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(91)  
ITEM 76

MUSTANG---MONTEZUMA  
Mercury Prospects

Esmeralda Co., Nevada

AN APPRAISAL

D.L. Evans

June 19, 1967



June 20, 1967.

Mr. Glen Kinney,  
26 Cheyney Street,  
Reno, Nevada.

Dear Mr. Kinney:

Attached, please find three copies of our report on the Mustang-Montezuma properties, Esmeralda County, Nevada, examined recently at your request.

The original and one copy are being air-mailed today to the Messrs. Osborn in Portland, Oregon.

Aware as I have been of the faith you have had in these properties, my conclusions and negative recommendations have been reached with genuine regret.

Thanking you for the assistance provided on the 7th and 8th, I am,

Sincerely,

cc: Messrs. Osborn,  
6830 NE Broadway,  
Portland, Oregon.

David LeCount Evans.

MUSTANG---MONTEZUMA  
Mercury      Prospects

Montezuma District  
Esmeralda Co., Nevada

AN APPRAISAL

FOREWORD:

These properties were examined on June 7 and 8, 1967. As noted on sections, this was a reconnaissance survey, with considerable area covered in a short time. Reference is urged to the five plats which accompany this written text.

PURPOSE OF STUDY:

To appraise the Mustang property was the initial purpose of this investigation. The Mustang property represents the easterly portion of a five mile trend, and had been offered to clients.

Having been advised that Mustang "shows" were without attraction, Mr. Kinny then assured Mr. Marc Osborn and the writer that a deal could probably be made on the westerly portion, the Montezuma property.

Mineralization at the latter was of sufficient interest to justify the cutting of representative samples and the rough mapping of pit area and underlying tunnel.

Our purpose at the Montezuma was to, not only, estimate the size of the mineralized body, but also, to check assertions that the mass would average between 4 and 6 pounds per ton in mercury, with bivalues as high as one ounce of gold.

PROCEDURES:

Transportation was available to within one and one half miles of the Mustang property. On the basis of a rough description for the location of the Mustang block, provided by Mr. Pete Mosier (Goldfield minor and prospector), Mustang claims were located. Brunton controlled pacing and intersection developed the partial claim-distribution map of Plat II, and the Long-Section Z-Z'.

Our approach on foot from the south, from below the opalite bed and then through this mineralized horizon; an examination of discovery pits, along the trend from east to west; and, finally, our return to lower elevations, down slope and east along section Z-Z', were the bases for Mustang conclusions and recommendations.

Concerning the Montezuma Pit and Tunnel area, after an initial study of exposures in pit, samples were cut, as much across mineralized dips as possible, with locations chosen on the basis of the three categories, (1) better appearing opalite mineralization, (2) massive opalite without exceptional "shows", and (3) a soft, gougy, fault-zone, carrying fragments of (1) and (2) in the gouge.



A pacing-Brunton compass traverse was then employed to tie-in sampling and geology, as well as the underlying tunnel, shown on Plats III and IV. The tunnel survey has been supplemented by a survey provided by Mrs. Leonora Mullenax, owner.

#### CONCLUSIONS:

This analysis concludes that:

- (1) The Mustang property is on the same opalite-replaced horizon as the Montezuma deposit. But thinness of opalite, averaging about  $3\frac{1}{2}$  feet, and weakness of mercury 'shows' (dominantly "paint" where observed) offer little, if any, possibility.
- (2) The same opalite bed at Montezuma has a thickness of 25 feet; red cinnabar occurs in minor amounts throughout, as "paint", with no crystalline cinnabar observed. Opalite also carries persistent, dark-gray, opaque mineralization, a part of which may be the dark-gray mercuric sulphide, meta-cinnabar.
- (3) Our samples indicate an average of 0.47 pounds per ton for the opalized bed at Montezuma. Remaining tonnage should not exceed 33,000 tons, above the tunnel level. Despite claims, opalite carries no gold values.

#### RECOMMENDATIONS:

Neither the Mustang nor Montezuma is recommended.

Considering both as representative of the five mile trend, further interest is not advised.

