

PRINTED: 11/19/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: LEVIATHAN

ALTERNATE NAMES:

SEXTON

STAUNTON'S

MAXMILLIAM

YAVAPAI COUNTY MILS NUMBER: 283

LOCATION: TOWNSHIP 10 N RANGE 5 W SECTION 35 QUARTER C

LATITUDE: N 34DEG 09MIN 56SEC LONGITUDE: W 112DEG 44MIN 42SEC

TOPO MAP NAME: YARNELL - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:

GOLD

BIBLIOGRAPHY:

ADMMR LEVIATHAN FILE

REPORT OF THE GOVERNOR OF AZ 1899 P 60

WILSON, E.D., ET. AL., 1934, ARIZONA LODE GOLD

AND GOLD MINING, ARIZONA BUREAU OF MINES

BULLETIN 137, P 68

LEVIATHAN CLAIM
MAXIMILLIAN GROUP

YAVAPAI COUNTY
T10N R5W Sec 35

11/23/77 - Map of Black Rock District and a map of Wickenburg showing points of interest are filed i- Wickenburg general file.

ABM Bull #137, p. 68

MILS Yavapai Index #283

Report of the Governor of Arizona 1899, p. 60, 61

Yarnell topo map (included in file)

3452 III NE
(CONGRESS)

3783

3782

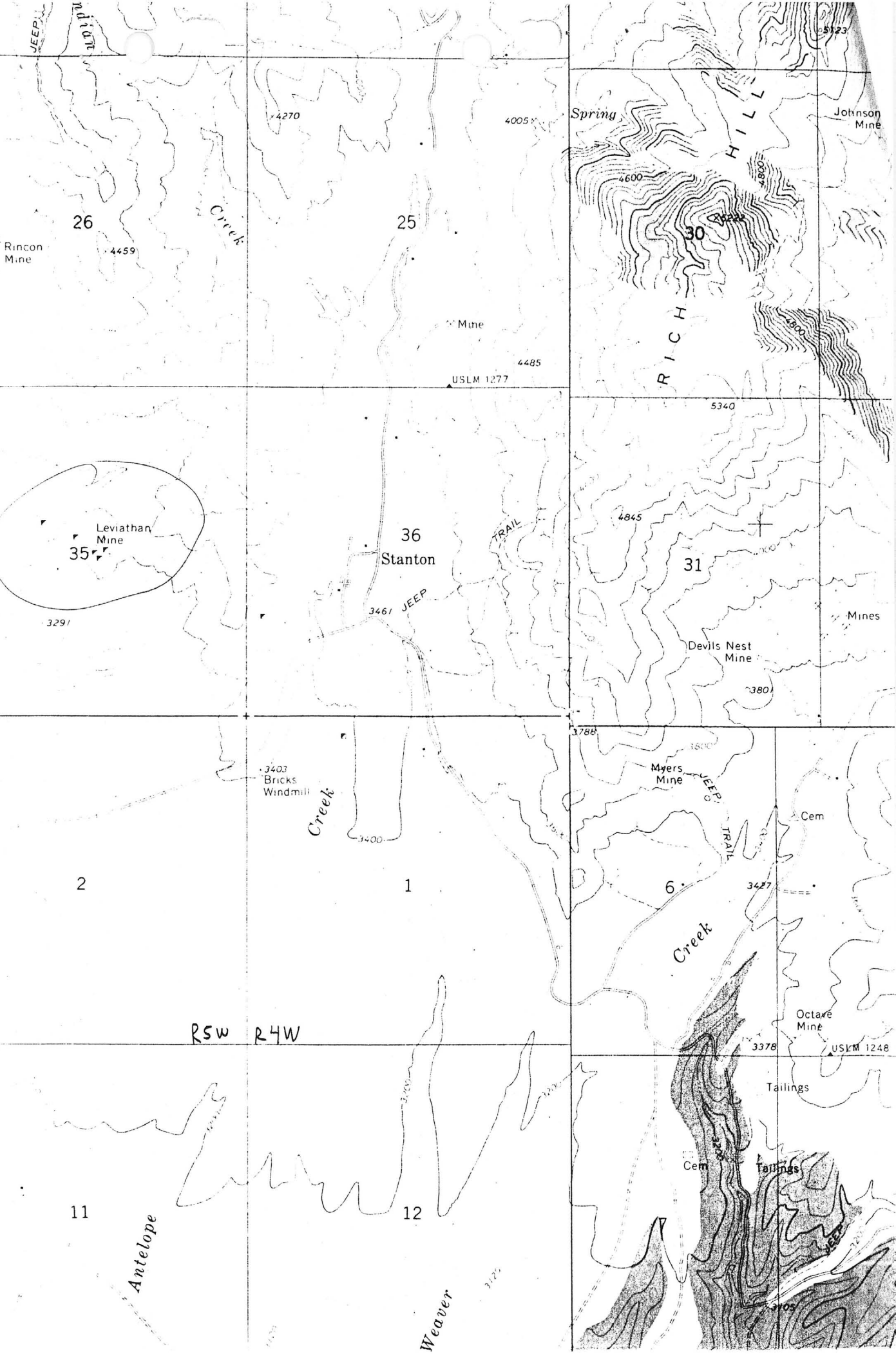
3781

5 MI TO U.S. 89

3779

3778

1:40 000
FEET



LEVITHAN CLAIM

YAVAPAI COUNTY

T10N ^{RSW} ~~R4W~~ Sec. 35

Weaver District

(Not Levithan Claim of Maximillian Group)

RRB WR 1/22/82: James Blanton was in to look at the Leviathon as he is considering leasing it for the placer material.

KAP WR 7/23/82: William Mir of Los Suertes Mining Corporation, 5401 E. Pershing Avenue, Scottsdale, AZ 85254, phone 953-1875, reported he is going to move his heap leach equipment from his Los Suertes claims to the Leviathan in six weeks.

NJN WR 1/14/83: Dick Mieritz, geologist, reported that a Mr. Mier of Los Suertes Mining has a lease/option on the Leviathon patented claim, Yavapai County. Duayne Grey was reported as operating a "Black Box" operation extracting Au and Ag from a quartz vein on the property. Mr. Mieritz planned to visit the operation on January 22.

NJN WR 6/29/84: William G. Mir, president of Los Suertes Mining Corp (c) visited and reported that on May 28, 1983 Duane Grey declared he could not complete his contract at the Leviathan Claim (file) Yavapai County for which he had been paid. During October, 1983 an EM16 VLF geophysical survey was conducted over the claim. Since then, 2000' of hammer drilling of targets to a depth of 150' has occurred with some good values. A program of drilling to a depth of 400' is planned to commence shortly. A joint venture on the property is a possibility in the future.

REFERENCE 1 F1 < ABGMT CLIPPINGS
REFERENCE 2 F2 < AZ DEPT MIN. RESOURCES FILE DATA
REFERENCE 3 F3 < USGM - ABGMT FILE DATA
REFERENCE 4 F4 < BARTH, C. G (1932), UNPUBLISHED MAP, AZ DEPT. MIN. RESOURCES.

283

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

*RECORD NUMBER B10 < _____> *RECORD TYPE B20 < X, 1, M, >
*REPORT DATE G1 < 8, 1, 1, 1, > *INFORMATION SOURCE B30 < 1, 2, > DEPOSIT NUMBER B40 < _____>
*REPORTER(SUPERVISOR) G2 < DEWITT, E. H. > *FILE LINK IDENT. B50 < USGM-004 025 1278
(last, first, middle initial) (last, first, middle initial)
*REPORTER AFFILIATION G5 < ABGMT > *SITE NAME A10 < LEVIATHAN MINE
*SYNONYMS A11 < _____>

LOCATION

*MINING DISTRICT/AREA A30 < RICH HILL DISTRICT > *STATE A50 < AZ > *COUNTRY A40 < U.S.
*COUNTY A60 < YAVAPAI >
*PHYSIOGRAPHIC PROV A63 < 1, 2, >
*DRAINAGE AREA A62 < 1, 5, 0, 7, 0, 1, 0, 3, >
*QUADRANGLE NAME A90 < YARNELL > (1, 9, 6, 9, >
*SECOND QUAD NAME A92 < _____> (, , , , >
*ELEVATION A107 < 3, 4, 0, 0, > F.T.)

UTM
*NORTHING A120 < 3, 4, 8, 1, 7, 4, 0, >
*EASTING A130 < 3, 3, 9, 2, 4, 0, >
*ZONE NUMBER A110 < 1, 2 >

*ACCURACY

ACCURATE ACC (circle)
ESTIMATED EST < _____>

GEODETIC

*LATITUDE A70 < _____ N
*LONGITUDE A80 < _____ W

CADASTRAL

*TOWNSHIP(S) A77 < 0, 1, 0, N, > *RANGE(S) A78 < 0, 0, 5, W, >
*SECTION(S) A79 < 35 >
*SECTION FRACTION(S) A76 < SE OF NE AND SW OF SW OF NE >
*MERIDIAN(S) A81 < GILA AND SALT RIVER >

*POSITION FROM NEAREST PROMINENT LOCALITY A82 < 3.9 MILES SOUTH OF YARNELL, ARIZONA
*LOCATION COMMENTS A83 < UTM COORDINATES TO CENTER SHAFT IN CLUSTER OF 5 SHAFTS IN CENTER OF SECTION 35. MAIN WORKINGS ON LEVIATHAN PATENTED CLAIM

* ESSENTIAL INFORMATION
* ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

COMMODITIES PRESENT C10 < AU, AG, VC >
ORE MINERALS C30 < GOLD >
COMMODITY SUBTYPES C41 < >
GEN. ANALYTICAL DATA C43 < >
COM. INFO. COMMENTS C50 < >

SIGNIFICANCE

MAJOR PRODUCTS MAJOR < AU >
MINOR PRODUCTS MINOR < AG, VC >
POTENTIAL PRODUCTS POTEN < >
OCCURRENCES OCCUR < >

NON-PRODUCER
MAIN COMMODITIES PRESENT C11 < >
MINOR COMMODITIES PRESENT C12 < >
OCCURRENCES OCCUR < >

*PRODUCTION

PRODUCER
PRODUCTION YES (circle) PRODUCTION SIZE SMALL MED LGE (circle one)

NON-PRODUCER
PRODUCTION UND NO (circle one)

STATUS

EXPLORATION OR DEVELOPMENT

PRODUCER
STATUS AND ACTIVITY A20 < 4 >

NON-PRODUCER
STATUS AND ACTIVITY A20 < >

DISCOVERER L20 < SEXTON AND STANTON >
YEAR OF DISCOVERY L10 < 1870 > NATURE OF DISCOVERY L30 < 1 > YEAR OF FIRST PRODUCTION L40 < 1934 > YEAR OF LAST PRODUCTION L45 < 1941 >
PRESENT/LAST OWNER A12 < CHASE RICH AND OTHERS (1934) >
PRESENT/LAST OPERATOR A13 < >
EXP./DEV. COMMENTS L110 < PATENTED CLAIMS INCLUDE LEVIATHAN, CHESTER, GRANTLY, GERMANY, DENVER, AND OTHERS. >

DESCRIPTION OF DEPOSIT

DEPOSIT TYPE(S) C40 < VEIN >
DEPOSIT FORM/SHAPE M10 < TABULAR >
DEPTH TO TOP M20 < > UNITS M21 < > MAXIMUM LENGTH M40 < 2000 > UNITS M41 < FT >
DEPTH TO BOTTOM M30 < 250 > UNITS M31 < FT > MAXIMUM WIDTH M50 < 200 > UNITS M51 < FT >
DEPOSIT SIZE M15 < SMALL > M15 < MEDIUM > M15 < LARGE > (circle one) MAXIMUM THICKNESS M60 < 12 > UNITS M61 < FT >
STRIKE M70 < N50E TO N45E > DIP M80 < 40 N AVERAGE >
DIRECTION OF PLUNGE M100 < > PLUNGE M90 < >
DEP. DESC. COMMENTS M110 < VEIN PARALLEL DIORITE DIKE >

DESCRIPTION OF WORKINGS

Workings are: SURFACE M120 UNDERGROUND M130 BOTH M140 (circle one)
DEPTH BELOW SURFACE M160 < 250 > UNITS M161 < FT >
LENGTH OF WORKINGS M170 < 2000 > UNITS M171 < FT >
DESC. OF WORK. COM. M220 < MAIN SHAFT 250 FT DEEP ON INCLINE. 12 SHAFTS TOTAL - ALL SHALLOW. >
MOST WORKINGS EXPLORATORY. DIMENSIONS OF WORKINGS ONLY APPROXIMATE.

