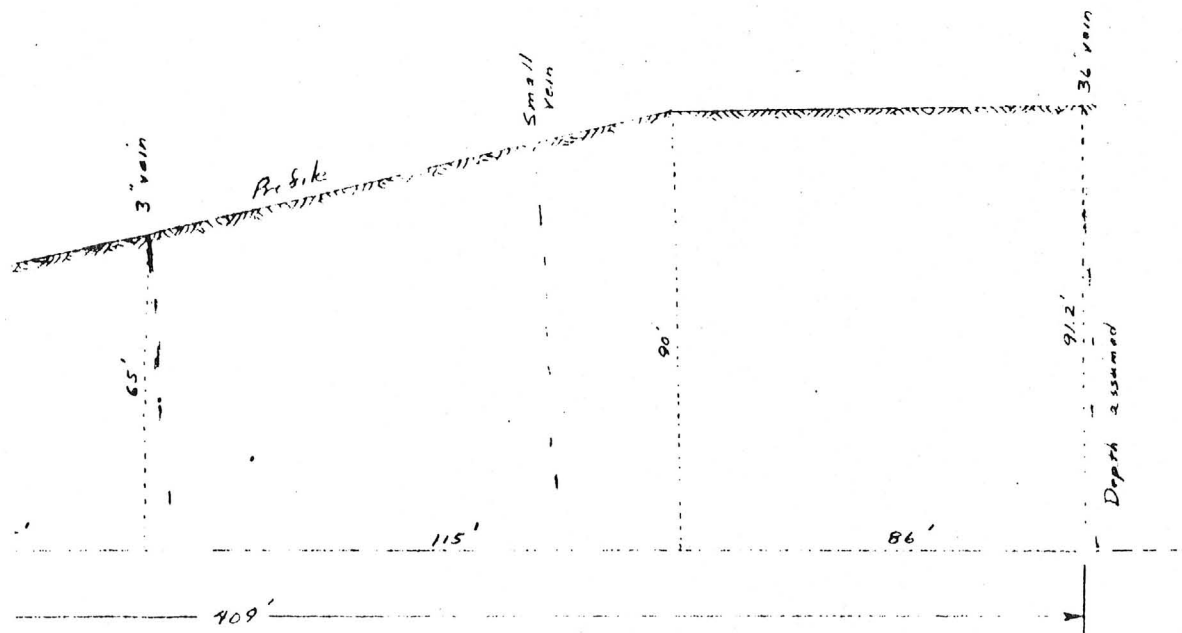
Brunton & steel tape Survey —
(All measurements approximate)

#2

Fig. 7



bearing
N-40°-W→



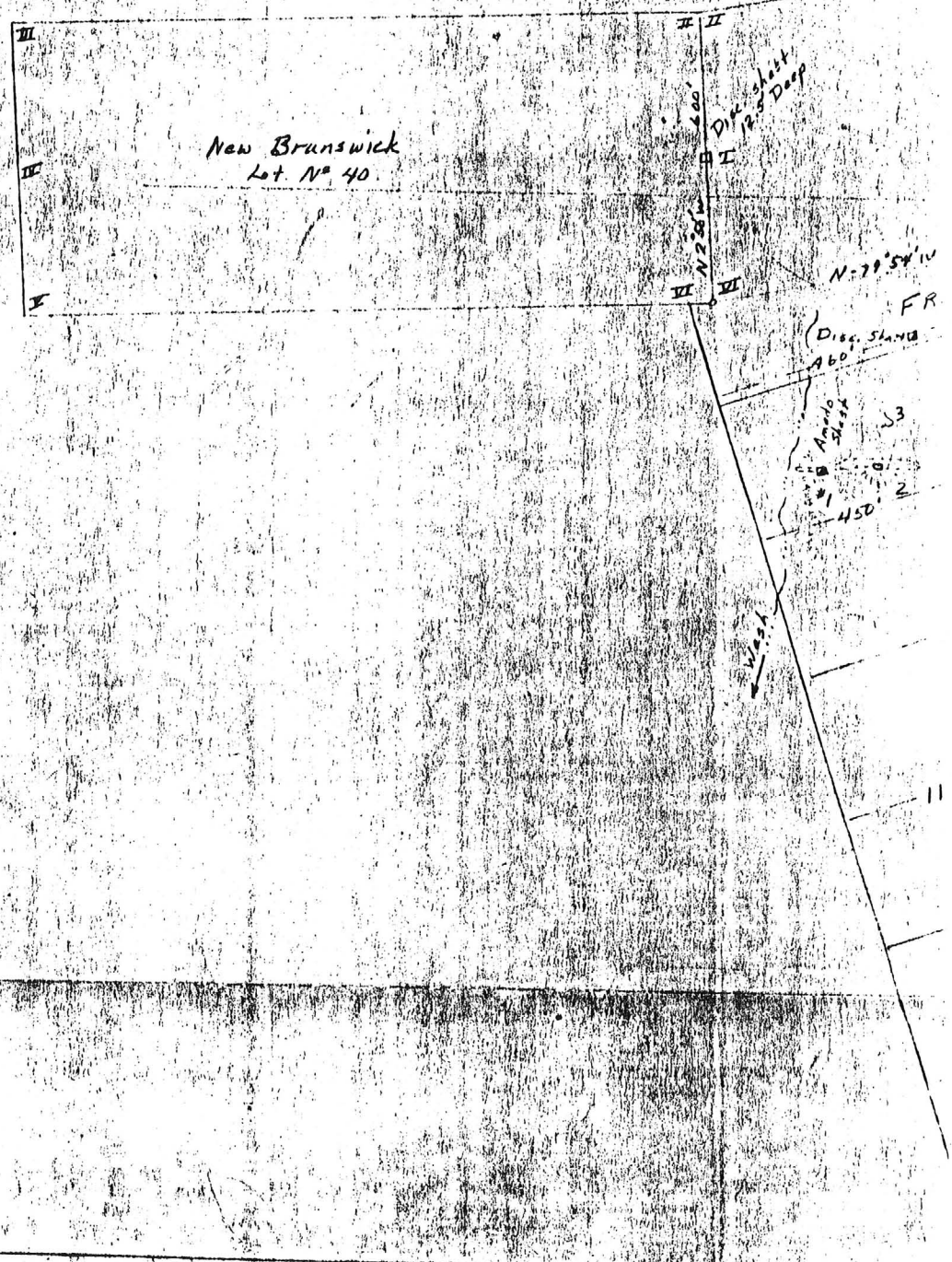
cy –
ximate)