#### LOCATION:

With reference to our attached Index Map, Plat I, Montezuma claims lie in sections 16 and 15, Township 3 South, Range 41 East, and Mustang claims fall, approximately, in section 6, Township 3 South, Range 42 East. Montezuma is the mining district. Length of trend from Montezuma to Mustang amounts to five miles. Air-line distance, Goldfield to Montezuma, is five miles.

#### GENERAL AND LIMITING CONDITIONS:

##### Access:

Road distance from Goldfield to Montezuma is 19 miles; seven miles are paved highway and twelve miles excellent desert road. Goldfield to Mustang, after three miles of desert, graded road, presents difficulties; four-wheel drive is a requirement for the last two miles from the Nevada Eagle.

##### Natural Conditions:

Year-round operation would be assured. Properties are at 6800 feet. Winter snows do occur, but snow-cover does not remain.



The area enjoys desert climate with hot days and cold nights. Summer flash-floods present the to-be-expected hazards.

#### Water:

Water supply was not investigated. A spring was reported for the Montezuma area, but problems would be anticipated.

#### Power:

No power services the mine areas. Nearest supply seems to be at Goldfield, nine miles, straight-line distance.

#### Lab or:

Miners and mill men are undoubtedly available in the Tonopah-Goldfield area.

#### LEGAL TITLE:

Properties are held by Mrs. Leonora Mullenax, of Carson City, Nevada and, probably, associates. The Mustang group of 17 claims has been offered by Mr. Glen Kinney, 26 Cheney Street, Reno, Nevada.

The Montezuma block, reputedly 20 claims, shares like ownership. It has been reported that the two blocks are contiguous.

However, lack of claim maps prevents a discussion of block details, or the submission of a full claim plat with this report.

#### HISTORY OF PROPERTY AND DISTRICT:

The Montezuma was discovered in 1928 by Messrs. Sweeney and McMillan of Goldfield, according to Nevada Bureau of Mines Bulletin No. 41 (1944). This property, to that date, had no recorded production. The Bureau reported "not enough ore had been found to justify the erection of reduction equipment".

Sweeney and McMillan completed the "180 feet of adit and 175 feet of connecting drifts and crosscuts". (Refer to our Plat IV)

Date of Mullenax claims was not ascertained. Mrs. Mullenax reports that circa-1965 she shipped a few hundred tons to a retort at the Red Rock mine, in the Fish Lake Valley district, results from which were unsatisfactory; and, finally, 2500 tons to the Kollman furnace at the old B and B property. Flasks of recovery were not specific, although from one source 17 flasks have been reported. If true, such represents a recovery of 0.5 pounds per ton.

The Mustang area was first covered by Pete Mosier, of Goldfield, with his "Spot" group, located on April 22, 1955. Mustang claims are dated July 10, 1965. The Mustang block has no production record.



## GEOLOGY

One and one half days of surface reconnaissance are inadequate as a basis for detailed description.

Suffice it to say that the two areas have characteristics in common, namely:

- (1) a mineralized horizon, originally a white, soft bed of volcanic ash (called 'tuff'), replaced by silica (so called 'opalite'), carrying the red cinnabar and, possibly, the black metacinnabar (both mercuric sulphides), in varying, minor amounts; and,
- (2) a hard, impervious cap rock, above the opalite member, consisting of silicified, volcanic, fragmental material (called 'silicified volcanic breccia')

Concerning the two properties, the merit per property would depend on the thickness of the original tuff bed (under the cap-rock) that has been opalized, and the amounts of cinnabar or metacinnabar, accompanying the opalization.

In line with the conclusions, listed above, note that:

- (1) The Mustang is considered to have about  $3\frac{1}{2}$  feet of opalized tuff and the Montezuma a minimum of 25 feet; and,
- (2) the Mustang has scattered cinnabar, mostly "paint" and not the real, crystalline, red, mercury sulphide; and the Montezuma is described as having "paint"-type cinnabar in minor amounts, and dark-gray mineralization, in part metacinnabar, and a great part not metacinnabar.

Both areas, under the tuff, go to iron-stained beds. In the case of the Mustang, these have been classified as soft, bedded volcanic breccias, without values. At the Montezuma, the Nevada Bureau of Mines in the 1944 report refers to the red zone as Cambrian limestone. This analysis is in no position to question the Bureau's classification.