GEOLOGY

AGE OF HOST ROCK(S) K1 < P.P.E.T.T.E.R.T. V. UNDATED PROBABLY 1720 MILLION YEARS AND OLDER; UNDATED, PP: EARLY MIOCENE >
HOST ROCK TYPE(S) K1A < METADACITE, METANDESITE, SLATE, SCHIST; ANDESITE, DIORITE >
AGE OF IGNEOUS ROCK(S) K2 < P.P.E.T.T.E.R.T. V. AS LINE K1 >
IGNEOUS ROCK TYPE(S) K2A < ANDESITE, DIORITE >
AGE OF MINERALIZATION K3 < T.E.R.T. V. UNDATED, PROBABLY MIOCENE >
PERT. MINERALS (NOT ORE) K4 < QUARTZ >
ORE CONTROL/LOCUS K5 < FAULTING, SHEARING, IGNEOUS ACTIVITY >
MAJ. REG. TRENDS/STRUCT. N5 < FOCUSION IN PRECAMBRIAN METAMORPHIC ROCKS TRENDS N20E TO N-S >
TECTONIC SETTING N15 < >
SIGNIFICANT LOCAL STRUCT. N70 < VEINS PARALLEL MAFIC DIKES WHICH TEND NE AND DIP AT LESS THAN 40 DEGREES >
SIGNIFICANT ALTERATION N75 < NONE >
PROCESS OF CONC./ENRICH. N80 < Oxidation AT NEAR SURFACE >
FORMATION AGE N30 < P.P.E.T.T.E.R.T. V. UNDATED, PROBABLY 1720 MILLION YEARS AND OLDER >
FORMATION NAME N30A < UNDATED METAMORPHIC UNITS AND QUARTZ-WICK SCHIST >
SECOND FM AGE N35 < >
SECOND FM NAME N35A < >
IGNEOUS UNIT AGE N50 < T.E.R.T. V. UNDATED, PROBABLY MIOCENE >
IGNEOUS UNIT NAME N50A < UNDATED ANDESITE AND DIORITE DIKES >
SECOND IG UNIT AGE N55 < >
SECOND IG UNIT NAME N55A < >
GEOLOGY COMMENTS N85 < DIORITE & QUARTZ VEIN WHICH CUTS PRECAMBRIAN METAMORPHIC ROCKS. VEINS LOCALIZED ALONG SHALLOWLY-DIPPING ANDESITE AND DIORITE DIKES. >

GENERAL COMMENTS

GENERAL COMMENTS GEN < >

AN
EVALUATION REPORT
OF
WORK COMPLETED
(Lessee -Todd Spargo).
on the
LEVIATHAN CLAIM
Yavapai County, Arizona

by

Richard E. Mieritz
Mining Consultant
Phoenix, Arizona

July 18, 1977

LY TO:
W. HAZELWOOD STREET
ENIX, ARIZONA 85015
EPHONE (602) 277-6053

Richard E. Mieritz

MINING CONSULTANT

ARIZONA REGISTERED
MINING ENGINEER AND GEOLOGIST

GEOLOGY
EXPLORATION
EVALUATION
FEASIBILITY
OPERATION

July 18, 1977

Mrs. Gloria Downer
P.O. Box 304
Palm Desert, California 92260

Dear Mrs. Downer:

As a result of your telephone request and authorization of July 9, 1977, the writer re-visited the Leviathan patented lode mining claim (Lot 57) in the Weaver Mining District, Yavapai County, Arizona. The requested visit was completed on July 12, 1977.

The purpose of the visit was to observe the progress and type of work completed by the lessee - Mr. T. Spargo - between the time of the writer's previous visit on February 22, 1977 and the just completed visit.

The writer completely traversed and reviewed the entire surface area of the claim, stadia surveyed that area where the surface had been changed, took photographs of the new work and general area, calculated the survey data and plotted the results on an earlier prepared Map to determine the extent of the new work and what surface changes such work created.

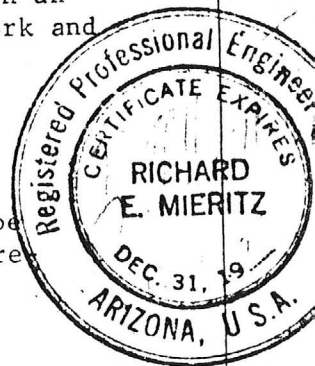
WORK COMPLETED:

Work completed between February 22 and July 12, 1977 can be classified into two categories - (1) mining work and (2) reclamation work, each being separately described below:

Mining Work:

Mining work has been carried on in two separate areas and designated on Map No. 3 as "Mining Work" and "Blasted Area."

The designated "mining work" centered around the "L" shaped trench approximately 400 feet northeast of Leviathan corner VIII (SW corner) and where the writer took sample #1240 on January 10, 1977 (See Map No. 2). Here the lessee has drilled, blasted and bulldozed the quartz vein exposure - expanding on the original smaller "L" shaped trench. A short dozer trail from the north end of the trench to a lower existing road was made. Although a small amount of broken material has been "piled" up as a "ridge" along the outline of the trench and at the east end, it is obvious from the Section Map No. 4 that some broken material has been removed from the trench - shipped??. The writer's opinion is that approximately 400 tons have been removed. This area was



surveyed in order to obtain the new or present surface outline in the specific area. The writer has used 50 feet by 20 feet by a five foot depth as dimensions for the 400 ton block. Twelve cubic feet to the ton was used as the conversion factor.

Blasted Area:

This area measures approximately 200 feet long, parallel to the main wash and has an average of 40 feet in width perpendicular to length. The area is located in the general area of previous work (prior to January 10, 1977 and February 22, 1977) completed by the lessee on the north slope of the small circular shaped knob or hill in the southwest portion of the Leviathan claim and just south of the main drainage (wash) traversing the claim from its northeast corner (corner IV) to the southwest end center corner (corner I).

This area was not surveyed topography-wise because drilling and blasting most generally cause an irregular, blocky type surface and a 50% expansion of volume. The blasted area appears to be somewhat disturbed by mechanical loading equipment near the upper portion of the broken rock. The blasted area, as measured, would produce slightly in excess of 3,000 tons of broken material if it were drilled to an average depth of five feet. With broken rock remaining and the expansion criteria present, a volume of material removed is not reasonably calculable except as an estimate. The volume of material removed from this area would be, - in the opinion of the writer - perhaps, 500 tons, more or less.

RECLAMATION:

The one item of reclamation (?) completed by the lessee is the bulldozed drainage canal so designated on Map No. 3. It is assumed this canal was constructed so as not to deter or dam the natural flow of the main drainage near the southwestern end of the claim.

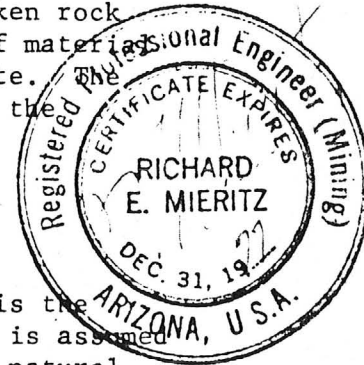
PHOTOGRAPHS:

Several colored photographs were taken by the writer on July 12, 1977, and these are mounted and herewith included as part and parcel of this report. Each photograph and/or group of photographs is separately described subject-wise and from what position and direction (arrows) on Map No. 3) they were taken.

CONCLUSIONS-OPINION:

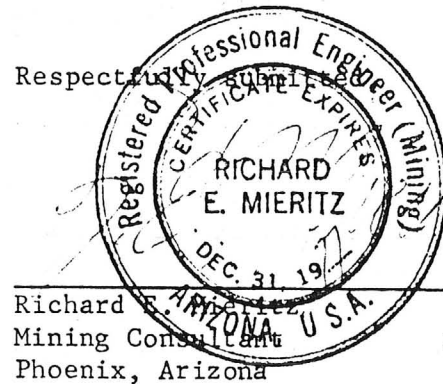
Based on the writer's previous and recent visits to the property, his geologic and mining knowledge and experience, the following are submitted for your consideration:

- (1) In general, it is concluded and opined that the overall mining work has not been carried out in "miner-like"



- fashion.
- (2) Based on the early survey and the recent survey and by calculations of same, approximately 400 tons of material have been removed from the "mining work" area and perhaps up to 500 tons of material were removed from the "blasted area." These tonnages reflect the time period from February 22 to July 12, 1977, the dates when the early and recent surveys were made.
 - (3) Other than the "drainage canal", it appears the lessee has failed to provide any type of reclamation or restoration work in the "mining work" area, the "blasted area" or on the south slope of the hill which is north of the "main drainage." In essence, the writer opines that the general area of the lessee's work or operation has left the surface quite badly "scarred."
 - (4) The property is void of any mechanical equipment and except for a very small amount of scattered debris, the area, including the house trailer site, is quite clean.
 - (5) Having a partial knowledge of the Lease Agreement terms, it is the opinion of the writer that the Lessee, Mr. Todd Spargo, at this writing, is negligent with regard to proper "miner-like" fashion and reclamation or restoration of the surface to a satisfactory natural-like appearance.

Respectfully submitted,



Richard E. Mieritz
Mining Consultant
Phoenix, Arizona

Exhibits:

- Map No. 1 - Location Map
- Map No. 2 - Surface Map - Scale: 1" equals 100 feet
- Map No. 3 - Surface Map - Scale: 1" equals 50 feet
- Map No. 4 - Cross-Sections - Leviathan Claim
- Photo I
- Photo II
- Photo III
- Photo IV
- Photo V
- Photo VI

0
Copperville

Location

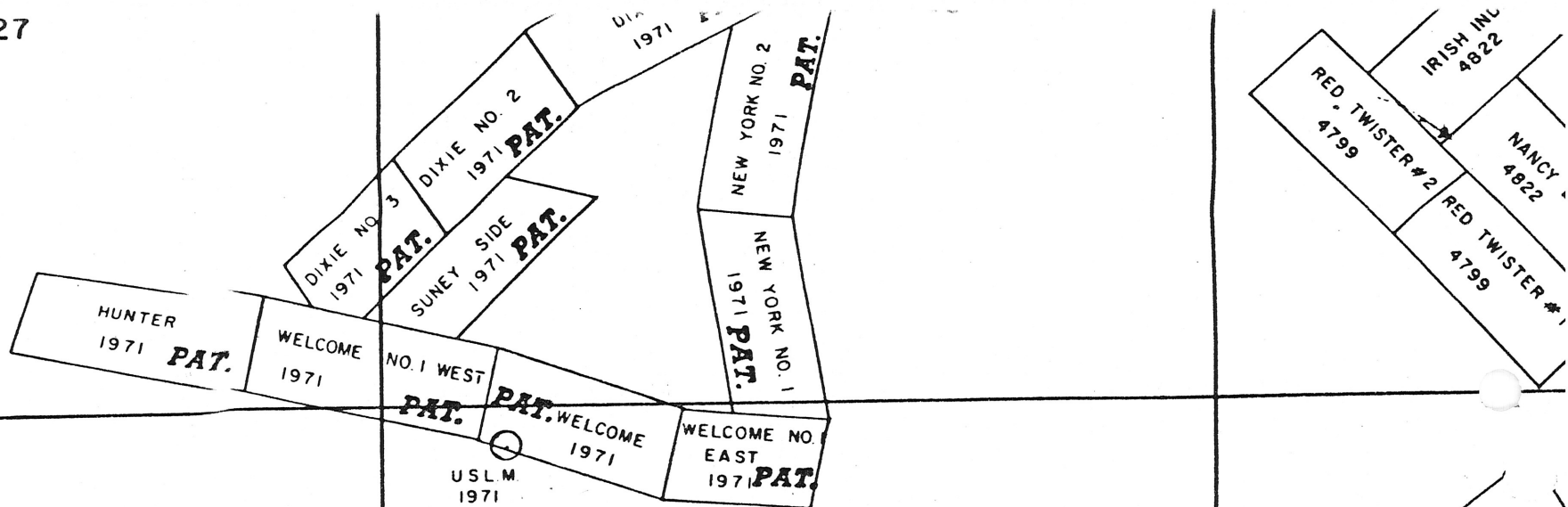
Q (Dig-w-d
50
feet)

