



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

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

PRINTED: 12/17/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: CHANCE

ALTERNATE NAMES:
AMY

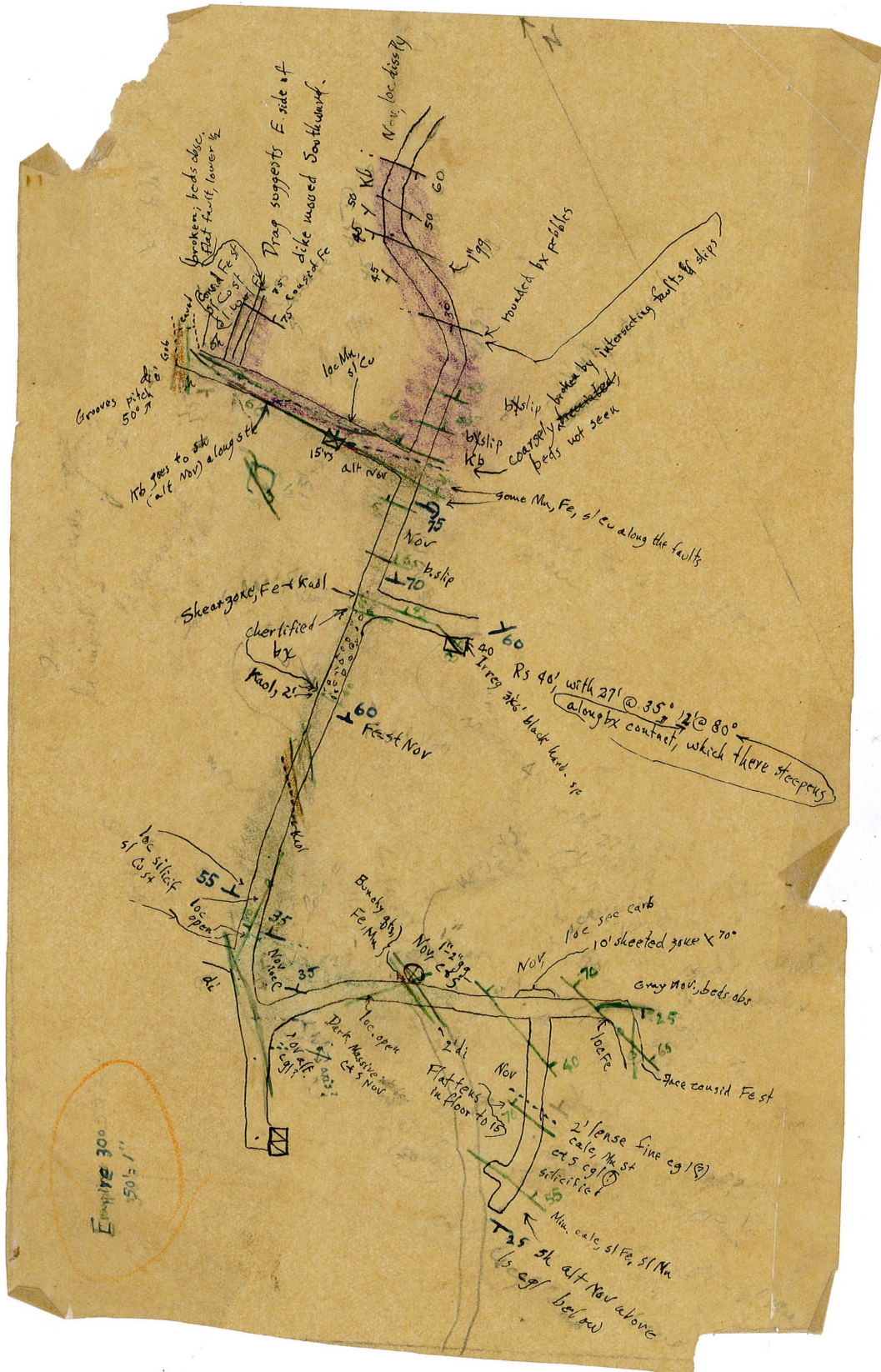
COCHISE COUNTY MILS NUMBER: 167

LOCATION: TOWNSHIP 20 S RANGE 22 E SECTION 16 QUARTER S2
LATITUDE: N 31DEG 41MIN 53SEC LONGITUDE: W 110DEG 06MIN 10SEC
TOPO MAP NAME: TOMBSTONE - 7.5 MIN

CURRENT STATUS: UNKNOWN

COMMODITY:
SILVER
GOLD

BIBLIOGRAPHY:
ADMMR CHANCE FILE



AMY GROUP

520421 T20S R22E

Tombstone Dist

COCHISE COUNTY

Mine visit to the site of Grace and Colvin claims (Silver Ventures Co.),
saw horn silver from drill hole below 220'. GWI WR 11/7/70

William Grace & Tom Colvin have done some drilling (Silver Ventures Mining Co.)
This property adjoins Tombstone Mineral Reserves to the North East. GWI QR 4-1-71

I talked to Tom Colvin who was doing assessment work on his 18 AMY claims in sections 16, 21, T20S, R22E. He was working about 500 feet east of the Tombstone Mineral Reserve mill. Colvin and his business associate, W.W. Grace, formed the Silver Ventures Mining Co. some time ago. Grace is a real estate dealer in Scottsdale. Their properties in the Tombstone area including the Chance patented claim, state lease lands and the Amy claims were leased to Larry Higbee and his Resources International group. Colvin advised that all leases and options to this group have been cancelled. He said that a Houston-based company with operating open pit mines in California, Nevada and Arizona had tentatively agreed to a lease-option on the property. He declined to name the company, saying that a joint news release would be made next week. He did say that the new operator had agreed to assume all the debts and obligations of Higbee's operations.
VBD WR 8/7/75

~~SEE MELLGREN MINES CORP. FILE~~

MG Mine Info Rpt 1/3/81: STATE OF MAINE Mine. Have established a small (65 TPD) zinc precipitation plant to recover silver from a second "high-grade" leach pad established to the west of the original pad. Ore going to this new pad is mined by open cut from the patented TRIPLE X claim. Assays on this ore have gone up to 220 oz Ag/ton and 0.9 oz Au/ton.

CJH WR 2/13/81: Visitor, Bailey Escapule, State of Maine, Tombstone, Arizona. The Escapules have purchased three claims in the Tombstone District: Red Top, Merrimac, and Clipper and wanted what information we have on them. Since we had nothing, Phoenix DMR was called. A cross reference in the card file pointed to the Amy Group and the Mellgren Mine files which are quite large. Mr. Escapule will go to Phoenix and examine them.

MG WR 4/15/83: Re: Recent conviction of Henry Farabee and John Durkin of Silver Bonanza Mines. Several sources indicate their operation was on the old unpatented Bonanza Mine site (Tombstone District, Cochise County.) Dump material from heap leaching apparently came from several places including the Chance Mine and the Uncle Sam Mine, both located nearby in the Tombstone District.



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

November 17, 1975

Mine: Amy Group (also referred to as Colvin & Grace Property)

District: Tombstone

Engineer: Ken Phillips

Subject: Attached copies

The attached copies were provided anonymously by an individual who had been approached by owners or promoters to invest money in a proposed operation.

The following is a table of contents of the copies received.

- I An eight page report on the Grace & Colvin Mining Property by Richard D. Brown
- II A five page summary report on the Grace & Colvin Mining Property by W.W. Grace (one of the operators)
- III Preliminary report of work done in compliance with Arizona State Prospecting Permit on Grace & Colvin Property by Richard D. Brown
- IV Assay reports on the Grace & Colvin Property (page 1), Chance Claim (pages 2-3) and the Santa Anna Mine (page 5) all submitted by an Austral Oil Company. IV, page 5, also refers to the Silver Bonanza Mines Inc. and S.B.M. Inc.
- V Letter from William Lunaby, geologist, Austral Oil Company Inc. to T.J. Colvin and W.W. Grace describing magnetometer; induced polarization and geochemical surveys done on the Amy Group.
- VI Partial map of patented claims showing location relationship of Grace & Colvin Property referred to now as Silver Bonanza Mining Inc. to the Escapule, Chance, Barko and Santa Anna Mines.

VII Vein and Claim Map of Western Portion-Tombstone District-lists 80 claims:

Bonanza	Oversite	Red Top
Bonanza #1	Oversite #1	Pinto #3
Joseph #1-4	Dacota #5	Clipper
Extension	Dacota #10	Argenta Group
Fraction	Anex #12-47	Solstice Group
Lost Lead	Dacota #4	Junetta
Empire	Chance	Louise
Bill-B	State of Maine	Sunset #2
Connection	Free Coinage	Margarette
Lion	Merrimac	Bay
Lion #1	San Pear	Pinto
Fox #1-3	XXX (Triple X)	Porphory (sp.)
Hornspoon	Uncle Sam	

VIII Enlargement of a portion of above map and showing relation to Amy Group

IX Copy of Tombstone Quadrangle map showing location of Amy Group

X Copy of Tombstone 15 minute quadrangle map showing general region of Amy Group

XI Contour Map Made by Cooper Engineering of the Amy Group

XII Aerial Geology of Tombstone Mountains

XIII Geological structure map and cross-section index of Tombstone area

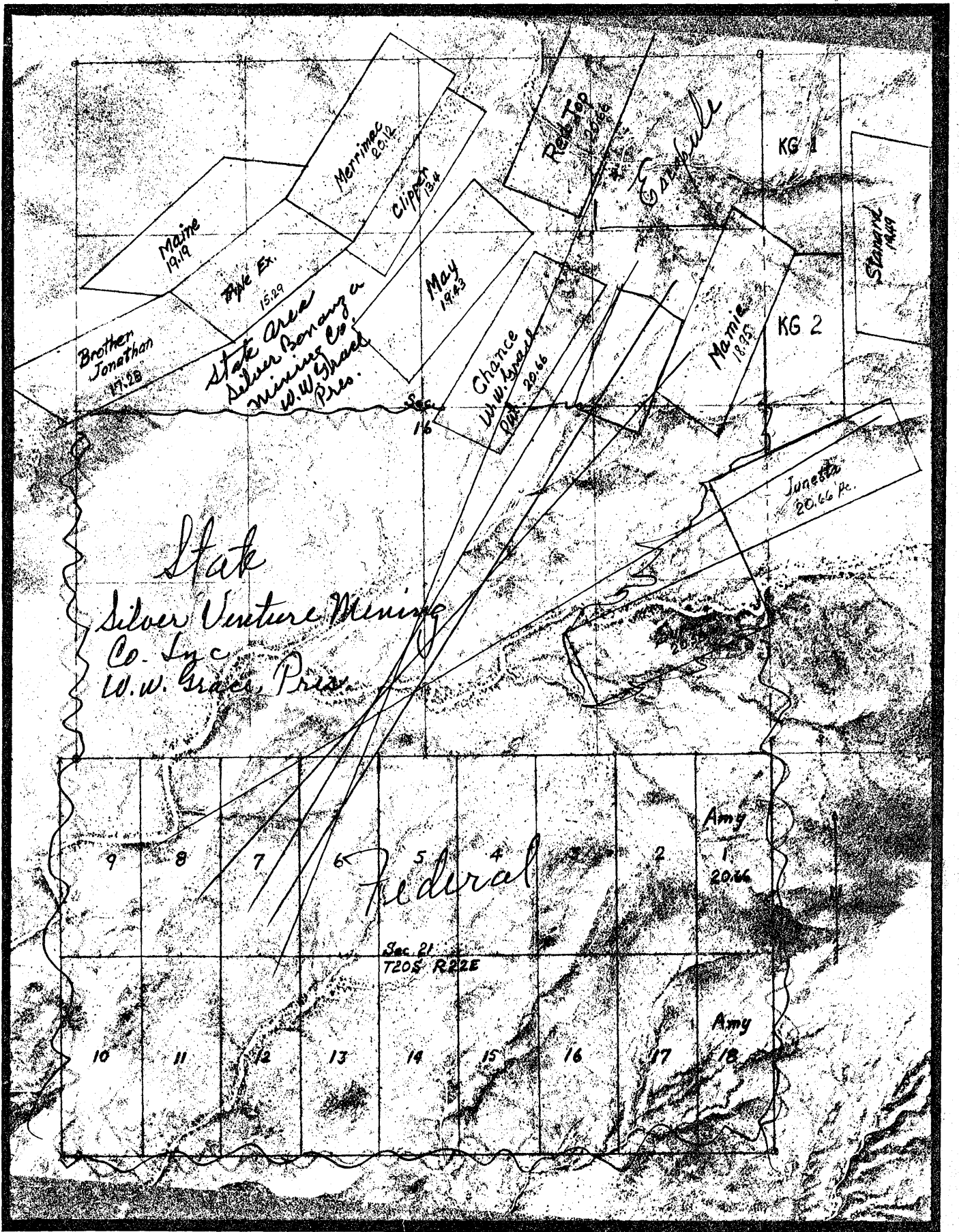
XIV Vertical Intensity Magnetometer Survey of Amy Group

XV Induced Polarization and Resistivity Survey of Amy Group region here referred to as the CAB Claim Group.

XVI Map of underground workings and sampling (Perhaps Chance Group)

XVII Longitudinal section of Bonanza Mine

Total of 38 pages.