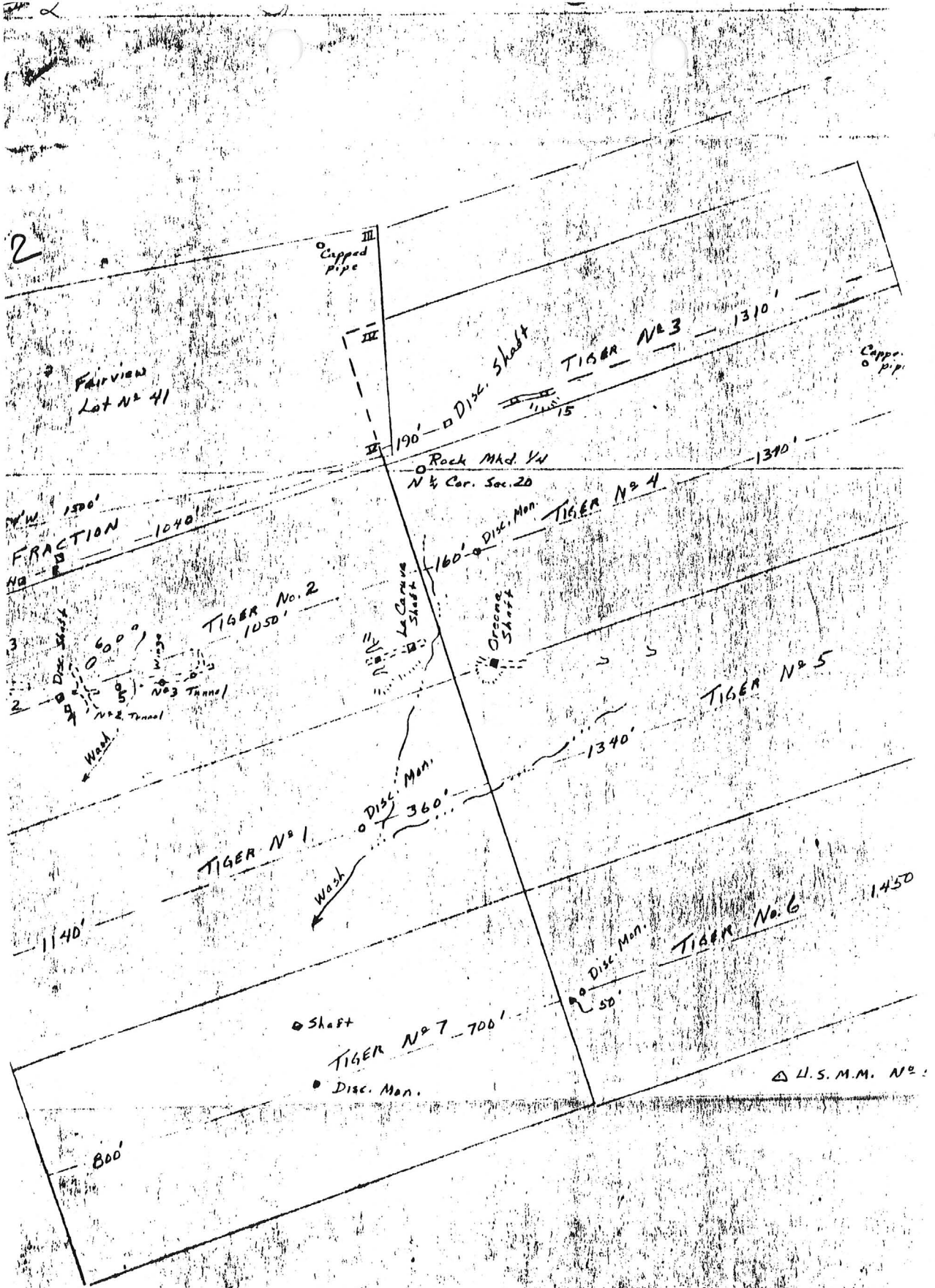
After original drawing by
Jos. G. O'Brien - Mining Engineer
Amado, Arizona
Aug. 4-9, 1954

Au. @ $32.00

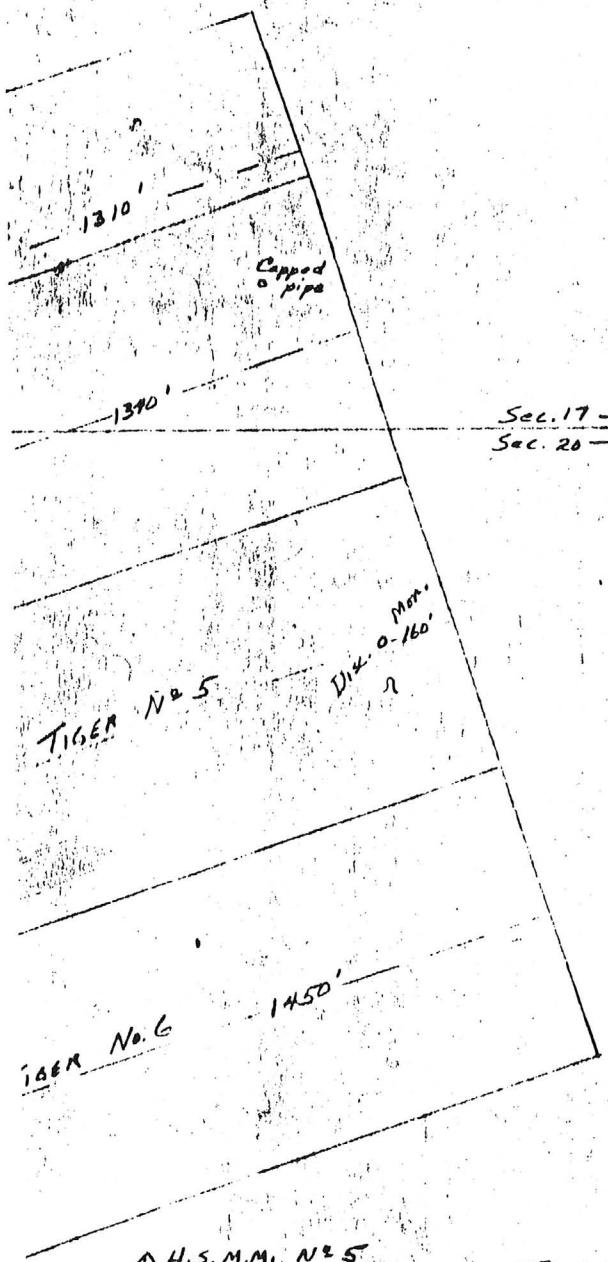
La Corona Mine Sampling Record – B-H Mining Co

			Au. oz	Value	Ag. oz	Value	Gro. Valu
4-58	#1.	East Face of stope above 100' Level - - - - 18" Channel - - - - - - -	1.25	$ 40.00	1.6	$ 1.21	$ 41.-
4-58	2.	From back of drift (pillar) West of Shaft - 100' Level - 36" Channel - - - - - -	0.43	$ 15.48	2.1	$ 1.59	$ 17.
1-58	3.	Fill below #2 - West of Shaft on 100' Level - - - - - - - - - - - -	0.05	1.80	0.7	0.53	2
1-58	4	From 50' below Collar in tramway shaft - pillar on West side - - 36" Channel - - - -	0.86	30.96	6.9	5.24	36.
26-58	5	(Huntley) East Face of stope above 100' Level - - - 24" Channel - - - - - - - -	0.66	21.12	2.74	2.08	23
"	6.	(Huntley) East Face of 120' Level - - - - - - - - 5' Channel - - - - - - - - -	0.10	3.20	1.58	1.20	4.
"	7.	(Huntley) La Corona Shaft Sump (140') - - - 3' Channel - - - - - - - -	0.04	1.28	0.40	0.28	1.5
21-58	8.	Grab sample from First 2 Tons hoisted - East Face 120 Level - - - - - - - - -	0.23	7.36	0.90	0.68	8.0
24-58	9.	Glassy Qtz with Fe. stringers from HW side of vein - - - (Some occurs in center of vein) - - - - - - -	0.22	7.04	1.00	0.76	7.
"	10.	3' Channel sample cut last round before connecting with old stope - - - - - - -	0.23	7.36	1.00	0.76	8.
"	11.	Grab sample from Ton #8, 9, 10, 11, 12 & 13 -	0.09	2.88	0.40	0.30	3.
	12	Sample cut from white, clean, sugar-qtz - - - no fe. or other material than the white qtz. - -	0.04	1.28	0.30	0.23	1.5
28-	13	Honey-comb qtz - qtz was creamy colored with lots of vugs of mud - - - - - - - -	0.47	15.04	1.60	1.22	17.2
28-58	14	Sample of very fine, granulated qtz - from a "pocket" - taken by Hendrickson - - - - - -	0.05	1.80	0.30	0.23	2.0
-29-58	15	Grab sample from Ton #14 thru ton #20 -	0.14	4.48	0.40	0.24	4.7
-31-58	16.	Grab sample from ton #21 thru ton #33.5 -	0.52	16.64	1.1	0.83	17.4
-4-58	17.	Grab sample from ton #33.5 thru ton #58.0 -	0.43	13.76	1.8	1.37	15.
-58	18.	Grab sample from ton #58.0 thru ton #72.0 -	0.45	14.40	1.4	1.06	15


New Brunswick
Lot. No 40
Dip shaft
125 Deep
N 28 W
N 79°54' W
FR
Disc. stand
460'
Amalg. Shack
450'
Wash