Concerning structure, the writer concurs with Bureau conclusions that mineralization is in an area of faulting, much of it post-mineral. Reference is made to our Plats III, IV, and V, and especially the last, a "working premise" to explain the lack of mineralization in the tunnel level. The cross-sections are presented for what thought they may provoke.

In conclusion, note that this analysis considers the owner's assertion that the opalized zone, throughout the five miles, is the same unit, justified.

## DEVELOPMENT:

Except for bull-dozed discovery pits, properties are without serious development; with the exception, of course, of work shown on Plats III and IV, at the Montezuma property.



### SAMPLES:

Seven samples were cut during the course of examination, all on the Montezuma. None were taken from the Mustang. As for the latter, thinness of opalite and weakness of cinnabar appeared to not justify sampling. This was a matter of opinion, based on past experience with deposits of this type.

Samples, and assay results, in the Montezuma pit area are listed below. Locations are shown on both Plats III and V. Values have been placed, only, on Plat V, the cross-sections.

#### Sample and Assay List

<u>Sample Number</u>	<u>Thickness Represented</u>	<u>Pounds/Ton Mercury</u>	<u>Ounces/T Gold</u>	<u>Ounces/T Silver</u>
1448	6 feet	0.14	M1	M1
1449	10 feet	0.04	M1	M1
1450	10 feet	0.08	M1	0.04
1451	6 feet	0.04	M1	0.03
1452	10 feet	0.18	Trace	Trace
1453	10 feet	0.40	Trace	Trace
1454	Dump; Sel- ected mat- erial.	1.60	Trace	Trace

Sample Descriptions are as follows: (See Plats III and V)

#### Group #1: Better appearing Opalite mineralization:

1448: Main pit; north face; series of cuts across apparent banding, for 6' of depth from top of exposure.

1451: Main pit; north face; same procedure for 6' of exposure at bottom of zone.

#### Group #2: Massive opalite without exceptional shows:

1452: Main pit; east face; series of cuts across opalite for upper ten feet of exposure.

1453: Main pit; east face; same procedure for bottom ten feet of exposure.

#### Group #3: Gouge or Fault zone:

1449: Northeast corner of pit; series of cuts for top ten feet of fault zone.



1450: Northeast corner of pit; same procedure for bottom ten feet of fault zone.

Miscellaneous (Refer to Plat III)

1454: Grab sample of mineralized material from dump, south of south trench; mineralization apparently from bottom of trench (now covered) and not from walls of trench.

TONNAGE POSSIBILITIES:

Values (exclusive of 1449 and 1450 in the fault zone) provide an arithmetic average of 0.47 pounds per ton. This does not indicate "Ore", since "Ore" in fers material that can be mined at a profit. There are no ore reserves.

Original tonnage of opalite of low-tenor amounted to about 37,000 tons. This is based on (1) the structural interpretation of Plat V, (2) the square area of opalite on section X-X' for 200 feet of possible strike extent, and (3) the square area of opalite on section Y-Y', for 100 feet of strike extent; and, finally, (4) a factor of 11 cubic feet per ton. About 4000 tons having been mined from pit leaves, therefore, 33,000 tons.

TREATMENT COSTS  
PROFIT OR LOSS  
METAL PRICES

In view of the low tenor and limited volume of this material, and lack of economic possibilities, these major headings are not considered.

RECAPITULATION:

1. Samples are considered truly representative, and the 0.47 pound estimate a fair value for the Montezuma mineralization. The closeness of the estimate of 0.5 pounds, based on a reported tonnage treated and recovery, is considered a rank coincidence. We cannot attest to the accuracy of these production figures.

2. The 37,000 ton figure is that reserve which might have been available for cheap open-pit mining, above the lower tunnel level, had grade warranted mining. It is believed that additional mineralization exists below tunnel level, but no improvement in grade would be expected, and increased costs would be anticipated, because of underground mining requirements.