9 ft
Deuge

93

SANDY

Sec. 27

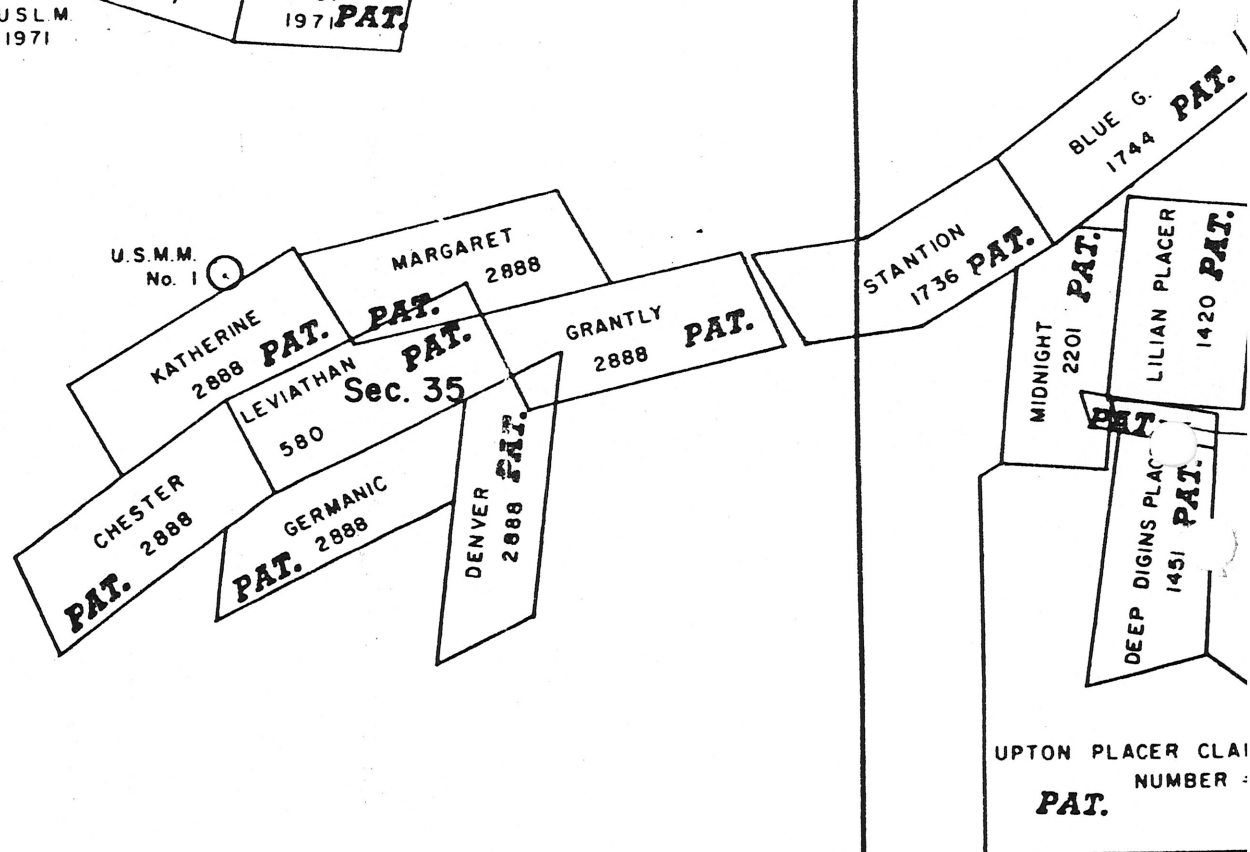


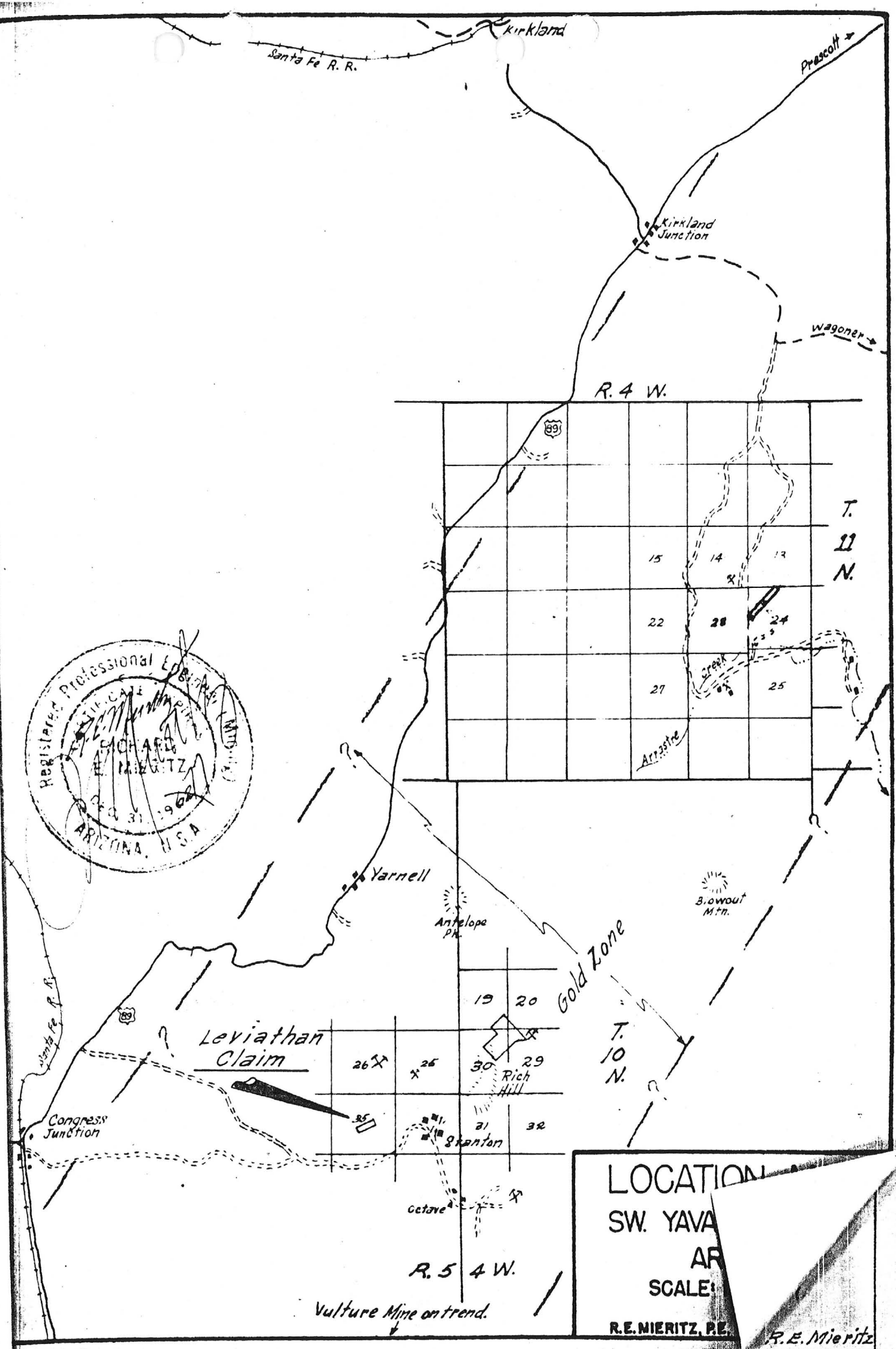
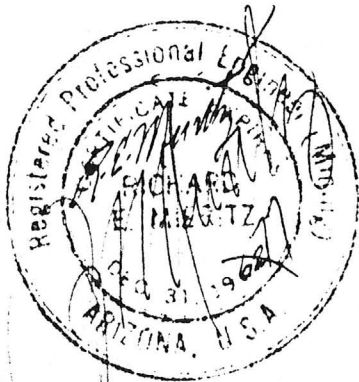
MOS SHEET #303

TION, RSW

YAKAPAI CO.

Sec. 34





THE SEXTON LODE

Mademillion file

1577

This quartz lode, also known as the Leviathan and as Staunton's, is in the Weaver Dist., Yavapai County, about 25 miles from the Vulture, and is now well known for its great extent and prominence, though explorations upon at least a part of it have failed to show sufficient value to justify working. It remains today in nearly the same condition, save the prospect holes and cuts, in which it was left by Sexton. The discovery of this ledge appears to have been made in 1870 or 1871. It was announced in Raymond's report for 1872. The location was probably made by Mr. Sexton while he was engaged at the Vulture. The dominance of the Apaches in that section will account for the slowness with which the region was prospected. When Sexton left the Vulture he put Staunton-Lord Staunton-in charge. Staunton did the assessment work for some years, and, as presumably remittances to cover the costs were not regularly made, he relocated the ground in his own name. It is what is called a blanket ledge. The size of the lode and the quantity of quartz exposed are enormous. The quartz lies upon the northern slope of the hill and practically forms the surface of the hill. It extends to the crest of the hill and there outcrops in a continuous ledge, broken down into a confused mass of great blocks of white quartz. Considerable development has been had on this mine within the past few years. The ledge has straightened up, and such values have been found as is believed will make it profitable to work the property.

*Abstracted
10/21/80 JFW*

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ~~MAXIMILIAN GROUP~~ - LEVIATHAN CLAIM
District Weaver, Yavapai County
Subject: Field Visit

Date October 2, 1980
Engineer Clifford J. Hicks *CJH*

Location: Section 35, T10N, R5W

Trip was made by passenger car in the company of Dick Beard, DMR Mineral Resources Specialist. We met the following brothers at the old Congress School House: Robert D. Brown, Box 618, Congress, Arizona 85332, phone 427-3370, also 122 Westway, Yarnell, Arizona 85362; Ruben O. Brown and William E. Brown (same mailing address). Additionally, they also have a California address, P.O. Box 1431, Paradise, California 95969. A fourth partner in the venture is Ed Bishop, Box 618, Congress, Arizona 85332, phone 427-3269. We then went to the Leviathan Claim of the old Maximilian Group. This patented claim is owned by Ms Gloria Downer, Start Route #2, Box 700, Yucca Valley, California 92284, phone (714) 364-3377. A group of contiguous surrounding claims are held by another lady whose name was not known. The claim holders have an informal agreement with the Brown Brothers and Mr. Bishop wherein they (the claim holders) will receive 10% of the gross value of the mineral mined.

The brothers allowed us to copy two reports on the property. One is by a D.J. Sayer, E.M., written in 1917, and the other by Richard E. Mieritz, Mining Consultant of Phoenix, written in 1977. These reports, of course, will be included in the Maximilian Group mine file and, along with an old printed promotional piece of The Leviathan Gold Mining Co., dating back to about 1902, very well cover the history, geology and other pertinent information about the property.