MR COLVIN V. PRES & COMPANY

Amy Group (file)

I page 1

REPORT ON THE
GRACE & COLVIN MINING
PROPERTY

MAY 1, 1970

By: RICHARD D. BROWN
Consultant
Tucson, Arizona

TABLE OF CONTENTS

	Page
1. GENERAL INFORMATION-----	2
2. MINING LAWS-----	2
3. TOMBSTONE PAST PRODUCTION-----	3
4. GEOLOGY OF THE AREA-----	4
5. SAMPLING RESULTS-----	5
6. GEOPHYSICAL INFORMATION-----	6
7. CONCLUSIONS AND RECOMMENDATIONS-----	6

APPENDED MATERIAL

LOCATION AND STATUS MAP

GEOLOGICAL MAP

INDUCED POLARIZATION REPORT & MAP by Nicholas H. Carouso

MAGNETOMETER MAP

ASSAY & LAB REPORTS

W. W. Grace and T. J. Colvin are the owners of approximately 800 acres of mining property consisting of 18 Federal unpatented claims, 420 acres of State Mineral Rights and one patented claim known as the "CHANCE". The property is located in Sections 16 and 21 in Township ²⁰~~21~~ South and Range 22 East, Cochise County, Arizona. The property is easily accessible by paved road and is two miles Southwest of Tombstone, Arizona on the road to Charleston.

The history of Tombstone mining is as exciting and colorful as the town itself, the reason for the town was because of the mines. Many books have been written about Tombstone, so I will leave that to the experts.

The region defined as the Tombstone Mining District is one of relatively moderate relief, the elevation at the San Pedro river, approximately nine miles to the south, is 3,900 feet. The country rises rapidly over a partially developed erosional sedimentary slope. Among the highest of the hills in the area is the Uncle Sam Hill with a summit of 4,831 feet, Mays Hill 5,727 feet, Military Hill 5,301 feet. The country is traversed by a system of washes and open passes which makes the ground easily accessible and all drainage is to the San Pedro River. The climate of the area is ideal, being mild winters and nice summers.

MINING LAWS

The purpose of these short paragraphs is to introduce ^{to} the reader a resume of the laws governing Federal as well as State Mineral Rights. Excerpts are taken from "Laws and Regulations Governing Mineral Rights in Arizona" by Victor H. Verity, 6th Addition, Revised June, 1965. Quote " the intent of the mining laws and the leasing acts, both State and Federal, is the development of the mineral resources on public domain and State land. The law and the public sentiment are on the side of the bona fide mining locator who stakes a claim with serious intention of prospecting for minerals. The

best way to demonstrate this good faith to the public, and to maintain and work it in full accordance with all legal requirements." Page 4

WHO MAY LOCATE

"Any citizen of the United States, or anyone who has declared his intention to become a citizen, an association of citizens or a qualified corporation may locate a mining claim upon public domain of the United States." "The statutes of Arizona provide that a mining claim may be located upon State land by any citizen of the United States, partnership, association or corporation organized under the laws of the United States or any State or Territory thereof." "There is no limitation on the number of mining locations that can be made by a qualified locator on Federal or State lands within Arizona."

To carry the information further in this discussion would defeat the purpose for which these paragraphs are intended. It is therefore recommended that any further broadening of scope be carried on by consulting the applicable laws - both Federal and State. A simple field guide is published under the Department of Mineral Resources, State of Arizona, titled "Laws and Regulations Governing Mineral Rights in Arizona" by Victor H. Verity.

TOMBSTONE PAST PRODUCTION

Extracted from MELLGREN REPORT by C. J. Sarle, PhD.

"When an analysis of production is made, on the output of mines in the Western Area, where several millions of dollars has been produced in high grade ores, with no attention being paid to the low grade milling ores, and this taken in connection with the magnitude of the mineralization area, containing virgin and unblocked ore bodies, it becomes one of the most attractive commercial mining propositions possible."

"The Eastern Area which has had proper financing for development of mining has yielded \$79,000,000.00." The Western Area of which Grace & Colvin property covers a substantial part and without proper financing and

equipment, has yielded the past owners approximately \$6,000,000.00 bringing *F page 5*
the total past production in the Tombstone District to about \$ 85,000,000.00
based on 1928 figures of \$1.00 per ounce for silver and \$20.67 per ounce for
gold.

GEOLOGY

Geologically, Section 21 is fairly simple: A sill-like mass of intrusive Uncle Sam Porphyry (Tertiary quartz latite) has intruded the Cretaceous Bisbee formation which consist of mudstone and sandstone quartzite with a few thin beds of limestone.

Because the geophysical (IP) and Magnetic anomalies are probably caused by alteration and mineralization of the Uncle Sam Porphyry, it is probable that these features will be stronger in the underlying Bisbee formation and chances for an economic deposit are good.

A vertical intensity magnetometer survey of all State land in sections 16 & 21, T20S, R22E (held by Grace & Colvin) was made using a McPhar vertical intensity flux-gate magnetometer (No.6513). The vertical intensity at the base station was 19,950 gammas (absolute).

Three areas of interest can be seen on the magnetic map:

(1) The area of low magnetic intensity approximately centered in Federal claims, Amy #12 & #13. The relatively low readings (950 gammas, based on 1,000 gammas at base station) cover an area about 600 feet wide and 2,000 feet long. This area ties in with the previous work; an I.P. survey showed sulphides at depth and a hole at the east end of the anomaly encountered sulphides at depth. This evidence points toward a large disseminated mass of sulphides.

(2) The second area of interest is at the northwest corner of section 21 and the southwest corner of section 16. Here, the magnetic lows, which are elongate for 4,000 feet are definately along the north-north easterly trending lineament seen on aerial photos. Also visible on the photos are cross faulting

and shearing leading into this area. Previous I.P. work has delineated definite metallic anomalies along this strike and the area should not be overlooked.

I page 6

(3) Another area of interest lies just north of Amy #3, in Section 16, and is an anomalous magnetic low also, apparently associated with a north-easterly trending fault; this fault (and vein) has been worked at the north end in past years.

All in all, there are two major anomalies which should be explored and a minor one along the fault zone north of Amy #3. Therefore, it is my recommendation that a drilling program should be initiated to check out the possibility of silver in the anomalous lineament and copper-silver in the broad, magnetically low zone.

SAMPLING

A comprehensive study of the ground held by Grace and Colvin was made. This work involved a chemical survey of the area, sampling and assaying of the dumps and drilling and assaying of the core and cuttings, the results of this study is as follows: (Metcon Report) (Appended Material)

Additional geo-chemical sampling was performed at a later date on the north 1/2 of Section 21, (Amy Claims), the results drawn there were inconclusive, and no additional work of this nature was made. The assay report is included in the Appended Material.

Underground sampling was performed in an area just north of the "Chance" claim on the Bonanza vein by the writer while employed for Austral Oil Co., the results of the sampling and a map are included in the Appended Material.

INDUCED POLARIZATION INFORMATION

Mr. Bill Lundby, geologist for Austral Oil Co. instructed Mr. Nicholas H. Carouso, Consultant, to undertake a study of the area, part of which is the Grace and Colvin property, the results of that study is included with

the Appended Material

I page 7

Mr. C. T. Henderson, a part owner of the ground to the south of the Amy (Grace & Colvin) claims, also requested Mr. Carouso to undertake an induced polarization survey of their ground, since the lines run, cover a portion of the ground held by Grace and Colvin, that report is also included in the Appended Material.

GEOPHYSICAL INFORMATION

The fundamental principals of magnetics and the background of the magnetics method of geophysical prospecting has much in common with that of the gravitation method. Both are "potential" methods, having their fundamentals in potential theory. Just as the gravitational force in a given direction is the derivative, or rate of change, in that direction of the gravitational potential, so also the magnetic force in a given direction is the derivative in that direction of the magnetic potential.

CONCLUSIONS AND RECOMMENDATIONS

Because of the vast store of information that has been collected, concerning the property of Grace and Colvin, I feel extremely justified in making a recommendation of one of "proceed with haste, but deligently". These are some of the conclusions I have drawn. Geologic speaking, it goes without saying the "Tombstone District" has been one of the best producers of silver in the nation and I know the wealth to be extracted yet from this area makes the Grace and Colvin holdings one of the most promising in the state.

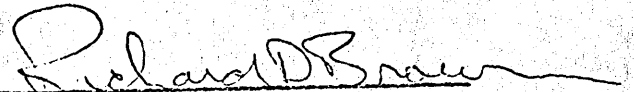
From a Geophysical sense of the word, it has been demonstrated by Carouso in his I.P. surveys, definite anomalous zones of metalics. These metalics being mostly iron pyrites but never the less are indictive of a large disseminated sulphide body. (See magnetic report, attached) In the work carried out by the author (magnetics) it also has been demonstrated the magnetics and

I.P. results are co-incident. This leads to the conclusion that both sets of results ie. (Magnetics & I.P.) are valid sense one has been checked *I page 8* against the other.

It is the writers professional opinion that the Grace & Colvin holdings offer excellent oppertunities because of its combination of favorable features.

- (a) Past production with similar paragenesis
- (b) Magnetics and I.P. results delineate potential ore zones
- (c) Residual silver ore of mineable grades

Respectfully submitted


Richard D. Brown
Consultant

The Grace & Colvin Mining Property consist of 800 acres; eighteen unpatented lode claims; 420 acres of State Mineral Rights and one patented claim known as the "CHANCE". The property is located in sections 16 & 21, T20S; R22E, Cochise County, Arizona. A paved road and electric power line runs through the property which is located two miles southwest of Tombstone.

The Grace & Colvin property, plus the Escapule properties, comprise what is locally known as the West District of the Tombstone Mining District.

The Tombstone Mining District is coextensive with the Tombstone Hills. The Tombstone Hills are deeply eroded and subdued, being the northerly end of a northwest-southeast trending mountain structure, some thirty odd miles in length, which has for its southerly end, the higher and broader Mule Mountains, and for its intermediate portion, the Little Mule Mountains. Bisbee is located on the southeast end of the range.

In the Tombstone area, the ores thus far developed occur principally in the Mesozoic (Bisbee Series) strata, but there are numerous occurrences in all of the underlying Paleozoic limestones.

The ores of the West District are not confined to the sedimentary rocks, but occur also in a widespread monzonite porphyry. Although there are many exceptions, the greater number of the fissure veins in both the Eastern and West District areas have a roughly north-south strike and dip steeply to the west. Where folds occur in the Eastern area, they have been found in many cases to be the loci of interbedded deposits, or saddle reefs, and this may well prove to be the case in the West District. This seems to indicate the same in the recently completed Lundby and Brown reports, attached hereto.

The ores throughout the Tombstone District appear to have the same general source and are essentially the same.

It is my opinion, as well as others, along with the present activity, that the mining of ore deposits in the Tombstone District has scarcely begun. The reserves of milling and high grade ore deposits in the area, as indicated, are very large. This applies not only to the ores below water level, which are yet practically untouched, but there is a very large tonnage remaining above. Moreover there is much virgin ground in the area, which when explored and developed, will greatly extend the activity.

To-date, mining in the district has been largely, a selection of the high grade portions of the ore bodies, leaving the lower grade milling ores, and these operations have been limited almost wholly to that portion of the secondary or oxidized ores, above the water level. The depth of the permanent water varies, being relatively greater at points of greatest relief. The water level in the West District ranges from 200 to 400 feet. The water in the West District can easily be handled, the volume being about ample for milling purposes. On the Chance claim there is well with the pump set at 265 feet. It had to be set that deep in a 500 foot hole to make 20 gallons per minute.

In 1922 a leaseholder sank a winze, from the north drift on the 200 foot level in the Chance claim to a depth of 22 feet below permanent water and drifted 18 feet and stripped the ore for this distance to the 200 foot level above. Before the ore could be removed however, the upper part of the shaft caved in. Assays showed the ore to run from 100 to 1,200 ounces of silver per ton. This ore is still there, ready to be taken out by installation of equipment and a small amount of shaft work, plus some drifting on the vein from the south shaft on the Bonanza vein. This ore deposit was confirmed to me by V. G. Mellgren, Jim Giacomini and Ernest Escapule, Sr., all of whom personally viewed the ore.

The average width of the veins mined in the West District, so far, has been about 4 feet, tho, sometimes in places, widening to as much as 10 to 12 feet.

The ores as deep as mined, or to the water level, to a proven depth of 34 feet below, are oxidized or secondary silver-gold ores. The silver occurs in the ore as a chloride, iodide, bromide and occasionally a small amount of sulphide, usually 40% as a chloride.

The average silica content of the ores shipped has been about 72%.

Many of the shallow gulches, or washes, of the area appear to owe their rectilinear courses to lines of weakness determined by the position of such structure as fault, shear and breccia zones and to interformational contacts. The formations and structures in such positions are usually more or less obscured by alluvium and they should be prospected carefully as likely places for veins, chutes, or less regular ore bodies.

The West District is largely undeveloped. There has been no systematic development of the ore bodies and no deep mining: No centralized workings for large scale operations, such as, cross-cutting the country at depth, from a main working shaft, to transect the parallel north-south vein system and the development of these veins along their strike. There is little doubt, that blind veins, will be encountered, when cross-cutting at depth is done. There is a parallel vein only approximately 100 feet east of the important Bonanza vein and there has never been a cross-cut made to it, however a cross-cut was started on the 181 foot level from a South Bonanza shaft that should be extended to the east vein, being an additional 50 feet. (See attached map of underground workings). Also note assays B-1 to B-5, in the cross-cut all carry values. This indicates the possibility of open pit mining in the proper area.

Mining in the West District has always been handicapped by lack of capital, having been operated by leaseholders for the main part, and paying high royalty with a low price of silver.

Mellgren mined from the Bonanza vein, 920 tons of ore by the fill-stope method, which ore was cyanided and gave a bullion value of \$44,000.00 at a low price of silver.

II page 4

Handicapped by primitive and inadequate equipment, it is natural, that with veins known to contain lenses and pockets of high grade, that mining in the West District, has always been in the nature of chloriding or go- phering, as the miners would express it, and that whenever ores too pre- sistantly low to ship were encountered, work was abandoned at that point and started elsewhere. Usually in these cases it was said the ore "Pimched Out". This is far from being true, for in practically all cases, ore of a milling grade may be found in the faces of these workings and ore indications are still there.