Capped pipe
Fairview Lot No 41
Disc. Shaft
TIGER No 3
1310'
Capped pipe
190'
15
Rock Mkd. Y/N
N ¼ Cor. Sec. 20
1340'
FRACTION
1040'
Disc. Mon.
TIGER No 4
160'
TIGER No. 2
1050'
La Carma Shaft
Orcana Shaft
Disc. Shaft
600'
No 3 Tunnel
No 2 Tunnel
Wash
TIGER No 5
1340'
Disc. Mon.
360'
TIGER No 1
Wash
1140'
1450
Disc. Mon.
TIGER No. 6
50'
Shaft
TIGER No 7
700'
Disc. Mon.
U.S.M.M. No
800'

#3



MAP
OF THE
AMADO MINE
AND
TIGER GROUP OF CLAIMS
ARIVACA MINING DISTRICT
PIMA COUNTY, ARIZONA

SCALE: 1" = 300'

Reproduced from original plat by:
Harlow D. Phelps
Registered Engineer
Dec. 1948 - Tucson, Arizona

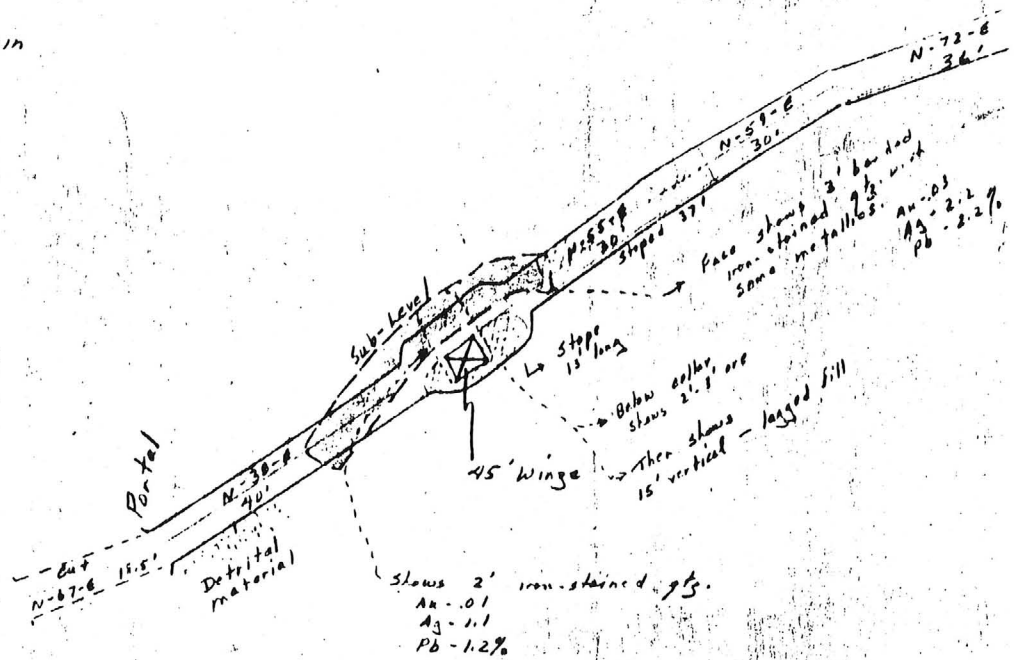
#1 AMADO MINE — ADIT NO. 3

Plan - with wings & sub-level - Small stope & dr.

General bearing N-65°-E

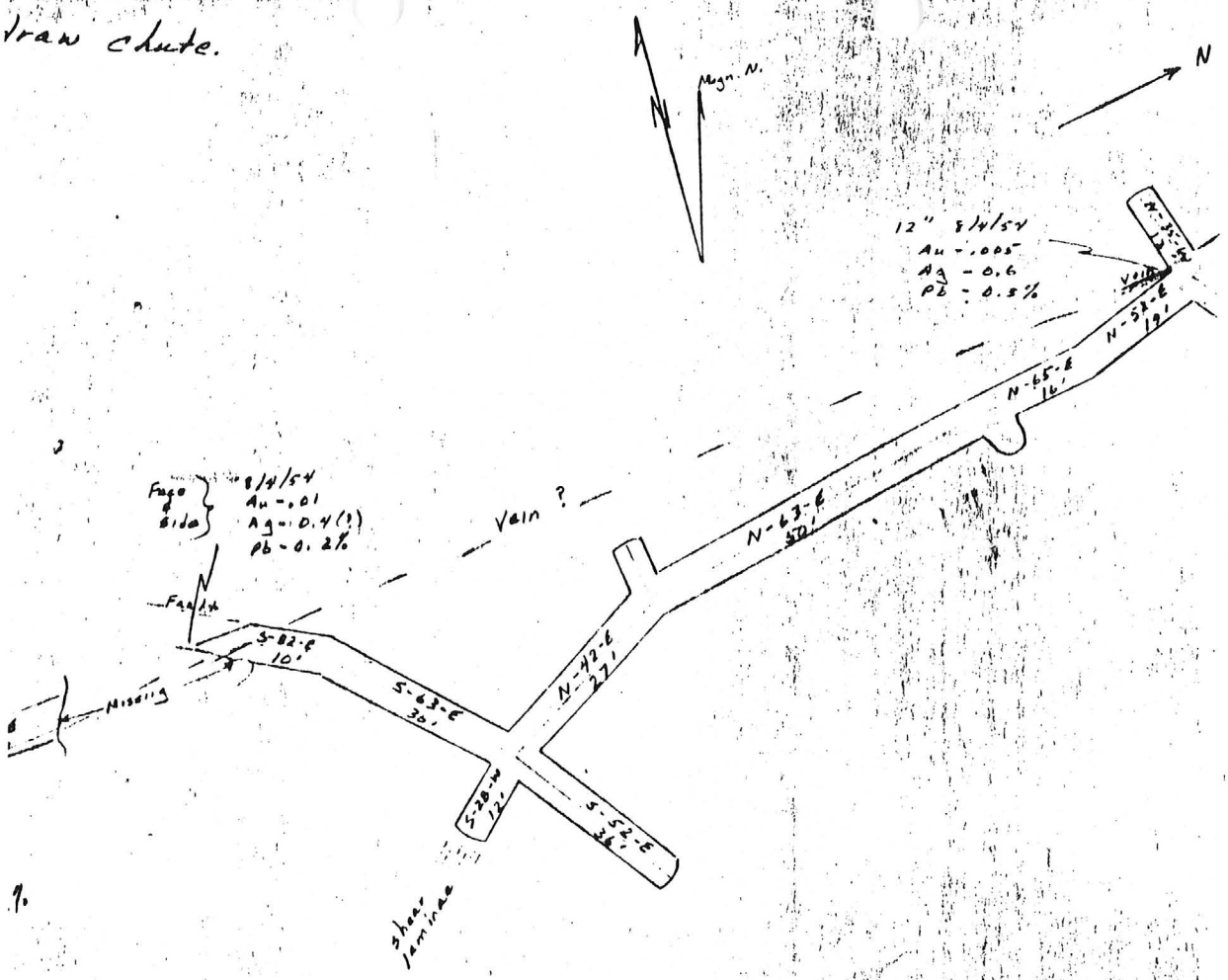
Scale 1" = 20'