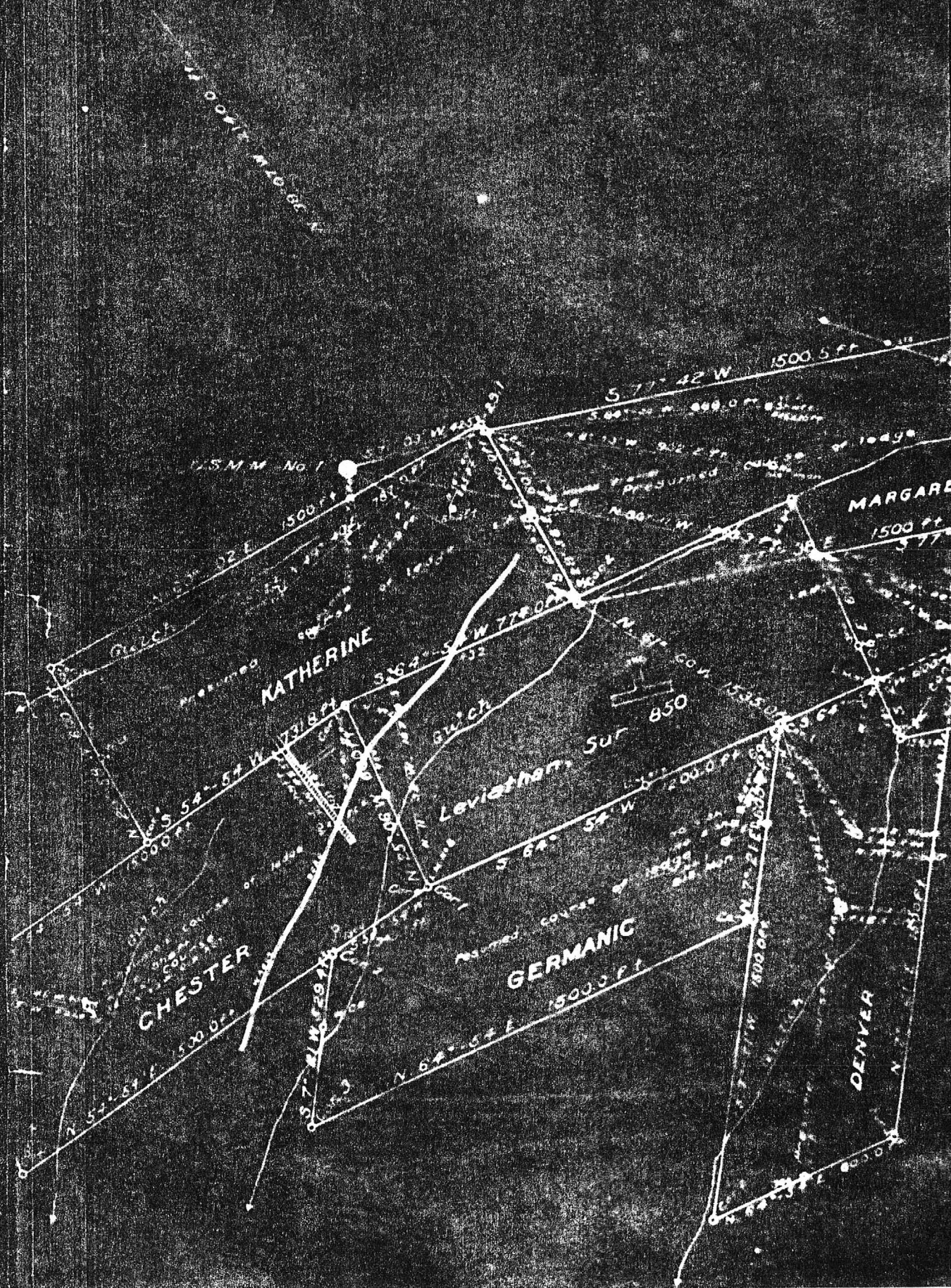
An enormous quartz vein, described in the reports, was observed on the Leviathan Claim. Its contact with the migmatite country rock seems irregular and for the most part is covered with alluvium. The white quartz is highly fractured and jointed with moderate to heavy limonite staining in all fractures. It is likely that precious metal values will be contained in the limonite. It was suggested that a washtub size sample of the quartz be cut, thoroughly washed and the limonite residue be panned for gold and silver.

The Brown brothers have the following equipment on the site, none of which is installed:

- 2 Wilfley tables (6' X 16')
- 1 Kue-Ken Simplex jaw crusher (12" X 24")
- 1 Cone crusher (15" - will crush to 1/8")
- 2 Stacking conveyors (15')
- 1 Pressure tank (2' X 8'). This could be made into a rod mill.
- 1 Mercury retort (not on the property).

As opposed to the Brown brothers initial idea of cyanide heap leaching, the following recommendations were made:

- 1) Systematically sample the portion of the quartz vein and the schistose (migmatite) country rock and place the assay returns on a claim map. If the assays indicate adequate values, then:
- 2) Develop one or more of the old mine shafts as a water source.
- 3) Install the jaw (primary) and gyrotory (secondary) crushers.
- 4) Construct a screened hopper, sluice box and perhaps an amalgamation plate. If recovery is poor it may be necessary to mill the crushed and install one or both of the tables. Thorough sampling and testing should be done before table installation, however. Plans for sluice box construction have been mailed to Bob Brown.



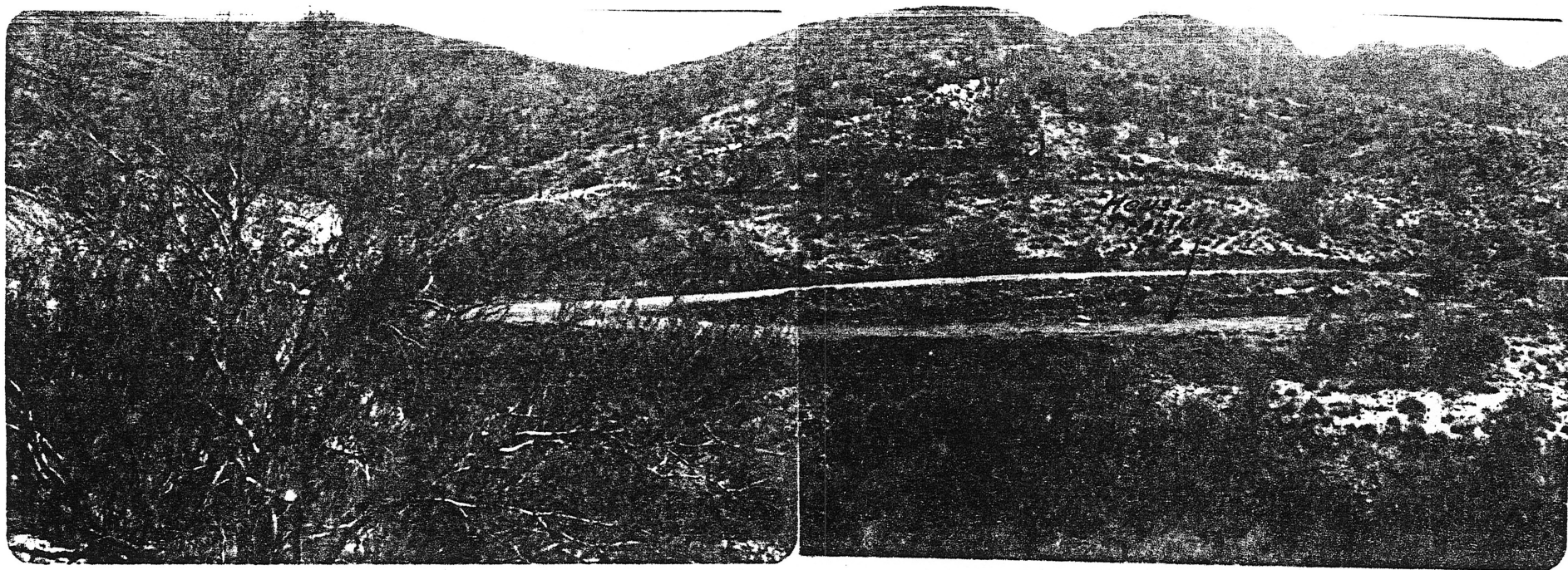


PHOTO 1: Panorama view of the house trailer site, most of which is on the Leviathan Claim. Photos taken from the roads edge near the inclined Shaft located on the Chester patented claim about 300 feet southwest of the southwest end center corner (No.1) of the Leviathan Claim. The direction of the Photo is southeast.

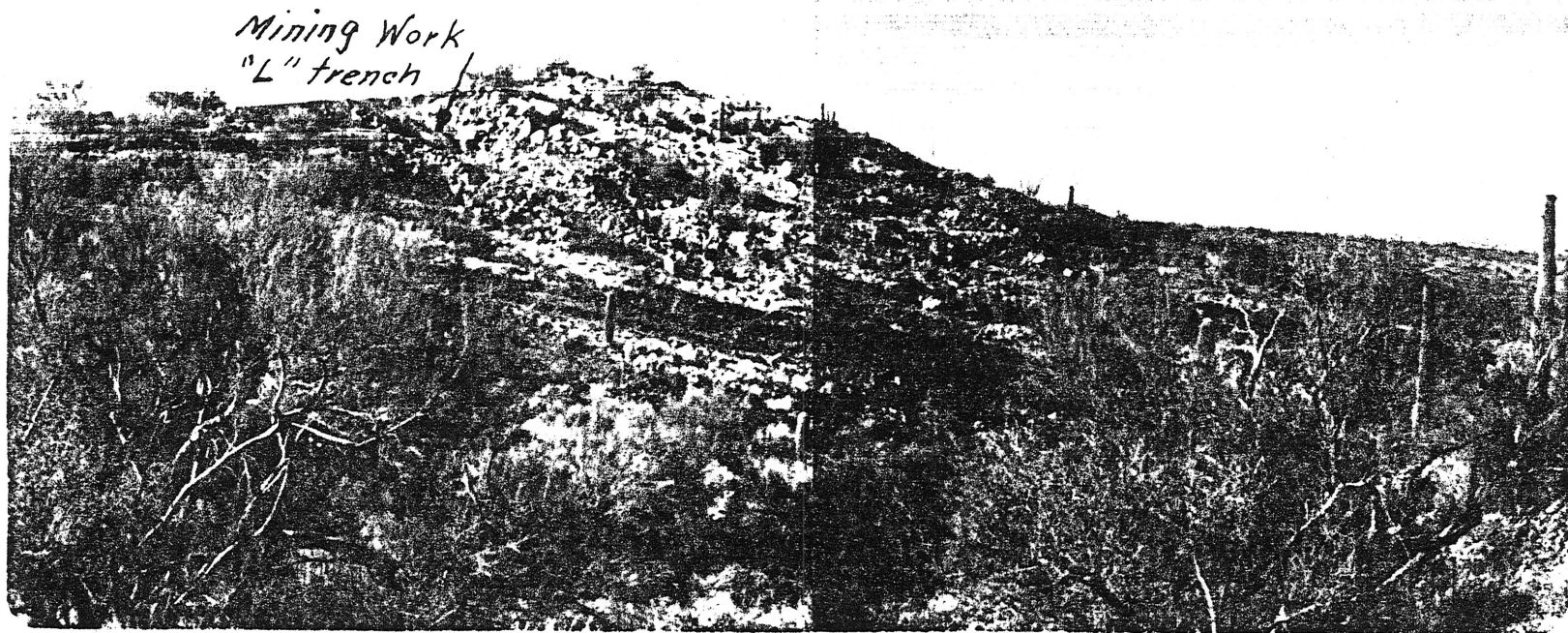


PHOTO II: Panoramic view of the north slope of the circular hill in the southwest portion of the Leviathan Claim and showing the "Mining Work" area in the upper left center of the Photo. Pictures were taken from survey station "B" and looking roughly south.

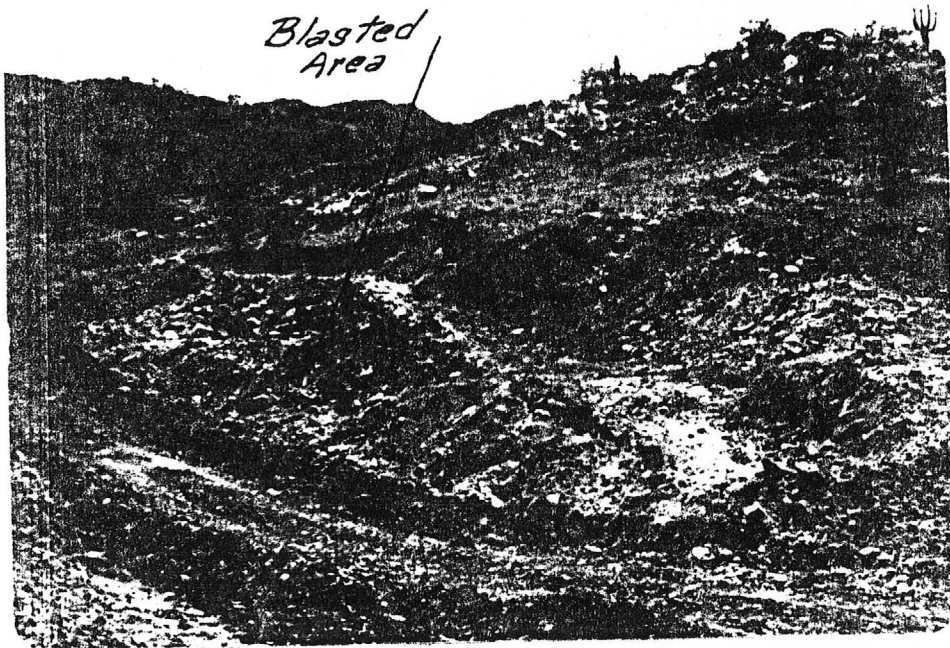


PHOTO III: Photo shows "Blasted Area" as well as a portion of the "Drainage Canal". Picture taken from southwest end center corner (No. I) of the Leviathan Claim in a southeast direction.