In the Bonanza-Chance vein, opened up in places for a distance of 1,200 feet, ore to the value of \$1,000,000 was produced, principally in high grade, about 2/3 of the vein above the water level still remaining to be mined. How- ever, the north 500 feet of this area is now located on the Escapule property. An area on the north end of the "Chance" for a distance of 200 feet down to the water level, produced \$600,000 in ore. Directly below this area is the ore, previously mentioned, waiting to be mined.

There also remains the possibility of unexplored Paleozoic limestone be- neath the Mesozoic series, which have been productive horizons in the Eastern area; and that arched structures, when encountered, will contain saddle reefs and breccia ores, as proved in the Eastern area. The new Vertical Intensity Magnetometer reports (attached hereto), indicate to me that we may very well have located several such areas. This remains to be proven by drilling. In the south part of "Amy #14 claim, a hole was drilled to the 300 foot level that started to pick up sulphides at 100 feet and increased in volume to the 300 foot level. The values were nil but the presence of a breccia ore body is indicated. This hole should be taken to greater depth or another hole in the area should be drilled.

If the ore faces were sampled today, on ore faces left in the past, which was mined solely for the high grade ores, they would give results wholly mis-

leading. Ores of exceptionally high grade have been encountered repeatedly and this fact must be taken into consideration in estimating the general average of the ore to be mined. One lot of 22 tons of silver-gold ore, shipped from the Bonanza vein brought \$40,000.00, which, allowing for present value of silver would have brought near \$100,000.00.

From the knowledge gained from working this property myself during the early thirties, I feel that silver from these veins should average at least \$60.00 per ton with silver at \$2.00 per ounce. Silver should go to \$3.00 per ounce by mid 1971.

The gold values will average about \$2.00 per ton for each 10 ounces in silver.

From the amount of development work done, few properties, under similar methods of operation, have yielded larger returns, or promise more, if adequately financed, developed, equipped and efficiently operated. Under these optimum conditions, in my opinion, the Grace & Colvin property may be worked for many decades with gratifying results. I further believe that the West District will become one of the major copper producing areas of the State of Arizona, as further development is made, but maybe not so great a depth on the "Amy" claims, the lower part of the Grace & Colvin property.

As of this date, there is unconfirmed reports, that a major discovery has been made on the Tombstone Mineral Reserve Property. Said property being directly south of the "Amy" claims. They are now constructing a mill just south of "Amy" number 10.

Attached hereto and made a part of this report are maps, assay results of ore on the surface of the "Chance" claim (Approx. 10,000 tons), I.P. lines, magnetometer maps, contour map and other data on the Grace & Colvin property.

W. W. Grace
W. W. Grace
8238 East Indian School Road
Scottsdale, Arizona 85251
Phone 946-9772

TOMBSTONE PROJECT

(Preliminary Report)

III page 1 (3)

At the request of Mr. W. W. Grace and Mr. T. J. Colvin, the following work was done to satisfy the state requirement of expenditure of ten dollars (\$10.00) per acre of land covered by Arizona state prospecting permits and to learn more of the nature of mineralization in the area.

A vertical intensity magnetometer survey of all state land in section 16, T-20-S, R-22-E (held by Messrs. Grace and Colvin) was made using a McPhar vertical intensity flux-gate magnetometer (No. 6513). The vertical intensity at the base station was 19,950 gammas (absolute).

Three areas of interest can be seen on the magnetic map:

(1) The area of low magnetic intensity approximately centered in Federal claims Amy #12 and #13. The relatively low readings (950 gammas, based on 1,000 gammas at the base station) cover an area about 600 feet wide and 2,000 feet long. This area ties in with the previous work; an I.P. survey showed sulphides at depth and a hole drilled at the east end of the anomaly (by Austral Oil Company) encountered sulphides at depth. This evidence points toward a large disseminated mass of sulphides.

(2) The second area of interest is at the northwest corner of section 21 and the southwest corner of section 16. Here, the magnetic lows, which are elongate for 4,000 feet are definitely along the north-northeasterly trending lineament seen on aerial photos. Also visible on the photos are cross faulting and shearing leading into this area. Previous I.P. work has delineated definite metallic anomalies along this strike and the area should not be overlooked.

SOUTHWESTERN ASSAYERS & CHEMISTS, Inc. IV page 1

REGISTERED ASSAYERS

IRAZO

P. O. BOX 7517
TUCSON, ARIZONA 85713

710 E. EVANS BLVD.
PHONE 602-294-5811

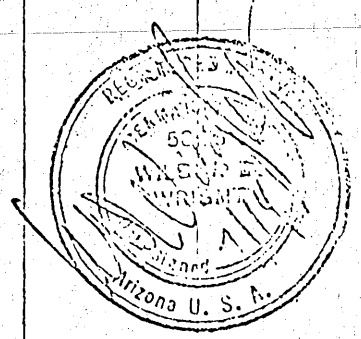
G. NO. 5575

Austral Oil Company
2700 Humble Building
Houston, Texas

JOB # 002771
RECEIVED 7-10-68
REPORTED 7-13-68

S. R.	GOLD OZ.*	SILVER OZ.*	LEAD %	COPPER %	ZINC %	MOLYBDENUM %		
	CaO %	MgO %	Fe %	S %	SiO ₂ %	Insol %	Al ₂ O ₃ %	Ag
1	.56	.22	3.95	.49	73.3	9.9	3.9	6.10
2	1.25	.30	4.37	.10	70.3	8.3	4.1	5.78
3	.91	.29	3.25	.33	71.9	8.1	4.7	2.46
4	.70	.27	4.85	.41	66.6	13.3	4.5	2.60
5	.56	.23	4.25	.38	79.8	1.8	3.7	1.24
6	.52	.30	2.79	.34	72.5	2.8	4.5	1.60
7	.56	.27	3.06	.22	75.0	11.1	3.9	4.54
8	.65	.22	2.30	.16	73.5	12.7	3.5	4.94
9	.93	.23	3.50	.14	76.5	.80	3.4	1.84
10	3.95	.39	3.45	.07	70.0	11.7	3.0	2.80
11	16.6	.98	3.40	.05	47.50	7.7	4.1	1.02
12	1.99	.65	2.97	.04	67.7	13.1	3.9	1.94
13	2.07	.44	3.01	.09	70.7	8.8	5.1	2.34

16.4 H1



\$ 431.00 less 10% quantity discount of 43.10

\$ 432.90

(3) Another area of minor interest lies just north of Amy #3, in section 16, and is an anomalous magnetic low also, apparently associated with a northeasterly trending fault; this fault (and vein) has been worked at the north end in past years.

All in all, there are two major anomalies which should be explored and a minor one along the fault zone north of Amy #3. Therefore, it is my recommendation that a drilling program should be initiated to check out the possibility of silver in the anomalous lineament and copper-silver in the broad, magnetically low zone.

Respectfully submitted,

Richard D. Brown

Richard D. Brown
Consultant

REGISTERED ASSAYERS

P. O. BOX 7517
TUCSON, ARIZONA 85713

TV page 2

710 E. EVANS BLVD.
PHONE 632-2341

FELIX K. DURAZO
WIL WRIGHT
ARIZONA REG. NO. 5875

Austral Oil
2700 Humble Building
Houston, Texas 77002

cc: Landby

JOB# 002439
RECEIVED 5-2-63
REPORTED 5-2-63

SAMPLE NUMBER	GOLD OZ.*	SILVER OZ.*	LEAD %	COPPER %	ZINC %	IRON %	MOLYBDENUM %
D-1	.020	6.10				.20	
<p>THIS IS ASSAY REPORT ON DUMP OF CHANCE CLAIM SHOWING 6.10 oz. in silver. (APPROXIMATELY 10,000 tons)</p>							



CHARGE \$ 6.75

INVOICE

REGISTERED ASSAYERS

P. O. BOX 7517
TUCSON, ARIZONA 85713

710 E. EVANS BLVD.
PHONE 602-202-1111

FELIX K. DURAZO
WIL WRIGHT
ARIZONA REG. NO. 5075

IV page 3

Amstar Oil Company
2700 Lytle Building
Houston, Texas

CG; Leaching

JOB# 002512
RECEIVED 5-14-68
REPORTED 5-14-68

SAMPLE NUMBER	GOLD OZ.	SILVER OZ.	LEAD %	COPPER %	ZINC %	MOLYBDENUM %
DD-1: 80-90	Nil	Trace				
Dump # 2	Nil	5.78				
THIS IS ASSAY REPORT ON DUMP OF CHANCE CLAIM 5.78 oz. per ton						

SOUTHWESTERN ASSAYERS & CHEMISTS Inc.

TV page 4

REGISTERED ASSAYERS

FELIX K. DURAZO
WIL WRIGHT
ARIZONA REG. NO. 5875

P. O. BOX 7517
TUCSON, ARIZONA 85713

710 E. EVANS BLVD.
PHONE 602-294-5811

Austral Oil
2700 Humble Building
Houston, Texas 77002

cc: Lundby

JOB # 002489
RECEIVED 5-9-68
REPORTED 5-9-68

SAMPLE NUMBER	GOLD OZ.*	SILVER OZ.*	LEAD %	COPPER %	ZINC %	Manganese %	MOLYBDENUM %
D-1	.020	6.10				.20	
Dump # 2	Nil	5.78					
Dump # 2		5.78					

** Chance area*

** Chance area*

CHARGE \$ 6.75

* Gold and Silver reported in troy oz. per 2,000 lb. ton.

INVOICE

SOUTHWESTERN ASSAYERS & CHEMISTS, Inc.

TV page 5

REGISTERED ASSAYERS

FELIX K. DURAZO
WIL WRIGHT
ARIZONA REG. NO. 5875

P. O. BOX 7517
TUCSON, ARIZONA 85713

710 E. EVANS BLVD.
PHONE 602-294-5311

Austral Oil Company
2700 Humble Building
Houston, Texas 77002

JOB# 002542
RECEIVED 5-21-63
REPORTED 5-24-63

SAMPLE NUMBER	GOLD OZ.*	SILVER OZ.*	LEAD %	COPPER %	ZINC %		MOLYBDENUM %
SA# 7	.200	838.80					
8	.080	210.92					
9	.040	32.96					

Santa Anna

*Assays take from
Santa Anna Mine
Next to Silver Bonanza
Mines, Inc. - Same vein
extends into S.B.M, Inc.*

See map for location



8840 Wrightstown Road
Tucson, Arizona
October 1, 1969

Mr. T. J. Colvin
Box 162
Tombstone, Arizona

Mr. W. W. Grace
Scottsdale, Arizona

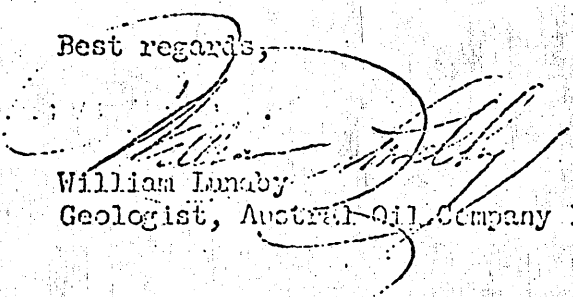
Dear Tom and Bill:

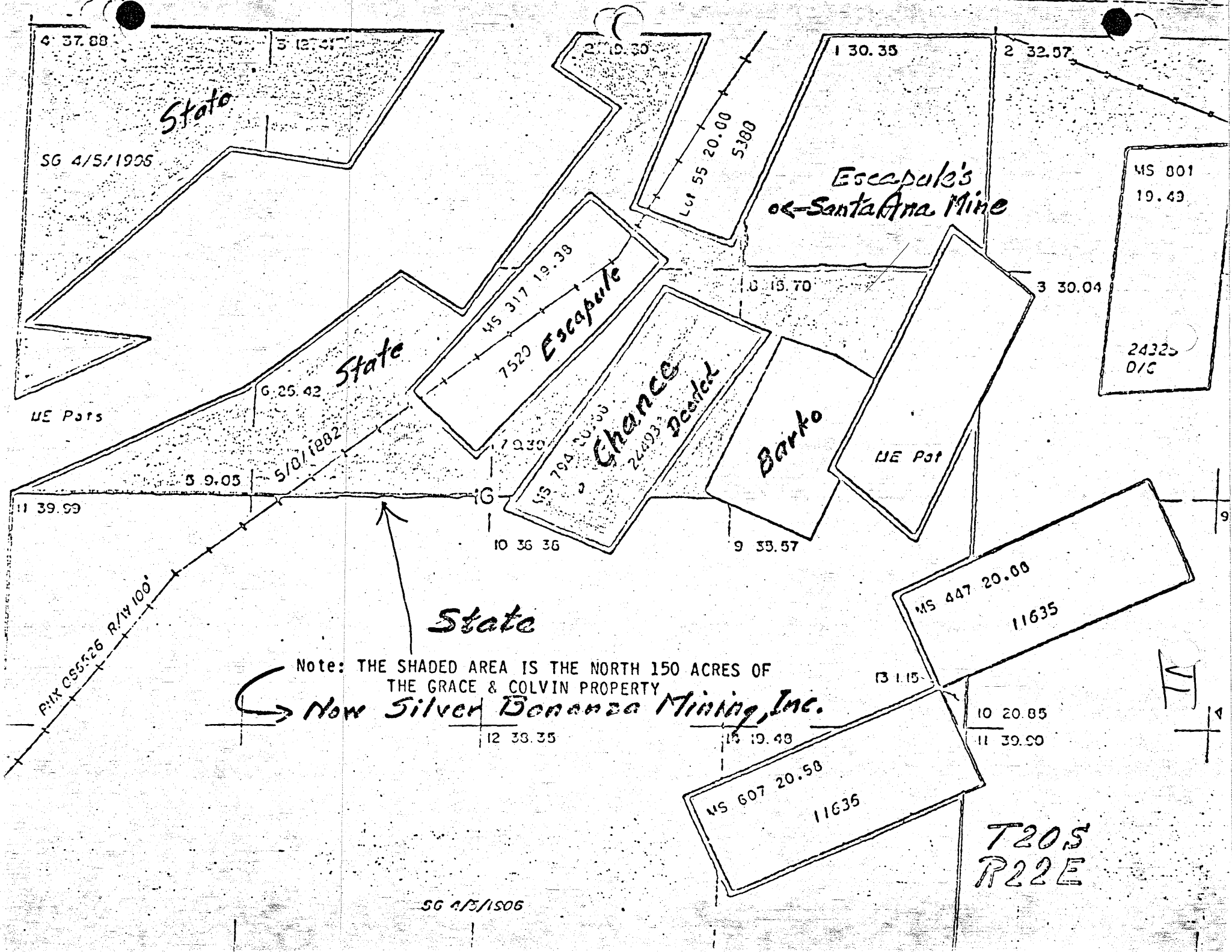
The magnetometer and geochemical surveys have been completed on the Amy group of claims near Tombstone, Arizona. As soon as I receive the recorded affidavit of labor from the county recorder's office I shall forward it to you.