Bearings magnetic
Var. = 14° E

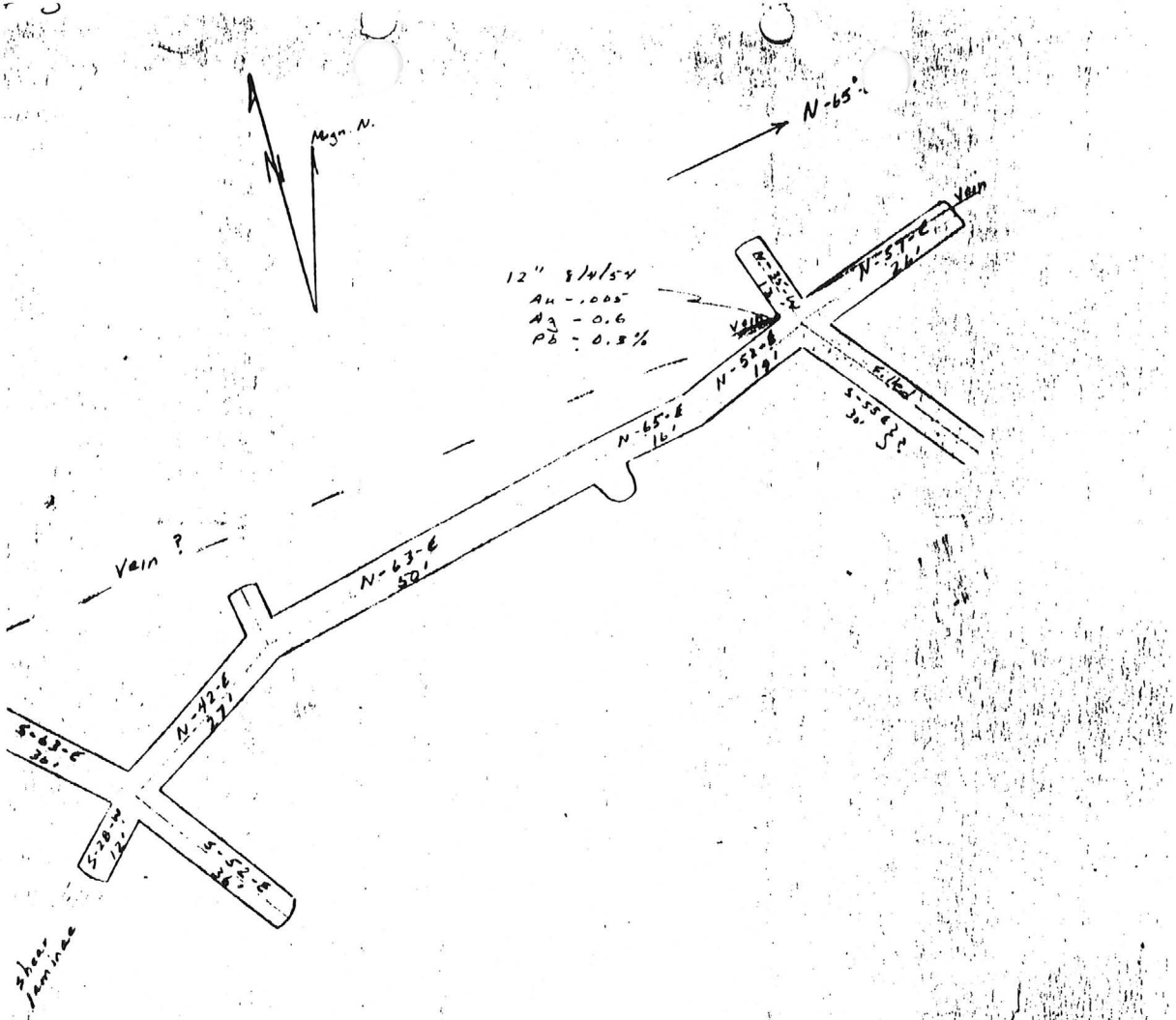


#2

Tram chute.



Survey & Map -
After original by
Jos. G. O'Brien
Amado, Ariz.
Brunton & steel
(All measurements



Survey & Map — Aug. 4-8, 1954
After original by:
Jos. G. O'Brien — Mining Engineer
Amado, Arizona

Brunton & steel tape survey
(All measurements approximate)

TIGER 1, 2, 3

NAME OF MINE: AMADO
OWNER:

COUNTY: Pima
DISTRICT:
METALS: Pb,Au

Date:	OPERATOR AND ADDRESS	Visited Date:	MINE STATUS
7/45	H.F. Leikem, Arivaca	7/45	Developing
		10/46	Shipping
8/48	H. D. Pixler, Box 542, Casa Grande		Dev. & Shipping

o
p
y

MEMORANDUM

6-15-42

GREENWOOD SHAFT
(AMADO MINE)

TO: Director, Dept. Mineral Resources
FROM: George A. Ballam

Under date of June 8, 1942, a report of activity was made covering the AMADO mine, Arivaca, Leased by C. E. Lewis from the Oreona Mining Co., Mrs. Andrews, Secy-Treas.

While Mr. Lewis is operating a gold property, his lease covers an adjacent property which was worked for lead. This department is interested in getting someone to open up the lead, applying for an accessibility loan to unwater, and retimber the shaft, which is 200' deep. Mr. Lewis is expecting to be called into the service.

I recently met one John Greenwood, 40 E. 14th St., Tucson. This man sank the shaft, formerly known as the Greenwood, and he worked the property during the few years of its production. Heinformed me that the vein folds at about the 120' level, where most of the lead was found, and dips at about 70° to the north. At the 200' level the owners insisted on cross cutting to the south. Greenwood maintains that the ore shoot can be cut by going to the north. He said there were several showings assaying 25 oz. gold where the vein folded, and believes there is rich ore on the 200' level.

At present he is interested in the Gould Mine, a report of which is submitted. He has been approached to take the AMADO, but is undecided. He expects to be in Phoenix shortly, and will contact the department at that time.

c
o
p
y

MEMORANDUM 6-15-42

DEPT. MINERAL RESOURCES
RECEIVED
JUN 17 1942
PHOENIX, ARIZONA

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(AMADO MINE)

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George A Ballam

MINING JOURNAL 7/15/42

June 8, 1942

DEPT. MINERAL RESOURCES
RECEIVED
JUN 13 1942
PHOENIX AMADO ARIZONA

SURVEY OF OPERATING MINES
By: George A. Ballam

The AMADO is located about 2 miles west of Arivaca. It is owned by the Oreona Mining Co., Mrs. Andrews, Secy.-Treas.

The property is leased by C.E.Lewis, Arivaca, who is at this time preparing to ship a car of ore to the Hayden smelter. The values are in silver and gold.

This is a small operation employing only two men. Shaft 115' vertical, small hoist, hand drilling, but well-equipped and operated.

An adjacent shaft, 200' vertical, has not been worked for several years, but smelter returns on file show a consistent production over a period of years of gold-silver with good lead values. There are drifts at 130' and 200' all under water. The lessee is filing for a loan for the purpose of unwatering, in the event he is not called into service.

Three men are working at this mine.

George A Ballam

MA-45

DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

Date: January 30, 1942

Mine: AMADO MINE

District: Arivaca Mining District, Pima County, Arizona

Location: 1½ miles north of Arivaca, Arizona.

Former Name: Oreona Group

Owner: Oreona Mining Co., Inc.

Address: Arivaca, Arizona - Mrs. G. P. Andrews, Secretary-Treasurer.

Operator: C. E. Lewis

Address: Arivaca, Arizona.

President: Alanson E. Stewart, 563 Dutton St., Lowell, Mass.

Gen. Mgr:

Mine Supt:

Mill Supt:

Principal Metals: Gold, Silver and Lead.

Men Employed: One.

Production Rate:

Mill - Type & Cap: None.

Power - Amt. & Type: Mechanical Windlass.

Operations - Present: Development work.

Operations - Planned: Sink a present 70 foot shaft to 125 foot level and drift both directions on vein.

Number Claims, Title, etc: Seven claims unpatented.

Description - Topography & Geography: The property lies on the southern slope of low hills on the northern side of Arivaca River valley. Fissure veins in porphyry intersecting a lime and shale bed at the west of the veins.

Mine Workings - Amt. & Condition:
4 shafts, 220 feet, 55 feet, 70 feet and 200 feet.
2 adits, 75 feet and 450 feet.
3 winzes, 50 feet, 45 feet and 35 feet.
2 drifts, 250 feet and 50 feet.

Water stands at the 50 foot level in the 220 foot shaft and the 250 foot drift is on the 100 foot level of this shaft. Other workings are accessible.

(over)

Geology & Mineralization: The vein matter is principally silica with some iron. About 50% of the gold is free in honey-combed quartz.

Ore - Positive & Probable, Ore Dumps, Tailings: No ore blocked out.

Mine, Mill Equipment & Flow-Sheet: None.

Road Conditions, Route: The property is $\frac{1}{4}$ mile north of the Arivaca-Sells country road and $1\frac{1}{2}$ miles north of Arivaca. Both roads are in good condition.

Water Supply: 20 gallons per minue in the 220 foot shaft.

Brief History:

Special Problems, Reports Filed:

Remarks:

If property for sale - Price, terms and address to negotiate: Property now leased with purchase option.