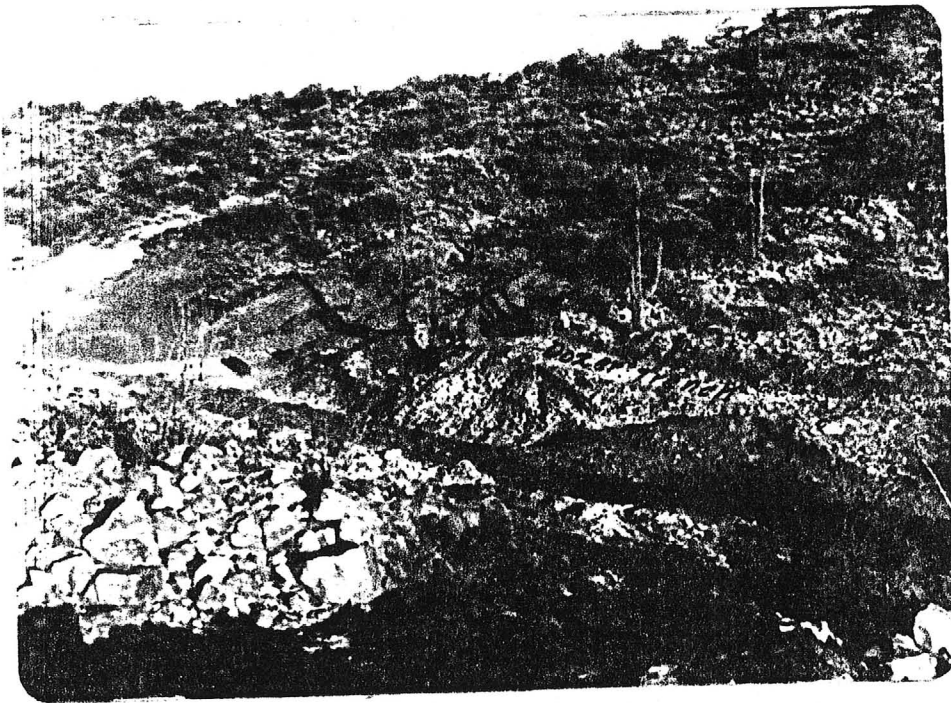


PHOTO IV: Photo shows dozer trench on the north side of main wash and on the south slope of the hill in the northwest portion of Leviathan Claim. Photo taken from point midway between "L" shaped trench and nearby Pit just east of survey station "E".

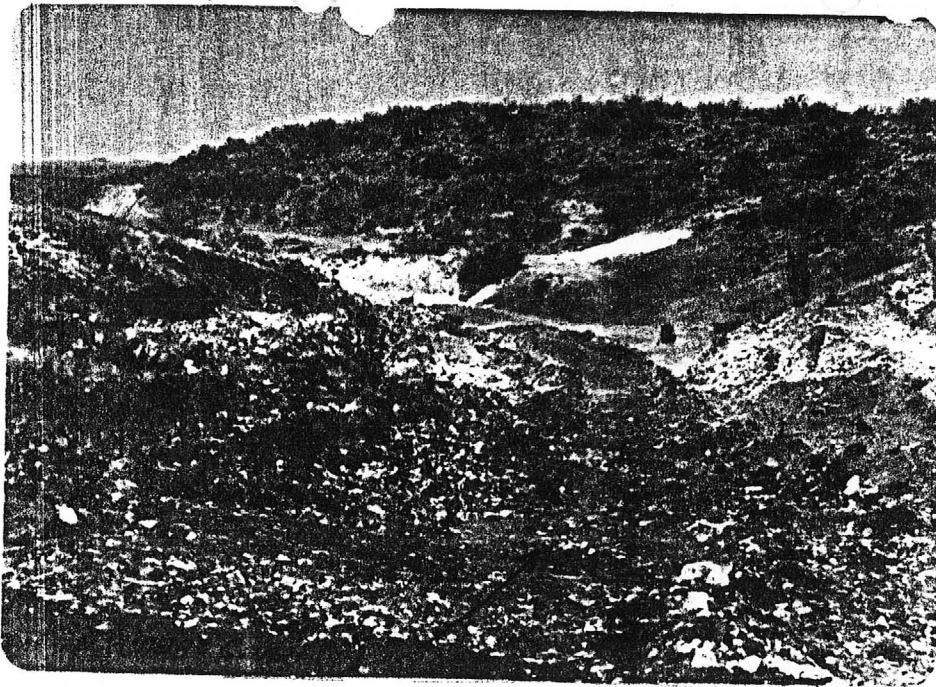


PHOTO V: Photo shows "Drainage Canal". Picture taken at junction point of long and short drainage canals at upper or east end of canal. Looking westerly from this point.

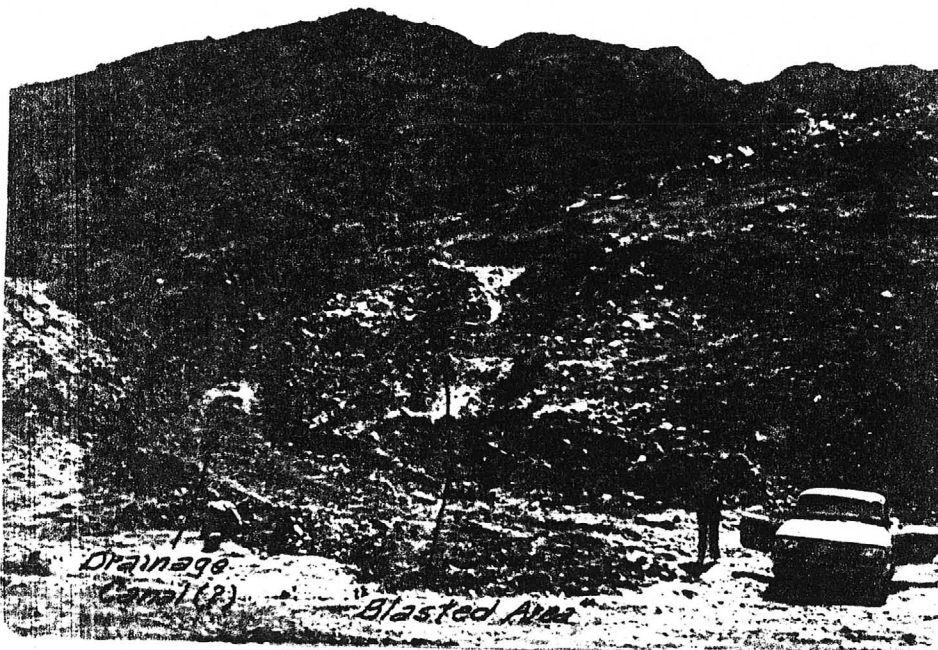
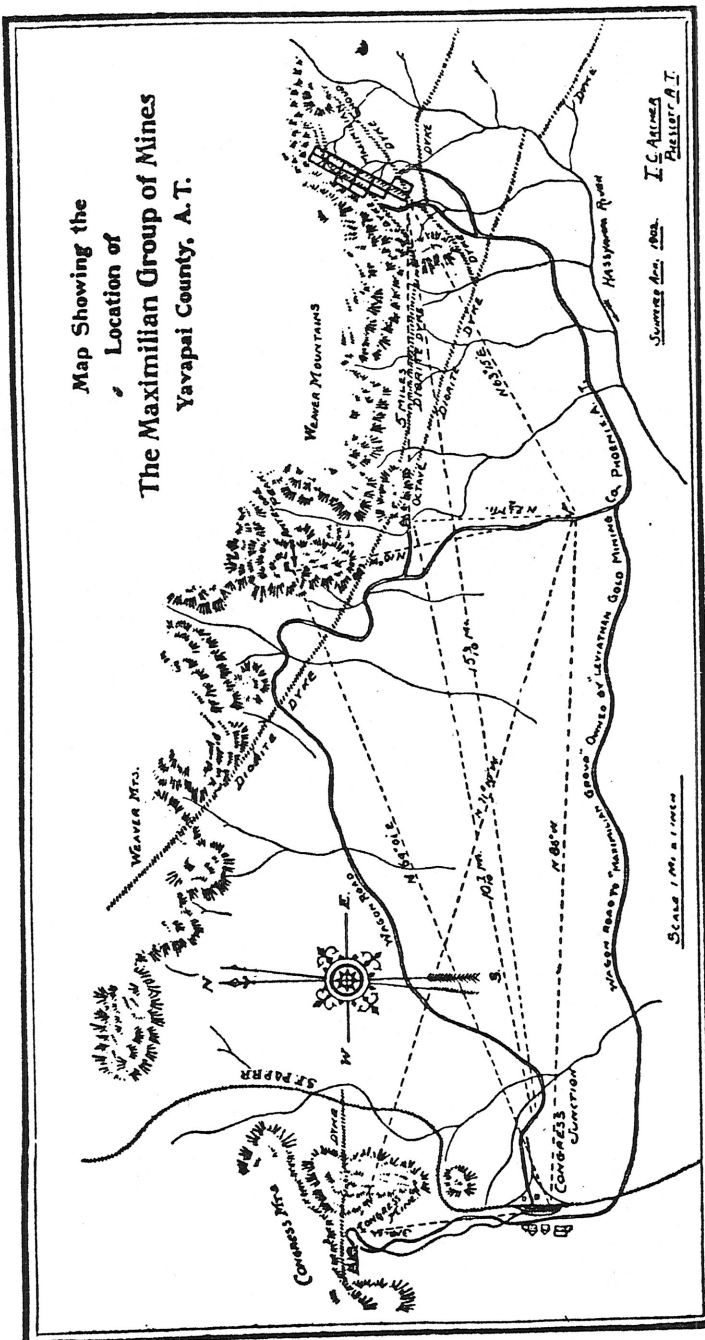


PHOTO VI: Photo shows "Drainage Canal" in lower left of photo and the "Blasted Area" in lower center of photo. Photo taken from point on road near the inclined shaft on the Chester patented claim approximately 300 feet westerly of the southwest end center corner (No. I) of the Leviathan Claim and looking east.

Map Showing the
Location of
The Maximilian Group of Mines
Yavapai County, A.T.



THE LEVIATHAN GOLD MINING COMPANY

✧ INCORPORATED UNDER THE LAWS OF ARIZONA ✧

CAPITAL STOCK

\$3,000,000, Divided Into 3,000,000 Shares

Stock issued full paid and non-assessable. 1,250,000
shares in the Treasury for working capital

OFFICERS AND DIRECTORS

DR. D. M. PURMAN	President
M. J. GALPIN	Vice-President
ARTHUR G. HULETT	Secretary
T. K. ELVEY	Treasurer
F. M. CZARNOWSKI	General Manager
DR. W. H. BATTIN	

REFERENCES BY PERMISSION

The Valley Bank, Phoenix, Arizona
Emil Ganz, President National Bank of Arizona, Phoenix,
Arizona
Hon. William Mason, United States Senator
Hon. John A. Roche, ex-Mayor Chicago, Illinois
Hon. Robert McBride, ex-Judge Superior Court, Indiana
Hon. E. D. O'Rourke, Judge Circuit Court,
Fort Wayne

GOLD

Is the king of all values
It does not fluctuate

WALL STREET

banks or financial manipulators
cannot change its worth, or
stop its universal circulation

THE WORLD OVER

London, Paris or Honk Kong gladly
accepts it for one hundred cents
All other minerals may be
manipulated and that which
represents untold

WEALTH TODAY

may mean bankruptcy

IN TWENTY- FOUR HOURS

The gold mine is vastly more
safe than the bank, and its profits
much greater—making comparisons
odious

Organization

The Leviathan Gold Mining Company was organized by gentlemen earnestly seeking the full measure of success which industry, energy and integrity invariably bring to the intelligent and conscientious mining man.

Individual members of the Company had spent years in securing a mine worthy of the confidence of the most scrupulous investor, and at last after patient and careful investigation by the best mining experts obtainable, the great group now known all over Arizona as the Meximilian, was purchased, and the Company began at once an almost unprecedented career of success.

Investors

In the early development of this property none but home investors were approached as probable purchasers of its stock. Nothing could speak better for its intrinsic worth than this most potent and suggestive fact. A very large number of those investing visited the mine personally and made a thorough inspection of the mine proper and the manner and methods of conducting its affairs.

The management, feeling the greatest confidence in the financial success of the enterprise, deemed it wise to confine the sale of stock to parties living in close proximity to the mine, and

who were personally acquainted with the various gentlemen engaged in its propagation.