The main feature of interest delineated by the magnetic survey is an area of low magnetic susceptibility generally coincident with an anomalous IP (induced polarization) zone as determined by Nick Carouso. Because the main rock type is igneous (Uncle Sam Porphyry), low magnetic susceptibilities may indicate zones of alteration accompanying mineralization; in this case, this is probably a valid assumption, as proven by the sulphides encountered in the validation hole put down by Austral Oil Company. Of course only pyrite was drilled, but deepening of this hole would certainly be of prime importance to determine whether or not substantial silver values might occur along with the pyrite at depth. The area to be tested extends from the southeast corner of Amy #14 to the southwest corner of Amy #9, which would represent the approximate centerline of the anomalous zone; the zone appears to vary from 1,500 feet to 2,000 feet in width. Since the apparent dip of the IP anomaly (line #3) is to the north, initial drilling should be somewhere along line A-A' on the enclosed map, and preferably along the most pronounced portion of the low (Amy #12, #13, or #14).

The geochemical survey indicated extremely weak values in both silver and molybdenum. This does not detract from the property, however, because similar low values were obtained on the ground to the north and good ore was mined from the Chance-Bonanza and State of Maine mines.

Best regards,


William Lumby
Geologist, Austral Oil Company Incorporated



4 37.88

5 12.41

27 10.30

1 30.35

2 32.57

State

SG 4/5/1906

Lot 55 20.00
5180

*Escapule's
of Santa Ana Mine*

MS 801
19.49

MS 317 19.39
7520
Escapule

0 15.70

3 30.04

24325
D/C

State

6 25.42

UE Parts

MS 794 20.00
24493
Chance Deed

Barko

UE Part

3 9.05

5/10/1882

11 39.59

10 36.36

9 35.57

State

MS 447 20.00
11635

Note: THE SHADED AREA IS THE NORTH 150 ACRES OF THE GRACE & COLVIN PROPERTY

Now Silver Bonanza Mining, Inc.

13 1.15

R/W 100'

10 20.85

11 39.50

12 33.35

15 19.48

MS 607 20.58
11635

T20S
R22E

SG 4/5/1906



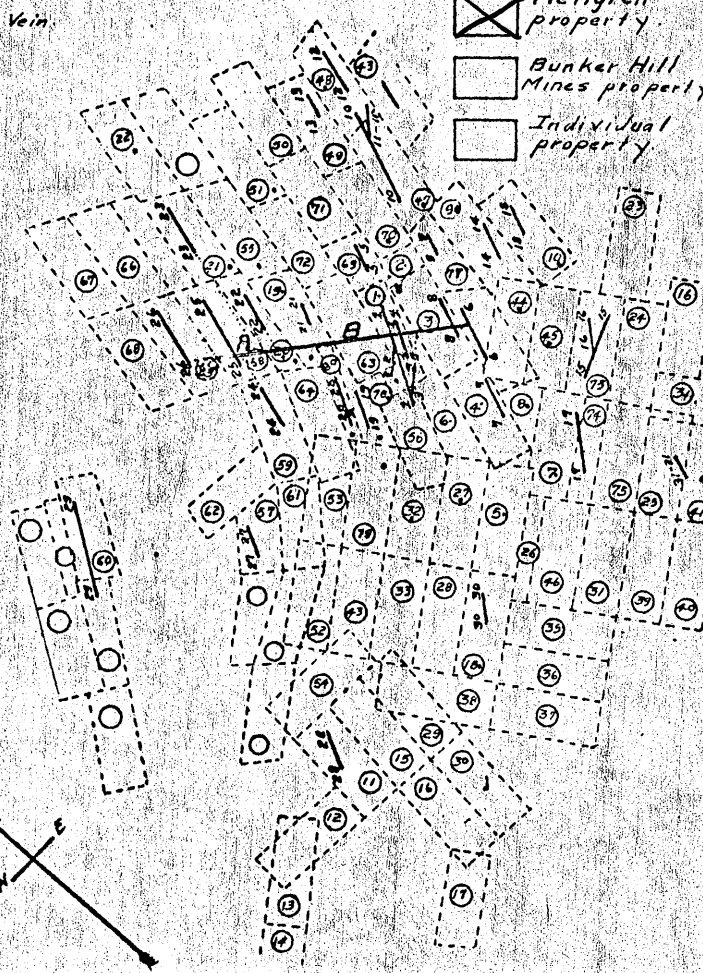
Vein Map of Western District

Scale 1" = 2400 feet. Vein positions approximate.

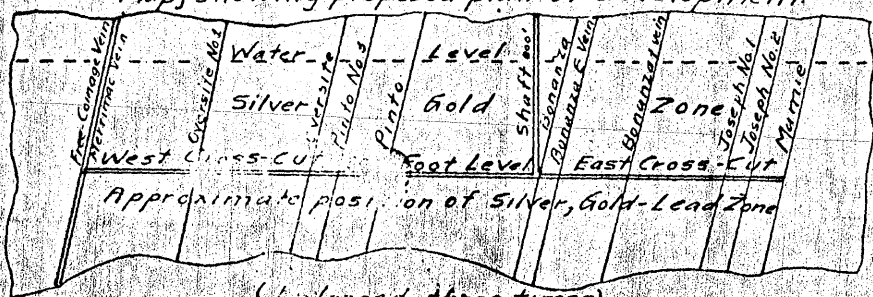
- N Veins**
- Bonanza-Chance Vein.
 - West Bonanza Cross Vein.
 - East Bonanza-Chance Cross Vein.
 - East Bonanza Vein.
 - Opafice Vein.
 - Junie Vein.
 - Joseph No. 2 Vein.
 - Junetta No. 1 Vein.
 - Blay Vein.
 - Annex No. 10 Vein.
 - Annex No. 10 Cross Vein.
 - Annex No. 41 Vein.
 - Annex No. 42 Vein.
 - Lost Lead Vein.
 - Junetta Vein.
 - Junetta Cross Vein.
 - Opafice-Extension Vein.
 - Empire Vein.
 - Pin'o Vein.
 - Pin'o No. 3 Vein.
 - Oversite Vein.
 - Oversite No. 1 Vein.
 - Dacota No. 5 Vein.
 - Martinez Vein.
 - San Coinage Vein.
 - Argenta Vein.
 - State of Maine Vein.
 - Bill-B Vein.
 - San Pedro Vein.
 - Hornspoon Vein.
 - Annex No. 15 Vein.

- Key to Property**
- Mellgren property
 - Bunker Hill Mines property
 - Individual property

- Key to Veins**
- 1. Bonanza
 - 2. Bonanza No. 1
 - 3. Joseph No. 1
 - 4. Joseph No. 2
 - 5. Joseph No. 3
 - 6. Joseph No. 4
 - 7. Extension
 - 8. Fraction
 - 9. Lost Lead
 - 10. Empire
 - 11. Bill-B
 - 12. Connection
 - 13. Lion
 - 14. Lion No. 1
 - 15. Fox No. 1
 - 16. Fox No. 2
 - 17. Fox No. 3
 - 18. Hornspoon
 - 19. Oversite
 - 20. Oversite No. 1
 - 21. Dakota No. 5
 - 22. Dakota No. 10
 - 23. Annex No. 12
 - 24. Annex No. 13
 - 25. Annex No. 15
 - 26. Annex No. 16
 - 27. Annex No. 17
 - 28. Annex No. 18
 - 29. Annex No. 19
 - 30. Annex No. 20
 - 31. Annex No. 21
 - 32. Annex No. 23
 - 33. Annex No. 24
 - 34. Annex No. 25
 - 35. Annex No. 26
 - 36. Annex No. 27
 - 37. Annex No. 28
 - 38. Annex No. 29
 - 39. Annex No. 30
 - 40. Annex No. 31
 - 41. Annex No. 32
 - 42. Annex No. 33
 - 43. Annex No. 35
 - 44. Annex No. 36
 - 45. Annex No. 37
 - 46. Annex No. 38
 - 47. Annex No. 41
 - 48. Annex No. 42
 - 49. Annex No. 43
 - 50. Annex No. 44
 - 51. Annex No. 45
 - 52. Annex No. 46
 - 53. Annex No. 47
 - 54. Annex No. 48
 - 55. Annex No. 49
 - 56. Chance
 - 57. State of Maine
 - 58. Free Coinage
 - 59. Martinez
 - 60. San Pedro
 - 61. XXX
 - 62. Uncle Sam
 - 63. Red Top
 - 64. Clipper
 - 65. Argenta Group
 - 66. Solstice Group
 - 67. Junetta
 - 68. Louisa
 - 69. Sunset No. 2
 - 70. Margarette
 - 71. Bay
 - 72. Pin'o
 - 73. Parphary
 - 74. Pin'o No. 3



Vertical-Section along line A-B on Vein Map, showing proposed plan of development.



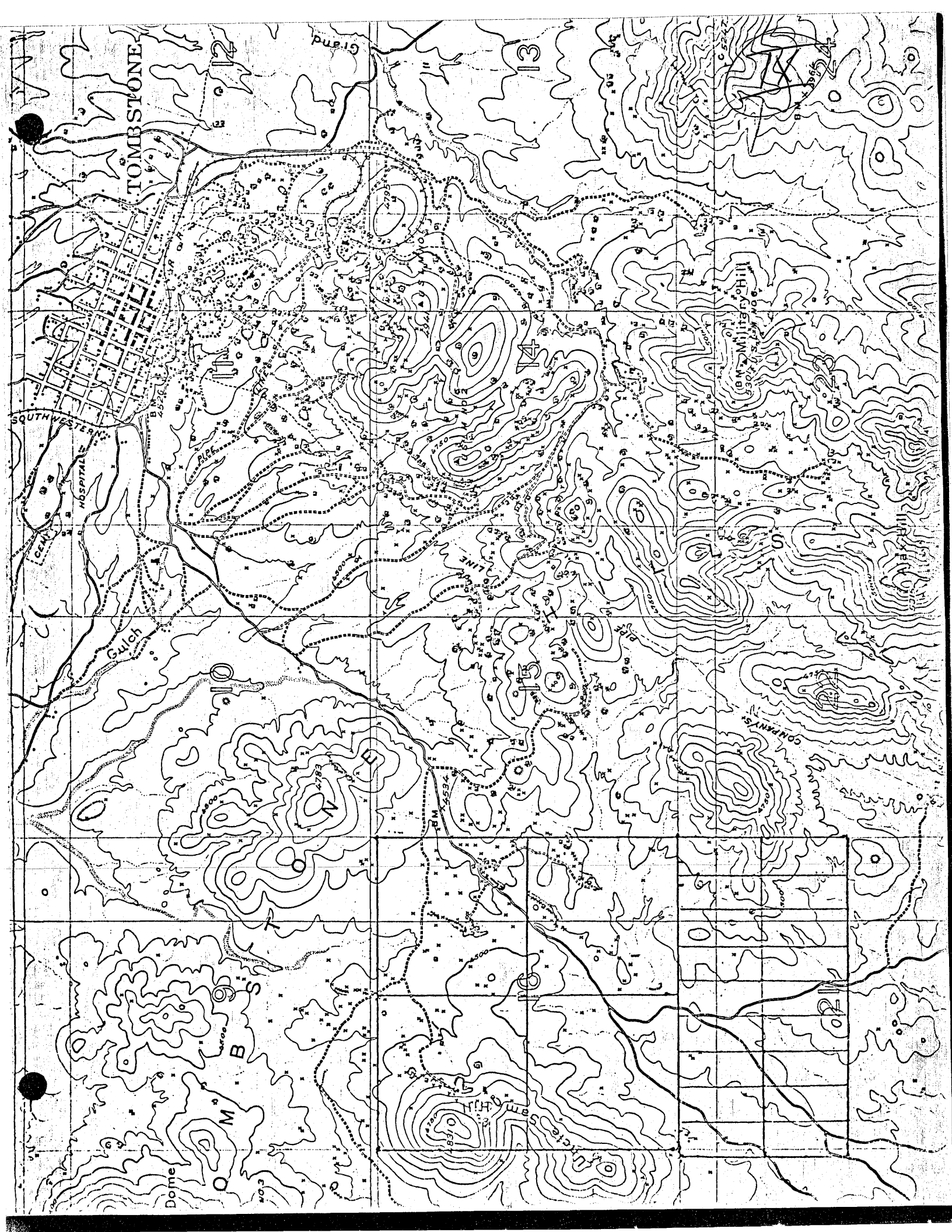
(Enlarged three times)

Drifts from the east and west cross-cuts should be run, not only on veins actually cut, but to lateral veins from points of intersection, of their projected lines of strike with this cross-cut. The cross-cut as thus delimited should in a distance of 3300 feet bring under development twelve veins, whose positions are indicated above, with a reasonable certainty of encountering other veins not exposed at the surface.