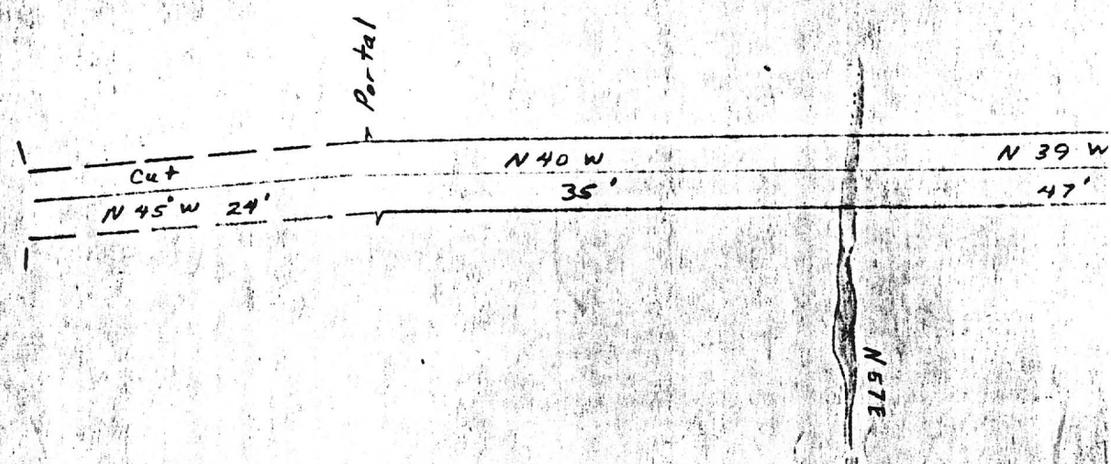
Signed: OREONA MINING COMPANY, INC.,
Mrs. Grace P. Andrews, Secretary-Treasurer,
Arivaca, Arizona

Amado Mine — Adit No. 2

Plan

Showing veins in Plan & Section

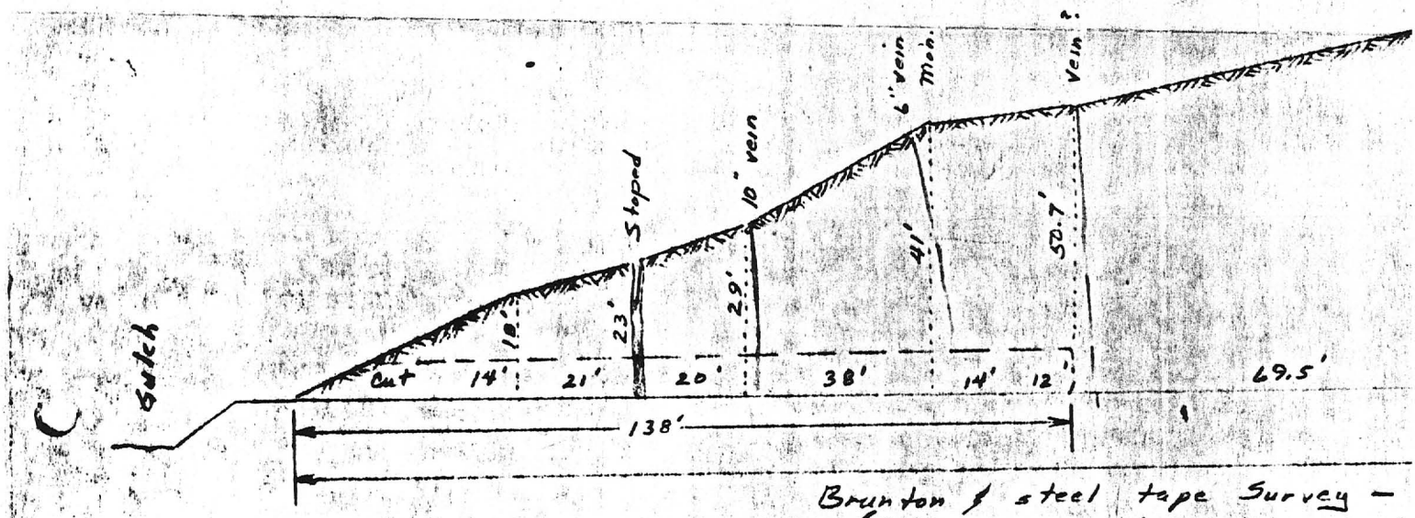
Scale 1" = 12.5'



Longitudinal Section — A profile on the bearing of the Crosscut for 409' — Bearing N-4

Scale 35' = 1"

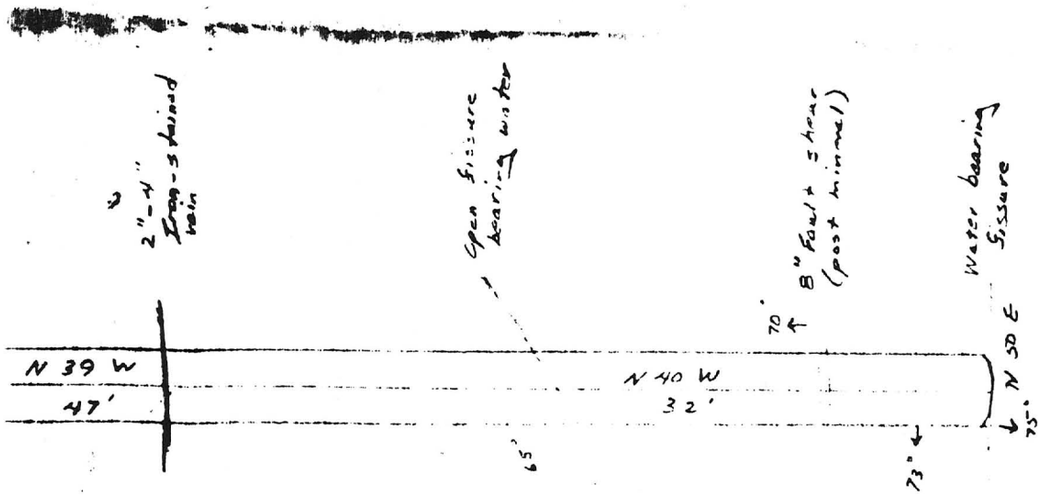
— Veins shown in Red —



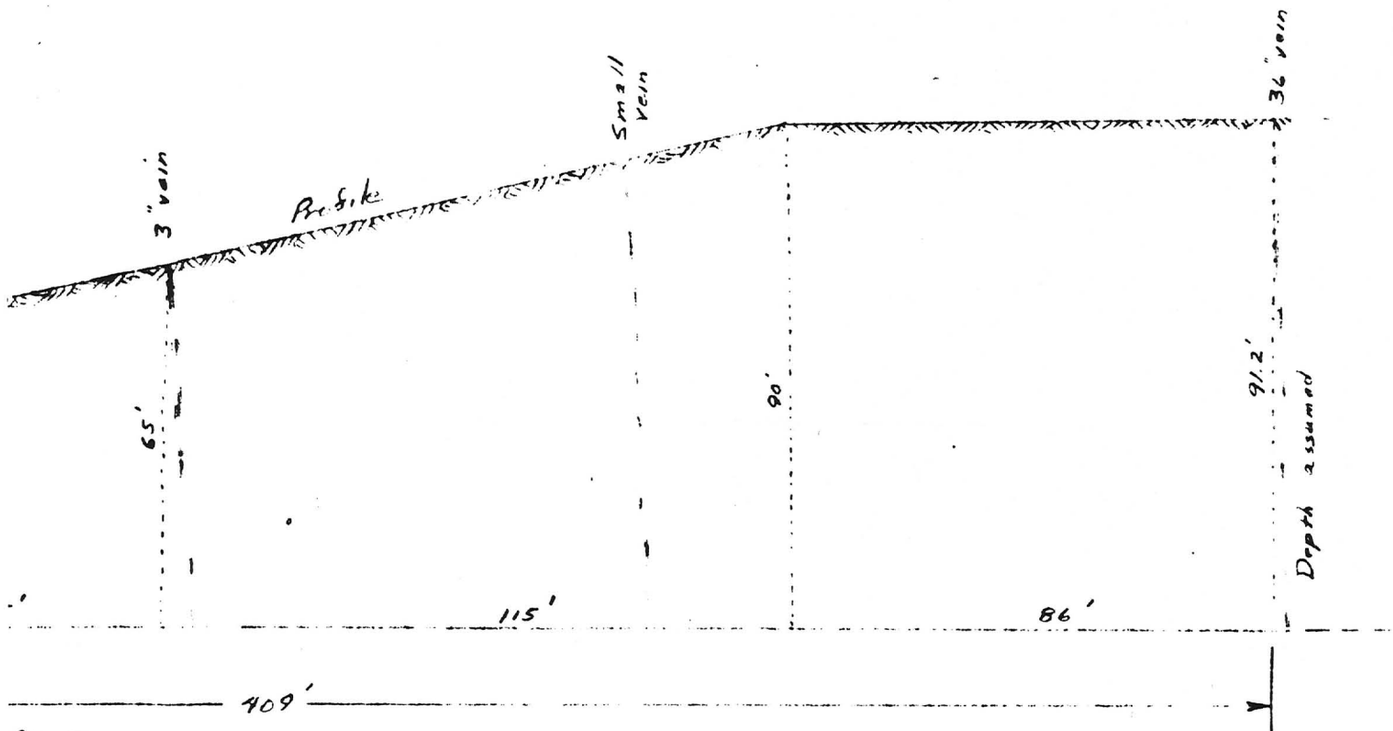
Brunton & steel tape Survey —
(All measurements approximate