3. Montezuma samples have been assayed by Metallurgical Laboratories of San Francisco, headed by Mr. Martin Quist. Mr. Quist, former Chief Chemist for Abbot A. Hanks, Custom Assayers of San Francisco, has also been Chief Assayer for the New Idria Company, this country's leading mercury producer.

The writer has on occasion had identical pulps analyzed by Met-



allurgical Laboratories, Abbot Hanks and the Nevada Bureau of Mines,  
with the three in concurrence on mercury determinations.

4. Reference is again made to conclusions and negative recommendations.

Respectfully submitted.



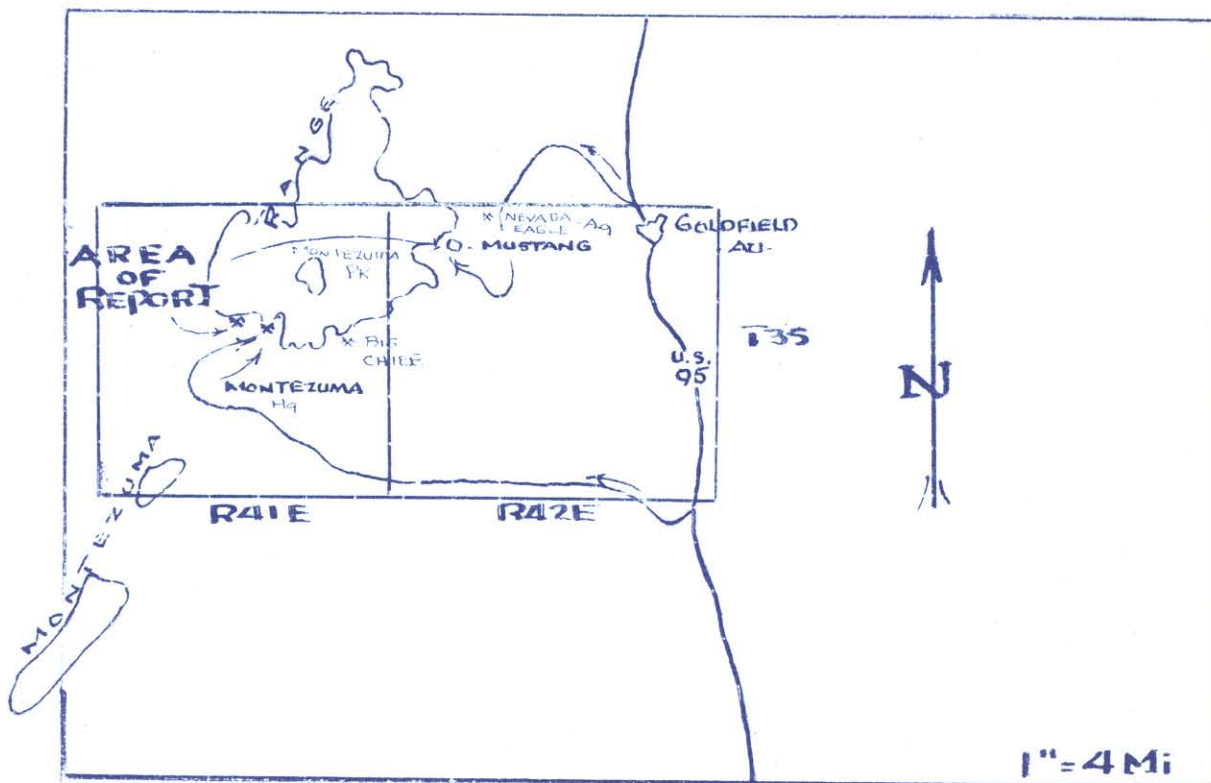
David LeCount Evans

June 19, 1967

1700 Royal Drive,  
Reno, Nevada 89503

DAVID LECOUNT EVANS, CONSULTING GEOLOGIST





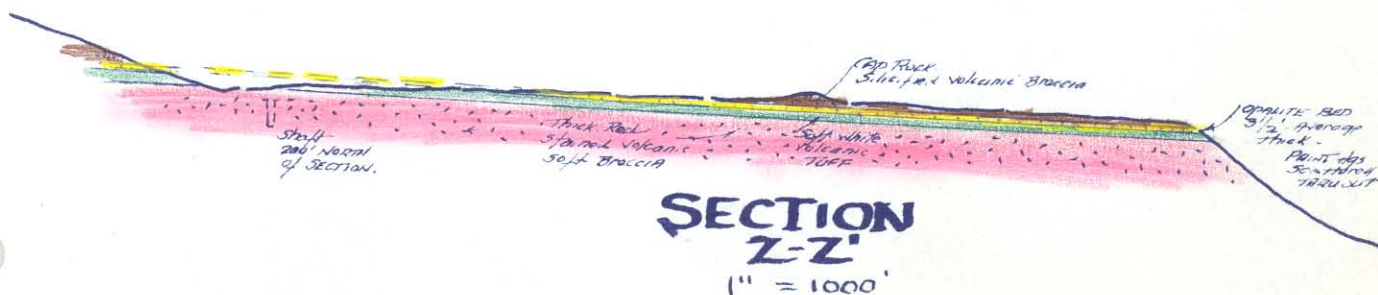
**MONTÉZUMA DISTRICT**  
**ESMERALDA COUNTY**  
**NEVADA**