THIS MAP SHOWS RELATIONSHIP OF CLAIMS REFERRED TO IN WELLGREN REPORT TO GARCE AND COLVIN PROPERTY

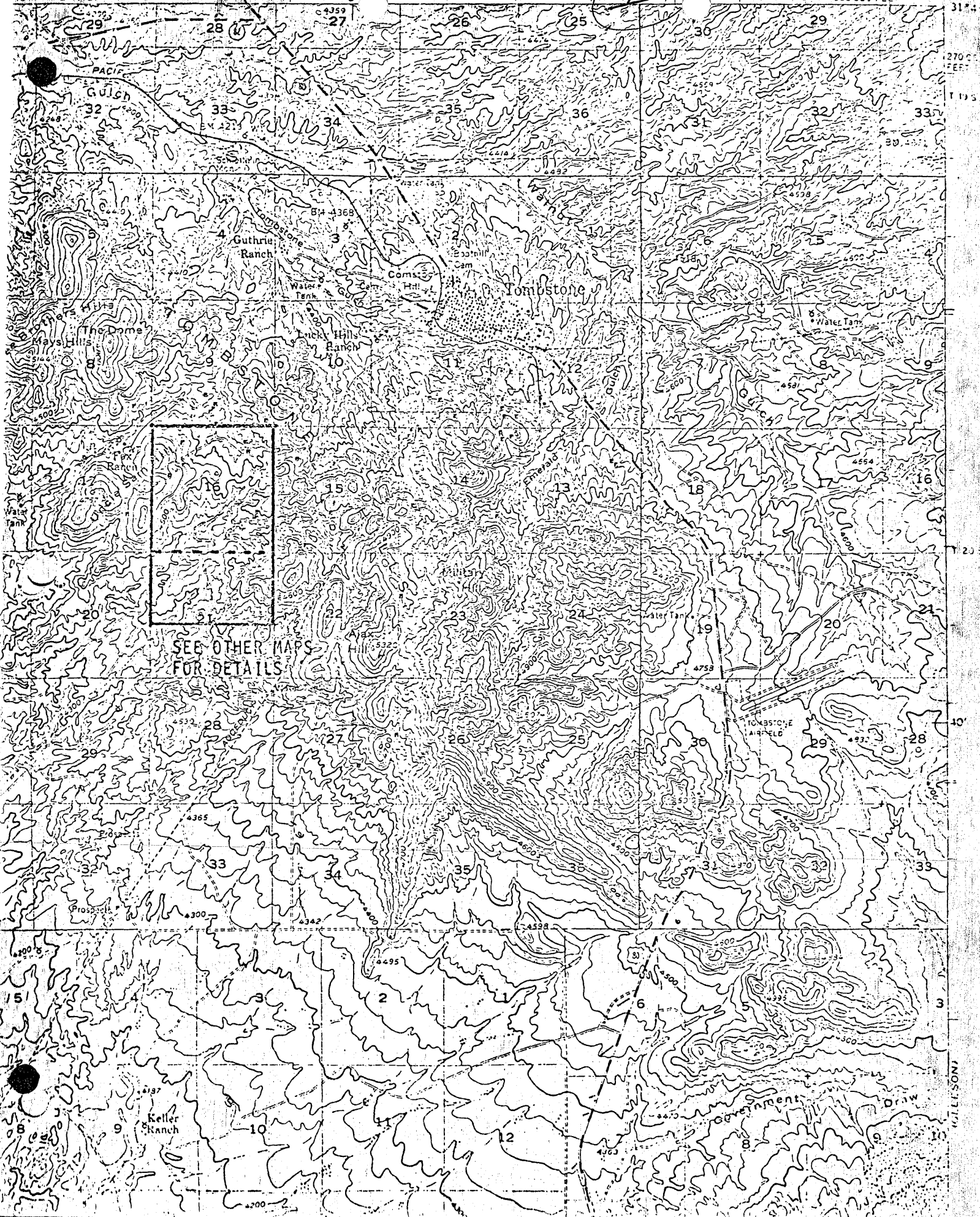
10 11 12 13 14 15 16 17 18
 Amy



R. 22 E

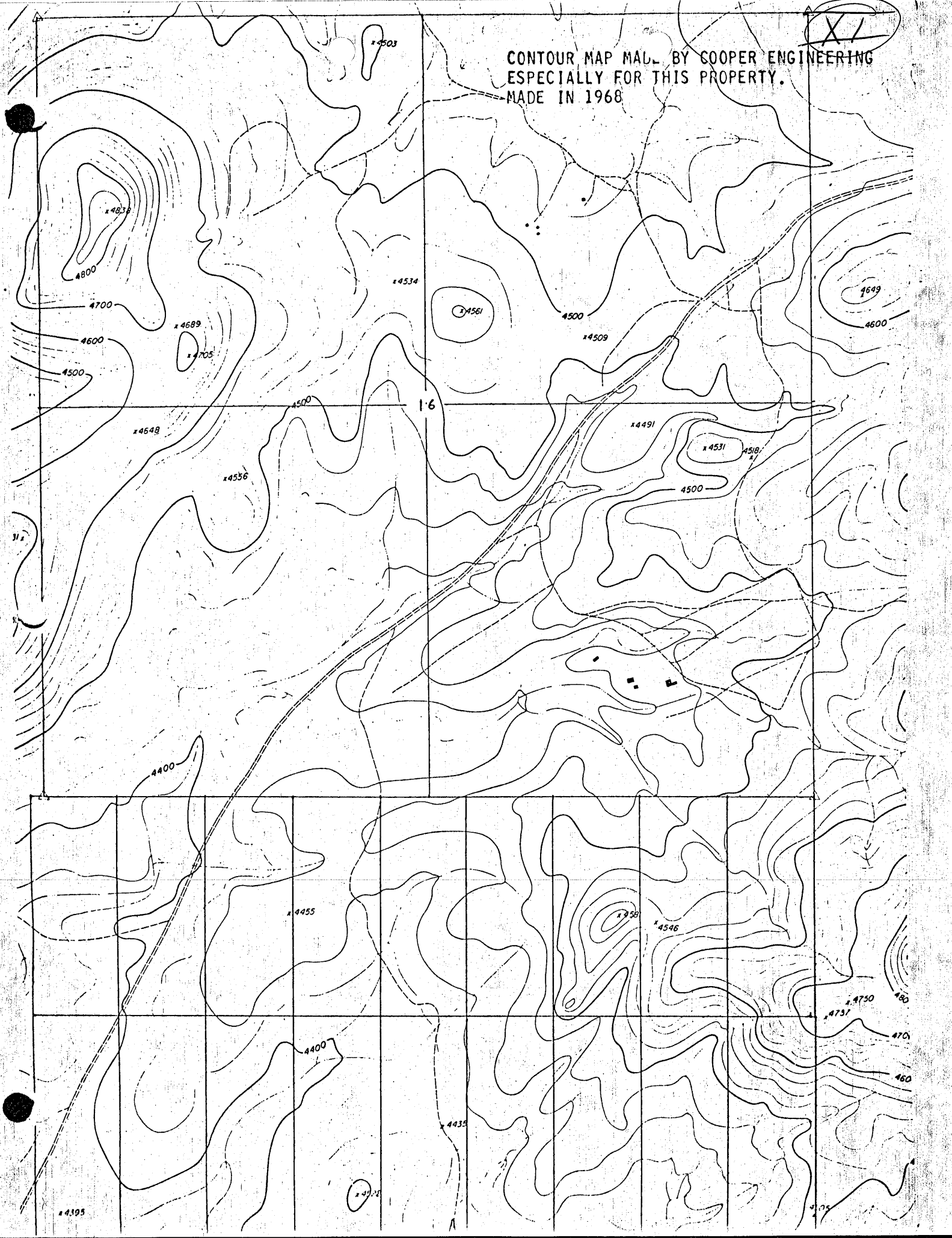
BENSON 21 MI.
ST. DAVID 14 MI.

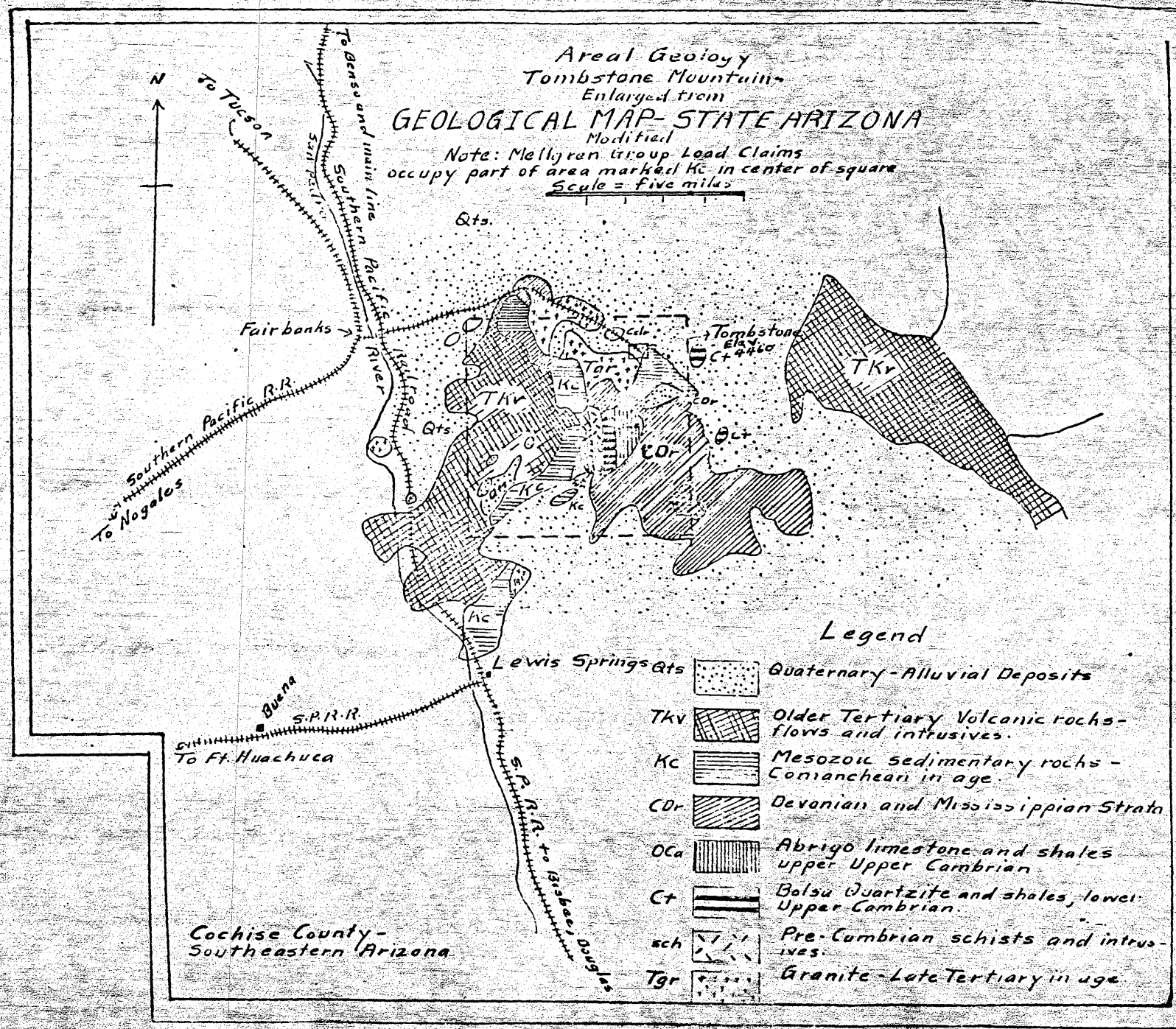
R. 23 E 550 000 FEET 110° 00'