It was capital thus secured, combined with that furnished by the original stockholders, that opened up the first shafts and drifts and made plain the great possibilities which time and work have realized to an extent, but little anticipated when the Leviathan Gold Mining Company first purchased the original six claims.

Size of Group

This group is now made up of fourteen full claims, covering an area of about 280 acres.

It would be useless to describe each of the various parts into which the property is divided.

Main Development

The Columbia was selected for the beginning of active operations in the development of shafts, drifts and tunnels, because of a number of features, both geological and physical, combining to make it most desirable and feasible.

There is no reason to believe that this claim is any larger, or that it contains higher values than any of the other thirteen. On the contrary, it has been regarded as among the smaller of the group, but for reasons largely of expediency it was selected as the point upon which to locate the forty-stamp mill now about to be erected.

The main working shaft is located on this claim and has reached the depth of over 250 feet. This shaft runs at an angle of 40 degrees, and is of sufficient size to meet all future requirements, however extensive may be the demands.

The track and cars are the best that could be procured and of ample capacity to rapidly and

economically convey the ore to the mill site, situated in close proximity.

The location selected for the plant now about to be established markedly simplifies and cheapens the mining and milling of the Columbia and adjacent product. After emerging from the shaft a distance of 30 feet will place the ore in the bin ready to be crushed. This is a saving both in labor and time.

It is unnecessary to enter into a detailed description of the various tunnels, drifts, crosscuts and other development work already done, and in rapid process of construction.

Our superintendent and general manager, whose experience in practical mining and its direction, covering a lifetime, gives us the most positive assurance that 60 days' work will block out ample ore to insure the continuous operation of a forty-stamp plant. With the improvements in milling machinery we expect to be able to treat 240 tons of ore a day.

The first exploring began in October of last year. Work has been pushed with all possible vigor, but owing to the remarkable size of the mineral body, it has necessarily been slow. Had we had an ordinary ledge of a few feet but little difficulty, comparatively speaking, would have been encountered, but to explore a body of quartz 1,000 or more feet wide, is an undertaking more easily imagined than realized. All developments—or most all—have been made with a view to future practical use. 'Tis true conditions have been such as to bring about some little dead work, but this is of such minor importance as to reflect merited credit upon Mr. Czarnowski.

Development and exploration will be continued with all possible expedition with the view of forwarding the erection of the greater plant.

It is possible the large and permanent plant, which we hope to have in active operation at the expiration of eighteen months from this date, and which will have a capacity of not less than 1,000 stamps, enabling us to treat 2,500 tons of ore a day, may be located on this claim.

This may seem a stupendous mill, but when the magnitude of our ore body is considered, one can readily see that nothing short of an enormous plant could at all meet the requirements of such a phenomenal mineral deposit.

Size of Ore Body

We shall say little of the ore body per se, preferring the reader should seek further and complete information from the report of our mining engineer, Mr. T. C. Archer, who has so accurately and exhaustively noted every condition in any way bearing upon the magnitude of this extraordinary body of gold bearing quartz. By referring to the statement in question it will be seen that we have a ledge or deposit of at least 1,000 feet in width, and 9,000 feet, or nearly two miles, in length, of very valuable ore which can be removed and carried to the treating plant for a sum not exceeding 50 cents per ton.

Our permanent plant, when completed, will be among the largest on the continent.

We do not deem it necessary to tell of the other properties, such as the Alaska-Treadwell, etc., in order to attract the reader's attention to the possibilities of gold mining on an extensive

scale. Suffice to say that inside of two years we confidently expect to be treating 2,500 tons of ore in every twenty-four hours.

Town Site

One of the claims possessing a well marked mineral ledge has been reserved for a town site. The ground is beautifully situated and well adapted for the purposes indicated. The domestic water supply is one of the most important features of the claim.

Future Policy of the Management

It is the intention of the Company to build houses for its employees, thereby giving them every advantage in the way of homes and pleasant surroundings, that can be obtained in a mining camp. Furthermore there will never be such a thing connected with this Company, and the operation of its works, as a pluck-me store, or any advantage taken of its employees, by compelling them to make purchases from the Company of any article or articles which they may need. On the contrary they shall always be at liberty to make their purchases wherever they may select. It is true the Company will have a supply store, enabling it to furnish its employees with all that is required to live comfortably and economically, but at the same time no one connected with the works, it matters not how lowly his position may be, will be under obligations to purchase one penny's worth in this store. It is a fact to be lamented that too often strong corporations have taken advantage, and in their haste to accumulate wealth, have resorted to every advantage which

power could suggest. We do not mean to infer that this is always the case. On the contrary, a great number of the more powerful organized companies have abandoned this nefarious habit, and we are convinced that the earlier all compulsion in this direction is withdrawn the better it will be, not only for the men who are laboring, but for those they are laboring for. In a word it is the intention to make the environments such as will insure the greatest and most efficient results from the labors of its employees. This may seem a small and, possibly irrelevant subject, but as a matter of fact it is one of the many influences that go to make up a complete and successful business enterprise.

Since issuing our last prospectus, Mr. T. C. Archer, a mining engineer of national reputation, has made a most careful examination of the Maximilian group of mines. Comment upon his report would be superfluous. It stands a monument to his genius and capabilities. He was instructed to place a most conservative judgment upon all the conditions coming under his consideration, and we are sure he has sedulously avoided all extravagant, useless and colored statements. What we wanted were facts, and we know that in Mr. Archer's report we have nothing else.

We hope that any one who reads this prospectus will be sufficiently interested to visit this extraordinary mine, and be thereby personally assured of its phenomenal magnitude and worth.

Values

When the size of the ore body is considered, the average assays should be regarded as unusually

high. Every effort has been put forth to exclude all samples that gave visible indications of marked richness.

In reaching the average result noted below, no test, however low, was excluded. Samples taken from the surface, extending across the entire width of 1,000 feet were included, which necessarily modified the figures obtained from examinations made from rock taken in the shafts, drifts and crosscuts. It will be useless to give a tabulated list of the large number of assays made, surface quartz going as low as \$2.20. It is but just to say that this was taken from the entire width of the deposit. The ordinary average, as stated in Mr. Archer's supplemental report, reached the very flattering figure of \$17.58. Time and more exhaustive development may increase or diminish this result, but we could well afford to be satisfied with it reduced one-half. Of this there is no probability—on the contrary every indication points to higher and better values.

Water

Our mining engineer enters fully into this question. Since making his report additional springs have been located on the claims and it is probable will furnish enough water not only for our present demands but for all future requirements. Should it not, the Hassayampa river is but one and one-half miles away, positively assuring the most ample supply for all possible uses.

Fuel

Oil will undoubtedly be used for fuel. Economy and availability are conserved by its use.

Wood, however, at a fairly reasonable price, could be had, and were it not for the advantages of the former, no trouble would be met in securing ample quantities of the latter.

Clear Title

This group of mines is owned by the Leviathan Gold Mining Company, and not one dollar of incumbrance upon them. Mr. Frank Czarnowski was the original discoverer and owner of the original six claims, and by him transferred to the Company, accepting by preference stock instead of cash, for a large part of the agreed consideration. Eight additional claims of equal size and value have been secured by the Company since its organization, and included and made a part of the original Maximilian group. They all join and are so located that ore from any one of them can be speedily and economically carried to the treating plant.

Treasury Stock

The Company will sell but a limited amount of stock. Until the mill is erected, however, it will be necessary to dispose of a limited quantity in order to carry forward the immense development work now in progress and for the further purpose of completing our initial plant. This once in operation, there will be no need of making further demands upon our treasury stock, as this alone will quickly furnish capital for all necessities that could possibly arise.

Our new forty-stamp mill will treat at least 240 tons per day. The ore which will be utilized we confidently expect to yield a net profit of not

less than \$25.00 per ton. The result is readily computed. Comment is unnecessary.

An Expert's Report

Report upon the Maximilian group of mines. The property of the Leviathan Gold Mining Company of Phoenix, Arizona Territory.

Situation

This property is made up of 14 claims which are situated about 15 miles easterly from Congress Junction, a station on the Santa Fe, Prescott and Phoenix Railway, in the Weaver Mining District, Yavapai County, A. T.

Age of Deposits

I find the age of the deposits throughout this district to be the same as other deposits of Central Arizona, already described in my reports of other mines and printed in the mining journals.

Minerals

The source of minerals in this district is identical with that of the Bonanza, Gold Eagle at Harrisburg, the Bullard properties west from Congress, the Vulture, the Oro Grande at Wickenburg, and in fact everything as already stated, throughout Central Arizona; that is, eruptive dykes of porphyry and diorite, also intrusive granites, accompanying which has been a flow of acid waters carrying silica and minerals in solution, said

minerals precipitating by coming in contact with other chemicals and minerals.

I find from a study of Central Arizona, to the south and west of the Bradshaw mountains, that there has been two principal sources from which minerals have been forced in this way. One is the great basin of the Harqua Hala, being about 40 miles in length by about 30 miles wide, oval in contour.

I will describe the action of this disturbance in the following manner, which description will answer for all. Gases generated below the crust of the earth under greater pressure than the crust will bear, force themselves up and through the weaker portions of the crust, taking the courses offering the least resistance.

Eruptive matter (porphyry, diorite and intrusive granites) are forced up at this time, accompanied by acid waters, heated by the action of said eruptive matter and containing in many instances, much sulphuric acid. These waters as a rule carry our different minerals and silica in solution. The sulphuric acid destroys the spar, mica and hornblende of rock with which it comes in contact and replaces these constituents with silica and in many instances almost solid mineral, chiefly pyrites. In cooling, the minerals are precipitated throughout the rocks, and as time goes on are chemically changed by coming in contact with other minerals and chemicals, also changed by oxidation. Eruptive matter, forming our dykes, while in solution, being of a greater specific gravity than the acid waters, the acid waters do not penetrate the dyke matter, but accompany the same on one side, thereby giving us

our contacts and simplifying our labors in research.

I find in many instances that these dykes and solutions have not been forced entirely to the surface, their upward movement seemingly having been arrested by the sudden cutting off, by the forces below, replacing the surface rocks only so far as the waters have been forced up.

I refer you to the Vulture, the Oro Grande at Wickenburg and the Iron King of Huron. These mines show most conclusive proofs of this theory as to the formation of ore bodies throughout this district. They also demonstrate the fact that wherever acid stains are visible on the surface, there we may reasonably expect to find an unchanged capping covering in many instances very large deposits of high grade ores, and it is always well to investigate to a reasonable depth, at least to the permanent water level of the district.

We must not expect to find continuous pay along these dykes, as all minerals have an affinity for themselves and run separately in their deposition; neither do we find a continuity of ledge matter along the lines of fissure.

These disturbances, which appear to us as being of such great magnitude, are in reality very diminutive when we consider the size of the earth, and also in comparison the great fissures are but fine threads, and our large deposits the smallest of specks, and we can understand how easily the vast powers of the inner world have sent up these small jets of eruptive rock, mineral waters, etc., and how easily mineral waters were made to penetrate what would seem to us to be impervious rock.

Location of Source

I find in connection with the Maximilian group of mines and the districts embracing the Weaver, Wickenburg, Buckhorn, San Domingo and Hassayampa, that the principal line of eruption was along what is now the source of the Hassayampa river. The direction of travel being from north to south. From this line there radiated like so many branches of a crooked tree the different dykes of the districts along which the many mines have been discovered. From the larger dykes smaller ones shoot out, and it frequently happens that the smaller dykes will have alongside of them good paying mines while the main sources will be barren of pay ores.

Location of Maximilian Group

I find that the Maximilian group of mines are located upon one of the main dykes of diorite above mentioned and at southeast end of the Weaver mountains. This diorite dyke extends along the base of the Weaver mountains in a northwesterly direction for a distance of 30 miles on this dyke. Five miles to the west is the noted "Octave" mine and farther on the "Planet Saturn" and upon an offshoot to the west the "Congress" mine.

Favorable Nature of Country Rock

An important fact in connection with this Maximilian group, is the very favorable nature of the country rock, being made up of the soft schists, gneiss and metamorphic granite, all of

which have been easily penetrated by the acid waters and have been replaced to a greater extent than the harder formations.