#2

Fig. 7



bearing
N-40°-W →



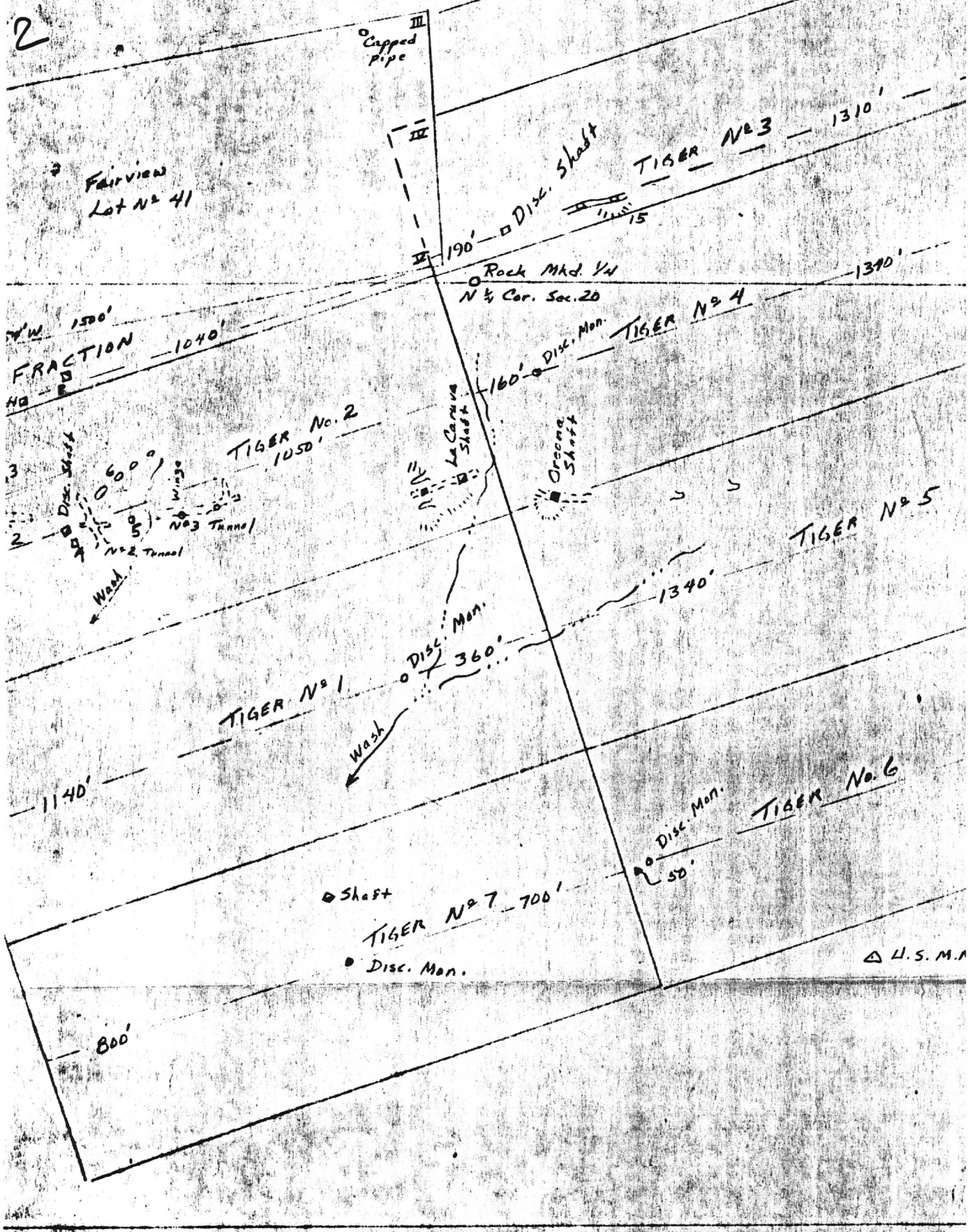
cy –
xinate)

After original drawing by
Jos. G. O'Brien – Mining Engineer
Arado, Arizona
Aug. 4-9, 1954