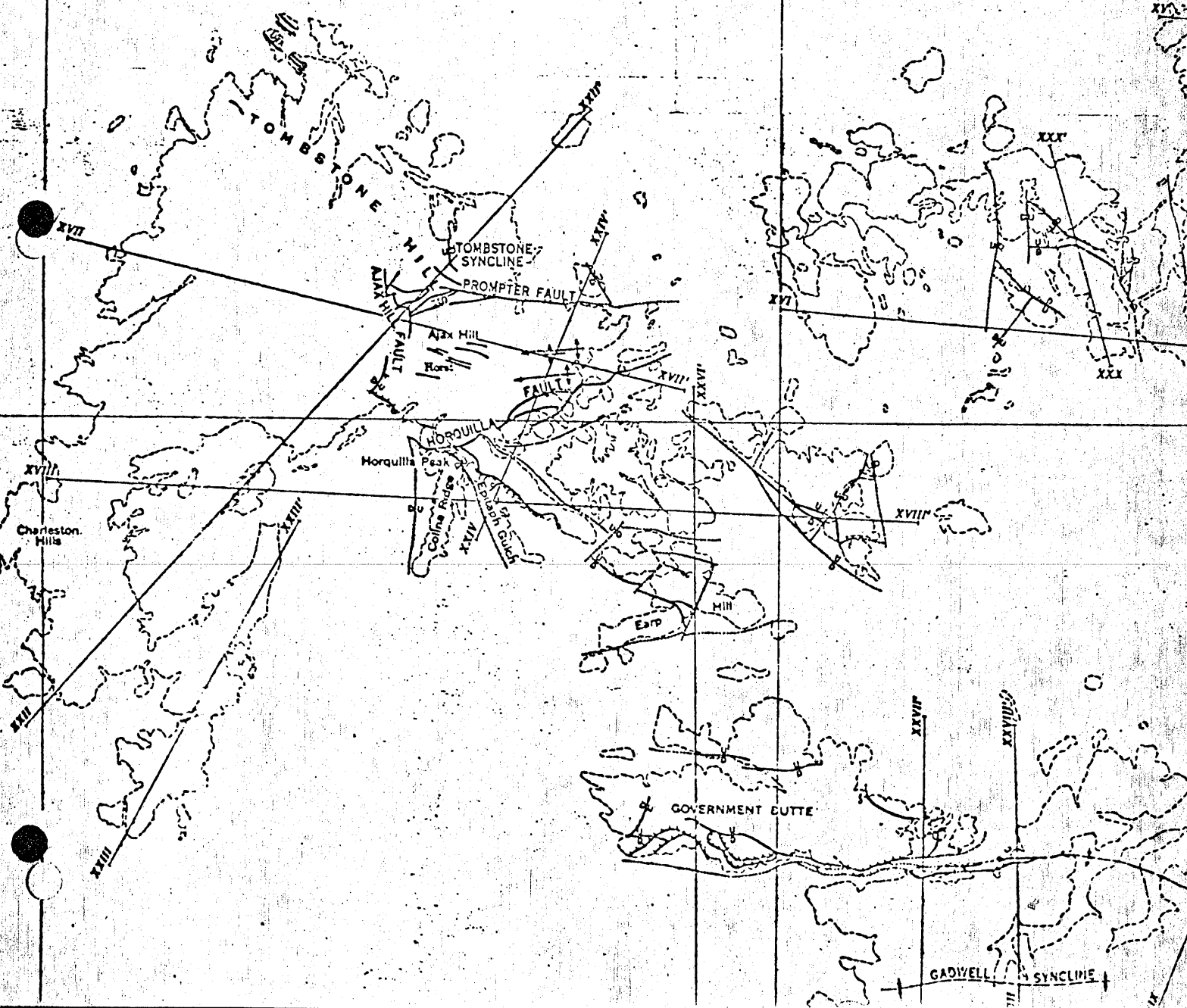
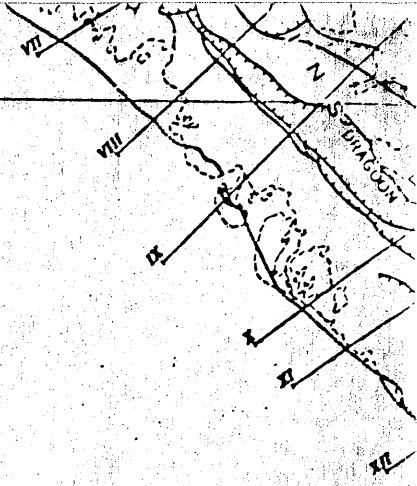
CONTOUR MAP MADE BY COOPER ENGINEERING
ESPECIALLY FOR THIS PROPERTY.
MADE IN 1968

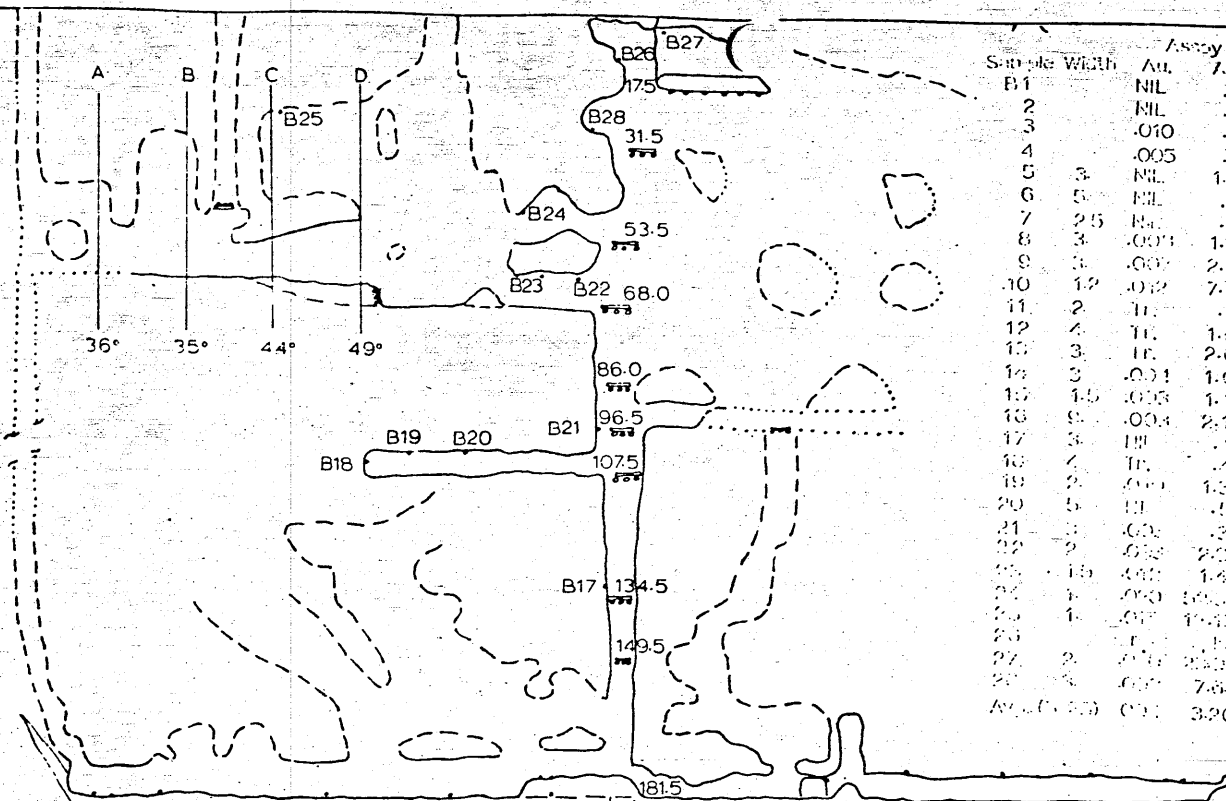
(XVI)





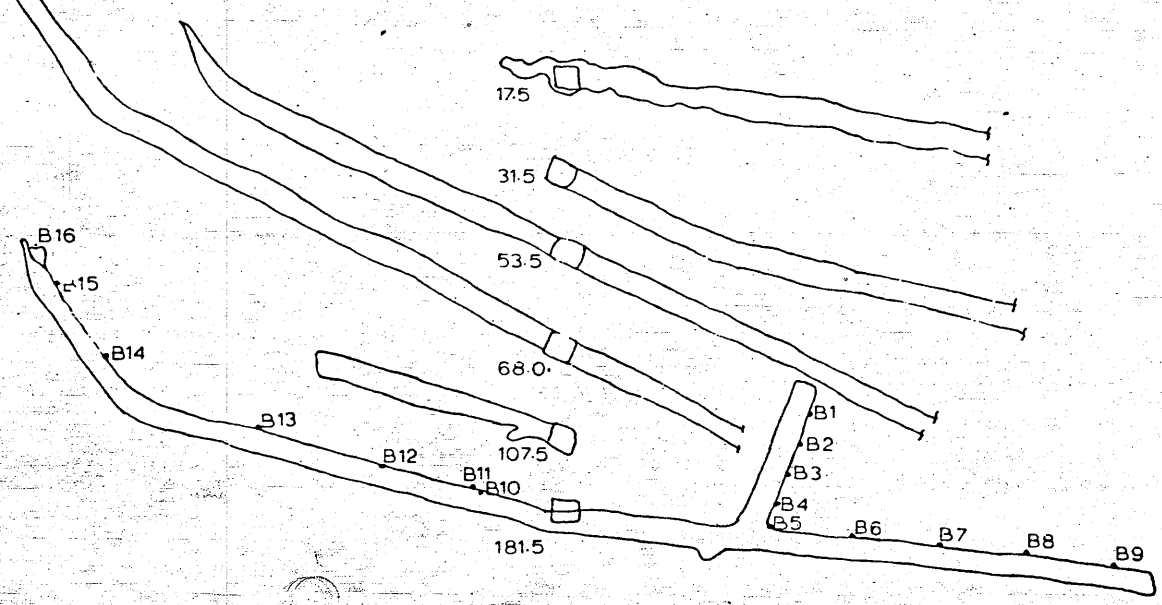
XIII





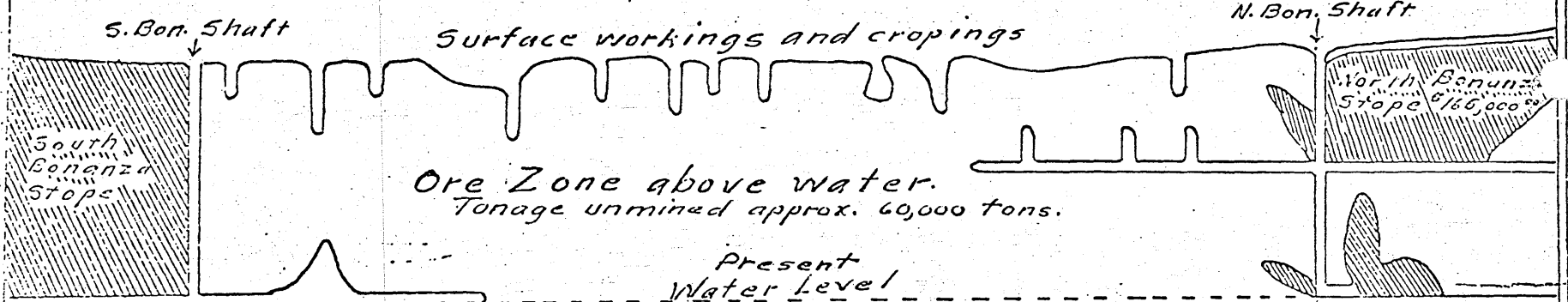
Sample	Width	Assay	
		Au.	Ag.
B1		NIL	.42
2		NIL	.28
3		.010	.75
4		.005	.88
5	3	NIL	1.24
6	5	NIL	.66
7	2.5	NIL	.5
8	3	.008	1.73
9	3	.007	2.55
10	1.2	.012	7.25
11	2	Tr.	.56
12	4	Tr.	1.60
13	3	Tr.	2.04
14	3	.004	1.08
15	1.5	.003	1.14
16	9	.003	2.12
17	3	Tr.	.48
18	4	Tr.	.40
19	2	.010	1.35
20	5	NIL	.52
21	3	.003	.34
22	2	.003	2.86
23	1.5	.012	1.43
24	1	.020	52.38
25	1	.014	12.13
26		no sample	
27	2	.020	23.08
28	3	.008	7.64
Avg (5-29)		.004	3.90

Some Table



Sample	Width	Assay	
		Au.	Ag.
B1		NIL	.42
2		NIL	.28
3		.010	.75
4		.005	.88
5	3	NIL	1.24
6	5	NIL	.66
7	2.5	NIL	.5
8	3	.008	1.73
9	3	.007	2.55
10	1.2	.012	7.25
11	2	Tr.	.56
12	4	Tr.	1.60
13	3	Tr.	2.04
14	3	.004	1.08
15	1.5	.003	1.14
16	9	.003	2.12
17	3	NIL	.48
18	4	Tr.	.40
19	2	.010	1.35
20	5	NIL	.52
21	3	.003	.34
22	2	.003	2.86
23	1.5	.012	1.43
24	1	.020	52.38
25	1	.014	12.13
26		no sample	
27	2	.020	23.08
28	3	.008	7.64
Avg (5-29)		.004	3.90

Longitudinal section of Bonanza Mine (One of the Mellgren Mines) Scale 1" = 1200' approx.



Ore Zone above water.
Tonage unmined approx. 60,000 tons.

Present Water Level

Ore in water 400 to 800 Oz. Ag. 105.0 Oz. Ag. 9.0% Pb., 0.92 Oz. Au.
0.84 Oz. Au. to 1.51 Oz. Au.

Ore in water 60.0 Oz. Ag.