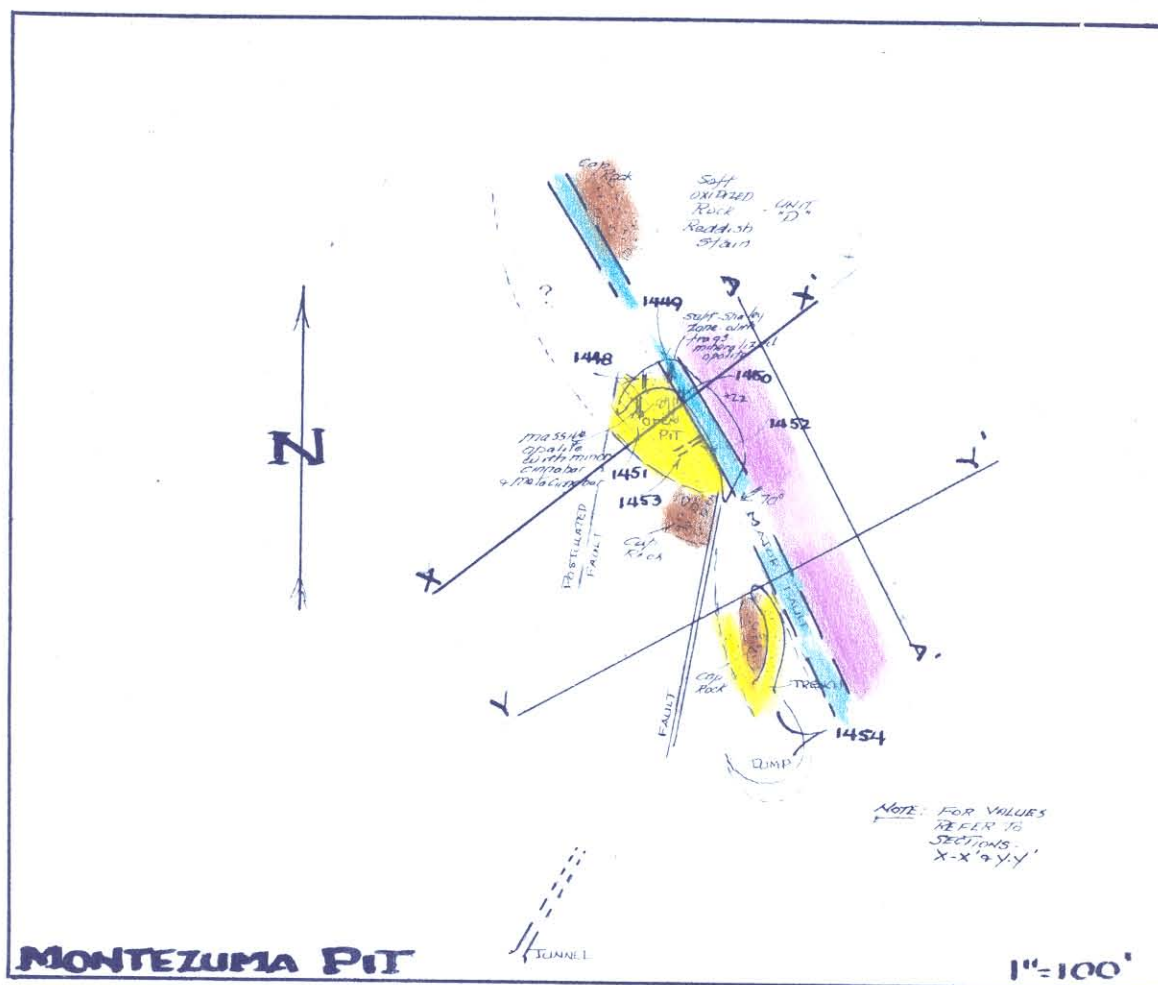
**INDEX MAP**

DAVID LeCOURT EVANS  
 CONS. GEOLOGIST

JUNE 16, 1967  
 RENO, NEVADA







**MONTEZUMA DISTRICT**  
**ESMERALDA COUNTY**  