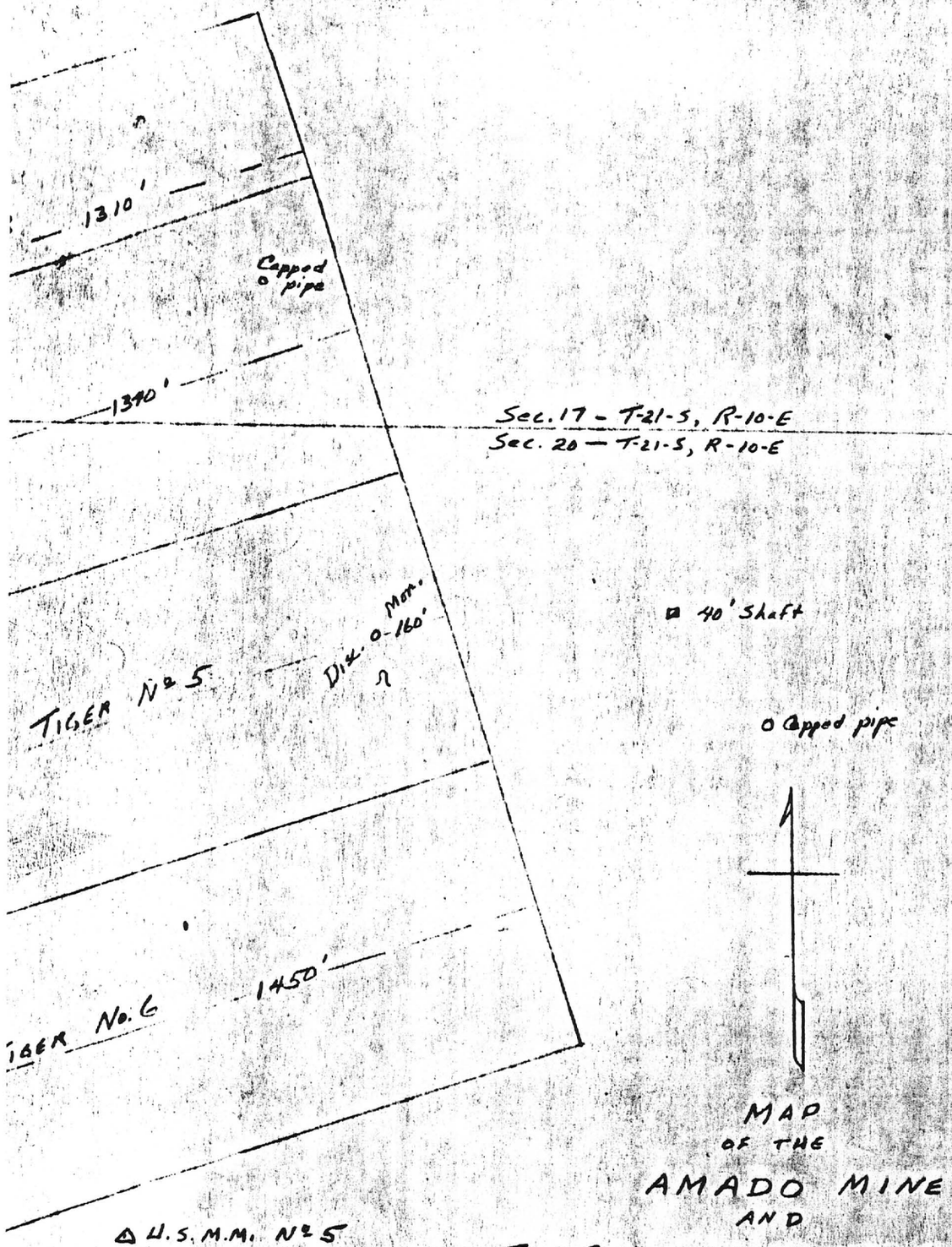
			Au oz	Value	Hg. oz	Value	Gross Value
1-4-58	#1.	East Face of stope above 100' Level - - - - 18" channel - - - - - - - -	1.25	$ 40.00	1.6	$ 1.21	$ 41.2
1-4-58	2.	From back of drift (pillar) west of Shaft - 100' Level - 36" channel - - - - - -	0.43	$ 15.48	2.1	$ 1.59	$ 17.0
1-4-58	3.	Fill below #2 - West of Shaft on 100' Level - - - - - - - - - - - - - -	0.05	1.80	0.7	0.53	2.3
1-4-58	4	From 50' below Collar in runway shaft - pillar on West side - - 36" channel - - - -	0.86	30.96	6.9	5.24	36.2
2-26-58	5	(Huntley) East Face of stope above 100' Level - - - 24" channel - - - - - - - -	0.66	21.12	2.74	2.08	23.2
"	6	(Huntley) East Face of 120' Level - - - - - - - - 5' channel - - - - - - - -	0.10	3.20	1.58	1.20	4.4
"	7.	(Huntley) La Corona Shaft Sump (140') - - - 3' Channel - - - - - - - -	0.04	1.28	0.40	0.28	1.5
3-21-58	8.	Grab sample from First 2 Tons hoisted - East Face 120 Level - - - - - - - - -	0.23	7.36	0.90	0.68	8.04
3-24-58	9.	Glassy Qtz with Fe. stringers from HW side of vein - - - - (Some occurs in center of vein) - - - - - - - -	0.22	7.04	1.00	0.76	7.8
"	10.	3' Channel sample cut last round before connecting with old stope - - - - - - - -	0.23	7.36	1.00	0.76	8.12
"	11.	Grab sample from Ton #8, 9, 10, 11, 12 & 13 -	0.09	2.88	0.40	0.30	3.18
	12	Sample cut from white, clean, sugar-qtz - - no Fe. or other material than the white qtz. - -	0.04	1.28	0.30	0.23	1.51
3-28-58	13	Honey-comb qtz - qtz was creamy colored with lots of vugs of mud - - - - - - - -	0.47	15.04	1.60	1.22	17.26
3-28-58	14	Sample of very fine, granulated qtz - from a "pocket" - taken by Hendrickson - - - - - -	0.05	1.80	0.30	023	2.03
3-29-58	15	Grab sample from Ton #14 thru ton #20 -	0.14	4.48	0.40	0.24	4.72
3-31-58	16.	Grab sample from ton #21 thru ton #33.5 -	0.52	16.64	1.1	083	17.47
1-4-58	17.	Grab sample from ton #33.5 thru ton #58.0 -	0.43	13.76	1.8	1.37	15.13
- 58	18	Grab sample from ton #58.0 thru ton #71.0 -	0.45	14.40	1.4	1.06	15.46

New Brunswick
Lot. Nº 40
N 28°W
600'
Diet's Shaft
Deep
Amado
Shaft
#1
Disc.
Abd.
N.
West
S.

#1


2
Capped Pipe
Fairview Lot No 41
Disc. Shaft
TIGER No 3
1310'
15
190'
Rock Mkd. 1/4
N 1/4 Cor. Sec. 20
1340'
FRACTION
1040'
Disc. Mon.
TIGER No 4
160'
TIGER No. 2
1050'
La Carma Shaft
Greene Shaft
Disc. Shaft
600'
Winze
No 3 Tunnel
No 2 Tunnel
Wash
TIGER No 5
1340'
Disc. Mon.
360'
TIGER No 1
Wash
1140'
Disc. Mon.
TIGER No. 6
50'
Shaft
TIGER No 7
700'
Disc. Mon.
U.S.M.
800'

#3



MAP
OF THE
AMADO MINE
AND
TIGER GROUP OF CLAIMS
ARIVACA MINING DISTRICT
PIMA COUNTY, ARIZONA

SCALE: 1" = 300'

Reproduced from original plat by:
Harlow D. Phelps
Registered Engineer
Dec. 1948 - Tucson, Arizona

#1 AMADO MINE — Adit No. 3

Plan - with winze & sub-level - Small stope &

General bearing N-65°-E

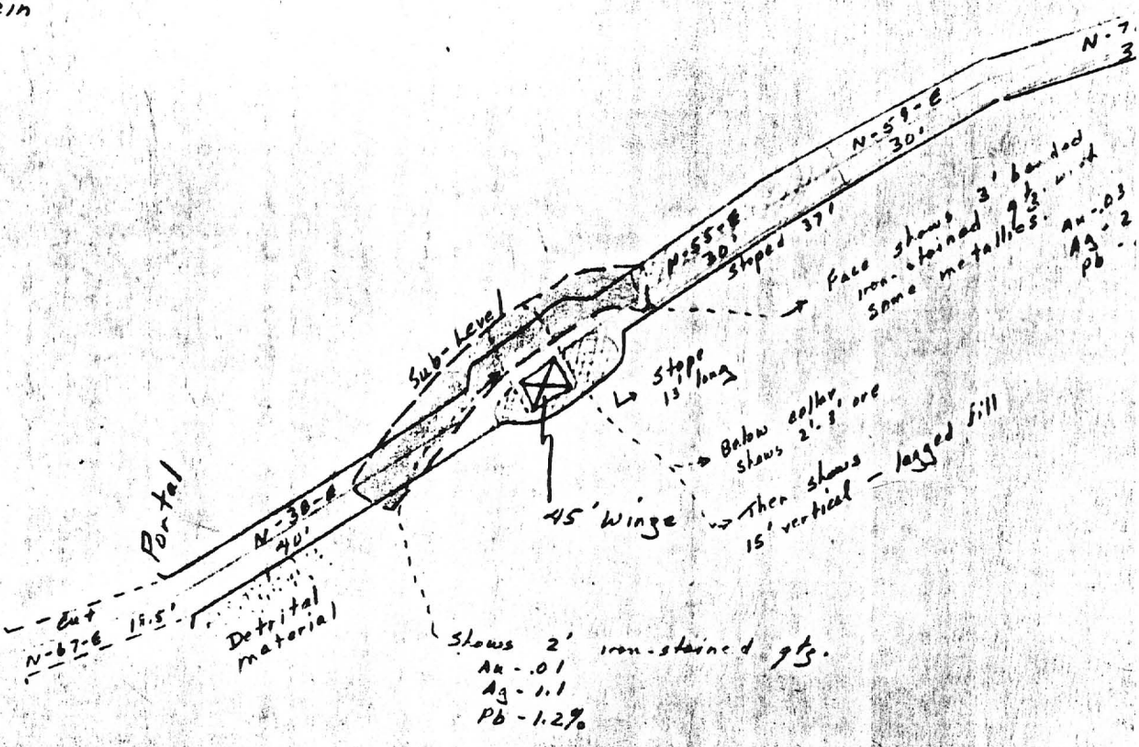
Scale 1" = 20'