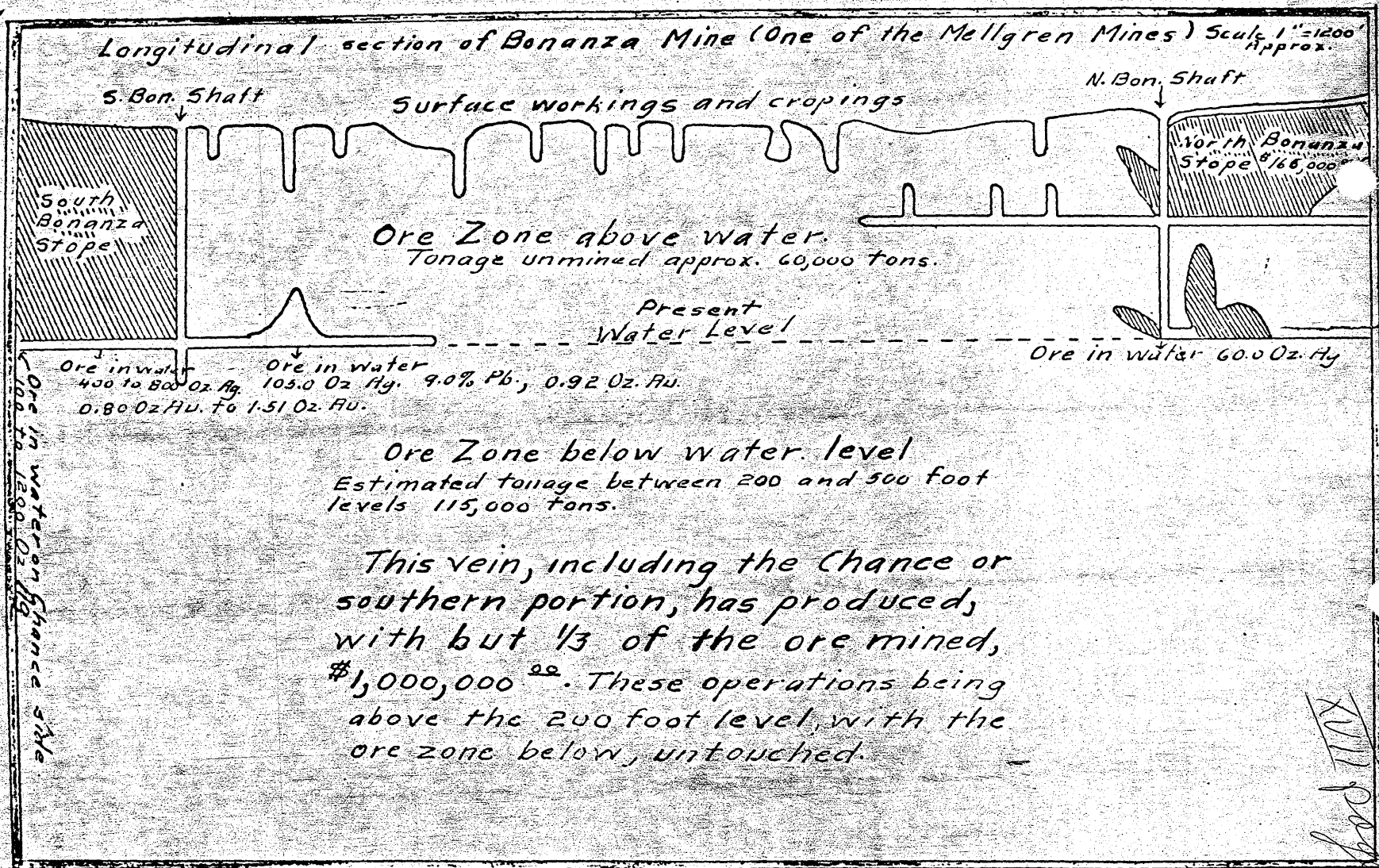
Ore Zone below water level
Estimated tonnage between 200 and 500 foot levels 115,000 tons.

THIS IS AREA REFERRED TO IN REPORT AS RUNNING 100 to 1,200 oz. in silver. STILL THERE

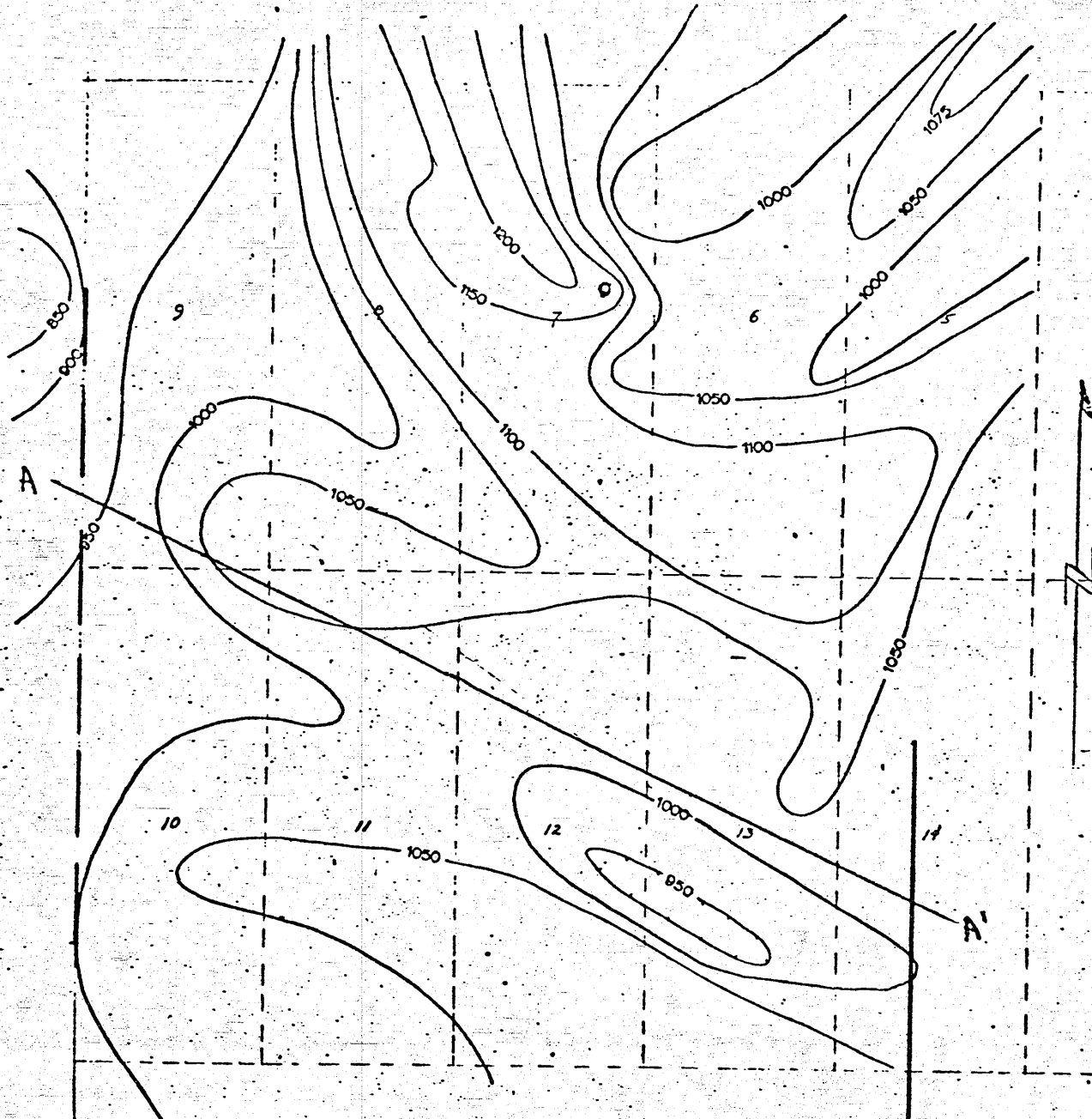
This vein, including the Chance or southern portion, has produced, with but 1/3 of the ore mined, \$1,000,000⁰⁰. These operations being above the 200 foot level, with the ore zone below, untouched.

Ore in water Chance vein

J. H. TAYLOR






W. J. ...
2



VERTICAL INTENSITY MAGNETOMETER
SURVEY
 (Askania #661,372)

AMY GROUP
 Cochise County, Arizona
 Section 21; T-20-S, R-22-E
 1" = 533'
 9-30-69 W. Lundy

-  Magnetic contour (true value = +19,000 gamma)
-  IP anomaly, definite
-  IP anomaly, probable

XIV page

SEC. 16

VERTICAL INTENSITY MAGNETOMETER SURVEY
(ASKANIA 461.372)
CM 4PHAR

AMY GROUP # SECTION 16

T-20-S, R-22-E

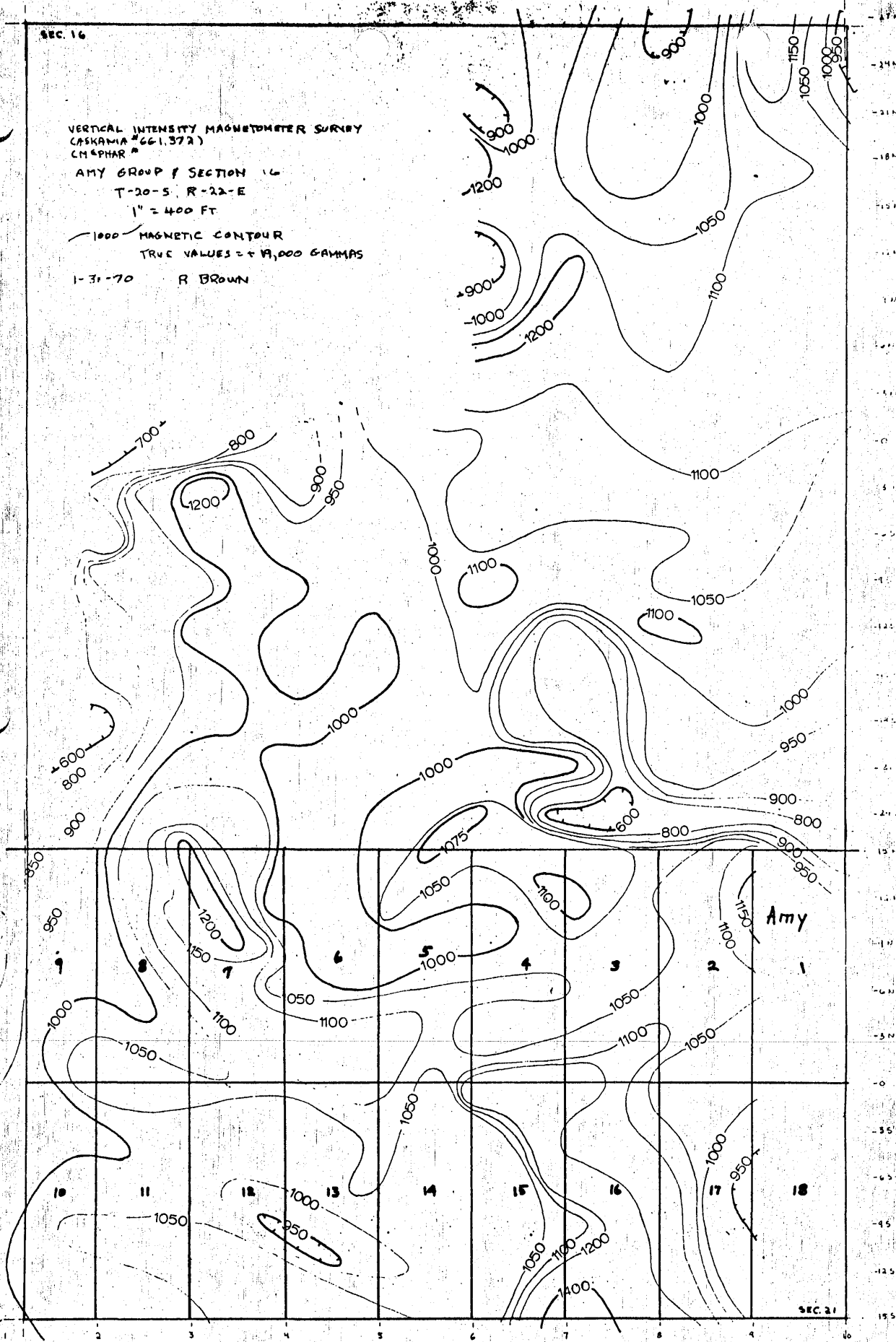
1" = 400 FT.

1000 MAGNETIC CONTOUR

TRUE VALUES = ± 19,000 GAMMAS

1-31-70 R BROWN

XIV page 2



SEC. 21

SEC. 16

VERTICAL INTENSITY MAGNETOMETER SURVEY
CASHAMA #661372
CHAPARRAL

AMY GROUP f SECTION 16
T-20-S, R-22-E
1" = 400 FT.