**NEVADA**

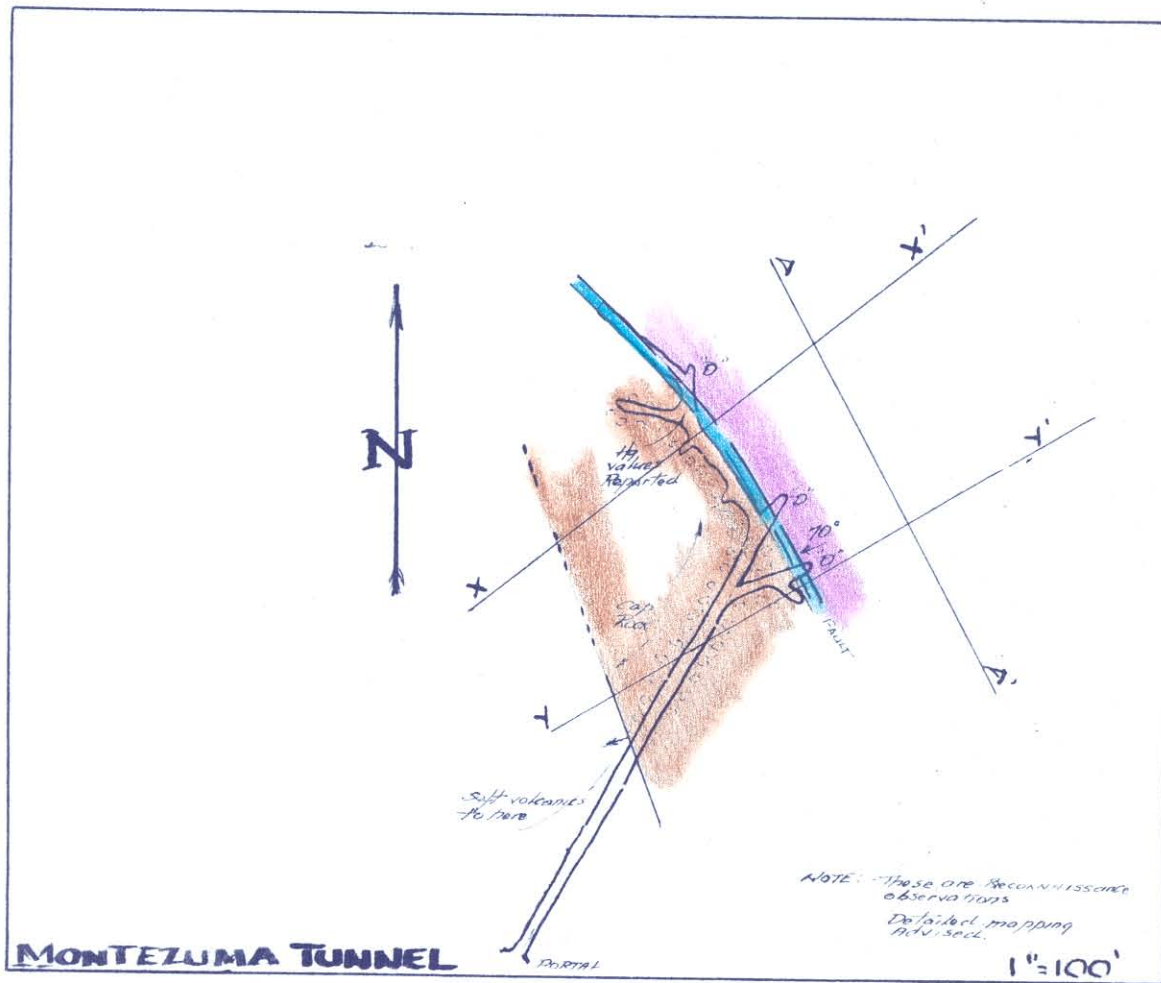
## **MONTEZUMA MINE**

DAVID LECOUNT EVANS  
 CONS. GEOLOGIST

JUNE 16, 1967  
 RENO, NEVADA

**NOTE:** RAPID RECONNAISSANCE USING  
 