Bearings magnetic
Var. = 14° E

Sub-level

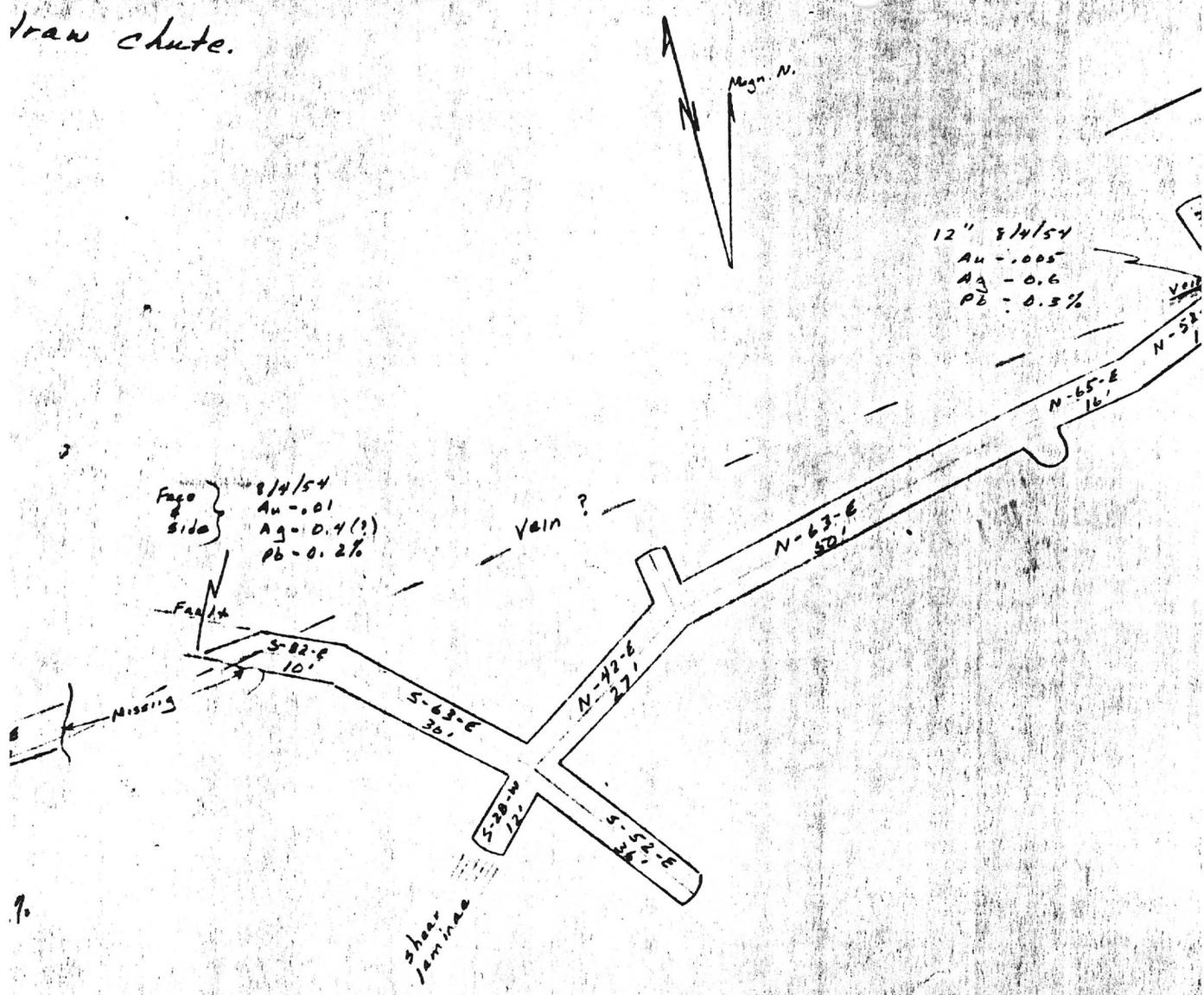
Stoped (overhead)

Vein

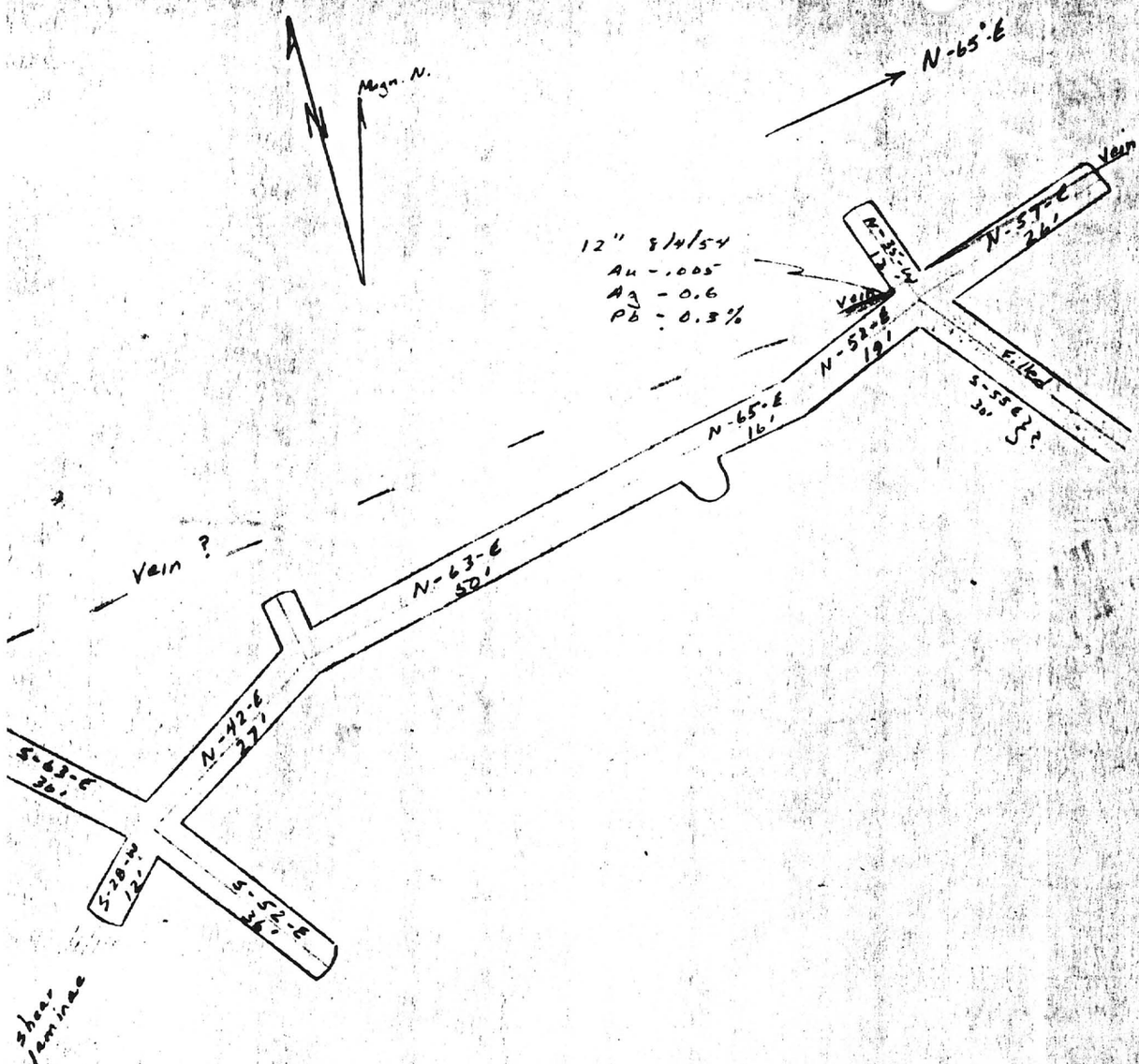


#2

Draw chute.



Survey & Map
After original
Jos. G. O'Br
Amado, Ar
Brunton &
(All measur



Survey & Map — Aug. 4-8, 1954
After original by:
Jos. G. O'Brien — Mining Engineer
Amado, Arizona

Brunton & steel tape survey
(All measurements approximate)