Location of Dykes and Extent of Quartz

Commencing at the north end of the claim Maximilian I find on the northwest corner a diorite dyke running south and bearing westerly, as shown on map of claims, also a dyke on the east side of claims, running south. I find that the mountain lying between these two dykes to be solid quartz. At the time of intrusion of the acid waters the spar was destroyed and was replaced by silica, making of it what we now term a granitic quartz. Three thousand feet south from this point this quartz is 1,500 feet in width, the two dykes spreading apart to this distance. This width is maintained south for another 1,500 feet when the quartz is split by a "horse" of granite which was evidently of too close a nature to be penetrated by the acid waters, and is therefore left in its original state. While there are eight claims of almost entire quartz, it does not follow that the whole of it is good pay ore. I find the best grade of ore along the foot wall of this mighty lode, upon which openings have been made at intervals sufficiently close together to show the continuity of pay ore throughout the entire length of six locations. This foot wall lead will average 100 feet in width. The mass of quartz between the west dyke and the east dyke, which is 1,500 feet wide for a distance of 3,000 feet, contains gold in sufficient quantities to warrant the thorough development of the whole.

Sulphides at Water Level

From indications in comparison with other proven deposits of this nature I expect to find at the water level of this deposit, sulphides which will pay handsomely throughout the whole length and breadth of the same.

The work at present being prosecuted at a point, about the center of the southerly claim, "Columbia," is sufficiently deep and of sufficient magnitude to warrant the immediate sinking of a proper prospecting shaft from which to drift and crosscut, in fact many shafts will be necessary to determine in part, even, the great values of this large property.

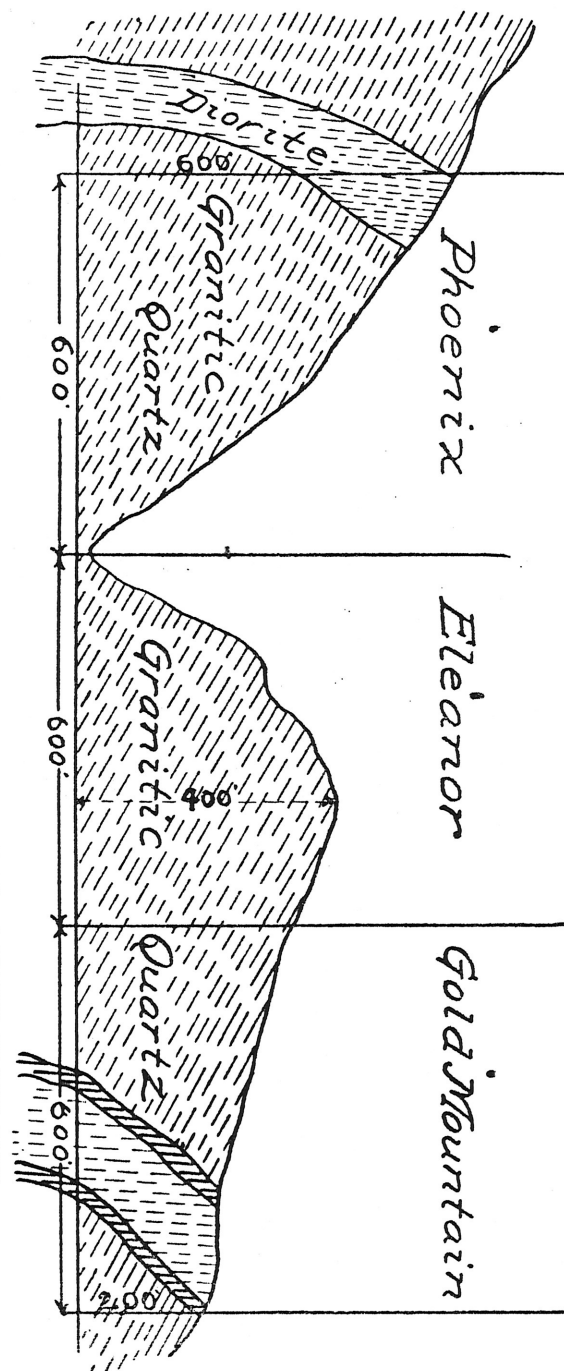
Favorable Ground on Which to Run Adits

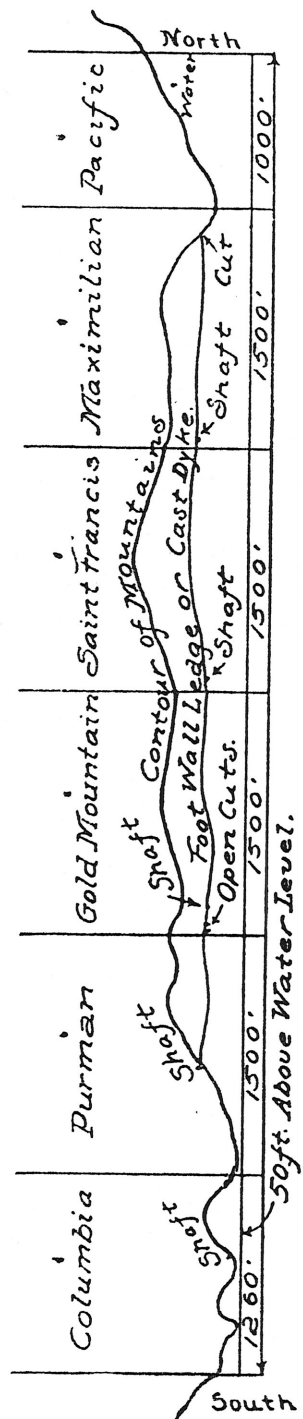
The claim Purman is admirably situated for crosscutting from the west side, a gulch extending along the entire length of the claim and continuing northward along the west side of the "Eleanor." This immense lode can be opened by crosscut adits from each side for the distance of 7,000 feet.

Vertical Cross Section

Following is vertical sections across the lode from east to west on the line to the north end of the Purman and Elvey and the south end of the Gold Mountain, Eleanor and Phoenix, which will show the dykes and replaced matter between. I also show a longitudinal section, looking from the east to the west.

VERTICAL CROSS SECTION ON LINE BETWEEN PURMAN AND GOLD MOUNTAIN, AS STATED IN THE BODY OF THIS REPORT. ACID WATERS CARRYING MINERALS IN SOLUTION HAVE REPLACED THE PORTIONS MARKED GRANITIC QUARTZ LYING BETWEEN THE WEST AND EAST DYKES, WHICH WERE THE SOURCES.





LONGITUDINAL SECTION SHOWING THE CONTOUR OF THE SURFACE, AND LOCATION OF EAST DYKE ALONG THE EASTERN SIDE OF THE CLAIMS.

Railroads

The approach to this property from Congress Junction, the nearest railroad point, is most favorable for building a branch railway. Presuming that the Prescott and Eastern railway, now being extended from Mayer to the "Crowned King," will be brought through the southeastern end of the Bradshaw mountains to this section, from which point the Buckhorn range with its many mines would be approached. From this section the road would continue to Congress Junction, and thence on westward to the Colorado river.

Wagon Roads

The present wagon road will need but little repair to meet all demands necessary until the mine is developed sufficiently for reduction works.

Water for Camp

Water in abundance for camp use is already opened, one large spring at the south end of the property and running water in abundance at the north end of the claim Maximilian, while many smaller springs exist on the claims Pacific and Water Witch, and in two of the shafts along the east side, which are only sunk to a depth of 10 feet, there is water.

Water for Hoisting Works

The running water at the north end of the property is in sufficient quantity to furnish steam for all development work and can be pumped for a distance of 2,000 feet, with a rise of about 200 feet, from which point it will run by gravity to any point south.

Water for Milling

Water for milling purposes can be taken from the Hassayampa river, which is distant to the east one and one-half miles.

Timber

Timber for mine will have to come in by rail. The first work of development will require but little timber and by the time the property is sufficiently developed to warrant the erection of a 200-stamp mill railroad facilities will be at hand to cheaply handle all material and supplies.

Convenience to Railroads

The convenience of this property to the railroad, affording cheap transportation, and the great quantities of ore in sight and developed by the cutting through of canyons, warrants your board in making extensive and intelligent exploitation, under the direction of a competent engineer who is accustomed to operating large ore bodies.

This ore should be mined and milled as cheaply as that at Alaska-Treadwell and Deadwood, enabling the Company to work the lower grades of ore.

I cannot speak in too high terms of this splendid prospect. It is of great magnitude, and if properly handled will mark the commencement of low-grade mining and milling on a large scale in Arizona.

(Signed.)

T. C. ARCHER.

Prescott, A. T., April 1st, 1902.

Submitted to The Leviathan Gold Mining Company, Phoenix, A. T.

Prescott, A. T., May 10, 1902.

To The Leviathan Gold Mining Company,
Phoenix, A. T.

Gentlemen:

Re,—Maximilian Group.

I find from the many assays made from samples taken along what we term the foot wall ledge for a distance of 7,200 feet, and an average width of 100 feet, an average of \$17.58, while the sample taken from the surface of the mass lying between the east and west dykes, as shown on the maps, give an average of \$2.32.

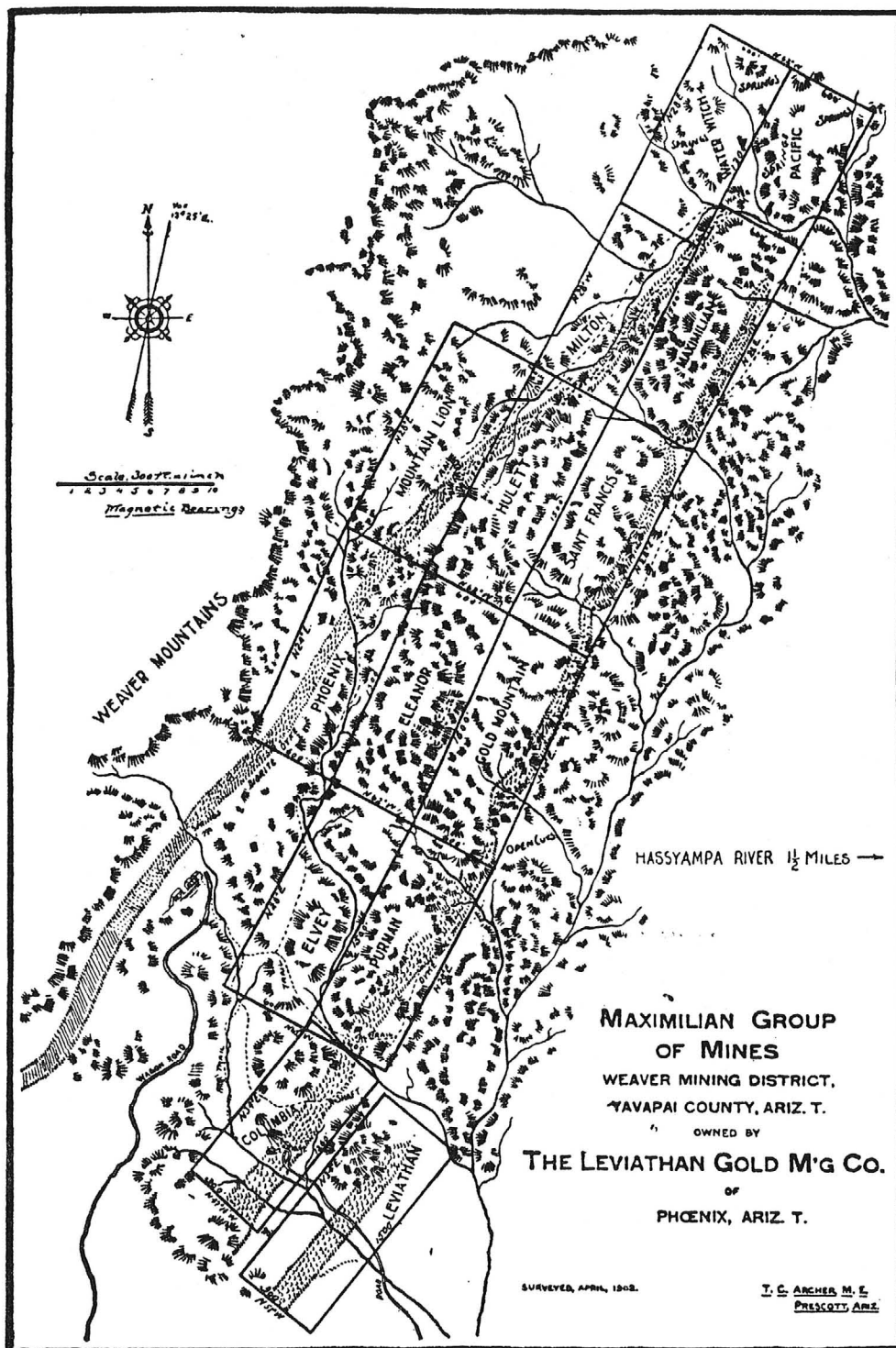
It is not necessary for me to dwell upon the merits of this property, as the most unsophisticated mind will not fail to grasp the idea of the immensity of this great body of ore, and the great values already exposed to view by the cutting through of same by the canyons.