1000 MAGNETIC CONTOUR
TRUE VALUES = + 19,000 GAMMAS
1-31-70 R BROWN

XIV page 2
XIV page 3

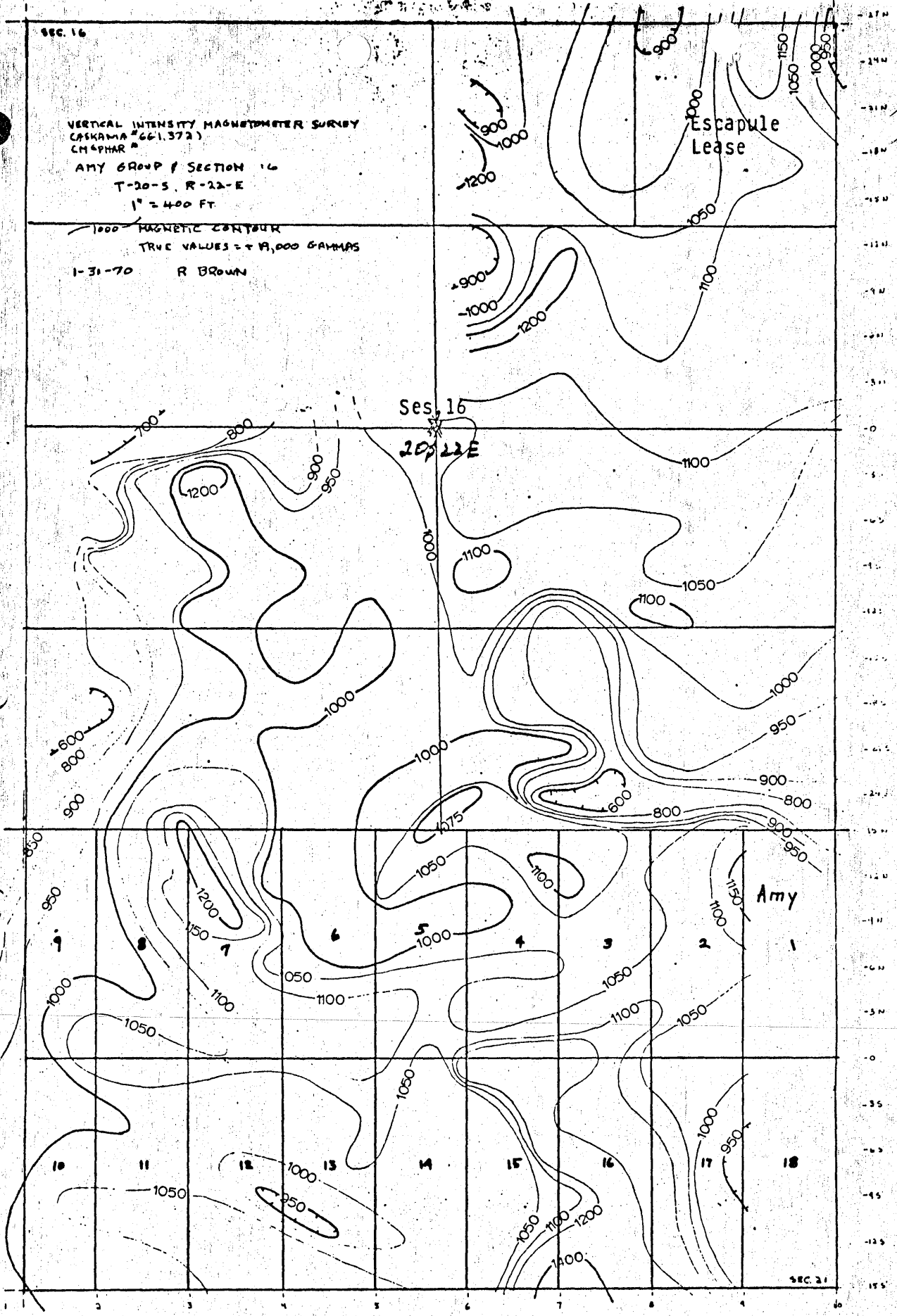
Escapule Lease

Sec. 16
20, 22 E

Amy



SEC. 21



SEC. 16

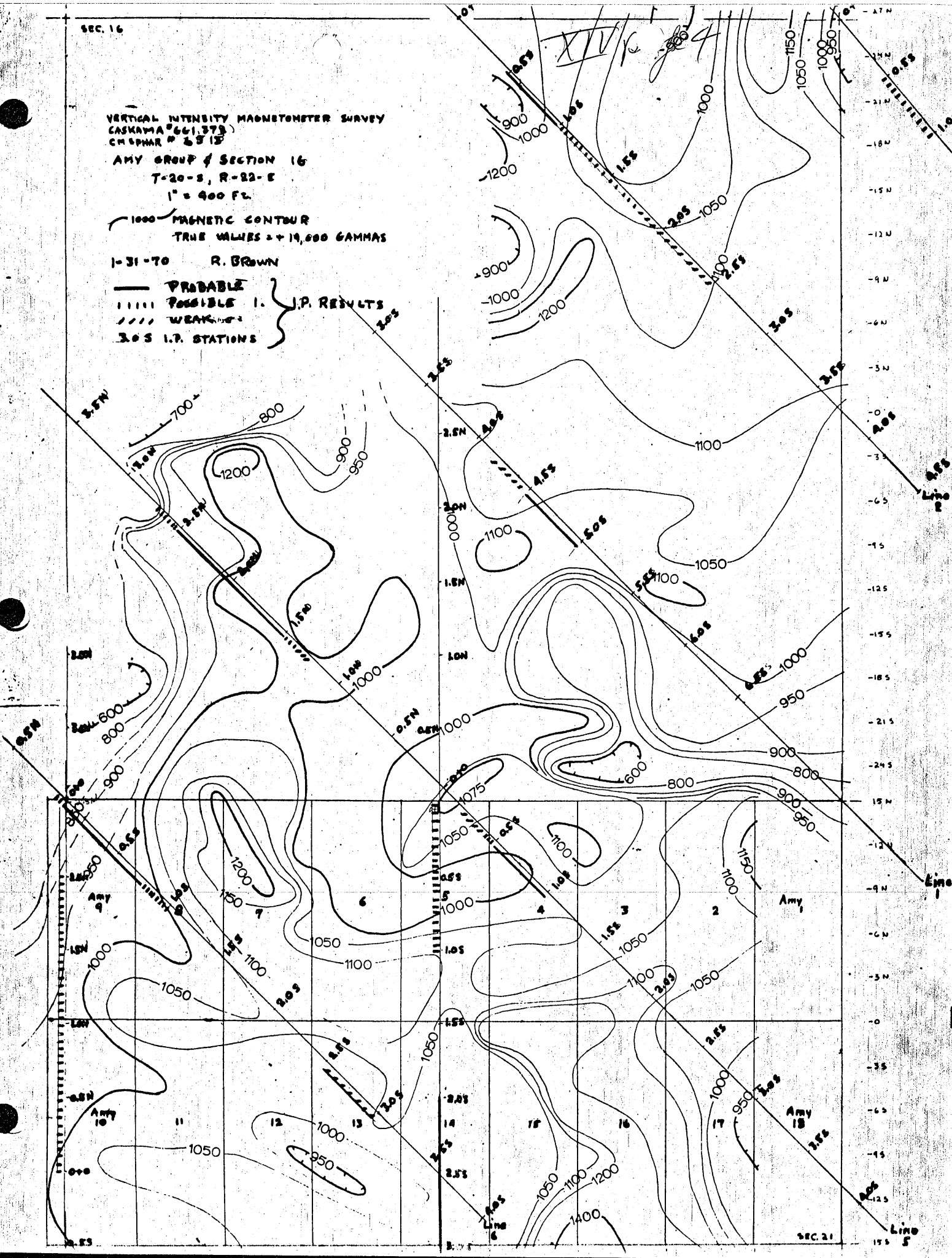
VERTICAL INTENSITY MAGNETOMETER SURVEY
CASKAMA #661,373
CM SPHR # 2512

ARMY GROUP 4 SECTION 16
T-20-S, R-22-E
1" = 400 FT.

1000 MAGNETIC CONTOUR
TRUE VALUES ± 14,000 GAMMAS

1-31-70 R. BROWN

— PROBABLE
- - - - - POSSIBLE I.P. RESULTS
- - - - - WEAK I.P. RESULTS
X X X I.P. STATIONS

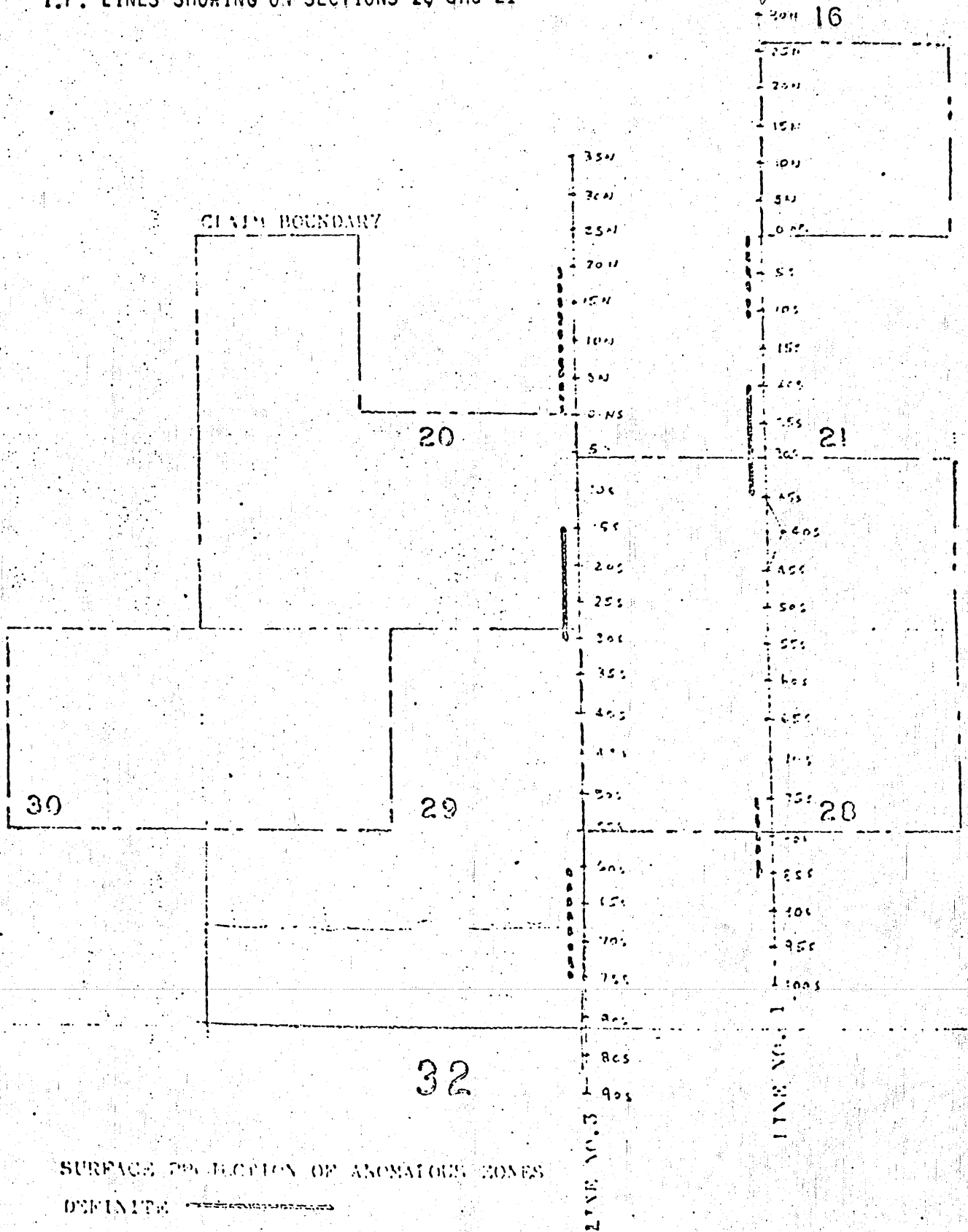


SEC. 21

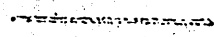
Line 5

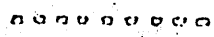
I.P. LINES SHOWING U. SECTIONS 16 and 21

page 1



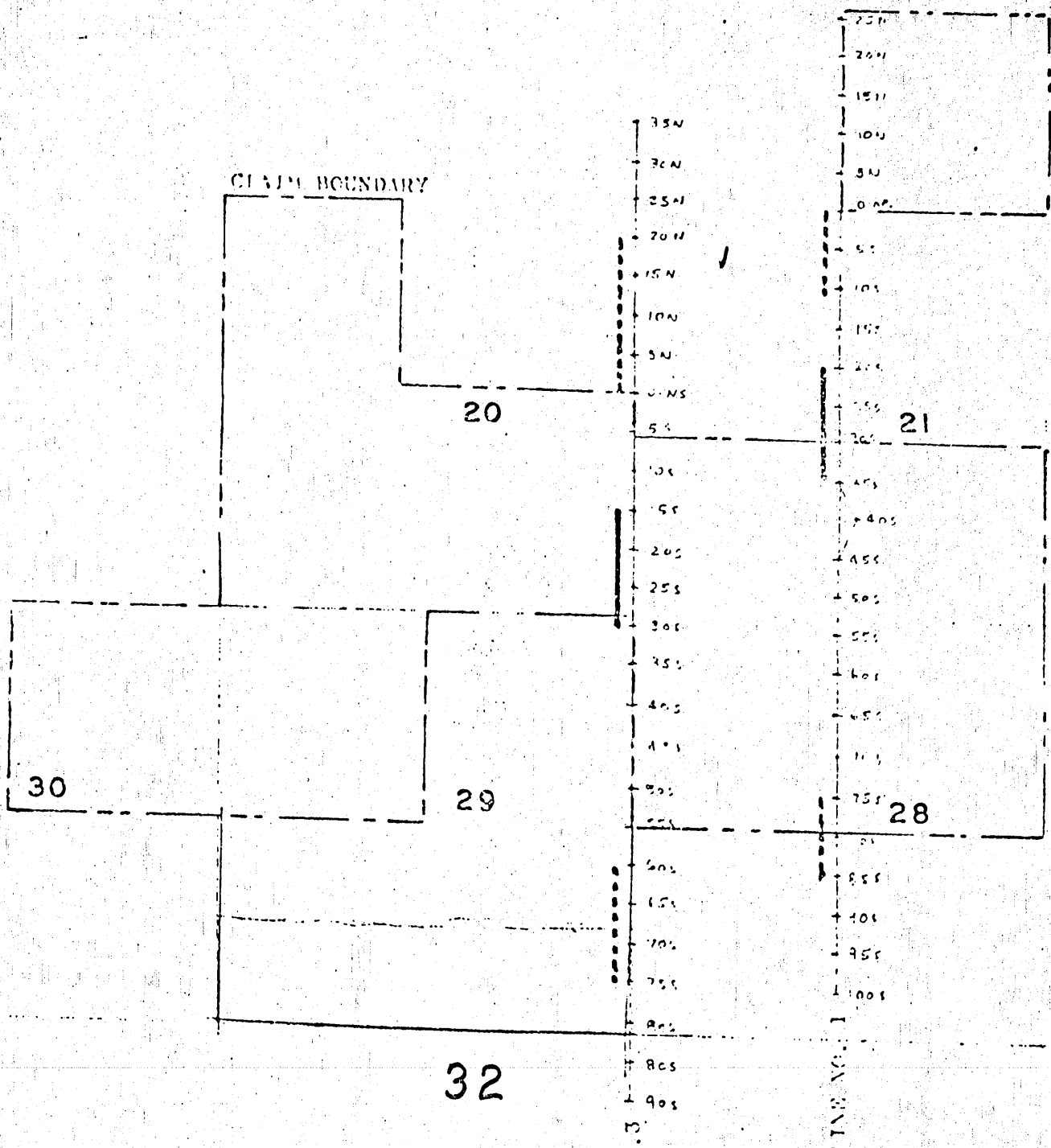
SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE 

PROBABLE 

SCALE 1:24,000

INDUCED POLARIZATION AND RESISTIVITY SURVEY
 CAB CLAIM GROUP, TOMBSTONE AREA, COCHISE CNTY.-ARIZ.



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE —————

PROBABLE

SCALE 1:24000

INDUCED POLARIZATION AND RESISTIVITY SURVEY
CAB CLAIM GROUP, TOMBSTONE AREA, COCHISE CTY.-ARIZ.

OCT. 1967