BRUNTON COMPASS & PACING; SUB-  
 JECT TO ADJUSTMENT.





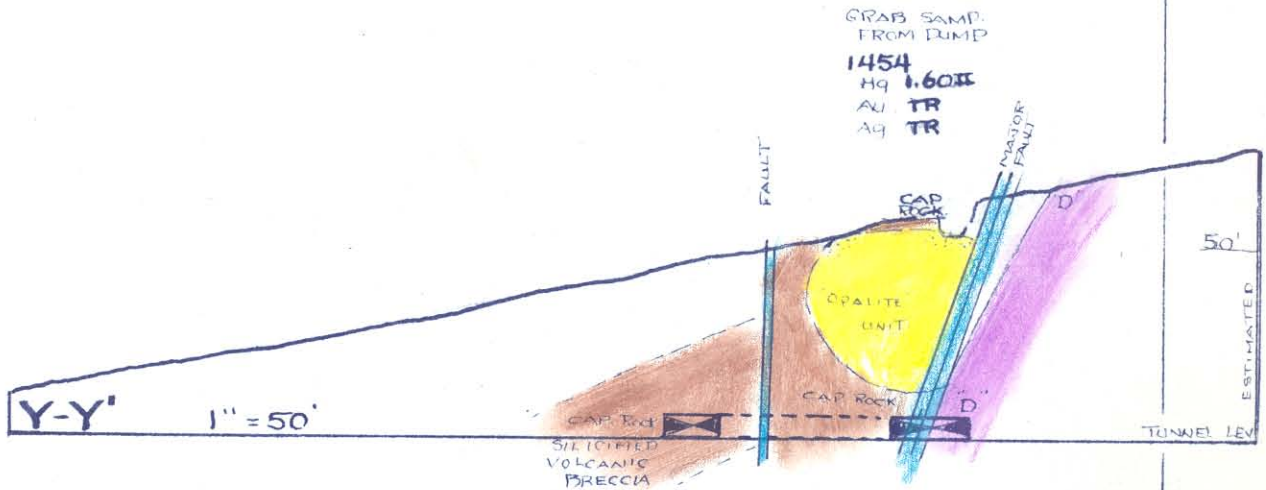
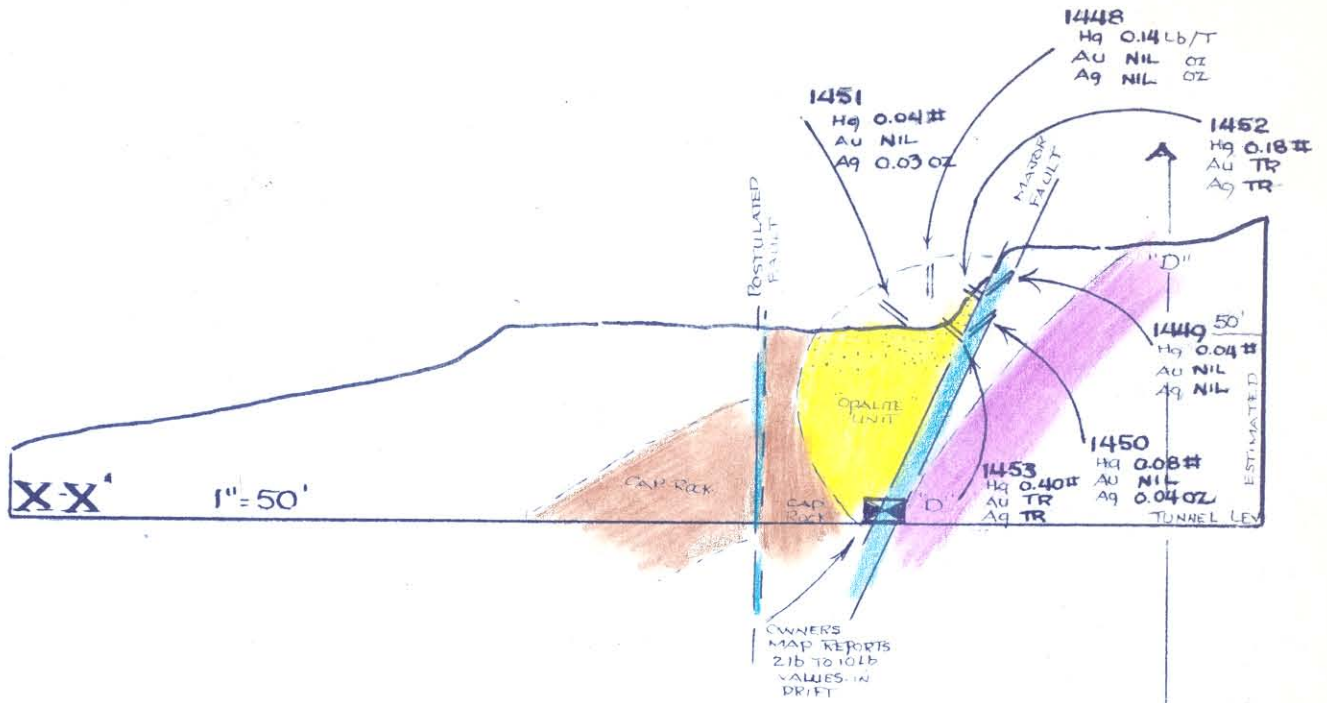
MONTEZUMA DISTRICT  
ESMERALDA COUNTY  
NEVADA