(Supplementary to above report of April 1st, 1902.)

Respectfully,

T. C. ARCHER,

Phoenix, A. T.



Marinella Irving MacCall

LOCATION AND CLAIMS.

The property is situated in the Weaver Mining District, Yavapai County, Arizona, five miles east of Congress Junction, a station on the Santa Fe, Prescott & Phoenix R. R., a branch of the Santa Fe which runs from Ash Fork on the main line, to Phoenix. It consists of the following lode claims: Chester, Leviathan, Grantley, Catherine, Margaret, Denver and Germanic, patented, and The O'Connor Placer of 40 acres, and Romana lode claim, not patented, containing in all about 200 acres.

HISTORICAL.

The property has been locally known as the "Leviathan", owing to the large outcrop on the main or Leviathan Ledge. It has been located since "early days in Arizona", and was worked more or less by arastre at that time when water was available. It is located on a spur of the Weaver Mountains, which consists of "Yavapai Granite" and which are intersected in places by Diorite dykes, at times accompanied by quartz contact veins. The main quartz vein on this property undoubtedly owes its gold content to one or more of these dykes, which run through the claims in a northeast-southwest direction. The main vein is a fine strong body of quartz, striking N. 65 degrees E, and dipping in main shaft about 25 degrees from the horizontal N. 25 degrees W. It outcrops very boldly and can be traced for a distance of about two miles, of which about one mile is within the limits of this property. Within a distance of five miles and in the same district, are located such well known mines as the Congress, Octave and Alvarado. The "Congress" has been operated for a period of twenty-eight

years and to a depth on the dip of the vein of 4300 feet. The Octave was operated for a period of from ten to twelve years and to a depth of 2200 feet, when the original Company sold it to a Chicago promoter for \$750,000.00. The Alvarado has been developed to a depth of 1120 feet and has more than 200,000 tons of ore blocked out. This property is tied up owing to the death of the principal owner. I have referred to these more especially to call attention as to what may be expected as to the permanency of this main vein, as it is about twice the size - width - of the veins in the other properties referred to.

ACCESSIBILITY.

As stated in a previous paragraph, the property is five miles from the railroad station over a fine road with little grade. The altitude at the mine is 3333 feet above sea level and at the railroad station 3032 feet. No snow falls in this region; as a consequence the climate is mild and the roads are always good. The wagon haul is comparatively cheap.

CHARACTER OF ORE.

The ore consists of a white to a brown quartz, carrying a small per cent of iron pyrites, not to exceed 2%. One ore shoot carries a very small per cent. of Galena. The sulphides are high grade, making a concentrate carrying one hundred and sixty dollars per ton and up. About sixty per cent. of the gold is free. The silver content is low and will average about one-half ounce per ton in the raw ore.

DEVELOPMENT AND ORE.

The principal amount of development has been done on the Chester claim. On the western end a 50 foot shaft is sunk on the dip of the vein, exposing the ore from five to six feet in thickness between walls of granite. Near the eastern end of the claims and within 150 feet of the end line, a shaft 438 feet has been sunk on the dip of the vein, which is, at this point, 25 degrees from the horizontal. The vein varies in thickness from 4½ feet to 10 feet in this shaft. At a point 300 feet down the shaft, a level has been started and driven 128 feet easterly. On the Leviathan two shafts 95 feet each were driven some years ago by previous owners but are not now accessible. A short cross-cut tunnel at the center of the claim cuts the ledge at about 20 feet below the surface and some 50 feet or more of drifting has been done, exposing the ore for full length of drift. On the Grantley claim one shaft is sunk on the dip of the vein which at this point is about 37 degrees from the horizontal, exposing the ore from three or four feet in thickness throughout the shaft. Two more shallow shafts, one 10 and the other 20 feet, expose the vein as of about the same thickness as in the 70 foot shaft. A two compartment shaft, timbered with Oregon Fir, has been sunk on the Catherine. This is a perpendicular shaft to a depth of 190 feet. Its only immediate use is as a well, as it usually contains about 150 feet of water. On the other claims only the necessary amount of development has been done to secure patents. Numerous open cuts and quarries have been opened along the outcrop in sampling and making various mill tests. The total development is approximately 2000 feet and the equipment consists of two complete hoisting plants. More than Thirty Thousand Dollars has been expended on development.

WATER.

The main shaft when sinking was being done had a flow of from 12000 to 15000 gallons per day. In the 190 foot shaft on the Catherine claim, the water generally stands at the 150 foot point; then, if the mine will not make enough water for its own use, additional water can be secured on Antelope Creek, about three-fourths of a mile distant.

FUEL.

California crude oil is used entirely in this part of Arizona and costs, laid down, from \$1.25 to \$1.60 per barrel, depending upon market conditions, three barrels of oil being equivalent to one ton of coal for power purposes. The Coal available at this point is mined at Gallup, New Mexico, and is a high grade Lignite, and costs, f. o. b. Congress Junction, \$6.00 per ton.

TIMBER AND SUPPLIES.

Timber for stulls is comparatively cheap and is shipped from Flagstaff, Arizona. Lumber such as Oregon Fir will cost from \$22.00 to \$27.00 per thousand f. o. b. Congress Junction. Powder fuse and caps cost slightly less than in most mining camps, as the freight on powder to this point is about one cent per pound less than in Colorado camps.

ORE AND VALUES.

About 300 tons of ore at different times and in varying amounts have been milled from the different open cuts, shafts, and quarries, to determine the values of the ore shoots as exposed on the surface. No mill test of less than seven

tons has been considered.

Lot No. 1	from 50 foot shaft on Chester	- - - - -	\$9.50
" " 2	Quarry #1 on Leviathan	- - - - -	10.00
" " 3	Quarry #2 and 3 on Leviathan	13.00
" " 4	Tunnel and drift on Leviathan	- - - - -	9.50
" " 5	Denver claim from 60 foot shaft	- - - - -	10.20
" " 6	Open cut near east end Leviathan	- - - - -	13.40

The above mill tests were made at the Octave Mill, and consisted of seven tons each. A second test of same quantity was made and confirmed the above results. Some time later, several tests were sent to Los Angeles and the following results obtained:

Lot No. 1	from Quarry #1 Leviathan	- - - - -	\$10.70
" " 2	Quarry #4, 5 and 6 Leviathan	- - - - -	9.00
" " 3	Quarry #3, 4, 5 and 6 Leviathan and West drift on tunnel	- - - - -	6.78
" " 4	East face of tunnel drift	- - - - -	4.23

When sinking the main shaft, a low-grade shoot of ore was passed through. This was encountered at 140 feet down the shaft and was passed through at a depth of 300 feet. Owing to slight step faulting, there is a crushed zone carrying from 3 to 10 feet in width. At these faults or crushed zones the values are entirely leached and washed out, but when the quartz is undisturbed, it carries good mill values. A recent sampling in this shaft, from 142 feet to 242 feet in the shaft, gave the following results, together with others numbered from 1 to 6 taken at points indicated. Low assays from crushed and leached places in vein.

	Oz. au.	Value	Price	Width	Place Taken
#1	0.16	\$3.30	20.63	5.5 feet	Face #2 shaft
#2	1.50	31.00	20.67	4.3 "	W. face of tunnel drift
#3	2.94	60.77	20.67	4.5 "	Open quarry Leviathan
#4	2.23	46.09	20.67	4.0 "	70 ft. shaft Grantley

	Oz. au	Value	Width	Place Taken			
# 5	0.04	\$.82	1.5 feet	Denver claim			
# 6	0.42	8.68	2.4 "	Roof of tunnel			
# 7	0.08	1.65	5. "	242 ft. down main shaft			
# 8	4.50	93.43	5.1 "	232	"	"	"
# 9	0.13	2.68	4.5 "	222	"	"	"
#10	0.05	1.03	7.5 "	212	"	"	"
(In fault) #11	Trace	----	8.3 "	202	"	"	"
#12	0.04	.82	8. "	192	"	"	"
#13	0.03	0.62	7. "	182	"	"	"
#14	0.18	3.72	8.5 "	172	"	"	"
#15	0.60	12.40	7.6 "	162	"	"	"
#16	0.16	3.30	3.7 "	152	"	"	"
#17	0.68	14.05	5.6 "	142	"	"	"

Owing to water in the shaft at this time, no sampling could be done below 242 feet. However, as stated previously, the low grade shoot was passed through at a depth of 300 feet. This shoot on surface I have not paid any attention to as it was low grade and somewhat spotted. The ore shoots, as far as determined, have a pitch to the west of about 45 degrees and this has been proven by the shoot passed through in sinking. The next ore shoot should be encountered within the next 50 feet in the shaft, and in fact where the last workers left off in the face of the shaft, it showed signs of nearing the ore shoot. The last assay from face of shaft returned \$3.25 across 6½ feet.

The vein is so large that it is hard to sample and I believe much more satisfactory results are obtained by large samples than small ones, as proved by our mill tests. The average of all mill tests has been \$9.63 per ton, but I believe that this is somewhat high owing to the fact that this ore could be taken without waste and much cleaner than under-

ground, so for the purpose of my calculations I take an average of the mill tests obtained in Los Angeles which covered a greater distance on the vein, and the average of these was \$7.67 per ton. The loss in milling on this class of ore should not be over 5% but the Octave Mill, when operating on ore somewhat similar, made a saving of only 92%, so I assume that as a basis, and on account of breaking ore under-ground, where more or less wall rock will get in, I assume \$7.00 as the value, then 92% of \$7.00 would give us a net saving of \$6.44 per ton. Working charges in this district on a 200 ton plant, which with proper development could easily be supplied, would be as follows:

Cost of mining, tramming and hoisting per ton - - - - -	\$1.50
Cost of development to keep ore ahead of extraction - - -	.30
Cost of milling and crushing - - - - -	.50
Cost of cyaniding - - - - -	.65
Cost of management, superintendence and office - - - - -	.15
Cost of insurance and taxes - - - - -	.035
Cost of maintenance and depreciation - - - - -	.135
Making a total charge against the ore per ton of	\$3.27

On this basis, the net earnings per month of thirty days, would be \$19,020.00 or \$228,240.00 per year. If for any reason it would seem advisable to start with a plant of 100 tons capacity, then the operating cost would be materially increased as the fixed charges would be about the same, and on a plant of this capacity would be about 20% more per ton. On a plant of this capacity, the working charges then would be \$3.47 which would leave us net per ton \$2.97, which would be \$297.00 per day, or \$8,910.00 per month of thirty days, or \$106,920.00 per year. To prove my estimate conservative, I would call to your attention an article by Walter Harvey Weed on the King-

man Mining District of Arizona, published in the Mining World in the issue of June 4, 1910, Pages 1113 and 1114, wherein he states that "At the Gold Road Mine, where they are milling 200 tons per day, their total working charges, including mining, milling and administration, are a little less than \$3.00 per ton". I wish to add that the Gold Road Mine is 24 miles from the railroad and therefore my estimate of working charges is conservative. I might also call your attention to working charges obtained by myself of \$2.25 per ton at the Butterfly Mine in San Miguel County, Colorado, for the years 1911 and 1912. See Engineering and Mining Journal, issue of September 14, 1912, on Page 497.

CONCLUSIONS.

When we take into consideration the many natural advantages which prevail in this district, such as the ideal climatic conditions, low altitude, nearness to transportation, excellent roads, comparatively cheap fuel and supplies, low cost of mining, owing to the large vein and comparatively cheap labor - labor in this section has been about 10% lower than in Colorado, or in fact, other mining camps in Arizona, - the prevailing cost of common labor such as shovelers and roustabouts in this district ranging from \$2.00 to \$2.50 per day - considering these facts, the earnings from the necessary capital to complete development and to equip the mine with a milling plant should be attractive, and I have no hesitancy in recommending it with a full assurance of earning not less than 17% per annum on a 100 ton capacity and on a 200 ton basis, the earnings would be 38% on the capitalization.

Respectfully submitted,

Denver, Colorado.
January 20, 1917.

A. J. Lazenby