## MONTEZUMA MINE

DAVID LECOUNT EVANS  
CONS. GEOLOGIST

JUNE 16, 1967  
RENO, NEVADA

NOTE: RAPID RECONNAISSANCE, USING  
BRUNTON COMPASS & PACING; SUB-  
JECT TO ADJUSTMENT.



**MONTEZUMA DISTRICT**  
ESMERALDA COUNTY  
NEVADA

# MONTEZUMA MINE

DAVID LECOUNT EVANS  
CONS. GEOLOGIST

JUNE 18, 1967  
RENO, NEVADA

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1

Marc Osborn

2

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George R. Sweet

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REGISTERED NO.

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Spec. del'y fee \$

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*6830 NE Broadway*

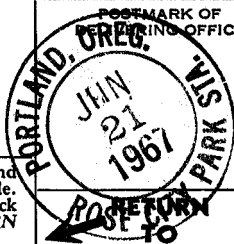
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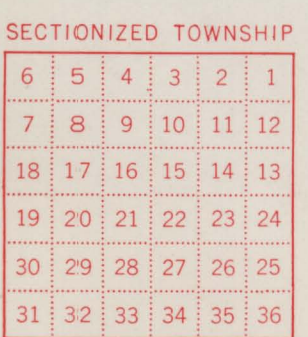
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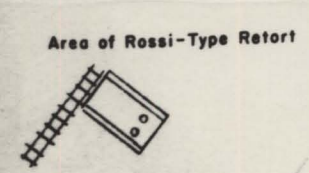
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**MONTEZUMA MERCURY**  
 MONTEZUMA DISTRICT — ESMERALDA COUNTY  
 TOPOGRAPHY — GEOLOGY — DEVELOPMENT  
 For J B BROWN — Tonopah, Nevada  
 By KEITH N. MEADOR — Fallon, Nevada  
 DECEMBER, 1957

3150 0022

91  
 ITEM 96-A